

PART IV

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ANIMAL MINDS
AND THEIR MORAL
SIGNIFICANCE
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CHAPTER 13

ANIMAL MENTALITY:
ITS CHARACTER,
EXTENT, AND MORAL
SIGNIFICANCE

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Do animals possess *moral standing*? That is to say, are they deserving of our sympathy and concern, and do they possess moral rights, in their own right? This chapter will claim that such questions should receive negative answers. The first four sections will argue that the pains and sufferings of almost all animals (including many insects and crustaceans) are of the right sort to make them possible objects of sympathy, figuring within a mind whose basic structure is similar to our own. In this case, utilitarian ethical theories will have a hard time denying that all such creatures have standing, thereby adding to the problems that such theories face. The remaining five sections will argue from a contractualist perspective that all humans, but probably no animals, possess moral standing. This conclusion, too, is admittedly counterintuitive, but some of the sting will be drawn from it by acknowledging that we can nevertheless have indirect duties toward animals.

Although humans are, of course, a kind of animal, when I speak of animals in this chapter, I should be understood as referring to nonhuman animals only. This is merely for ease of expression, and should not be taken as a commitment to any sort of “Cartesian divide” between ourselves and members of other species. On the contrary, I believe firmly in the evolutionary and cognitive continuities between humans and other animals.

1. DO ANIMALS HAVE CONSCIOUS EXPERIENCES?

There are a variety of different uses of the term “conscious,” many of which are surely applicable to at least some animals. All animals spend time awake, for example, and are therefore conscious as opposed to unconscious during these periods. However, one usage has seemed especially pertinent to the question of the moral standing of animals. This is so-called *phenomenal* consciousness, which is the property that perceptions and bodily sensations possess when there is something that it is *like* for a creature to undergo those events, or when the events in question possess a subjective *feel*. For on the one hand, it can seem very plausible that only creatures whose pains are phenomenally conscious—and which thereby *feel like* something—truly suffer, and are worthy of sympathy and moral concern. But on the other hand, there are theories of phenomenal consciousness that probably imply that few if any animals besides humans are phenomenally conscious.¹ I shall discuss the latter first, before turning in section 2 to consider the implications of such theories for the moral standing of animals.

Most philosophical theories of phenomenal consciousness belong to one of two broad classes, either first-order² or higher-order.³ First-order theories maintain that phenomenally conscious states possess a distinctive kind of representational content (analog, perhaps, or nonconceptual) as well as occupying a distinctive sort of functional role (such as being *poised* to have an impact on the belief-forming and decision-making processes of the creature in question). They are described as “first-order” because all of the mental states appealed to in the account (perceptions, beliefs, and so forth) are representations of properties of the world or body. Such theories probably entail that phenomenal consciousness is widespread in the animal kingdom. For as we will see in section 3, the evidence suggests that even navigating insects like bees and wasps have perceptual states located within the right sort of first-order cognitive architecture. Higher-order theories likewise agree that phenomenally conscious states possess a distinctive sort of content, but they claim that these states must be ones *of which the subject is aware*. It is by being aware of our perceptual states that they acquire their subjective dimension or “feel,” on this sort of account. Higher-order theories are so called because they crucially appeal to representations of other mental states (namely the mental states that are thereby rendered phenomenally conscious).

What higher-order theories, as such, should claim about the distribution of phenomenal consciousness in the animal kingdom isn’t entirely straightforward, since they come in significantly different varieties. Some say that the higher-order states in question are themselves nonconceptual in character, resulting from perception-like *monitoring* of our own mental states.⁴ Others claim that they are fully conceptual *thoughts* about our current perceptual states.⁵ One might naturally think that higher-order *perceptions* could be found in creatures that are as yet incapable of higher-order *thought*, in which case the largely negative evidence of any

capacity for the latter in most other animal species might grossly underestimate the extent of higher-order representations in the animal kingdom. However, I have argued elsewhere that this natural thought is likely false, because there would be no need for a creature to evolve a capacity to monitor its own mental states unless it were also capable of entertaining thoughts about those states.⁶

If we suppose that this latter claim is correct, then the prospect of widespread phenomenal consciousness among animals appears quite bleak, from a higher-order perspective. Admittedly, the evidence suggests that humans are by no means unique in possessing some mental state concepts and higher-order thoughts. For monkeys and apes appear to possess simple forms of mindreading ability, and can ascribe perceptual and knowledge states (but not beliefs and appearances) to other agents.⁷ But there is no convincing evidence that these animals are capable of applying mental-state concepts to themselves in the sort of way that would be required for phenomenal consciousness, according to higher-order theories of the latter. While some comparative psychologists have claimed to find evidence of capacities for self-directed higher-order thoughts in monkeys and chimpanzees,⁸ my own view is that the data admit of simpler explanations.⁹ And although it is easy to be tempted by the Cartesian idea that introspective (higher-order) access to our own mental states is a necessary precursor for attributing such states to others,¹⁰ such a view is by no means mandatory and faces significant difficulties.¹¹ Indeed, from an evolutionary perspective the main pressure toward developing a capacity for higher-order thought is likely to derive from the third-person uses of such thoughts in forms of social competition and cooperation.¹²

Although these issues are still highly controversial, it is worth exploring the implications for ethics if it should turn out that phenomenally conscious states are restricted to human beings (and perhaps also to members of some closely related species). Would it follow that sympathy for the pains and apparent sufferings of other creatures is inappropriate? It is natural to think so, because if animals aren't phenomenally conscious, then their mental lives are all "dark on the inside." If their perceptual states (including their pains) lack phenomenal properties, then their pains won't be *like* anything for them to undergo and will lack any subjective "feel." Indeed, their pains would have the same sort of status as the perceptual states of so-called "blindsight" patients.¹³ In that case, it would seem that animals would be beyond the pale of possible sympathy (or so I once claimed).¹⁴ Section 2 will argue that these temptations should be resisted, however.

2. DOES CONSCIOUSNESS MATTER?

I shall argue that the question whether or not a creature's pain is phenomenally conscious should be irrelevant to the question whether that pain is a possible—or *appropriate*—object of sympathy and concern.¹⁵ Whether we are *required* to be

concerned about animal pain is another matter, and is a topic for ethical theory to pronounce on. (See the discussion that follows in later sections of this chapter.)

To fix ideas, let us suppose that some version of higher-order monitoring account of phenomenal consciousness is correct. (Nothing substantive turns on this assumption. Similar points can be made with respect to other higher-order approaches.) If this is so, then phenomenally conscious experiences of pain will have a dual aspect. One is objective, or body-representing, while the other gives the experience its subjective feel. On the one hand, there will be a first-order representation of a state of the body (normally involving cellular damage of some sort). This can be thought of as a perceptual representation of a secondary quality of the body, much as first-order visual perceptions represent secondary qualities of external objects such as colors. However, in addition, this representation will be monitored to produce a higher-order awareness that one is experiencing pain. It is this that is responsible for the subjective, *feely*, qualities of the state, according to the higher-order theorist.

We can now ask which of these two aspects of our pain experiences makes those pains *awful* (in the sense of being bad or unwelcome from the perspective of the subject). The answer is that it is the first-order representation of a state of the body rather than our higher-order awareness of the representing event. Imagine a case where you have just been stung between the toes by a bee while walking barefoot through the grass, and you are experiencing intense pain. The focus of your concern—and what it is that you want to cease—is surely the event that is represented as occurring in your foot. A naïve subject, such as a child, might gesture toward his foot saying, “Mommy, make *that* go away” (meaning the pain represented). What the child wants to stop is *the pain*, not his experience of the pain. The content of his desire is first-order, not higher-order. It is only when one knows about analgesics and their effects that one comes to care about the *experience* of pain. For now one might say, “I don’t care whether you get rid of *that* [meaning the pain represented], I want you to give me something to stop my experience of the pain.”

Many animals experience pain, of course, including invertebrates such as hermit-crabs.¹⁶ They are also strongly motivated to avoid the relevant represented properties of their bodies, or to make those properties stop. (However, if a higher-order theory is correct then they aren’t *aware* that they are experiencing pain, and their pains aren’t phenomenally conscious.) Therefore, they have what *we* have when we find our own pains to be awful. In each case, it is the same represented first-order property of the body that is the object of the motivation of avoidance. So if sympathy is appropriate in the one case, it is also at least possible in the other.

Admittedly, we don’t know how to imagine a pain that isn’t phenomenally conscious. This is because any pain that we imagine will carry with it a higher-order awareness that a representing of pain is occurring, and the imagining will therefore be a phenomenally conscious one. However, this shouldn’t obscure the theoretical

point, which is that the animal has the same sort of property occurring as we do when we find our own pains to be awful. If the position sketched above is sound, then it won't actually be misleading to imagine the animal's pain as conscious. Although strictly false, if the subjective, phenomenally conscious aspect isn't what makes pain bad in our own case, then the introduction of such an aspect into our imagining of the experience of the animal shouldn't be leading us astray.

Suppose, however, that someone is unconvinced and thinks that the phenomenally conscious properties of one's pain are intrinsic to what one finds awful, in such a way that the pain would not be awful (to us) without them. Still, there remains another argument that phenomenal consciousness is irrelevant to the possibility of sympathy. For what really makes pain bad, in any case, isn't its phenomenal properties as such, but rather the fact that the state of being in pain is *unwanted*. I shall argue that even if the phenomenal properties of pain are generally intrinsic to what one finds awful and wishes to see cease, this isn't always the case. Indeed, I will suggest that it is goal frustration that is the proper object of sympathy, not pain sensations as such.

Pain perception in mammals (at least) is underlain by two distinct nervous pathways. The so-called "new path" is fast, projects to a number of different sites in the cortex, and is responsible for pain discrimination, location, and feel. It is this pathway that gives rise (in humans) to the felt qualities of pain. The "old path," in contrast, is comparatively slow, projects to more ancient subcortical structures in the limbic system of the brain, and is responsible for pain motivation. It is this that makes one want the pain to stop. Some analgesics like morphine suppress the old path while leaving the new path fully functional. Subjects will say that their pain feels just the same to them, but that they no longer care. What they are aware of is now just a sensation. It is no longer an *awful* sensation. Such people are no longer appropriate objects of sympathy, surely. Of course one might be sympathetic for any physical damage that has occurred, because of its likely future effects on the life of the agent; but that is another matter. Not only is there no obligation on us to try to make the remaining pain sensation stop, but it seems that doing so would be morally completely neutral. Making the pain sensation stop wouldn't be doing the subject any sort of favor.

What makes pain (or anything else) awful, then, is that it is the object of a negative desire. Phenomenal consciousness is irrelevant to its status. (Note that these points would motivate some kind of *preference* utilitarianism over any form of *hedonistic* utilitarianism in moral theory.) It would be absurd to insist that the person in our example above is undergoing something bad (at least assuming that there is no physical damage in addition to the pain sensation), despite the fact that he doesn't care. And the claim made here probably generalizes. For there are powerful arguments for thinking that what things and events count as valuable depend ultimately on our desires, values, and preferences.¹⁷ The question that we need to ask, therefore, isn't whether animals are capable of phenomenally conscious experience, but whether they are subjects of propositional attitudes, especially desires and goals.¹⁸



3. HOW MANY ANIMALS HAVE ATTITUDES?

What does it take for a creature to be capable of attitude states? Some philosophers have placed conditions on genuine attitude possession that are extremely demanding, such as a capacity for consciousness,¹⁹ rationality,²⁰ and/or spoken language.²¹ Such demands seem to me quite excessive. Section 2 has already shown that the consciousness condition is irrelevant to the question whether or not sympathy for animals is appropriate. The rationality condition probably doesn't even apply to human beings, much of the time.²² Moreover, the argument for claiming that language is necessary for attitude possession conflates an epistemic condition with a metaphysical one. It runs together the question of how one might *know* of the existence of a fine-grained attitude in the absence of language (such as the difference between believing that the cat is up this tree and believing that the furry animal is up the biggest tree in the yard) with the question of what it takes to *possess* such an attitude. In addition, three decades of careful work by comparative psychologists has shown us how we can make significant progress even on the epistemic question.

Other philosophers, in contrast, have placed extremely weak conditions on attitude possession. They have claimed, for example, that it is enough that a creature's behavior should allow it to be *interpreted as* possessing beliefs and desires.²³ I shall assume that such weak claims are likewise incorrect, for two reasons. The first is that people are intuitive realists about mental states. We are therefore open to the possibility of being mistaken in our interpretations, even under ideal conditions.²⁴ The second is that our concern should be with the real mental properties that animals possess (in the sense that those properties are acceptable to science), not whether it is pragmatically useful to think of them in such terms. We therefore need to know whether there is a real, scientifically valid, distinction between the belief states and the desire states of animals (and between these and their perceptual states). We also need to be assured that these states are compositionally structured out of concepts or concept-like elements, interacting with one another in inference-like processes in virtue of their compositional structures. These are demanding conditions. Nonetheless, I shall argue that even insects can meet them.²⁵

The dominant position in both philosophy and psychology throughout much of the twentieth century was that animals aren't capable of genuine thought (although they can be interpreted as such, anthropomorphically). Animal behavior was believed to be the product of conditioning, resulting from learned associations among stimuli, and between stimuli and behavioral responses. Anyone espousing such a view has a ready-made reason for denying moral standing to animals, if attitude-possession is a necessary condition for such standing. But the adequacy of the account has been crumbling rapidly since at least the 1980s. Animals engage in many forms of learning that cannot be accounted for in associationist terms, and even conditioning itself is better explained by the operations of a computational rate-estimation system, as I shall now briefly explain.



Gallistel and colleagues have shown that animals in conditioning experiments who are required to respond to randomly changing rates of reward are able to track changes in the rate of reward about as closely as it is theoretically possible to do.²⁶ Thus, both pigeons and rats on a variable reward schedule from two different alcoves will match their behavior to the changing rates of reward. There is a lever in each alcove, each set on a random reward schedule of a given probability. However, these probabilities themselves change at random intervals. It turns out that the animals respond to these changes *very* rapidly, closely tracking the random variations in the immediately preceding rates. They aren't averaging over previous reinforcements, as associationist models would predict. On the contrary, the animals' performance comes very close to that of an ideal Bayesian reasoner, and the only model that can predict the animals' behavior is one that assumes that they are capable of calculating the ratio of the two most recent intervals between rewards from the two alcoves. It is therefore hard to resist the conclusion that the animals are genuinely reasoning, rather than learning by association.

Another dramatic example of nonassociationist learning has been provided by Balci and colleagues.²⁷ They tested swift and intuitive assessments of risk, using similar experiments in both humans and mice with very similar results. All subjects were set the task of capturing an object in one of two positions for a reward. (For the humans, this occurred on a computer screen. The mice had to press a bar to obtain a reward in one of two alcoves.) There were two types of trial, short latency and long latency, whose probability of occurring varied from one series of trials to the next. If the trial was a short one, the target could be captured in the left-hand position within two seconds of the stimulus onset. If the trial was a long one, the target could be captured in the right-hand position during the third second. Subjects were therefore required to estimate the optimum time to switch from the short-latency strategy to the long-latency strategy, an estimate that depends on two factors. The first is the objective chance (set by the experimenters in each series of trials) that the interval would be either short or long. The second is the accuracy of each subject's estimate of elapsed time (which varies from individual to individual, but is normally in the region of $\pm 15\%$). Balci and colleagues were able to compute the optimum switch time for each subject, combining both sets of probabilities. This was then compared with actual performance. Human subjects came within 98% of optimum performance, whereas the mice were at 99%. Moreover, very little learning was involved. In most series of trials, subjects were just as successful during the first tenth or the first quarter of the series as they were during the final tenth or the final quarter.

In addition, Gallistel has demonstrated that conditioning behavior itself is best explained in rule-governed computational terms, rather than in terms of associative strengths.²⁸ He points out that there are many well-known conditioning phenomena that are extremely puzzling from an associationist perspective, but that fall out quite naturally from a computational account. To give just a single example: the number of reinforcements that are necessary for an animal to acquire an intended behavior is unaffected by mixing *unreinforced* trials into the learning process. One set of

animals might be trained on a 1:1 schedule: these animals receive a reward every time that they respond when the stimulus is present. But another set of animals might be trained on a 10:1 schedule: here the animals only receive a reward once in every ten trials in which they respond when the stimulus is present. It still will, on average, take both sets of animals the same number of rewarded trials to acquire the behavior. It will take the second set of animals *longer* to acquire the behavior, of course. If it takes both sets of animals forty rewarded trials to acquire the behavior, then the first set might learn it in eighty trials, whereas the second set will take eight hundred. However, the number of *reinforcements* to acquisition is the same. This is extremely puzzling from the standpoint of an associationist. One would expect that all those times when the stimulus *isn't* paired with a reward ought to weaken the association between stimulus and reward, and hence make learning the intended behavior harder. However, it doesn't, just as Gallistel's computational model predicts.

Moreover, many forms of animal learning give rise to stored informational states that can interact with a variety of different goals to guide the animal's behavior, just as can our own beliefs. To offer a single illustrative example: chimpanzees can acquire detailed information about the spatial (and other) properties of their forest environment. They use this information in the service of a variety of foraging goals (such as seeking out one sort of fruit that they can predict to be ripening rather than another), but also when patrolling their territory or launching an attack on a neighborhood troupe. Depending on their goals, they travel in a straight line to their desired location, which they can approach in this way from many different directions.²⁹ The animals are therefore engaging in a form of practical reasoning, accessing their beliefs to achieve the satisfaction of a current goal.

Generalizing from data of the sort considered above, together with a range of other forms of evidence, we are warranted in concluding that mammals and birds, at least, share a perception/belief/desire cognitive architecture much like our own. Moreover, it should be stressed that to attribute beliefs and goals to animals is not just to give a redescription of their behavior. On the contrary, it is to ascribe real underlying states to them as the *causes* of their behavior, doing so on the basis of an inference to the best explanation. The question remains, however, how widespread minds of this sort are within the animal kingdom. I shall now briefly argue that navigating invertebrates like bees, wasps, and spiders share a similar sort of mental architecture, and are likewise capable of propositional attitudes.³⁰

For brevity, I shall focus on honeybees. Like many other insects, bees use a variety of navigation systems. One is dead reckoning, which involves integrating a sequence of directions of motion with the distance traveled in each direction, to produce a representation of one's current location in relation to the point of origin.³¹ This requires that bees can learn the expected position of the sun in the sky at any given time of day, as measured by an internal clock of some sort. Another mechanism permits bees to recognize and navigate from landmarks, either distant or local.³² Moreover, some researchers have shown that bees will also construct crude mental maps of their environment from which they can navigate.³³ (The maps have to be crude because of the poor resolution of bee eyesight. But they can still contain

the relative locations of salient landmarks, such as a large freestanding tree, a forest edge, or a lake shore.) Furthermore, in addition to learning from their own exploratory behavior, bees famously also acquire information from the dances of other bees about the spatial relationships between the hive and various desired substances and objects (including nectar, pollen, water, and potential new nest sites).

Although basic bee motivations are, no doubt, innately fixed, the goals that are activated on particular occasions (such as whether or not to move from one foraging patch to another, whether to finish foraging and return to the hive, and whether or not to dance on reaching it) would appear to be influenced by a number of factors.³⁴ (Note that similar claims can be made about humans.) Bees are less likely to dance for dilute sources of food and they are less likely to dance for the more distant of two sites of fixed value. They are less likely to dance in the evening or when there is an approaching storm, when there is a significant chance that other bees might not be capable of completing a return trip. Moreover, careful experimentation has shown that bees scouting for a new nest site will weigh up a number of factors, including cavity volume, shape, size and direction of entrance, height above ground, dampness, draftiness, and distance away from the existing nest.³⁵

Most important for our purposes, bees' goal states and information states interact with one another in flexible ways, and in a manner strongly suggestive of an underlying constituent structure. Thus, the very same information about the direction and distance between the hive and a newly discovered source of nectar can be used to guide a direct flight to the hive when the bee's goal is to return there (often flying a route that has never previously been traversed by that individual); or it can be used to guide the orientation and number of waggles in the bee's dance to inform others of the location; or it can be used to guide a straight flight back to the nectar from the hive once the bee has been unloaded. Moreover, the flexibility of bee learning and navigation suggests that their informational states are compositionally structured, with some having the following form: "[object or substance] is [measure of distance] in [solar direction] from [object or substance]." The distance and direction information will be utilized differently depending on whether the bee's goal is represented in the first position or the last one (or on whether the goal is to dance). Moreover, we also know that bees are capable of computing a novel bearing (from a known landmark to a feeder, for example) from two others (from the landmark to the hive and from the feeder to the hive).³⁶

From this and much other data, we can conclude that not only do bees have distinct information states and goal states, but that such states interact with one another in the determination of behavior in ways that are sensitive to their contents and compositional structures. In this case bees really do exemplify a perception/belief/desire cognitive architecture, construed realistically. There are also many things that bees can't do, of course, and there are many respects in which their behavior is inflexible. However, this inflexibility doesn't extend to their navigation and navigation-related behavior. On the contrary, the latter displays just the right kind of integration of goals with acquired information to constitute a simple form of practical reasoning. Similar points can be made with respect to other species of navigating invertebrates.

None of this is to deny that there are significant differences between the minds of humans and other animals, of course. Indeed, many psychologists have converged on the idea that humans employ two distinct types of system for reasoning and decision making.³⁷ The first consists of a set of quick and intuitive systems that are largely shared with other animals. The second is a more reflective system that is thought to be unique to humans, and which employs a stream of inner speech and visual imagery to direct and control our mental lives and (indirectly) our behavior. It should be stressed, however, that on what I take to be the best account of the operations of the reflective system, the latter is *realized in* the workings of the intuitive systems (hence being parasitic upon them).³⁸ They are also dependent upon motivations provided by the latter to achieve their effects. Moreover, it is very doubtful whether the reflective system really contains, itself, any propositional attitude states.³⁹ Furthermore, the case of pain, discussed in section 2, suggests that it isn't the presence of some sort of reflective mind that determines the appropriateness of sympathy. For it isn't by conscious reflection that we determine that our pains are awful, of course. Rather, a powerful desire to get rid of them is generally forced on us as part of the painful episode itself.

4. THE EXTENT OF WARRANTED SYMPATHY FOR ANIMALS

Our conclusion in section 2 was that the frustration of an agent's goals constitutes the most basic object of sympathy, irrespective of anything phenomenological. However, our conclusion in section 3 was that navigating invertebrates (including bees and wasps, together with many kinds of ants and spiders) are genuinely *agents* with a perception/belief/desire psychology and with goals that can be frustrated. Putting these two conclusions together, it follows that many invertebrates are at least possible objects of sympathy and altruistic concern.

There is a famous story about the medieval Scottish rebel leader, Robert the Bruce. Hiding in a cave while on the run from the English following a defeat in battle, he is said to have watched a spider repeatedly try to spin its web across a section of the cave, eventually succeeding after many failed attempts. Robert the Bruce is said to have been inspired by the spider's persistence to resume his war against the English. It is not reported whether or not he felt sympathy for the spider, but had he done so, it now appears that he would not have been making any sort of metaphysical mistake. For it is quite likely that the spider was genuinely an agent with its own beliefs and goals, making the frustration of one of its goals an appropriate target of sympathy.

However, it is one thing to say that sympathy for the frustrated goals of an animal is possible or appropriate, and another thing to say that it is required, or that the animal's situation makes any sort of moral claim on us. (These correspond to two different senses in which sympathy for an agent can be *warranted*.) Compare

the following. Most people feel disgust at the thought of incest between siblings, even when consensual and guaranteed to be reproductively barren.⁴⁰ This is probably a tendency that is innate to human psychology.⁴¹ Moreover, this sort of incest has many properties in common with cases where we almost certainly *should* feel disgust, such as incest between a father and his 16-year-old daughter. Nevertheless, many of us have come to believe that sibling incest doesn't in itself deserve our moral disapproval. Similarly, then: although sympathy for the frustrations of any creature correctly categorized as an agent can occur, and may also result from an innate psychological tendency,⁴² it is another matter to claim that such sympathy *should* be felt, or that it gives rise to any kind of moral obligation when it is. This can only be resolved by considerations of moral theory.

Bentham is famous for having claimed that the only factor relevant to determining whether we have moral obligations toward a creature is whether it can suffer and feel pain.⁴³ Updated in light of our discussion in section 2, the claim should now be that the only relevant factor is a capacity for goal frustration. If this is what utilitarianism requires, then it appears that we owe equal moral consideration to the goals of many invertebrates. No doubt some will rush to embrace such a conclusion. Many, however, will not. Most of us don't feel that we do anything wrong when we kill the ants that enter our kitchens, although the costs of not doing so may be quite minimal. Still less do we feel that we would be wrong to prevent them from entering in the first place. Furthermore, I think most people would feel that it would be a serious moral error to allow the goals of even millions of ants or bees to outweigh the goals of a single human child, or even to be put into the same equation with the latter. (I should stress that I am referring to individuals here, not entire species. For of course there are powerful reasons for maintaining biodiversity and preserving endangered species, having to do with the long-term interests of humans themselves.) Admittedly, this might be because people don't really consider bees to be genuine agents with desires of their own. It may be that anyone convinced by the arguments sketched in section 3 would immediately regard the animals in question as possessing moral standing, although I doubt it. The real question before us is what the best moral theory would support.

In what follows, I will focus on forms of utilitarian and contractualist moral theory, discussing the former briefly here before exploring the implications of the latter throughout the remainder of the chapter. (Forms of virtue theory are best pursued and accounted for within the framework of one or the other of these two approaches, in my view. See section 8 for a sketch of a contractualist treatment.) There are many different varieties of utilitarianism, of course, which have been defended in a number of different ways. So it is hard to know what utilitarianism as such entails on any particular issue such as the moral standing of animals, or to find ways of evaluating all forms of utilitarianism at once. One of the most acceptable utilitarian theories has been provided by Singer.⁴⁴ This is distinctive in providing a highly plausible—and naturalistically acceptable—account of the origins of morals and moral motivation. In Singer's telling, morality takes its start from natural (innate) human sympathy. Initially this is focused on family and tribe members, all of whom will be individually

known to the agent. However, the impact of rational considerations thereafter forces the moral circle to be gradually widened to include members of other tribes and nations. For people can be brought to see that there is no rational difference between the sufferings and frustrations of someone whom they know and can see, and the similar suffering of someone who is a member of another group living elsewhere in the world. This issues in a principle of equal consideration of interests that is applicable to all people and that should, on similar grounds, be extended to include members of some other species of animals, Singer believes.

It is difficult to see how any such sympathy-based ethical theory can have the resources to deny moral standing to insects. For it seems that bees and humans are relevantly alike in the one respect that matters: both are agents with goals that can be frustrated; and as we saw in section 2, the most fundamental target of sympathy is goal frustration. This isn't to say that utilitarians of this sort can't find *any* relevant differences between humans and other animals, of course. For they can allow numbers of desires to count (humans will generally have many more of them), as well as normal life expectancy, in addition to indirect effects on humans who are friends or relatives of the person in question, and so on. However, just as Singer has claimed that there can be no defensible grounds for according standing to all humans while denying it to animals, so it seems he can't grant the standing of *some* animals without also granting it to almost all (including individual members of many species of insect).

Other forms of utilitarianism may be able to avoid this consequence. For example, one might make a commitment to the intrinsic value of *endorsed* desires (of the sort that a human might have) in contrast with the *mere* desires of animals. Such an account would face problems of its own, requiring us to give up on naturalism and accept the mind-independence of value.⁴⁵ In what follows, however, I propose to set utilitarian moral theories to one side. They confront two pervasive sets of problems. These are sufficiently deep to render utilitarian theories unacceptable, in my view, provided that there are alternatives that are both viable and sufficiently plausible.

The first of these problems is to provide adequate protection for individuals against the tyranny of the utility of the majority. Differently put, utilitarian theories face notorious difficulties in accounting adequately for principles of *justice*. The second problem is more theoretical: it is to provide a non-moral space, a domain of action in which individuals can be free to do what they wish. For common sense divides actions into three basic kinds: those that are duties (and are required), those that are against duty (and are forbidden), and those that are neither (which are discretionary). The third category then further subdivides into those that are morally admirable (but supererogatory) and those that are morally indifferent (where agents can please themselves). Utilitarianism, in contrast, is apt to consider pleasing oneself to be either a duty (in the right sorts of utility-increasing circumstances) or against duty.

I do not pretend to have refuted utilitarian moral theories in these few comments, of course. That has not been my goal. Taken together with the brief discussion of contractualist moral theories that follows in section 5, my aim is simply to explain why the remainder of the chapter will approach the question of the moral standing of animals from the perspective of contractualism.

5. CONTRACTUALIST MORAL THEORY

In the discussion that follows, I shall assume that some or other version of contractualist moral theory is correct. All contractualists of the sort that I am concerned with agree that moral truths are, in a certain sense, human constructions, emerging out of some or other variety of hypothetical rational agreement concerning the basic rules to govern our behavior.

In Rawls's version of contractualism, moral rules are those that would be agreed upon by rational agents choosing, on broadly self-interested grounds, from behind a "veil of ignorance."⁴⁶ (For these purposes, rational agents are agents who have the necessary mental capacities to consider, reason about, and implement systems of universal rules.) On this account, we are to picture rational agents as attempting to agree on a set of rules to govern their conduct for mutual benefit in full knowledge of all facts of human psychology, sociology, economics, and so forth, but in ignorance of any particulars about themselves, such as their own strengths, weaknesses, tastes, life plans, or position in society. All they are allowed to assume as goals when making their choice are the things that they will want *whatever* particular desires and plans they happen to have—namely, wealth, happiness, power, and self-respect. Moral rules are then the rules that would be agreed upon in this situation, provided that the agreement is made on rational grounds. The governing intuition behind this approach is that justice is fairness: since the situation behind the veil of ignorance is fair (all rational agents are equivalently placed), the resulting agreement must also be fair.

In Scanlon's version of contractualism, in contrast, moral rules are those that no rational agent could reasonably reject who shared (as his or her highest priority) the aim of reaching free and unforced general agreement on the rules that are to govern behavior.⁴⁷ On this account, we start from agents who are allowed full knowledge of their particular qualities and circumstances (as well as of general truths of psychology and so forth). However, we imagine that they are guided, above all, by the goal of reaching free and unforced agreement on the set of rules that are to govern everyone's behavior. Here each individual agent can be thought of as having a veto over the proposed rules, but it is a veto that they will only exercise if it doesn't derail the agreement process, making it impossible to find any set of rules that no one can reasonably reject.

In what follows, I shall often consider arguments from the perspective of *both* of these forms of contractualism. In this way, we can increase our confidence that the conclusions are entailed by more than just the specifics of a particular account. In addition, it should be stressed that for contractualists of these sorts, rational agents aren't allowed to appeal to any moral beliefs as part of the idealized contract process. This is because moral truths are to be the output of the contract process, and hence cannot be appealed to at the start. In other words, since morality is to be constructed through the agreement of rational agents, it cannot be supposed to exist in advance of that agreement. It should be acknowledged, however, that not all varieties of

contractualism satisfy this constraint. For some allow the contracting agents to appeal to antecedent moral *values*, and in such cases the implications for the question of the moral standing of animals are much more difficult to discern.⁴⁸ Nonetheless, the constraint is justified, in my view, by the goal of providing a comprehensive moral theory that would be naturalistically acceptable, requiring us to postulate no properties and processes that would be unacceptable to science. In consequence, in the discussion that follows I shall, for simplicity, restrict my use of the term “contractualism” to *only* the two kinds described at the outset of this section.

The two main theoretical advantages of contractualism are the converse of the two major difficulties for utilitarianism. For one of the main goals of the contracting agents is to agree on a set of principles of justice, and individuals will veto any proposed rules that allow the vital interests of one to be compromised for the benefit of others (without adequate compensation). Individuals should therefore receive adequate protection. Moreover, contracting self-interested agents will be concerned to preserve as much freedom for themselves to pursue their own projects and goals as possible under the contract. Hence a significant space for non-moral action is nearly guaranteed.

It should be noted, however, that according to each of the forms of contractualist account that we will be considering, some moral rules will be mere local conventions (whereas others will be universally valid). This will happen whenever the contract process entails that there should be *some* moral rule governing a behavior or set of circumstances, but where there are no compelling grounds for selecting one candidate rule over the others. (By way of analogy, the rule requiring people in the United States to drive on the right suggests that there should be a rule requiring people to drive on one side of the road or the other, or chaos will ensue. But it doesn't much matter which side is chosen, and in the United Kingdom, in contrast, one should drive on the left.) It may be that rules governing the treatment of animals are of this general sort, as we shall see later.

One important theoretical challenge remains to be addressed before we can turn to the question of the implications of contractualism for the moral standing of animals. This is the question of the sources of moral motivation. Why should anyone care what rational agents *would* agree to? Why should agents take the results of any sort of hypothetical agreement to be binding on their actual behavior? In contrast with the difficulties that contractualism apparently faces on this question, some utilitarian approaches to moral theory have a plausible story to tell in this regard, for they can postulate an innate tendency to sympathize with the sufferings and struggles of other agents, as we have seen. Such a claim is actually very plausible,⁴⁹ and it is therefore quite easy to see why people should care about increasing utility, for this connects directly with one of their basic motivations.

In reply, contractualists should postulate an innate desire to be able to justify oneself to others in terms that the latter can freely accept. Given that no one will freely accept justifications that require them to believe falsehoods or to reason irrationally (by their own lights), this will amount to a desire to be able to justify one's conduct to other agents in terms that they can freely and *rationally* accept. It then

seems very plausible that any set of rules that would enable one to satisfy this desire would be one that no one could reasonably reject who shared the aim of reaching free agreement.⁵⁰

How plausible is it that humans have an innate desire of this sort? It makes a good deal of sense that the desire to justify oneself to others should be quite basic. Even hardened criminals will characteristically offer attempted justifications of their conduct. Moreover, we know that young children will begin making complaints and offering justifications to one another at quite an early age, without any training or encouragement from adults.⁵¹ In addition, the existence of such a desire is just what one would predict evolution should have produced, given that punishment for unjustified breaches of societal norms (often resulting in death or exclusion from the group) has been a fundamental part of human society from time immemorial.⁵²

I no more claim to have established the truth of contractualist moral theory here than I claimed to have refuted utilitarianism in section 4. But I hope to have shown that it can be reasonable to assert (as I do) that contractualism forms the best framework for moral theorizing (at least, modulo its commitments concerning the rights of animals and infants, which we consider in the sections to come—like many others, I endorse the method of reflective equilibrium in moral theorizing).

6. ALL HUMANS HAVE STANDING

In the present section, I will argue that all, or almost all, human beings have moral standing, irrespective of their status as rational agents. I will argue first that all rational agents have standing, and will then show that the same basic sort of standing should be accorded to human infants and senile (or otherwise mentally handicapped) adult humans. Since these arguments don't extend to animals (as we will see in section 7), they constitute a reply to Singer's main challenge.⁵³ He claims that contractualism can't consistently deny moral standing to animals without *also* withholding it from infants and mentally defective humans. This section and the next will demonstrate that Singer is mistaken.

The topic of the present section is important, since it is often taken as a reductio of contractualism that it can't adequately accommodate the moral standing of humans who aren't rational agents. If contractualism can't give a convincing account of the moral standing of infants and senile elders, then that will conflict with powerful and deeply held intuitions. This would mean deep trouble for the entire theoretical approach. I should note that I don't, however, see the question of the moral standing of human fetuses as belonging in the same "make or break" category, and so won't attempt to tackle that topic here. For this is an issue that is already deeply controversial, on which people have wildly differing intuitions. It is consequently difficult for everyone. (I actually believe, however, that contractualists should grant

moral standing to fetuses in the later stages of development while denying such standing in the early stages, such as during the first trimester.)

The contractualist framework plainly entails that all rational agents should have the same moral standing. This is because moral rules are conceived to be constructed *by* rational agents *for* rational agents. Rational agents behind a veil of ignorance would opt to accord the same basic rights, duties, and protections to themselves (that is to say: to all rational agents, since they are choosing in ignorance of their particular identities). And likewise within Scanlon's framework, any proposed rule that would withhold moral standing from some subset of rational agents could reasonably be rejected by the members of that subset.

Contractualism accords the same basic moral standing to all rational agents as such, and not merely to the members of some actual group or society. On Rawls's approach, contracting agents don't even know which group or society they will turn out to be members of once the veil is drawn aside. On Scanlon's account, although we are to picture rational agents seeking to agree on a framework of rules in full knowledge of who they are and the groups to which they belong, those rules can be vetoed by *any* rational agent, irrespective of group membership. It follows that if Mars should turn out to be populated by a species of agent possessing the right sort of psychology, then contractualism would accord the members of that species full moral standing.

However, it seems that rational contractors wouldn't automatically cede moral standing to those human beings who are *not* rational agents (such as infants and senile elders), in the way that they must grant standing to each other. Nevertheless, there are considerations that should induce them to do so. The main one is as follows.⁵⁴ Notice that the fundamental goal of the contract process is to achieve a set of moral rules that will provide social stability and preserve peace. This means that moral rules will have to be *psychologically supportable*, in the following sense: they have to be such that rational agents can, in general, bring themselves to abide by them without brainwashing. (Arguably, no rational agent would consent to the loss of autonomy involved in any form of the latter practice.) But now the contractors just have to reflect that, if anything counts as part of "human nature" (and certainly much does)⁵⁵ then people's deep attachment to their infants and aged relatives surely belongs within it. In general, people care as deeply about their immediate relatives as they care about anything (morality included), irrespective of their relatives' status as rational agents—in which case contracting agents should accord moral standing to all human beings, and not just to those human beings who happen to be rational agents.

Consider what a society would be like that denied moral standing to infants and/or senile old people. The members of these groups would, at most, be given the same type of protection that gets accorded to items of private property, deriving from the legitimate concerns of the rational agents who care about them. That would leave the state or its agents free to destroy or cause suffering to the members of these groups whenever it might be in the public interest to do so, provided that their relatives receive financial or other forms of compensation. For example, senile elders might

be killed so that their organs could be harvested, or it might be particularly beneficial to use human infants in certain painful medical experiments. We can see in advance that these arrangements would be highly unstable. Those whose loved ones were at risk would surely resist with violence, and would band together with others to so resist. Foreseeing this, contracting rational agents should agree that all human beings are to be accorded moral standing. Note that this doesn't mean, of course, that all humans are given the same *rights*. While normal human adults might be given a right to autonomy, for example, it will make little sense to accord such a right to a person who isn't an autonomous agent.

It might be replied against the argument from social stability that there have been many communities in the world where infanticide and the killing of the old have been sanctioned, without any of the predicted dire consequences for the stability and peacefulness of those societies. Thus, in many traditional societies the smaller of a pair of twins, or any infant born deformed, might be abandoned by its mother to die.⁵⁶ Moreover, certain Inuit tribes are said to have had the practice of forsaking their elders to die in the snow when the latter became too infirm to travel.

One point to be made in response to this objection is that all of the communities in question were sustained and stabilized by systems of traditional belief (often religious belief: "the gods require it" might be the justification given). This is no longer possible for us in conditions of modernity, where it is acceptable for any belief, no matter how revered and long-standing, to be subjected to critical scrutiny. In addition, the contract process envisaged by contractualism can't make any appeal to such traditional beliefs.

Another point to be made in response to the objection is that all of the communities in question were teetering on the edge of survival for their members; or at least the costs to individuals for acting differently would have been *very* high. In such cases, it is not obvious that the practices we are considering involve the denial of moral standing to infants and/or the old. This is because in these communities death occurs from failure to support, or from the withdrawal of aid, rather than by active killing. We, too, accept that it can be permissible to withdraw support, allowing someone to die, when the costs to oneself become too great. Think, for example, of someone in the process of rescuing another person from drowning, who has to give up their effort when they realize that the current is too strong and that they themselves are in danger of drowning.

Infants and senile old people aren't by any means accorded "second-class moral citizenship" within contractualism, it should be stressed. Although it is only rational agents that get to grant moral standing through the contract process, and although the considerations that should lead them to grant moral standing to humans who aren't rational agents are indirect ones (not emerging directly out of the structure of the contract process, as does the moral standing of rational agents themselves), this has no impact on the product. Although the considerations that demonstrate the moral standing of rational agents and of nonrational humans may differ from one another, the result is the same: both groups have moral standing, and both should have similar basic rights and protections.

It probably isn't true that contractualism should accord moral standing to *all* human beings, however. Consider anencephalic infants. These are undoubtedly human beings. Yet they are born without a cortex, and although they sometimes possess a rudimentary brainstem, this lacks any covering of skull or skin. They are blind and deaf, and incapable of feeling pain, although reflex actions such as breathing and responses to touch and sound may occur. If not stillborn, most die within a few hours or days of birth. There is no cure or treatment.⁵⁷ The argument from social stability appears to have no application in such cases. Most parents will grieve at the *birth* of an anencephalic infant rather than its death, and will make no requests that the infant's life should be prolonged. What would be the point? Moreover, if the state were to legislate to permit harvesting organs from such infants, vigorous debate would ensue, no doubt, but it seems very unlikely that serious social instability would result. It is true that *some* people will care deeply about the lives of their anencephalic infants, as (famously) did the mother of Baby K.⁵⁸ But, in contrast with normal or handicapped infants, the vast majority of parents will not. Moreover, it is likely that the attachments of those who do care don't result from the normal operations of an innate human nature, but are produced, rather, by prior moral or religious beliefs.

We can conclude the following. If, as I claim, contractualism is the correct framework for moral theorizing, then it follows that almost all human beings—whether infant, child, adult, old, or senile—should be accorded moral standing. They should also be provided with a similar basic structure of protections (depending on their powers and capacities). In section 7, I will show, in contrast, that contractualism leaves all animals beyond the moral pale, withholding moral standing from them altogether.

7. NO ANIMALS HAVE STANDING

In the present section, I will maintain that the argument just given for according moral standing to all humans doesn't extend to animals. I shall then consider two further attempts to secure moral standing for animals within contractualism, showing that they fail. The upshot can be captured in the slogan: "Humans in, animals out." But first I propose to argue that no animals count as rational agents in the sense that is relevant to contractualism—in which case they don't *automatically* acquire moral standing through the contract process.

What does it take to qualify as a rational agent from the perspective of contractualist moral theory? A rational agent is a potential contractor, which means that such a person should be capable of proposing and examining normative rules, as well as reasoning about the consequences of their adoption. It also means having the sort of motivational and emotional systems necessary to comply with and enforce such rules (at least some of the time) and to constrain one's behavior in accordance with

previous agreements. Therefore, emotions like guilt and indignation are plausibly part of what it takes to be a rational agent.

The evidence suggests that rational agency is a distinctively human adaptation. Animals are certainly agents, and possess many remarkable cognitive capacities. For example, apes seem to possess at least some of the ingredients of human moral psychology, such as sympathy for others and engagement in reciprocal social interactions.⁵⁹ But there is no reason to believe that apes are capable of thinking in terms of normative rules, or that they would be motivated to comply with such rules if they could. On the contrary, evidence is beginning to accumulate that humans are unique in possessing an innate moral faculty that was selected for in evolution because of its role in sustaining complex cooperative societies.⁶⁰ This means that we are (at least for the present) warranted in assuming that only human beings are rational agents in the sense relevant to contractualism.

The argument of section 6 was that human beings who aren't rational agents should nevertheless be accorded moral standing to preserve social stability, since people's attachments to their infants and aged relatives are generally about as deep as it is possible to go. Someone might try presenting a similar argument to show that animals, too, should be accorded moral standing, citing the violence that has *actually* occurred in western societies when groups of people (like members of the Animal Liberation Front) have acted in defense of the interests of animals. Such an argument fails, however, because members of these groups are acting, not out of attachments that are a normal product of human emotional mechanisms, but out of their moral beliefs (which they take to be justified, of course, but which aren't the product of the contract situation).

Rational agents engaging in the contract process are forbidden from appealing to any antecedent moral beliefs, whether their own or other people's. This is because moral truth is to be the outcome of the contract, and shouldn't be presupposed at the outset. Therefore, contracting rational agents should *not* reason that animals ought to be accorded moral standing on the grounds that some people have a moral belief in such standing and may be prepared to kill or engage in other forms of violence in pursuit of their principles. The proper response is that such people aren't entitled to their belief in the moral standing of animals unless they can show that rational agents in the appropriate sort of contract situation should agree to it.

Many people care quite a bit about their pets, of course, which rational contractors might be expected to know. Could this give rise to a social-stability argument for moral standing? The answer is "no," for at least two distinct reasons. One is that it is far from clear that the phenomenon of pet keeping and attachment to pets is a human universal (in contrast with attachment to infants and aged relatives). It may rather be a product of local cultural forces operating in some societies but not others. If the latter is the case, then such attachments aren't a "fixed point" of human nature, which should constrain rational contractors in their deliberations. They might appropriately decide, instead, that society should be arranged in such a way that people don't develop attachments that are apt to interfere with correct moral decision making.



A second problem with the suggestion is that attachment to pets is rarely so deep as attachments to relatives, in any case. Because of this, people should have little difficulty in coming to accept that pets can only be accorded the sorts of protections granted to other items of private property. Most of us would think that it would be foolish (indeed, reprehensible) to continue to keep a pet that threatens the life of a child (e.g., through severe allergic reactions). And when the state declares that the public interest requires that someone's dog be put down (e.g., because it is vicious), it would surely be unreasonable to take up arms to defend the life of the animal, just as it would be unreasonable to kill to preserve a house that has been condemned for demolition.

It is true that *some* people care more for their pets than their relatives, and might well go to great lengths to preserve the lives of the former. Here too, however (as in the example of anencephalic infants discussed earlier), numbers matter. That such strengths of attachment are relatively rare means that the argument from social stability fails to apply. Moreover, to the extent that deep attachments to pets are increasing in our society, this is likely to be the product of more widespread beliefs in the moral standing of animals, combined with increases in individual social alienation. These are not the kinds of factors that can be appealed to legitimately in the construction of the moral contract.

While the argument from social stability fails to show that animals should be accorded moral standing, other arguments could still be successful. One suggestion would be that some rational agents behind the veil of ignorance should be assigned to represent the interests of animals, much as a lawyer might be assigned to represent the interests of a pet in a court of law in a case involving a disputed will.⁶¹ If it was the job of those representatives to look out for the interests of animals in the formulation of the basic moral contract, then they might be expected to insist upon animals being granted at least enough moral standing to protect their interests from invasive human harms.

This suggestion, however, is plainly at odds with the guiding idea of contractualism. For what possible motive could there be for assigning some agents to represent the interests of animals in the contract process, unless it were believed that animals *deserve* to have their interests protected? But that would be to assume a moral truth at the outset: the belief, namely, that animals deserve to be protected. We noted above, in contrast, that contractualism requires that the contracting parties come to the contract situation either without any moral beliefs at all, or setting aside (taking care not to rely upon) such moral beliefs as they do have.

The point is even easier to see in Scanlon's version of contractualism. Real individual agents with knowledge of their own particulars, but who either lack moral beliefs or have set aside their moral beliefs while trying to agree to rules that no one could reasonably reject, could have no reason to assign some of their number to represent the interests of animals. For to do so would be tantamount to insisting at the outset that animals should be accorded moral standing, preempting and usurping the constructive role of the contract process.

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Another suggestion is that people behind the veil of ignorance should be selecting moral rules in ignorance of their species, just as they are ignorant of their life-plans, age, strength, intelligence, gender, race, position in society, and so on.⁶² Then just as rational agents might be expected to agree on rules to protect the weak, since for all they know they might end up *being* weak, so rational agents might be expected to agree on a system of fundamental rights for animals, since for all they know they might end up *being* an animal.

One problem with this suggestion is that Rawls's veil of ignorance is designed to rule out reliance upon factors that are widely agreed to be morally irrelevant. Among the intuitions that a good moral theory should preserve is the belief that someone's moral standing shouldn't depend upon such factors as their age, or gender, or race. In contrast, we don't (or don't all) think that species is morally irrelevant. On the contrary, this is highly disputed, with (I would guess) a clear majority believing that differences of species (e.g., between human and horse) *can* be used to ground radically different moral treatment.

The veil of ignorance is a theoretical device designed to ensure that deeply held moral beliefs about what is, or isn't, morally relevant should be preserved in the resulting theory. So although the contracting agents aren't allowed to appeal to any moral beliefs in the contract process, the moral theorist has relied upon his prior moral beliefs in designing the surrounding constraints. Scanlon's version of contractualism, in contrast, digs deeper. It has the capacity to *explain why* the properties mentioned in the veil of ignorance are morally irrelevant. This is because one should be able to see in advance when one comes to the contract situation that if one proposes a rule favoring men, then this will be vetoed by those rational agents who are women, and vice versa; and so on for differences of age, intelligence, strength, race, and so on. Therefore, if we are motivated by the goal of reaching free and unforced general agreement among rational agents, we should abjure proposals that might favor one group over another. For we can foresee that these will be vetoed, and that others could equally well suggest proposals favoring other groups in any case, which *we* would need to veto. In contrast, there is no reason for us to abjure rules that favor humans over animals.

The idea of choosing rules in ignorance of one's species isn't even coherent within the framework of Scanlon's form of contractualism, in which agents are supposed to have full knowledge of their own particular qualities and circumstances, as well as of general truths of psychology, economics, and so forth. So there is no way to argue for the moral significance of animals from such a standpoint. One should be able to see in advance that a proposed rule that would accord moral standing to animals would be vetoed by some, because of the costs and burdens that it would place on us.

I conclude that while contractualism entails the moral standing of almost all humans (including infants, the handicapped, and senile old people), by the same token such standing should be denied to animals. However, even if this position is theoretically impeccable it faces a serious challenge. This is that most people believe strongly that it is possible to act wrongly in one's dealings with animals

(especially by displaying cruelty). Most people also believe that it is something about what is happening *to the animal* that warrants the moral criticism. These are powerful intuitions that need to be explained, or explained away. This will form the topic of section 8.

8. INDIRECT MORAL SIGNIFICANCE FOR ANIMALS

Imagine that while walking in a city one evening you turn a corner to confront a group of teenagers who have caught a cat, doused it in kerosene, and are about to set it alight. Of course you would be horrified. You would think that the teenagers were doing something very wrong, and the vast majority of people would agree with you. It would be a serious black mark against contractualist moral theories in general, and against the line that I am pursuing in this chapter, if this intuition could not be accommodated.

To meet this challenge, we should claim that while we do have duties toward animals, they are *indirect*, in the sense that the duties are owed to someone other than the animal, and that they fail to have any corresponding rights in the animal. According to one suggestion, they derive from a direct duty not to cause unnecessary offense to the feelings of animal lovers or animal owners, and it is to them that we have the duty. Compare the above scenario with this one: while walking through a city you come across a pair of young people, stark naked, making love on a park bench in broad daylight. In this case, too, you would be horrified, and you would think that they were doing something wrong. But the wrongness isn't, as it were, intrinsic to the activity. It is rather that the love-making is being conducted in a way that might be disturbing or distressing to other people: namely, in public. Likewise, it might be said, in the case of the teenagers setting light to the cat: what they are doing is wrong because it is likely to be disturbing or distressing to other people.

This particular proposal isn't at all promising. While it can explain why the teenagers are wrong to set light to a cat in the street (since there is a danger that they might be observed), it can't easily explain our intuition that it would be wrong of them to set light to the cat in the privacy of their own garage. Admittedly, there is some wiggle room here if one wanted to defend the account. For animals, having minds of their own, are apt to render public a suffering that was intended to remain private. The burning cat might escape from the garage, for example, or might emit such ear-piercing screams that the neighbors feel called upon to investigate.

We can demonstrate the inadequacy of this whole approach through an example in which such factors are decisively controlled for, such as the example of Astrid the astronaut. You are to imagine that Astrid is an extremely rich woman who has become tired of life on Earth, and who purchases a space rocket for herself so that she can escape that life permanently. She blasts off on a trajectory that will eventually take her out of the solar system, and she doesn't carry with her a radio or any other

means of communication. We can therefore know that she will never again have any contact with anyone who remains on Earth. Suppose now that Astrid has taken with her a cat for company, but that at a certain point in the journey, out of boredom, she starts to use the cat for a dart-board, or does something else that would cause the cat unspeakable pain. Astrid does something very wrong, but the grounds of its wrongness can't be the danger that animal lovers will discover and be upset, because we know from the description of the case that there is no such danger.

Quite a different approach, which I shall spend most of the remainder of this section developing and defending, would be to claim that the action of torturing a cat is wrong because of what it shows about the moral character of the actor, not because it infringes any rights or is likely to cause distress to other people. Specifically, what the teenagers do in the street and what Astrid does in her space rocket show them to be *cruel*, which would be our ground for saying that the actions themselves are wrong. In order for this account to work, however, it needs to be shown more generally that we sometimes judge actions by the qualities of moral character that they evince (without necessarily being aware that we are doing so), irrespective of any morally significant harm that they cause or of any rights that they infringe.

Return to the example of Astrid the astronaut, but now suppose that, in addition to a cat, she has taken with her another person. In one version of the story, this might be her beloved grandfather. In another version of the story (to avoid contaminating our intuitions with beliefs about family duties) it might be an employee whom she hires to work for her as a lifetime servant. Now at a certain point in the journey, this other person dies. Astrid's response is to cut up the corpse into small pieces, thereafter storing them in the refrigerator and feeding them one by one to the cat.

What Astrid does is wrong. But why? It causes no direct harm of any sort because her companion is dead and can't know or be upset, and nor can any harm be caused indirectly to others. In the nature of the case, no one else can ever know and be offended, nor are any rights infringed. Even if one thinks that the dead have rights (which is doubtful), Astrid might know that her companion was a non-believer who took not the slightest interest in ceremonies for the dead. He might once have said to her, "Once I am dead I don't care what happens to my corpse; you can do what you like with it," thus waiving any rights that he might have in the matter. But still one has the intuition that Astrid does something very wrong.

Why is what Astrid does wrong? I suggest it is because of what it shows about *her*. Just as her treatment of her cat shows her to be cruel, so her treatment of her dead companion displays a kind of disrespectful, inhuman, attitude toward humanity in general and her companion in particular. (Note that practices for honoring the dead, and for treating corpses with respect, are a human universal. They are common to all cultures across all times.)⁶³ In each case, we judge the action to be wrong because of the flaw that it evinces (both manifesting and further encouraging and developing) in her moral character, I suggest.

Consider a different sort of example. Suppose that lazy Jane is a doctor who is attending a conference of other medical professionals at a large hotel. She is relaxing in the bar during the evening, sitting alone in a cubicle with her drink. The bar is so

arranged that there are many separate cubicles surrounding it, from each of which the bar itself is plainly visible, but the insides of which are invisible to each other. Jane is idly watching someone walk alone toward the bar when he collapses to the floor with all the signs of having undergone a serious heart attack. Jane feels no impulse to assist him, and continues calmly sipping her martini.

Plainly what Jane does (or in this case, doesn't do) is wrong. But why? We can suppose that no harm is caused. Because the man collapses in plain view of dozens of medical personnel, expert help is swift in arriving, and she had every reason to believe that this would be so in the circumstances. Nor are any rights infringed. Even if there is such a thing as a general right to medical assistance when sick (which is doubtful), the man had no claim on her help in particular. If he had still been able to speak, he could have said, and (perhaps) said truly, "Someone should help me." But he surely wouldn't have been correct if he had said, "Jane, in particular, should help me." Since our belief in the wrongness of Jane's inactivity survives these points, the explanation must be the one that we offered in connection with Astrid the astronaut: it is wrong because of what it reveals about *her*. Specifically, it shows her to be callous and indifferent to the suffering of other people; or at least it shows that she lacks the sort of spontaneous, emotional, non-calculative, concern for others that we think a good person should have.

My suggestion is that our duties toward animals are indirect in just this sort of way. They derive from the good or bad qualities of moral character that the actions in question would display and encourage, where those qualities *are* good or bad in virtue of the role that they play in the agent's interactions with other human beings. On this account, the most basic kind of wrongdoing toward animals is *cruelty*. A cruel action is wrong because it evinces a cruel character, but what makes a cruel character bad is that it is likely to express itself in cruelty toward *humans*, which would involve direct violations of the rights of those who are caused to suffer. Our intuition that the teenagers and Astrid all act wrongly is thereby explained, but explained in a way that is consistent with the claim that animals lack moral standing.

I shall return to elaborate on this idea shortly. But first we need to ask how, in general, qualities of character, or virtues, acquire their significance within a contractualist moral framework. This question needs to be answered before the position sketched above can be considered theoretically acceptable.

Contracting rational agents should know in advance that human beings aren't calculating machines. We have limited time, limited memory, limited attention, and limited intellectual powers. In consequence, in everyday life we frequently have to rely on a suite of "quick and dirty" heuristics for decision making, rather than reasoning our way slowly and laboriously to the optimal solution.⁶⁴ Contracting rational agents should also realize the vital role that motivational states and emotional reactions play in human decision making.⁶⁵ Hence, they should do far more than agree on a framework of rules to govern their behavior. They should also agree to foster certain long-term dispositions of motivation and emotion that will make right action much more likely (especially when action is spontaneous, or undertaken

under severe time constraints). That is to say: contracting agents should agree on a duty to foster certain qualities of character, namely, the *virtues*.

For example, contracting agents should agree on a duty to develop the virtue of beneficence because they should foresee that more than merely rules of justice are necessary for human beings to flourish. (Such rules are for the most part negative in form: “Don’t steal, don’t kidnap, don’t kill, etc.”) Humans also need to develop positive attachments to the welfare of others, fostering a disposition and willingness to help other people when they can do so at no important cost to themselves. For there are many ways in which people will inevitably, at some point in their lives, need the assistance of others if they are to succeed with their plans and projects, ranging from needing the kindness of a neighbor to jumpstart one’s car on a frosty morning, to needing someone on the river bank to throw one a life-buoy or rope when one is drowning. It is important to notice, moreover, that this does *not* mean that actions undertaken out of generosity are really self-interested ones. On the contrary, generous people are people who feel an impulse to help others simply because they can see that the other person needs it. It only means that self-interest enters into the explanation of why generosity is a virtue. This is because self-interested rational agents attempting to agree on a framework of rules that no one could reasonably reject would agree on a duty to become a generous sort of person.

Rational contractors should also agree that people’s actions can be judged (that is, praised or blamed) for the qualities of character they evince, independently of the harm caused, and independently of violations of a right. This is because people *should possess*, or should develop, the required good qualities. Although these good qualities *are* good, in general, because of their effects on the welfare and rights of other people, their display on a given occasion can be independent of such effects. Hence we can and should evaluate the action in light of the qualities of character that it displays, independently of other considerations. It is for this reason that we can blame Astrid for her actions, even though she will never again have the opportunity to interact with other human beings.

If the account given above of the reasons why it is wrong for the teenagers to set light to the cat is to be successful, then cruelty to animals needs to be psychologically and behaviorally linked to cruelty to humans. To a first approximation, it must be the case that there is a single virtue of kindness, and a single vice of cruelty, that can be displayed toward either group. How plausible is this? The American Society for the Prevention of Cruelty to Animals claims on its website to have amassed voluminous evidence that people who are cruel to animals are also likely to engage in cruelty that involves human beings.⁶⁶ The United Kingdom’s RSPCA makes a similar claim on its “information for professionals” website, citing a number of empirical studies,⁶⁷ and prior to the Animal Welfare Act (which came into force in April 2007), the Society’s prosecutions for cruelty to animals were almost always built upon this premise.

It certainly appears that attitudes toward the sufferings of humans and animals are quite deeply linked, at least in western culture. This is because many of us have pets whom we treat as honorary family members, toward whom we feel filial

obligations. Our practices of child-rearing also make central use of animal subjects in moral education. A child's first introduction to moral principles will often involve ones that are focused upon animals. A parent says, "Don't be cruel—you mustn't pull the whiskers out of the cat," "You must make sure that your pet gerbil has plenty of water," and so on and so forth. It would not be surprising, then, if attitudes toward the sufferings and welfare of animals and humans should thereafter be pretty tightly linked. This will warrant us in saying that the teenagers who are setting light to a cat are doing something wrong, not because the cat has moral standing, but because they are evincing attitudes that are likely to manifest themselves in their dealings with human beings.

It seems possible, however, that the linkages that exist between attitudes to human and animal suffering depend upon local cultural factors. Hence it might be questioned whether these links reflect properties of a universal human nature. In cultures where pets aren't kept, where people's interactions with animals are entirely pragmatic (e.g., through hunting or farming), and where animals aren't used as exemplars in moral education, it is possible that these attitudes are pretty cleanly separable. At the very least, since cruelty involves causing *unjustified* suffering (just as murder is unjustified killing), we would expect cultures to differ a great deal in the circumstances in which cruelty is displayed toward an animal, because the virtue in question will have been molded by cultural assumptions and expectations. Thus consider someone in another culture who hangs a dog in a noose, strangling it slowly to death (perhaps because this is believed to make the meat taste better). This might not display cruelty under local conditions (at least in the sense of evincing a quality of character that is likely to generalize to that person's treatment of human beings), although in someone from our culture who behaved likewise it would do so.

If these speculations are correct, then our western moral attitudes toward animals should be thought of as forming part of the *conventional* content of our morality. If there is nothing in our human nature that links causing suffering to animals with cruelty to humans, then contracting rational agents would have no reason to insist upon a rule forbidding harsh treatment of animals, or a rule mandating a virtue of kindness that extends to animals. But contracting agents have to settle upon some or other way of bringing up their children, and cultural practices (such as pet-keeping) may be adopted for reasons having nothing to do with the moral contract itself, but which nevertheless have an impact upon morals. Given such facts, we can become obliged not to be cruel to animals. However, the question whether the wrongness of (what we take to be) cruelty-evincing behavior toward animals is either a conventional component of morality, on the one hand, or depends on universal facts about human nature, on the other, isn't the main issue. This is because, on either account, such wrongness will be consistent with the denial of moral standing to animals.

In either case, moreover, it is important to see that someone with the right sort of kindly character who acts to prevent suffering to an animal will do so *for the sake of the animal*. This is required for having the right sort of sympathetic

attitude. The latter involves a spontaneous upwelling of sympathy at the sight or sound of suffering (at least in certain circumstances). Likewise, it is something about the animal itself (its pain) that forms the immediate object of the emotion, and of the subsequent response. Certainly, someone acting to ease the suffering of an animal won't be doing it to try to make himself into a better person! Nevertheless, the reason why this attitude is a virtue at all will be because of the way in which the behavior is likely to manifest itself in the person's dealings with other human beings.

We can therefore explain away the commonsense intuition that when we are morally obliged to act to prevent suffering to an animal, we are required to do so *for the sake of the animal* (where this would be understood to entail that the animal itself has standing). As a theoretical claim about what grounds our duties toward animals, this is false, since animals lack standing. But as a psychological claim about the state of mind and motivations of the actor, who has acquired the right kind of kindly attitude, it is true. While agents should act as they do for the animal's sake (with the animal's interests in mind), the reason why they are required to do so doesn't advert to facts about the animal (which would then require animals to have standing), but rather to the wider effects on human beings.

9. THE EXPANDING CIRCLE

We have seen how contractualism can explain why cruelty to animals is wrong while denying that animals have moral standing. However, a final challenge remains: How are the changing attitudes toward animals (at least in western cultures) to be explained? Why do so many more people today think that animals have moral standing? Singer has a plausible story to tell, which makes the change in question appear progressive.⁶⁸ According to Singer, as we have seen, morality is sympathy based. Initially, feelings of sympathy were confined to members of one's own family or tribe. However, rational considerations have forced the moral circle to expand because one can see that there is no relevant moral difference between the suffering of someone in one's own social group and the suffering of someone from another tribe or nation state. On Singer's telling, the same rational movement of thought has now (for many people) caused the moral circle to expand still further to embrace animals.

One aspect of this challenge has already been addressed above. For we have shown in section 7 that the divide between humans and animals is by no means arbitrary from the perspective of contractualism. Moreover, there are reasons (briefly reviewed in sections 4 and 5) for preferring contractualist moral theories to utilitarian ones. But why, then, have so many people come to feel that animals have moral standing, if really they don't? I am forced to deploy a form of error-theory. I claim that people have been seduced by faulty arguments and false theoretical

assumptions, as well as by psychological tendencies that are apt to get reinforced in our culture. In fact, I can offer two distinct lines of explanation. Since these are consistent with one another, both may actually be at work.

We have already noted in section 8 how we use people's treatment of animals as an indicator of moral character. It may be that such a tendency is innate, and is partly a product of sexual selection. We know that what people want most in a marriage partner all around the world is someone who is kind.⁶⁹ Hence, kindly behavior toward animals (as well as other people's children) may be an honest indicator of fitness. (A thought experiment: you see a stranger in the street stop to lift up a cicada from a place where it is likely to get crushed, putting it safely on a nearby tree. Wouldn't you be inclined to feel warmly toward that person, even if, like most people, you don't think that insects have moral standing?) We also know that infants as young as six months of age show a preference for helpful over neutral agents, as well as a preference for neutral agents over unhelpful ones.⁷⁰ (This, too, may be adaptive, given how vulnerable infants still are at ages when they would normally start interacting with strangers.) Moreover, these preferences are displayed in respect to anything that gives off cues of animacy, including cartoon squares and triangles (on which a pair of eyes may have been drawn) that appear to be capable of self-motion. It would seem, therefore, that humans possess an innate tendency to prefer people who behave in a kindly fashion toward other agents, even when those agents are quite minimally characterized as such.

In previous eras, such an innate tendency would presumably have been prevented by social learning from issuing in a belief in the moral standing of all agents. Children would have observed adults interacting with animals in the context of hunting, fishing, and farming (as well as listening to adults talk). However, in our own culture there are few opportunities for such correction to take place, except in respect of adults' treatment of household and garden pests (which are insects, for the most part). Most children today have no experience of hunting, and little experience of farming beyond visits to a petting zoo and whatever they learn from television and books. Most children's only contact with vertebrate animals is with pets, who are generally treated in our culture as honorary members of a family. With nothing to prevent them from doing so, children's natural inclinations to feel warmly toward people who are kind, and not unkind, to other agents, leaves them wide open to a tendency to *moralize* such feelings, resulting in a belief in the moral standing of vertebrate animals. But in my view this is an error, comparable to the manner in which people in many cultures have tended to moralize their initial feelings of revulsion toward consensual incest between siblings or toward homosexuality.⁷¹

A second explanation of the "expanding circle" in our culture is suggested by the literature on *dehumanization*.⁷² In what ways do humans tend to conceive of other groups of humans when they deny them moral standing and think that they may kill or harm them with impunity? Interestingly, and counting against

Singer's sympathy-based ethic as an account of our moral psychology, people don't usually deny that dehumanized groups feel pain, or fear, or other emotions that humans share with animals. Rather, what is denied is that those groups are subject to *distinctively human* emotions of love, guilt, indignation, shame, and so forth. Indeed, it appears that the upshot of dehumanization is a denial that members of the other group possess some of the main ingredients of rational agency, in the sense discussed in section 7. By parity of reasoning, then, one might expect that widening the moral circle to include some animals would be associated with a tendency to attribute human-like emotional states to them. In this connection, it is surely no accident that representations of animals as undergoing such states are now *rife* in children's story books, movies, and in popular culture more generally. But again the result is a moral mistake. By overhumanizing the psychological states of animals in the fantasy lives of young people we create a tendency (which mostly remains unconscious, no doubt) to think of them as rational agents and potential collaborators, and hence as possessing moral standing in their own right.

If the position defended in this chapter is correct, in contrast, then the increasing moral importance accorded to animals in our culture can be seen as a form of creeping moral corruption and should be resisted. Particular attention would need to be paid to the moral education of our young, correcting each of the corruptive tendencies identified above.

10. CONCLUSION

This chapter has defended a number of important claims. One is that the kind of mindedness that makes sympathy appropriate is *extremely* widespread in the animal kingdom, extending to individuals belonging to many species of invertebrate. This presents utilitarian moral theories with a challenge: either to somehow persuade us of the moral standing of bees, spiders, and ants, or to find some morally relevant difference between the sufferings of invertebrates and those of mammals. (Moreover, the latter would need to be done in a naturalistically acceptable way, in my view, without making a commitment to the mind-independence of value.) Another claim defended in this chapter is that we possess at least one cognitive adaptation that sets us apart from other animals. This is a psychology that enables and supports cooperation and norm-governed behavior. From a contractualist perspective, morality is the outcome of an idealized contract among agents who share such a psychology, undertaken to constrain and guide their relations with one another. If contractualism provides the best framework for moral theorizing, as I have suggested, then the upshot is that almost all humans, but no other animals, possess moral standing.



NOTES

1. Both premises are endorsed by Peter Carruthers, "Brute Experience," *Journal of Philosophy* 86 (1989): 258–69.
2. See among others Fred Dretske, *Naturalizing the Mind* (Cambridge, Mass.: MIT Press, 1995); Michael Tye, *Ten Problems of Consciousness* (Cambridge, Mass.: MIT Press, 1995), and Tye, *Consciousness, Color, and Content* (Cambridge, Mass.: MIT Press, 2000).
3. See among others William Lycan, *Consciousness and Experience* (Cambridge, Mass.: MIT Press, 1996); Peter Carruthers, *Phenomenal Consciousness* (Cambridge: Cambridge University Press, 2000), and *Consciousness: Essays from a Higher-Order Perspective* (Oxford: Oxford University Press, 2005); and David Rosenthal, *Consciousness and the Mind* (Oxford: Oxford University Press, 2005).
4. Lycan, *Consciousness and Experience*.
5. Rosenthal, *Consciousness and the Mind*.
6. Carruthers, *Phenomenal Consciousness*.
7. See: Brian Hare, Josep Call, and Michael Tomasello, "Do Chimpanzees Know What Conspecifics Know?" *Animal Behavior* 61 (2001): 139–51; Brian Hare, E. Addessi, Josep Call, Michael Tomasello, and E. Visalberghi, "Do Capuchin Monkeys, *Cebus paella*, Know What Conspecifics Do and Do Not See?" *Animal Behavior* 65 (2003): 131–42; Michael Tomasello, Josep Call, and Brian Hare, "Chimpanzees Understand Psychological States—The Question is Which Ones and To What Extent," *Trends in Cognitive Sciences* 7 (2003): 153–56; and Laurie Santos, Aaron Nissen, and Jonathan Ferrugia, "Rhesus Monkeys (*Macaca mulatta*) Know What Others Can and Cannot Hear," *Animal Behavior* 71 (2006): 1175–81.
8. John Smith, Wendy Shields, and David Washburn, "The Comparative Psychology of Uncertainty Monitoring and Metacognition," *Behavioral and Brain Sciences* 26 (2003): 317–73.
9. Peter Carruthers, "Metacognition in Animals: A Skeptical Look," *Mind and Language* 23 (2008): 58–89.
10. Alvin Golman, *Simulating Minds: The Philosophy, Psychology, and Neuroscience of Mindreading* (Oxford: Oxford University Press, 2006).
11. Shaun Nichols and Stephen Stich, *Mindreading: An Integrated Account of Pretence, Self-Awareness, and Understanding of Other Minds* (Oxford: Oxford University Press, 2003).
12. See Richard Byrne and Andrew Whiten, eds., *Machiavellian Intelligence* (Oxford: Oxford University Press, 1988); and Andrew Whiten and Richard Byrne, eds., *Machiavellian Intelligence II: Evaluations and Extensions* (Cambridge: Cambridge University Press, 1997).
13. Laurence Weiskrantz, *Consciousness Lost and Found* (Oxford: Oxford University Press, 1997).
14. Carruthers, "Brute Experience"; and see also Peter Carruthers, *The Animals Issue: Moral Theory in Practice* (Cambridge: Cambridge University Press, 1992), chapter 8.
15. For an extended discussion of the arguments sketched here see Carruthers, *Consciousness*, chapters 9 and 10.
16. Robert Elwood and Mirjam Appel, "Pain Experience in Hermit Crabs?" *Animal Behavior* 77 (2009): 1243–46.
17. Sharon Street, "A Darwinian Dilemma for Realist Theories of Value," *Philosophical Studies* 127 (2006): 109–66.
18. Most theorists think that propositional attitudes aren't phenomenally conscious per se, although some attitudes may give rise to phenomenally conscious effects. There will be phenomenally conscious bodily sensations (e.g., a dry throat) causally associated with



one's desire to drink, for example. But that desire itself isn't phenomenally conscious, because it lacks the right kind of fine-grained nonconceptual content. Admittedly, some philosophers claim that some attitudes, too, are phenomenally conscious. See, for example, Galen Strawson, *Mental Reality* (Cambridge, Mass.: MIT Press, 1994); and Charles Siewert, *The Significance of Consciousness* (Princeton, N.J.: Princeton University Press, 1998). For a critique, see Peter Carruthers and Bénédicte Veillet, "The Case Against Cognitive Phenomenology," in *Cognitive Phenomenology*, ed. Tim Bayne and Michele Montague (Oxford: Oxford University Press, 2010). But in any case, it is doubtful whether the phenomenally conscious properties of an attitude would have any bearing on the value or disvalue of the *objects* of that attitude. What makes pain a negative value for me is surely that I don't want it, not anything about the phenomenal properties of my desire for it to cease (supposing that there are any).

19. John Searle, *The Rediscovery of the Mind* (Cambridge, Mass.: MIT Press, 1992).
20. See Donald Davidson, "Rational Animals," *Dialectica* 36 (1982): 317–27; and Jennifer Hornsby, *Simple Mindedness* (Cambridge, Mass.: Harvard University Press, 1997).
21. Donald Davidson, "Thought and Talk," in *Mind and Language*, ed. Samuel Guttenplan (Oxford: Oxford University Press, 1975), 7–24.
22. See Daniel Kahneman, Paul Slovic, and Amos Tversky, eds., *Judgment under Uncertainty: Heuristics and Biases* (Cambridge: Cambridge University Press, 1982); and Dan Ariely, *Predictably Irrational: The Hidden Forces that Shape Our Decisions* (New York: HarperCollins, 2009).
23. Daniel Dennett, *The Intentional Stance* (Cambridge, Mass.: MIT Press, 1987).
24. William Ramsey, Stephen Stich, and J. Garon, "Connectionism, Eliminativism, and the Future of Folk Psychology," in *Philosophical Perspectives*, vol. 4, ed. J. Tomberlin (Atascadero, Calif.: Ridgeview Publishing, 1990), 499–534.
25. For a more extended discussion of many of the points made in this section, together with others, see Peter Carruthers, *The Architecture of the Mind: Massive Modularity and the Flexibility of Thought* (Oxford: Oxford University Press, 2006), chapter 2; and Peter Carruthers, "Invertebrate Concepts Confront the Generality Constraint (and Win)," in *The Philosophy of Animal Minds*, ed. Robert Lurz (Cambridge: Cambridge University Press, 2009), 89–107.
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28. See Charles Gallistel and J. Gibbon, "Time, Rate and Conditioning," *Psychological Review* 108 (2001): 289–344; and Charles Gallistel and Adam King, *Memory and the Computational Brain* (Chichester: Wiley-Blackwell, 2009).
29. Emmanuelle Normand and Christophe Boesch, "Sophisticated Euclidean Maps in Forest Chimpanzees," *Animal Behaviour* 77 (2009): 1195–1201.
30. For elaboration of this and related material, see Carruthers, *Architecture of the Mind*, chapter 2, and Carruthers, "Invertebrate Concepts Confront the Generality Constraint."
31. C. R. Gallistel, *The Organization of Learning* (Cambridge, Mass.: MIT Press, 1990).
32. T. Collett and M. Collett, "Memory Use in Insect Visual Navigation," *Nature Reviews: Neuroscience* 3 (2002): 542–52.
33. R. Menzel, U. Greggers, A. Smith, S. Berger, R. Brandt, S. Brunke, G. Bundrock, S. Hülse, T. Plümpe, S. Schaupp, E. Schüttler, S. Stach, J. Stindt, N. Stollhoff, and S. Watzl,

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34. Thomas Seeley, *The Wisdom of the Hive* (Cambridge, Mass.: Harvard University Press, 1995).
 35. James Gould and Carol Gould, *The Honey Bee* (New York: Scientific American Library, 1988).
 36. Menzel et al., “Honey Bees Navigate According to a Map-Like Spatial Memory.”
 37. See the papers contained in Jonathan Evans and Keith Frankish, eds., *In Two Minds: Dual Systems and Beyond* (Oxford: Oxford University Press, 2009).
 38. See Keith Frankish, *Mind and Supermind* (Cambridge: Cambridge University Press, 2004); and Peter Carruthers, “An Architecture for Dual Reasoning”, in *In Two Minds*, ed. Evans and Frankish, pp. 109–27.
 39. See Peter Carruthers, “The Illusion of Conscious Will,” *Synthese* 159 (2007): 197–13; and “How We Know Our Own Minds: The Relationship Between Mindreading and Metacognition,” *Behavioral and Brain Sciences* 32 (2009): 121–38.
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 42. Kiley Hamlin, Karen Wynn, and Paul Bloom, “Social Evaluation by Preverbal Infants,” *Nature* 450 (2007): 557–59.
 43. Jeremy Bentham, *An Introduction to the Principles of Morals and Legislation* (1789).
 44. Peter Singer, *Practical Ethics* (Cambridge: Cambridge University Press, [1979] 1993); and *The Expanding Circle* (Oxford: Oxford University Press, 1981).
 45. Street, “Darwinian Dilemma for Realist Theories of Value.”
 46. John Rawls, *A Theory of Justice* (Cambridge, Mass.: Harvard University Press, 1971).
 47. Thomas Scanlon, “Contractualism and Utilitarianism,” in *Utilitarianism and Beyond*, ed. A. Sen and B. Williams (Cambridge: Cambridge University Press, 1982), 103–28.
 48. This is true of the later work of both Rawls and Scanlon, for example. See John Rawls, *Political Liberalism* (New York: Columbia University Press, 1993); and Thomas Scanlon, *What We Owe to Each Other* (Cambridge, Mass.: Harvard University Press, 1998).
 49. See M. Hoffman, *Empathy and Moral Development* (Cambridge: Cambridge University Press, 2000); and Paul Bloom, *Descartes’ Baby* (New York: Basic Books, 2004).
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59. Frans de Waal, *Good Natured* (Cambridge, Mass.: Harvard University Press, 1996).
60. See Richerson and Boyd, *Not by Genes Alone*; Richard Joyce, *The Evolution of Morality* (Cambridge, Mass.: MIT Press, 2006); Chandra Sripada and Stephen Stich, "A Framework for the Psychology of Norms," in *The Innate Mind*, vol. 2, ed. P. Carruthers, S. Laurence, and S. Stich (Oxford: Oxford University Press, 2006), 280–301; Chandra Sripada, "Adaptationism, Culture, and the Malleability of Human Nature," in *The Innate Mind*, vol. 3, ed. P. Carruthers, S. Laurence, and S. Stich (Oxford: Oxford University Press, 2007), 311–29; and John Mikhail, *Elements of Moral Cognition* (Cambridge: Cambridge University Press, 2009).
61. Tom Regan, *The Case for Animal Rights* (London: Routledge, 1984).
62. Regan, *Case for Animal Rights*.
63. Brown, *Human Universals*.
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66. See the documents, "Domestic Violence and Animal Abuse" and "Animal Cruelty Prosecution," linked under "Resources" from the ASPCA's Fighting Animal Cruelty page, available at <http://www.aspcapro.org/fighting-animal-cruelty/> (accessed on August 27, 2009).
67. See the report, "Animal Abuse amongst Young People Aged 13–17: Trends, Trajectories and Links with Other Offending," linked from the RSPCA's Science Group page, <http://www.rspca.org.uk/servlet/Satellite?pagename=RSPCA/RSPCARedirect&pg=sciencegroup> (accessed on August 27, 2009).
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