Mentalizing Animals: Implications for Moral Psychology and Animal Ethics

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ABSTRACT: Ethicists have tended to treat the psychology of attributing mental states to animals as an entirely separate issue from the moral importance of animals’ mental states. In this paper I bring these two issues together. I argue for two theses, one descriptive and one normative. The descriptive thesis holds that ordinary human agents use what are generally called phenomenal mental states (e.g., pain and other emotions) to assign moral considerability to animals. I examine recent empirical research on the attribution of phenomenal states and agential states (e.g., memory and intelligence) to argue that phenomenal mental states are the primary factor, psychologically, for judging an animal to be morally considerable. I further argue that, given the role of phenomenal states in assigning moral considerability, certain theories in animal ethics will meet significant psychological resistance. The normative thesis holds that ethicists must take the psychology of attributing mental states into account when constructing moral ideals concerning animals. I draw from the literature in political philosophy on ideal and non-ideal theory to argue that non-ideal theories for animals must account for human psychology because—like current social and political conditions—human psychology limits the achievement of moral ideals.

1. Introduction

Ethicists have tended to treat the *psychology* of attributing mental states to animals (henceforth “mentalizing”) as an entirely separate issue from the *moral importance* of animals’ mental states. In this paper I bring these two issues together. I draw from recent empirical research on mentalizing to argue that there are significant constraints on how people think about the importance of animals’ mental states, and that these constraints, in turn, have implications for moral ideals concerning people’s treatment of animals.

I argue for two specific theses, one descriptive and one normative. The descriptive thesis holds that ordinary human agents use what are generally called *phenomenal* mental states to assign moral considerability to animals, or to identify which animals are owed basic moral obligations. Prototypical phenomenal states include pain, joy, and other emotions. I argue that the evidence indicates that attributing phenomenal states is the primary factor, psychologically, in assigning moral considerability. This claim is central to what I will refer to as the *phenomenal*
account of mentalizing. I also consider the role of agential states (e.g., memory and language) in assigning moral considerability. Though the evidence here is not definitive, I offer reasons to think that any attribution of agential states must entail phenomenal states in order for moral considerability judgments to be made.

The normative thesis holds that ethicists must take the psychology of mentalizing into account when constructing moral ideals concerning animals. To develop this thesis, I draw from recent discussions of ideal and non-ideal theories within political philosophy (I offer a similar analysis of egalitarianism in Kasperbauer, 2015). According to non-ideal theorists, ethicists should take current political and societal limitations into account when promoting moral ideals because taking the actual, non-ideal world into account is the only realistic way to pursue moral change (see e.g., Stemplowska & Swift, 2012). I argue that non-ideal theories for animals must also account for human psychology because—like current social and political conditions—human psychology limits the achievement of moral ideals. While the phenomenal account is congruent in many ways with ideals in animal ethics, I argue that the behavioral triggers we possess for attributing phenomenal states to animals are quite narrow—primarily animals that look and act like human beings. This anthropocentric bias presents a challenge to animal ethics, as most theories require people to recognize that a wide range of animals, far beyond those that look and act like human beings, are capable of phenomenal experiences. The theories facing the most significant challenges are those that presuppose an agency-based moral psychology and those that require humans to attribute phenomenal states to a wide range of animal species. To help construct non-ideal versions of these theories, I consider possible changes to human psychology that would make moral ideals easier to achieve.

My arguments for these two theses come in sections 3 and 4. First, however, I will
provide a brief introduction to discussions of moral considerability and how animal ethicists use mental states to assign moral importance.

2. Moral Considerability and Moral Significance

A common distinction in animal ethics, classically made by Kenneth Goodpaster (1978), is between moral considerability and moral significance. Moral considerability refers to an entity’s status as being worthy of basic moral attention—as deserving moral attention at all—while moral significance refers to an entity’s relative moral importance (e.g., the moral status of a human being as opposed to a frog). Being morally considerable marks off an agent as having surpassed a minimum threshold, beyond which is the realm of entities toward whom we possess varying degrees of moral responsibilities. There are many additional ways of carving up our moral judgments concerning animals, but these two concepts capture the predominant approach within animal ethics.

Questions about moral significance typically arise when the interests of morally considerable entities conflict. For instance, even if animals are morally considerable, and thus possess morally relevant interests, one might think that human interest in eating them is justifiable because of our relative moral importance—our interests trump theirs. Their moral considerability still dictates that they should not be made to suffer, but this might be all they are entitled to. If an animal is entitled to much more than this, it is because we have assigned them greater moral significance. For example, it is often thought that the great apes cannot be eaten because their moral significance is on par with our own.

The feature animal ethicists use most often to assign moral considerability and moral significance is an animal’s psychological capacities. Sentience, for example, is typically
understood to provide a broad-based justification for assigning moral considerability. As Peter Singer defines it in *Animal Liberation*, sentience is “the capacity to suffer and/or experience enjoyment” (1990, p. 8). However, as Singer goes on to explain, sentience consists of mental states generally characterized as *phenomenally conscious*. This means that an animal’s suffering and joy have a subjective quality and feel a certain way to that animal.¹ Varner (2012) thus defines sentience more aptly as “the capacity for phenomenally conscious suffering and/or enjoyment” (p. 108). This definition will be important throughout this paper.

There are three broad views one can take on the relationship between animals’ mental states and moral importance. The first I will call *pure phenomenal* views. These use animals’ capacity for phenomenal experiences to grant them great moral significance. Steiner (2008, 2013) and Francione’s (2000) animal rights theories typify this view. Animal rights theories argue that animals’ sentience entails that they cannot be used for human ends. This does not mean animals and human beings possess equal moral significance, but the gap has been significantly narrowed, based solely on phenomenal states.

Pure phenomenal views, as I understand them, are polar opposites of the second type of view, which I will call *pure agential* views. As mentioned above, common agential capacities include the ability to use language, form intentions, plan, and make decisions. Pure phenomenal views exclude the importance of agential abilities, while pure agential views exclude the importance of phenomenal abilities. Raymond Frey and Donald Davidson’s accounts of language

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¹ For instance, in *Practical Ethics* (2012) Singer says, “‘Terms like ‘pleasure’ and ‘happiness’ lack precision, but it is clear that they refer to something that is experienced or felt— in other words, to states of consciousness” (2012, p. 77). He furthermore connects these felt experiences to moral considerability, “If a being is not capable of suffering, or of experiencing enjoyment or happiness, there is nothing to be taken into account” (p. 50). The well-known animal welfare scientist Françoise Wemelsfelder (1999) also seems to support this basic idea, “The concept of consciousness, as it functions in common-sense interaction with animals, denotes that animals are not mere objects but subjects; that is, it indicates that a level of behavioural organization is present which requires a non-mechanistic, subject-related, first person perspective level of explanation” (p. 42).
typify this view. For both Frey (as expressed in his earliest work) and Davidson, language is a prerequisite for even moral considerability. Frey (1980) argues that language is necessary for beliefs, beliefs are necessary for desires, and desires are necessary for interests. He reasons that an agent must believe he or she has a deficiency with respect to some need of theirs (e.g., water) in order to desire that need. So although animals can respond to pain in such a way that indicates they need to avoid pain, they cannot truly desire to avoid that pain without a relevant belief. On Frey’s account of belief, having a belief consists of judging sentences to be true or false, which is a linguistic activity. Since animals do not have language, they cannot have beliefs, desires, or interests, thereby excluding them from moral considerability.²

Davidson holds a similar view. As he says, “a creature cannot have a thought unless it has a language” (1985, p. 477). On Davidson's holistic view of language, in order to have a belief, one must have many general beliefs, and this requires a network of communicators. Animals, he argues, do not have this. For example, perhaps a dog understands, in some sense, that his owner is home, but he does not know that his owner is called Mr. Smith, is the president of a bank, and a number of other facts that ordinary language users would know (Davidson, 1980, p. 164). This limits the sorts of beliefs we can ascribe to the dog.

Pure agential views, like pure phenomenal views, narrow the gap between moral considerability and significance. Frey and Davidson’s account of language entails that animals are not morally considerable, and so lack any moral significance. However, if an animal turns out to be a language-user, Frey and Davidson’s view would automatically grant that animal great

² In later writings, Frey (2014) states that animals do have beliefs and desires and can suffer. His discussion of agential abilities also shifted to primarily emphasize the differences in autonomy between humans and animals, rather than language (Frey, 1987, 2014). What I say about Frey in this paper should thus be understood as pertaining primarily to his early views. I adopt this strategy because his early views were widely influential, are illustrative of the pure agential position, and are similar in important respects to Davidson’s.
moral significance, regardless of any other capacities it might possess.

The third type of view I will simply call *mixed*. Theories in animal ethics can be understood on a spectrum from pure phenomenality to pure agency, the majority of which fall in between these two poles, and are thus mixed. I will discuss Varner’s (2012) categories of sentient, near-persons, and persons to illustrate how mixed views generally work.

According to Varner’s (2012, p. 113, 123) well-known taxonomy of pain-feeling animals, the animals that appear to be sentient (in the phenomenal sense) include all vertebrates, which encompass all mammals, birds, reptiles, and amphibians. Thus, all vertebrates should be judged morally considerable (as is required by most theories in animal ethics; Garner, 2013), and different levels of moral significance can be granted among the different types of vertebrates, some of which are persons or near-persons. Persons and near-persons, on Varner’s account, possess an array of cognitive capacities that qualify them for great moral significance: near-persons can think about their past and their future; persons possess a biographical sense of self and the ability to see their lives in narrative terms. Importantly, the reason these cognitive capacities matter, on Varner’s account, is that they enhance an animal’s phenomenal states. As he explains the importance of narrative abilities, “the abilities to consciously remember the past and to consciously anticipate the future allow the individual to reexperience good (and bad) states of consciousness and to anticipate (and dread) future experiences” (p. 162). Meeting one’s goals, for instance, can be thought of as realizing—consciously—that one’s desires have been satisfied. The desires (or goals) provide one layer of phenomenality, and the conscious realization of those desires (or goals) being met or frustrated adds another layer, and so on.

Varner’s mixed approach maintains that some animals are more morally significant because of the way cognitive capacities affect their phenomenal states. This places his view
closer to the phenomenal end of the spectrum. However, arguably a more common view is to focus on agential states, and exclude phenomenal states, when discussing moral significance. This is illustrated by Frey and Davidson’s views discussed above. Agential states enhance an entity’s moral significance without entailing any change in phenomenality. We can thus make a further distinction among mixed views, between those that emphasize agency and those that emphasize phenomenal states. For example, suppose Frey and Davidson modify their view to allow that animals can suffer (phenomenally), and are thus morally considerable, but they maintain a purely agential account of language. Such a modification, though it introduces phenomenality at one level, might still allow humans to use all animals in a wide variety of exploitative ways (so long as they do not cause suffering) because humans are language-users and animals are not.

3. The Phenomenal Account

Here I argue for my descriptive thesis. I present two core claims of the phenomenal account and review the evidence in their favor: (1) phenomenal states are the main factor, psychologically, in assigning moral considerability; (2) physical and behavioral similarity to human beings strongly influences the attribution of phenomenal states. I also consider evidence that might refute the phenomenal account, specifically from studies claiming that the attribution of agential abilities determines moral considerability.

One preliminary note: The label “phenomenal account,” at least with respect to the link between mentalizing and moral psychology, originated with Philip Robbins and Anthony Jack (2006), but the relevant research has been discussed primarily in the context of the “valence account,” as proposed by Jesse Prinz, Joshua Knobe, Justin Sytsma, and Edouard Machery. The
The valence account is a more specific variety of phenomenal account, focusing particularly on the role of emotion, or hedonic mental states, in determining moral judgments. The evidence provided by each account is quite similar, and both accounts make similar hypotheses concerning the relationship between mentalizing and moral judgments about animals. Thus I will discuss the relevant evidence under the single heading of the phenomenal account.

3.1 Phenomenal States and Moral Considerability

The moral psychological claim made by the phenomenal account is captured nicely by Philip Robbins (2008):

> If a being has phenomenal experience of any sort (i.e., if there is something that it is like to be that being), we are morally obliged to take that experience into consideration. In other words, it is not just that we feel morally obliged to consider others’ pains; we also feel morally obliged to consider their pleasures, and perhaps even their hedonically neutral experiences, as factors in deciding how we should act. (p. 20)

The basic idea is that something about an animal’s ability to experience phenomenal states (of which pain is a perspicuous example) naturally leads people to think it is worthy of the most basic form of moral consideration.

The departure point for discussing research on the connection between phenomenal mental states and moral judgments is Gray, Gray, and Wegner’s (2007) influential two-dimensional account of mind perception. They conducted a relatively large survey (over 2000 respondents) in which people were asked to compare different types of agents on a wide variety of mental attributes. Participants in the survey were presented with pictures and descriptions of 13 different agents as well as descriptions of 18 different mental states. The agents and mental states were then presented in 78 pairwise comparisons. For instance, a chimpanzee and a human fetus might be presented as a pair, and people would have to rate which one was more capable of
experiencing pain (or if they were equal). Gray et al. found that the responses split along two dimensions (a number that was not specified a priori). One dimension they labeled Agency, and included an agent’s ability to make choices, have intentions, and control their own thoughts. Entities that scored high on Agency included God and human beings. The other dimension they labeled Experience, which included an agent’s ability to have sensations and feel emotions such as hunger, fear, pain, and pleasure. Entities that scored high on Experience included chimpanzees and human infants.

Experiential mental states can be understood as synonymous with phenomenal mental states. Indeed, many cite this experiment to argue that the possession of phenomenal mental states determines mentalizing specifically related to morality. The primary piece of evidence Gray et al. cite is from a single question they posed to participants, asking which entities they would avoid inflicting harm upon. They found that the desire to avoid harming an entity correlated significantly more strongly with Experience than with Agency. The phenomenal account generalizes Gray et al.’s data to claim that moral judgments will diverge as a function of the two dimensions identified. Put simply, the phenomenal account predicts that agents who are attributed experiential mental states will be judged morally considerable.

This finding has been confirmed and reproduced across many different studies. Gray and colleagues have subsequently proposed that phenomenal mentalizing and agential mentalizing represent two fundamentally different processes in human moral psychology (Gray & Wegner, 2009; Gray & Wegner, 2012; Gray, Young, & Waytz, 2012). Agential states are primarily attributed to those understood to be moral agents, who are seen as capable of making moral judgments and being held responsible for those judgments, while phenomenal states are attributed to moral patients, who are the subjects of basic moral concern (or are “morally
considerable” as I am using the term here). Even human beings with acknowledged agential abilities will receive greater moral concern if described in experiential terms (and less concern if described in agential terms; Bastian, Laham, Wilson, Haslam, & Koval, 2011). Phenomenal mentalizing thus appears to be a core process in human moral psychology for assigning moral considerability.

One of the first pieces of evidence for the phenomenal account, with respect to animals, comes from surveys conducted by Joshua Knobe and Jesse Prinz (2008). They presented people with descriptions of a researcher studying fish. In one condition, the researcher was described as studying fish’s ability to remember where food is in a lake. In the other condition, the researcher was studying fish’s ability to have feelings. The participants were then asked, “Why do you think he [the researcher] might want to know this? Why might the question be important to him?” The results were quite striking: 100 percent of the participants in the feeling group connected the study to moral issues, while 100 percent of the participants in the memory condition mentioned items related to predicting and explaining the behavior of fish (with only 9 percent mentioning moral issues). Thus, there was a stark difference in responses to the phenomenal question and the agential question.

More recent studies by Jack and Robbins (2012) and Sytsma and Machery (2012) also provide support for the phenomenal account. Jack and Robbins asked people to read stories about the harvesting of lobsters. In one condition people were told that lobsters possessed the sorts of states that would be considered Agential in Gray et al.’s sense: they were described as intelligent, able to perform elaborate foraging strategies, and having great memories. In this condition lobsters were also described as feeling little to no emotion. In a second condition participants were asked about states that were consistent with Experience in Gray et al.’s study:
lobsters were described as possessing the ability to feel emotions such as depression and anxiety but not having much intelligence. Participants were asked to rate on a 10-point scale how concerned they were about lobsters, how they would feel if they themselves were harvesting the lobsters, and how severe the penalty should be if the harvesting was made illegal. In all three cases, those in the Experience condition scored significantly higher than those in the Agency condition.

Sytsma and Machery conducted a study similar to this one but focused on primates. They presented people with a story in which monkeys were being used to test the effects of wound-healing antibiotics and scientists were puzzling over which of five species to use for the experiment. They found that describing a species in Experiential terms had a significant impact on ratings of the moral permissibility of the experiment, but Agential descriptions did not.

These experiments indicate that attributing phenomenal states to animals is strongly correlated with judgments of moral considerability. When animals are attributed phenomenal mental states, they are also judged to be morally considerable. It also seems to indicate that agential states are not involved with such judgments. When an animal is determined to be incapable of phenomenal states (or particularly unfeeling), no amount of Agency-related qualities lead people to judge the animal morally considerable. These considerations support the main claim of the phenomenal account: phenomenal states are the primary factor, psychologically, in assigning moral considerability. However, before we can conclude that phenomenal states are indeed more important than agential states for assigning moral considerability, we must look more closely at research that suggests a stronger role for agential states.
3.2 Agential States and Moral Considerability

Sytsma and Machery (2012) argue that “Experience and Agency are important, independent cues for lay ascriptions of moral standing” (p. 310). As outlined above, they found that describing monkeys in experiential terms was more likely to produce moral concern than describing them in agential terms. The influence of agential terms was not significant in their study ($p = 0.13$), but given the somewhat promising p-value of their study, further studies might reveal a significant effect. The average ratings of moral concern (on a 7 point scale) for agency were also relatively high (4.37 for high agency and low experience; by comparison, high agency and high experience was 5.44; high experience and low agency was 5.34; and low experience and low agency was 3.91). This provides some evidence in favor of the role of agency in determining judgments of moral considerability.

Their main source of evidence for the role of agency, however, comes from another study they conducted. They presented people with vignettes featuring a newly discovered alien species from another planet, called atlans. The “high experience” atlans were described as looking similar to slugs. They could feel pleasure and pain, but lacked intelligence, opinions, beliefs, and desires. The “high agency” atlans were described as looking similar to human beings except they were hard and metallic, like a humanoid robot. They could feel neither pain nor pleasure, but they did have thoughts, opinions, beliefs, and desires. Participants were then asked the same questions that were posed concerning the monkey experiment above: whether it would be wrong to capture the atlans for use in experiments, to use the atlans for human colonization, to kill the atlans, or to destroy “the atlan way of life.” There were in fact two variations of this study, one in which these questions were asked of the entire species, and one in which these questions were asked of a particular atlan. In both variations, responses to all four questions were significantly
correlated with agential descriptions. Agential descriptions led people to show greater moral concern, regardless of whether participants were considering an individual atlan or the whole species. The experiential descriptions, by contrast, differed depending on the target. When considering the whole species, there was no significant effect. When considering an individual atlan, only responses to the question of capturing the atlan were statistically significant (i.e., below the 0.05 threshold for statistical significance). Responses to the other three questions (using for human colonization, killing atlans, or destroying the atlan way of life) failed to reach statistical significance.

This study would appear to support Sytsma and Machery’s hypothesis that Agency is also important for moral considerability. However, I see two reasons to resist this conclusion. First, the use of desires to indicate agency (without experience) would appear to be a nontraditional understanding of desire. Desires are typically understood to be an emotional or motivational state—something indicating valence. This is certainly the case in the ethical literature pertaining to animal desires (e.g., DeGrazia, 1996; Varner, 1998). Furthermore, in Gray et al.’s (2007) study desire is classified as an experiential state, possessing an Experience rating comparable with “Rage” and “Consciousness.” Thus, in describing the atlans as possessing desires, Sytsma and Machery have introduced an element of Experience.

Second, Sytsma and Machery describe the high Experience atlans as unintelligent, nonsocial, and spending most of their time sitting on rocks, while the high Agency atlans were described as highly social and possessing “highly developed literary, musical, and artistic traditions, in addition to having made great advances in the sciences.” These descriptions would appear to modify the nature of Experience in problematic ways. For instance, here being nonsocial is classified as an Experiential state, but no other study categorizes it in this way. Jack
and Robbins, for one, describe experiential agents as being “emotionally responsive” and “warm towards others.” Being completely nonsocial might indicate to people that the atlans are unfeeling in a particularly morally salient way (even if they can feel other emotions, like pain and pleasure). The high Agency atlans, on the other hand, are described as social and interested in music and art, which implies significant Experience.

So Sytsma and Machery’s evidence for the role of agential states in making moral considerability judgments would actually seem to provide further support for the role of phenomenal states, and thus do not detract from the main claim of the phenomenal account. However, this study also illustrates the difficulty in dissociating phenomenal states from agential states. Both in the experiments above and in everyday discourse it is difficult to identify agential states that do not also seem to include a phenomenal element.

One prediction we can derive from the phenomenal account is that agential states sometimes entail phenomenal states. This is what we should expect if, psychologically, moral considerability judgments ultimately require the attribution of phenomenal states. Empirical support for this prediction comes from an experiment recently conducted by Piazza, Landy, and Goodwin (2014). They asked participants to rate a wide range of different types of animals (e.g., chimpanzees, rabbits, dolphins, turtles, crows, octopuses, butterflies) on 20 different traits indicative of both Experience and Agency. They found that the correlation between Experience and Agency was extremely high (r = .90, p < .001). Moreover, the correlation between experiential traits was higher for agential traits indicative of intelligence (r = .86) than agential traits indicative of the basic ability to perform actions, which need not require intelligence (r = .62). The likely explanation for this is that certain agential traits indicative of intelligence plausibly entail phenomenal states. For example, Piazza et al. count “sophistication” and
“creativity” as agential states. Sophistication, however, is frequently understood to require refined emotional abilities, not the total absence of emotion. Similarly, creativity is often taken to include a strong emotional component and to be antithetical to cool rationality.

Interestingly, this entailment relationship provides some reason for animal ethicists to emphasize agential states. Piazza et al.’s experiment indicates that complex cognitive states in particular seem to illustrate such an entailment relationship. As Sytsma and Machery (2012) say, “But Agency seems to matter too: People seem more willing to grant moral standing to animals whose cognition and lifestyle are complex. In fact, the more complex these are, the more people seem to be willing to grant moral standing” (p. 312). This idea is also illustrated by what I said above about music and art. These activities indicate the presence of complex cognition as well as phenomenal abilities. Something similar, we might think, is involved with other agential capacities, such as memory, language, and decision-making. Episodic memory, for instance, is typically thought of as being phenomenally rich (e.g., Varner 2012). When these states are attributed to an animal, we can predict that they will have an impact on that animal’s moral importance, because they entail a certain type of phenomenal state. More will be said about this in section 4.

3.3 The Role of Bodies in Phenomenal Mentalizing

A number of studies have found that an entity’s body and behavior influence how it is mentalized. With the main claim of the phenomenal account outlined, I will now focus on a second important claim: physical and behavioral similarity to human beings strongly influences the attribution of phenomenal states. The evidence, I suggest, indicates that a relatively narrow range of animals will be attributed phenomenal mental states—namely, those that look and act
like human beings. Animals that display behaviors and physical features that are characteristic of human beings are more likely to be attributed phenomenal mental states. I will also provide reasons to think this is problematic for assigning moral considerability.

That phenomenal mentalizing is triggered by specific physical features is evident simply from looking at which nonhuman entities scored highest in Experience on Gray et al.’s (2007) scale: apes and dogs. Both animals possess pronounced facial features similar to human beings, engage in complex social relationships, and display neotenous features (e.g. big eyes) that trigger the well-known “cute response” in human beings (Herzog, 2010). Apes can also occasionally walk bipedally. All of these features are characteristic of human beings. They have also been found to predict mentalizing of animals, indicating the presence of an anthropocentric bias (Horowitz & Bekoff 2007; Eddy, Povinelli, & Gallup, 1993).

Further evidence for the role of animal bodies in phenomenal mentalizing comes from Phillips and McCulloch (2005). They surveyed people from a large cross-national sample about their views on the sentience of various animal species. People were asked to rate the degree to which each species could feel pain, happiness, fear, and boredom, in comparison to normal adult human beings. Their responses were then combined to create an aggregate sentience score. The final rankings, across all countries, went in the following order: monkey, dog, newborn baby (human), fox, pig, chicken, rat, fish. On the high end, monkeys, dogs, and newborn babies were judged to be about 80% as sentient as normal adult human beings. As mentioned above, monkeys and dogs both possess a number of characteristically human physical features. At the bottom end, chickens and rats were judged about 60% and fish 47% as sentient as normal adult human beings. These animals lack many of the features that normally elicit comparisons to human beings, including prominent facial features, large eyes, flexible limbs, and overall body
size (Horowitz & Bekoff, 2007). This study thus suggests that sentience ratings possess an anthropocentric bias.

Phillips et al. (2012) conducted a similar study in which people were asked to rank different animals according to their general capacity to possess feelings (but without specifying individual emotional states). Participants in this study did not rank according to percentages, but by order of ability. The results were thus a relative ranking, indicating animals’ sentience compared to other species. Human infants were on average ranked above all other animals. Following human infants, the average rankings of each species (out of 11) were as follows: chimpanzee (9.7), dog (9.5), dolphin (8.6), cat (7.7), horse (7.2), cattle (5.5), pig (5.2), rat (4.8), chicken (3.8), octopus (2.7), and fish (2.6).

Some tendencies can be seen in both of these studies. No formal analysis was conducted comparing sentience ratings to physical similarity, but a bias toward primates and mammals is evident. Primates, dogs, and dolphins are clustered together at the very top, which is what one would expect, given that they possess certain features making them uniquely similar to human beings (for instance, long-term social bonds, complex social relationships, and neotenous facial features for primates and dogs). Pigs and cattle tended toward the middle, while chicken, fish, and rats all tended to be seen as the least capable of feelings. It’s difficult to tell what exactly determined this ranking, but one plausible explanation is a general bias toward large mammals comparable to human beings. Notably, octopuses were ranked similar to fish, despite possessing agential capacities indicative of intelligence. My explanation for this is that they lack physical and behavioral features that would draw a comparison to human beings (like sociaity).

Corroborating evidence that people’s attitudes to animals are largely determined by similarity to human beings comes from Batt (2009). She presented people with pictures of 40
different species and asked them to rank how much they liked each species in comparison to all the others. She also created a ranking of each species according to their biological similarity to humans (using a combination of behavioral, ecological, and anatomical information about each species). She then mapped people’s preferences for each species onto the species’ biological similarity to humans. The correlation between the two was moderately high ($r = 0.542, p < 0.01$).

Batt did not assess moral evaluations, but it is enough to show that biological similarity influences general preferences. This indicates that people do indeed take such information into account.

As mentioned above, there is widespread agreement that all vertebrates are sentient, and thus morally considerable (see Garner 2013). But the evidence suggests people do not naturally attribute phenomenal states to all vertebrates. Rather, they attribute phenomenal states according to physical and behavioral similarity to humans.

To see the potential implications of this, consider the Phillips and McCulloch study again. This study did not ask any questions pertaining to morality, but one could argue that, if we had to set a moral considerability threshold according to sentience, the 75-80% range looks pretty accurate. Foxes and pigs were rated 65% and 67% respectively, but are arguably treated more like chickens and rats in contemporary Western society than monkeys and dogs (e.g., in being considered easily expendable). If this is right, and animals in the lower ranges are attributed “less” sentience because of their lack of similarity to humans, then a wide range of animals who are actually morally considerable (e.g., according to scientific and ethical consensus on the phenomenal states they possess) will fail to be evaluated accurately.

Even if this is not right, and the sentience-moral considerability threshold is much lower, the study nonetheless shows that similarity to human beings has a strong influence on sentience
ratings. This is enough for ethicists to be concerned. Suppose the threshold is at 50%, right above fish. Chickens, rats, foxes, and pigs would all be sufficiently sentient to be deemed morally considerable. Though this might seem significant, this fails to cover the thousands of amphibian and reptile species who physically resemble fish more than mammals, and would likely receive low sentience ratings (and, drawing from Phillips et al., 2012, might also exclude octopuses and other cephalopods).

One particularly problematic aspect of the way bodies and behavior influence mentalizing is that this process appears to be a type of ingroup bias, where we show a preference toward anything that possesses ingroup markers. Human ingroups tend to use external physical features, like skin color, clothing, and body modification, to identify group membership and indicate who one can trust and form alliances with. This sort of psychological process is thought to be evolutionarily ancient and highly unmodifiable (Gil-White, 2001). So although the exact physical markers used in this process will vary, human beings generally use some physical markers to identify group membership. For instance, in experimental conditions, when one physical marker of ingroup membership becomes unreliable, people will switch to another physical marker (if race, for instance, no longer usefully tracks one’s affiliations, gender or even shirt color will be used instead; Kurzban, Tooby, & Cosmides, 2001). The only instances where physical markers are not used are when there are redundant cues indicating that they bear no relationship to highly salient personal goals (e.g., see Pietraszewski, Cosmides, & Tooby, 2014).

This applies to the case of animals as well. A great deal of evidence suggests that animals’ physical features are used to determine the extent to which they are part of our ingroup and thereby worthy of receiving phenomenal state attributions and of being assigned moral considerability. For instance, Westbury and Neumann (2008) found that empathic emotional
responses to animals in abusive situations increased according to phylogenetic similarity (as measured by survey as well as skin conductance responses). In a similar experiment, Plous (1993) showed participants pictures of a monkey, raccoon, pheasant, and bullfrog, and told them that each animal had been abused in certain ways. Skin conductance measurements detected increased activity in response to the animals’ similarity to humans. This bias for similarity to humans can also be seen in people’s allocation of punishment for animal abuse. In one experiment (Allen et al., 2002), people read about abuse of a goose, monkey, possum, or goanna. They were then asked how much punishment they would give the transgressor. Those who scored highest in empathy gave out harsher punishments, and this was mediated by similarity to humans. Some people did indeed express moral concern for animals, but this was limited to species nearest to us, most notably the primates.

The conclusion I take from this research is that animal ethicists who hope to convince people that a broad range of animals deserve moral consideration will meet great resistance. The mind assessment system we have inherited is primarily activated by organisms that are grossly similar to human beings. As a result, animals that are not physically and behaviorally similar to human beings will be denied the phenomenal mental states needed to be judged morally considerable.

The influence of physical and behavioral similarity might also impact moral significance judgments. Animal bodies limit the range of entities assigned moral considerability, and an animal denied moral considerability has no moral significance. Regardless of how morally significant an animal’s agential qualities actually are, they will only be relevant if the animal is first perceived to be capable of phenomenal experiences. And as I have argued, the role of animal bodies in phenomenal mentalizing narrows this range considerably.
4. Ethical Implications of the Phenomenal Account

Here I argue for my normative thesis. Two main psychological processes I have outlined raise challenges for animal ethics. One is the role of animal bodies and behavior in constraining our phenomenal mentalizing, and the other is the absence of moral evaluations from agential mentalizing. Both of these processes exclude animals from moral considerability in cases where ethicists say otherwise. These processes are particularly challenging because they appear to be deeply engrained in our psychologies and extremely difficult to modify. Without significant intervention (e.g. a large segment of the population receiving years of experience with certain types of animals), the necessary changes would be very difficult to obtain.

Within political philosophy, there is a classic debate over the role of idealization when making moral prescriptions. This debate can be usefully applied to the psychological constraints I have identified. Contemporary discussion of this issue primarily draws from Rawls’ (1971) discussion of ideal and non-ideal theories of justice (for reviews, see Gheaus, 2013; Rossi & Sleat, 2014; Simmons, 2010; Stemplowska & Swift, 2012; Valentini, 2012). While ideal theories construct moral prescriptions without regard for current limitations or constraints, non-ideal theories take into account any relevant constraints, in order to determine how moral goals “might be achieved, or worked toward, usually in gradual steps” (Rawls, 1971, p. 246). Here I will provide reasons to think that non-ideal theorists must take into account psychological constraints, like the ones I have identified, when constructing moral ideals concerning animals.

4.1 Non-ideal Theory for Animals

The main reason to include psychological constraints in non-ideal theory is that human
psychology is a central factor limiting the pursuit of moral ideals in the real world. Non-ideal theories typically focus on how social and economic factors limit the achievement of moral ideals. One main reason for doing this is that diagnosing the obstacles to moral change can assist in meeting moral goals. As Hamlin and Stemplowska (2012) describe the relationship between ideal and non-ideal theory, “the continuum of ideal/non-ideal theory is concerned with the identification of social arrangements that will promote, instantiate, honour or otherwise deliver on the relevant ideals” (p. 53). Psychological constraints, like social and economic factors, limit the achievement of moral ideals. By taking psychological constraints into account, ethicists can better diagnose obstacles to change, and thus better understand how obstacles might be overcome in meeting moral ideals.

To be clear, a non-ideal ethic does not entail the endorsement of psychological constraints. My claim is that, within a non-ideal theory, psychological constraints must factor into prescriptions made for long-term moral goals. Doing so increases the chances that moral prescriptions will have the right impact on their intended audience. This does not mean, however, that psychological constraints directly determine moral goals. For instance, anthropocentric biases in mentalizing do not dictate which animals are morally considerable in a non-ideal theory. Rather, these biases must be taken into account if one hopes to create moral prescriptions with the potential for real-world impact (e.g., when recommending improved treatment for animals that people likely do not think are morally considerable). Both ideal and non-ideal theory utilize ideals. The content of ideals within non-ideal theories is just more constrained by the actual world, and is more aimed at enacting social and political change.

One recent attempt at constructing a non-ideal theory for animals comes from Robert Garner (2012, 2013). Moral ideals are useful, on his account, so long as they inform the
construction of non-ideal theories that can be used for real social change. Garner criticizes abolitionist views (what I above called animal rights views), which hold that human use of animals must cease, and that it is in general impermissible to sacrifice animals’ interests for that of humans (Steiner, 2008; Francione, 2000; Francione & Garner, 2010). Garner argues that abolitionist ideals are so unrealistic that there are no non-ideal versions that could inform changes in people’s attitudes toward or treatment of animals. Instead, he argues, we should adopt the view that “animals have a right not to have suffering inflicted upon them” (2013, p. 15). Meeting this ideal, he thinks, is more easily accommodated in the actual, non-ideal world than the claims of abolitionists.

Garner’s view is relevant here because the ideal he identifies—to avoid inflicting suffering on animals—seems to adhere to what I have called pure phenomenal views in animal ethics. And as I argued above, there is an anthropocentric bias in human psychology, such that phenomenal states will often fail to be attributed to animals that are in fact capable of experiencing phenomenal states. This is particularly problematic for Garner because he openly aims to take real-world constraints into account. Non-ideal theorizing would seem to entail a commitment to addressing all relevant causal constraints on realizing moral goals, including constraints presented by human psychology. Garner hopes to provide a realistic alternative to abolitionism, but the psychology of mentalizing indicates that the ideal Garner identifies will meet significant psychological resistance.

Of course, it may be the case that this anthropocentric bias can eventually be overcome, with the right external support. And as I argued above, phenomenal views do seem to be generally supported in human psychology; people are disposed to connect animal suffering to moral concern. But this is clearly not sufficient to meet the moral ideals put forth by pure
phenomenal or pure agential views. The point here is just that psychological constraints must influence the construction of non-ideal versions of these theories. This would seem to be necessary in order for a proponent of any particular ideal to persuasively argue that any other ideal is *psychologically* unrealistic (as Garner does for abolitionism). It would also seem necessary in order to identify the psychological changes that would make it possible to meet a moral ideal. Pure agential views are particularly problematic here, as I argued above. Meeting the ideals put forth by these views would require people to include agential considerations in their moral evaluations, but as the evidence discussed above indicates, agential states do not play a central role in moral evaluations of animals. Without a psychologically informed non-ideal theory, pure agential views would thus seem incapable of informing real moral change in people’s attitudes toward and treatment of animals.

So the challenge facing a wide range of views in animal ethics is that they need to address psychological constraints when constructing non-ideal theories. They need to provide some account of how human psychology is compatible with the ideals they promote. So, with respect to the moral psychology of mentalizing, we should ask whether theories in animal ethics can accommodate the evidence that currently existing human beings attribute moral considerability based on the ability to experience phenomenal states. Or, if they cannot, we must ask whether they can provide a strategy for modifying the role of phenomenal states in human moral psychology. I will do this in the next section by briefly returning to the previous discussion of phenomenal, agential, and mixed views in animal ethics.

### 4.2 Prospects for Psychological Change

As argued above, we appear to be stuck with our bias toward things that look and act like us.
This is problematic because the range of legitimately sentient animals is much broader than we are disposed to recognize. The impact of phenomenally-based moral ideals on currently existing psychological profiles will be limited to the extent they require people to assign moral considerability to a wide range of animals.

One possible strategy for avoiding this limitation is to teach people about different types of animals, and show how the possession of phenomenal states is dissociable from whether an animal looks or acts like human beings. For instance, Morris, Knight, and Lesley (2012) found that familiarity with animals, including rodents, increased attributions of mental states, particularly emotions. Given my discussion of the phenomenal account in section 3, we can expect that increased contact with an animal increases the probability of that animal being deemed morally considerable. Depending on the strength of this relationship, increased contact might also help in overcoming our bias toward animals that look and act like human beings. While we might currently use various mammalian or hominoid features (e.g., hairiness) to identify things “like us,” perhaps in the future we could learn to use markers that apply to vertebrates more broadly. For instance, perhaps we could learn to use reptilian skin (in addition to mammalian features, like hairiness) as a marker of sentience.

While this might be possible, the evidence cited here suggests there will still be significant psychological obstacles. The behavior and physical appearance of reptiles, amphibians, and many of the “lower mammals” are highly dissimilar from ours. The differences would appear to be much larger than that between most exclusive human groups. It would thus be incredibly difficult to convince people that animals bearing no resemblance to human beings should be deemed morally considerable. This education would also need to have significant breadth and depth (enough to demonstrate that vertebrates are sentient) and would need to reach
a wide audience (not just highly trained scientists). While this may be possible, it would take significant resources to successfully avoid our bias toward things that look and act like us.

The most consistent finding of the research reviewed here is that agential views are psychologically problematic. Agential states are generally not used to assign moral considerability by ordinary human beings. And while some people are clearly capable of using agential states to assign moral considerability (indeed, many philosophers!), clearly the intent of agential views (e.g., that of the early Frey) is for people generally to use agential states in this way. Given the evidence I have reviewed, an agent-based moral psychology does not appear to be part of current psychological profiles.

It is also not clear how a transition to an agent-based moral psychology would look. Agent-detection is quite old, evolutionarily, and is also one of the first abilities developed in infancy (Arico et al., 2011). Physical cues for detecting agency include eye gaze, goal directedness, and contingent reactivity (e.g., responding flexibly to another agent). These are features even young infants (perhaps by 3 months) use to distinguish between agents and non-agents (Biro & Leslie, 2007). Attempts to modify moral considerability judgments to include attributions of agency would likely be building “on top of” these more fundamental agency-detection processes. Judgments of moral considerability based on phenomenal states, by contrast, seem to be “built into” phenomenal state attribution processes (according to the evidence reviewed above). Any proposal for transitioning to an agent-based moral psychology would thus need to explain how attributions of agency might come to be more strongly integrated with judgments of moral considerability, and also how attributions of phenomenal states that would otherwise drive these judgments might be suppressed.

Mixed views are less straightforward to classify in terms of their compatibility with
human psychology. There are two general types of mixed theories that would seem to be in question. The first includes agential states that entail phenomenal states (e.g., complex cognitive capacities like episodic memory and musical abilities). The second includes agential states applied to animals already deemed morally considerable (e.g., language in apes). Above, I suggested that complex cognitive capacities sometimes produce moral considerability judgments because they entail phenomenal states.

The crucial issue in both cases is whether the requisite moral psychology is achievable. With respect to entailment theories, we must ask which agential states entail phenomenality, and whether people’s views on entailment can be changed. For example, consider Knobe and Prinz’s experiment, in which a researcher was studying fish memory. If participants were interpreting this in terms of episodic memory—a phenomenal state—then, according to the phenomenal account, they would have connected the memory study to moral concerns. But they did not, suggesting that they understood memory purely agentially. So it is possible that ethicists and ordinary agents will disagree about which agential states entail phenomenality. But what if it was made explicit that phenomenal states related to memory were being studied? Or perhaps a comparison was made between agential and phenomenal memory? Answers to these questions would illustrate whether people’s concepts of agency are flexible with respect to entailing phenomenality. Despite the lack of data on this question, there are nonetheless good grounds to claim that human psychology could be changed to be compatible with entailment theories.

Another type of mixed view that is interesting to consider comes from Tom Regan. Regan (1983) says that many animals are “preferentially autonomous” in that they “perceive and remember; and have the ability to form and apply general beliefs” (p. 85). This seems to attribute to animals agential abilities of the sort I have argued are not psychologically connected to
judgments of moral considerability. However, Regan’s well-known “subject of a life” criterion for moral considerability appears to combine both experiential and agential states. His classic definition of being a “subject of a life” states:

Individuals are subjects of a life if they have beliefs and desires; perception, memory and a sense of the future, including their own future; an emotional life together with feelings of pleasure and pain; preference and welfare interests; a psychological unity over time and an individual welfare in the sense that their experiential life fares well or ill for them. (1983, p. 244)

This definition blends together an array of mental states, some agential and some phenomenal. But he also says that subjects of a life “are individuals who have an experiential welfare – whose experiential life fares well or ill, depending on what happens to, or is done to or for, them” (p. 262). Emphasizing the experiential aspects of being a subject of a life would seem to make Regan’s view compatible with human psychology. Whether the other agential states he emphasizes would have a counteractive effect, however, is not clear.

Things are similarly complicated with respect to agential views that do not entail phenomenality. The question here is whether ordinary human agents will use, or learn to use, pure agential states to assign moral significance. Answering this is difficult because the animal in question has been judged phenomenally capable, and thus any agential states might be assumed to have an impact on phenomenal states. A crucial test for this would be asking people to rank the moral significance of different phenomenally capable animals (or animal species) according to purely agential states. For instance, the Border collie Chaser has demonstrated the ability to comprehend over 1,000 English words (Pilley & Reid, 2011). This would seem to be a purely agential ability. This sort of view about agential states could be tested by comparing Chaser’s moral significance to an array of other dogs, all of which must be described as phenomenally capable but non-linguistic. My prediction would be that Chaser would not be judged to have
greater moral significance. If, however, Chaser is granted increased moral significance, there
would need to be an additional assessment of whether phenomenal states factored into their
judgments. This would be relatively simple, and could be achieved by asking participants to fill
out a basic mentalizing survey on Chaser and the other dogs. Without such evidence, however, it
is difficult to assess the psychological plausibility of this view.

4.3 Concluding Thoughts
Phenomenal states have risen to particular prominence in animal ethics relatively recently,
perhaps sometime in the 1970s in conjunction with work by Peter Singer and others on the
concept of sentience (though, of course, there are many historical precursors, further
substantiating the validity of the phenomenal account). The phenomenal account suggests that
theories in animal ethics have thereby become increasingly compatible with human psychology.

The issue with arguably the greatest significance here is the role of animal bodies in
mentalizing. There are many questions unanswered concerning our ability to learn more about
animals, and potentially learn to mentalize more accurately. This is particularly important
because of what is at stake. If all vertebrates truly are sentient, then we are making a grave
mistake in failing to attribute phenomenal states to them, thereby denying them moral
considerability. So long as a creature is morally considerable, it is assured that its interests will
be taken into account. This is absolutely fundamental, morally speaking. Future research on
mentalizing would thus do well to achieve greater clarity on what makes us deny phenomenal
states to legitimately morally considerable animals.

References


