

Comparisons of Capacity for Welfare and Moral Status Across Species

Jason Schukraft

May 17, 2020

Executive Summary

Effective altruism aims to allocate resources so as to promote the most good in the world. To achieve the most efficient allocation of resources, we need to be able to compare interventions that target different species, including humans, cows, chickens, fish, lobsters, and many others.

Comparing cause areas and interventions that target different species requires a comparison in the moral value of different animals (including humans). Animals differ in their cognitive, emotional, social, behavioral, and neurological features, and these differences are potentially morally significant. According to many plausible philosophical theories, such differences affect (1) an animal's capacity for welfare, which is the range of how good or bad an animal's life can be, and/or (2) an animal's moral status, which is the degree to which an animal's welfare matters morally.

Theories of welfare are traditionally divided into three categories: (1) hedonistic theories, according to which welfare is the balance of experienced pleasure and pain, (2) desire-fulfillment theories, according to which welfare is the degree to which one's desires are satisfied, and (3) objective list theories, according to which welfare is the extent to which one attains non-instrumental goods like happiness, virtue, wisdom, friendship, knowledge and love. Most plausible theories of welfare suggest differences in capacity for welfare among animals, though the exact differences and their magnitudes depend on the details of the theories and on various empirical facts.

A central question in the literature on moral status is whether moral status admits of degrees. The unitarian view, endorsed by the likes of Peter Singer, says 'no.' The hierarchical view, endorsed by the likes of Shelly Kagan, says 'yes.' If moral status admits of degrees, then the higher the status of a given animal, the more value there is in a given unit of welfare obtaining for that animal.

Status-adjusted welfare, which is welfare weighted by the moral status of the animal for whom the welfare obtains, is a useful common currency both unitarians and hierarchists can use to frame debates.

Different theories entail different determinants of capacity for welfare and moral status, though there is some overlap among positions. According to most plausible views, differences in capacity for welfare and moral status are determined by some subset of differences in things like: intensity of valenced experiences, self-awareness, general intelligence, autonomy, long-term planning, communicative ability, affective complexity, self-governance, abstract thought, creativity, sociability, and normative evaluation.

Understanding differences in capacity for welfare and moral status could significantly affect the way we wish to allocate resources among interventions and cause areas. For instance, some groups of animals that exhibit tremendous diversity, such as fish or insects, are often treated as if all members of the group have the same moral status and capacity for welfare. Further investigation could compel us to prioritize some of the species in these groups over others. More generally, if further investigation suggested we have been overestimating the moral value of mammals or vertebrates compared to the rest of the animal kingdom, we might be compelled to redirect many resources to invertebrates or non-mammal vertebrates. To understand the importance of these considerations, we must first develop a broad conceptual framework for thinking about this issue.

Introduction and Context

This post is the first in [Rethink Priorities'](#) series about comparing capacity for welfare and moral status across different groups of animals. The primary goal of this series is to improve the way resources are allocated within the effective animal advocacy movement in the medium-to-long-term. A secondary goal is to improve the allocation of resources between human-focused cause areas and nonhuman-animal-focused cause areas. In this first post I lay the conceptual framework for the rest of the series, outlining different theories of welfare and moral status and the relationship between the two. In the second entry in the series, I compare two methodologies for measuring capacity for welfare and moral status. In the third entry in the series, I examine temporal perception as a case study of a morally important feature that can plausibly be measured and compared across species. In the fourth entry in the series, I explore the possibility that the experiences of some nonhuman animals are worth more, morally, than the experiences of humans. In the final entry in the series, I map some future research directions and posit concrete suggestions for making progress in this area.

The Comparison Problem

The effective altruism (EA) movement aims to allocate resources efficiently among interventions. Comparing interventions across cause areas requires comparing the relative value of human lives (or interests or experiences) against the lives (or interests or experiences) of nonhuman animals. Within the animal welfare cause area, efficiently allocating resources requires comparing the relative value of the lives (or interests or experiences) of many different types of animals. Humans directly exploit a huge variety of animals: pigs, cows, goats, sheep, rabbits, hares, mice, rats, chickens, turkeys, quail, ducks, geese, frogs, turtles, herring, anchovies, carp, tilapia, milkfish, catfish, eels, octopuses, squid, crabs, shrimp, bees, silkworms, lac bugs, cochineal, black soldier flies, mealworms, crickets, snails, earthworms, nematodes, and many others.¹ Counting somewhat conservatively, there are at least 33 orders of animals, across 13 classes and 6 phyla, that humans directly exploit in large numbers.² The effective animal advocacy (EAA) movement has limited resources, and it must choose how to allocate these scarce resources among these different animals, most of whom are treated miserably by humans.³ Since we can't (yet) help all these animals, we must

decide which animals to prioritize. Sometimes these prioritization questions will be guided by practical concerns, like the degree to which an intervention is tractable or the degree to which a certain strategy will affect the long-run prospects of the movement. Ultimately, though, practical concerns ought to be guided by the answer to a much more fundamental question: What is the ideal⁴ allocation of resources among different groups of animals?

Even if practical concerns continue to dominate our strategic decisions in the near-term, understanding the ideal allocation of resources could change our estimates of the expected value of different meta-interventions. Suppose, for example, that we come to believe both that farmed insects deserve about 1/3 of EAA resources and that practical limitations mean that we can currently only dedicate about 1/300th of EAA resources to farmed insects. If that were the case, then the expected value of overcoming these limitations—either by working on moral circle expansion or funding new charities or researching new interventions or whatever—would be quite high. If, however, we come to believe that farmed insects deserve 1/299th of EAA resources but practical limitations mean that we can currently only dedicate 1/300th of EAA resources to farmed insects, then the expected value of overcoming these limitations would be much lower. Even if we are far from an ideal world, it's still important to know what an ideal world looks like so we can plot the best path to get there.

Comparative Moral Value

To answer the fundamental question, we need to be able to compare the moral value of different types of animals. There are two non-exclusive ways animals could characteristically differ in intrinsic moral value: (1) certain animals could have a greater capacity for welfare than others and (2) certain animals could have a higher moral status than others. Below, I sketch a conceptual framework for thinking about capacity for welfare and moral status. In the second entry in the series, I analyze how best to actually measure capacity for welfare and moral status, given the current state of our scientific knowledge and scientific toolset.

Although capacity for welfare and moral status are related, it's important to keep the two concepts conceptually distinct—else we will be apt to over- or underestimate the moral value of a given

1. My colleague Saulius Šimčikas has compiled a long list of [estimates of global captive vertebrates](#).

2. See [this spreadsheet](#) for details. By my count, every order in the spreadsheet is exploited in numbers greater than ~50 million individuals per year.

3. Of course, some of these animals are treated *much* worse than others. See the 'Objections' section for more discussion of this point.

4. Ideal in the sense that we are ignoring strategic considerations like how the allocation might affect public opinion. So maybe in an ideal world we would be committing more resources to arthropod welfare, but we can't in the actual world because doing so would risk too great a reputational harm.

experience, interest, or life. In my experience, many conversations that purport to be about moral status are actually about capacity for welfare. For that reason, I initially discuss the two concepts separately. However, on some theories of moral status, capacity for welfare is a contributor to moral status. So ultimately it might make more sense to think about comparative moral value in terms of status-adjusted welfare, which is welfare weighted by the moral status of the creature for whom the welfare obtains. I discuss status-adjusted welfare after the capacity for welfare and moral status sections.

In what follows, I intend to adopt as theory-neutral an approach as possible. I explore the implications of a number of different plausible viewpoints in order to highlight the collection of features that might be relevant to comparing capacity for welfare and moral status across animals. There are very few knockdown arguments in this area of philosophy and thus we should all be keenly aware of our uncertainty. When making cross-species comparisons of welfare and moral status, the best we can do is take note of where the recommendations of different theories overlap and where they diverge. Incorporating this knowledge will hopefully allow us to build interventions that are sufficiently robust in the face of our uncertainty.

Capacity for Welfare

Capacity for welfare is how good or bad a subject's life can go. One is a welfare subject if and only if things can be non-instrumentally good or bad for it. Positive welfare is that which is non-instrumentally good for some subject; negative welfare is that which is non-instrumentally bad for some subject.⁵ A subject's capacity for welfare is the total range between a subject's maximum positive welfare and minimum negative welfare.⁶ Capacity for welfare should be distinguished from realized welfare. If capacity for welfare is how good or bad a creature's life can go, then realized welfare is how good or bad a creature's life actually goes. Creatures with a greater capacity for welfare have the potential to make a greater per capita difference to the world's overall realized welfare stock.

Synchronic welfare is welfare at a particular time. Diachronic welfare is welfare over time. The fact that one creature has a greater capacity for synchronic welfare than some other creature

does not entail that the creature also has a greater capacity for diachronic welfare. If one were analyzing differences in total welfare over the course of a lifetime (diachronic welfare), differential lifespans would need to be taken into account. Creatures with longer lifespans have longer to amass welfare. So even if a given creature's capacity for welfare at any one time is lower than some other creature, if the former creature lives longer than the latter, it may be able to accrue more welfare. (So holding lifespans fixed, a greater capacity for synchronic welfare does entail a greater capacity for diachronic welfare.⁷) The analysis below concerns synchronic welfare. Synchronic welfare is the more fundamental concept, and it is easier to investigate, so nothing is lost by this simplification. In practice, though, when we want to compare lives saved across species, we will have to account for differential lifespans in order to estimate total welfare over the course of a lifetime and so we will appeal to diachronic welfare.

Capacity for welfare is how good or bad a subject's life can go. But it's important to note that there is no single concept capacity for welfare. One can generate multiple concepts depending on how one interprets the modal force of the 'can' in 'how good or bad a subject's life can go.' Take some actual pig confined to a gestation crate on a factory farm. We can perhaps imagine a metaphysically possible (but physically impossible) world in which a god grants this pig her freedom and gives her the ability to reason like a superintelligent machine. If reasoning abilities generally raise capacity for welfare,⁸ then, in a very broad sense of 'can,' this pig's life can go very well indeed. On the other hand, if we simply ask how good or bad the actual pig's life can go, given that she will spend her whole life in a gestation crate, then, in a narrow sense of 'can,' her life can only go very poorly. The first sense of 'can' is obviously too broad: the mere metaphysical possibility of vast pig welfare doesn't tell us anything about how to treat actual pigs. The second sense of 'can' is obviously too narrow: we think it a tragedy that the pig is confined precisely because her life can go much better.

To remain a useful concept in practice, capacity for welfare must be relativized so that it encompasses all and only the normal variation of species-typical animals. In other words, the concept must be restricted so as to exclude possibilities in which a subject's capacity for welfare is unnaturally raised or lowered. To see why,

5. Some authors prefer the term 'well-being' to 'welfare.' In many instances, two terms are meant to be synonymous. However, some authors draw a distinction between well-being and welfare, reserving 'welfare' for non-instrumental goods constituted by experience. I use the term 'welfare' in the more expansive sense in which a subject's welfare is constituted by whatever is non-instrumentally good for the subject, whether experiential or non-experiential.

6. Note that this range need not be symmetric between positive and negative welfare. An animal might have only a small capacity for positive welfare but a large capacity for negative welfare or vice versa.

7. I'm here assuming the additivity of welfare. More on that assumption in the 'Objections' section.

8. It's not obvious that they do, but we can substitute a different feature that *does* raise capacity for welfare without affecting the substance of the thought experiment.

consider that with the right sort of advanced genetic engineering, it may be possible to breed a pig that is, in essence, a superpleasure machine. That is, with the right artificial brain alterations, perhaps we can create a pig that experiences pleasures that are orders of magnitude greater than the pleasures that any creature (pig or otherwise) has experienced before.⁹ But even if such a scenario were physically possible, it would not tell us anything about the moral value of normal pigs in the circumstances in which we actually find them.¹⁰ Peter Vallentyne makes much the same point by distinguishing capacity from potential. He writes, “Instead of focusing on the potential for well-being, we should, I believe, focus on the capacity for well-being. A capacity is something that can be realized now, whereas a potential is something that can be realized only at some later time after the capacity is developed. Thus, for example, most normal adults now have the potential to play a simple piece on the piano (i.e. after much practice to develop their capacities), but only a few adults now have the capacity to do so” ([Vallentyne 2007](#): 228). In this parlance, even if a pig has the potential for extreme, god-like pleasure, that potential does not affect the pig’s capacity for pleasure (and thus does not affect the pig’s capacity for welfare).¹¹

In somewhat formal terms, the capacity for welfare for some subject, *S*, is determined by the range of welfare values *S*² experiences in some proper subset of physically possible worlds. How wide or narrow we should circumscribe the set of relevant possible worlds will be contentious, but in general we should be guided by considerations of practicality. If we circumscribe the relevant possible worlds as tightly as possible, then only the actual world will remain in the set, and capacity for welfare will collapse to actual welfare. Obviously, that is too narrow. But if we draw the line too far in modal space, we will include some modally distant possible worlds in which *S* experiences abnormally large or small welfare values because *S* has been unnaturally altered or stimulated. These remote possibilities are generally irrelevant to resource allocation—at least in the medium-term—so those worlds should not affect a subject’s capacity for welfare. We want to circumscribe the set of possible worlds so that it includes all and only normal variation in the welfare values of species-typical

animals.¹³

There are two non-exclusive ways capacity for welfare might be a determinant of an animal’s characteristic moral value. The first is direct. Capacity for welfare might be one of the factors that determines an animal’s moral status. I’ll save discussion of this potential role for the section on moral status. Another way capacity for welfare might shape characteristic moral value is indirect. On this view, there’s nothing intrinsically valuable about capacity for welfare. All that matters is welfare itself. But because animals with a greater capacity for welfare are in a position to make a greater contribution to the world’s welfare—either positive or negative—they deserve more of our attention.¹⁴ This position is usually supplemented by the claim that animals with a greater capacity for welfare tend, in fact, to attain more valuable goods and more disvaluable bads: their highs are higher, their lows, lower. Importantly, the claim that animals with a higher capacity for welfare have the potential to experience more valuable goods and more disvaluable bads is a conceptual truth. But the claim that animals with a higher capacity for welfare tend to experience more valuable goods and disvaluable bads is a contingent empirical assertion. It could be the case that some types of animals have a large capacity for welfare but in fact only oscillate within a narrow range.¹⁵ When evaluating interventions, it is imperative that potential welfare gains and losses are compared, not merely the capacity for welfare of the animals targeted. Capacity for welfare tells us how high or low such gains or losses could be. And if capacity for welfare is correlated with disposition to welfare, it tells us even more. Thus, it is plausibly the case that the greater an animal’s capacity for welfare, the more good we can typically do by improving its life.

Variabilism vs. Invariabilism

Before tracing the implications of different conceptions of welfare, we must first ask if the same conception of welfare is applicable to all animals. Welfare variabilism is the view that the

9. It’s uncertain that such a pig would remain a pig. But because it is uncertain, it is an epistemic possibility that it would.

10. Of course, if there were some animals that were capable of transformation into superpleasure machines and some that were not, that information could be valuable to our technologically advanced descendants. Similarly, if there were a way to reduce the overall intensity of valenced experience, that technology could plausibly lead to reductions in animal suffering if the technique were applied to animals leading net-negative lives.

11. Another possibility is that pigs already have the latent potential for extreme pleasure, if, say we were able to simultaneously stimulate all their neurons at once. Assuming that pigs cannot artificially achieve this stimulation on their own and that no natural circumstance activates such a stimulation, such a possibility only implies a large *potential* for pleasure, not a large *capacity* for pleasure.

12. Or, in [Lewisian terms](#), the counterparts of *S*

13. Admittedly, filling in the details of this relativization will be complex. It’s not at all clear how to define ‘normal variation’ or ‘species-typical animal.’ I set aside that difficulty for now.

14. When I say that they are in a position to make a greater contribution, I of course mean on a per capita basis. At the group level, extremely numerous animals might deserve more attention even if their individual capacity for welfare is quite low because collectively the group can make a bigger welfare contribution than other groups. See the “Objections” section for more discussion of this issue.

15. Certainly this is true of some individuals.

basic constituents of welfare may differ across different subjects of welfare. (For example, for one type of animal, welfare may consist in the balance of pleasure over pain; for another type of animal, welfare may consist in the satisfaction of desires.) Welfare invariabilism is the view that the same basic theory of welfare is true for all subjects of welfare.¹⁶

On initial inspection, welfare variabilism appears to be the more intuitive view. Richard Kraut captures the common sense behind the variabilist position fairly well. He notes that “when we think about the good of animals, our thoughts vary according to the kind of animal we have in mind. We must ask what is good for a member of this species or that, and the answer to that question will not necessarily be uniform across all species. Unimpeded flying is good—that is, good for birds. Although pleasure is good for every animal capable of feeling it, the kinds of pleasure that are good for an animal will depend on the kind of animal it is. And the stimulation of the pleasure centers of an animal’s brain may, on balance, be very bad for it if it prevents the animal from getting what it needs and engaging in the kinds of behavior that constitute a healthy life for a member of its kind” (Kraut 2007: 89).

However, a little reflection reveals that variabilism is far from the intuitive view it purports to be. For a start, it’s unclear what could ground the applicability of a theory of welfare to some animals but not others. Suppose that the capacity for unimpeded flight is a constituent of a bird’s welfare but not a fish’s welfare.¹⁷ How could we explain this alleged fact? A natural thought is that flying is good for a bird but not for a fish. But that answer doesn’t work in this context. Recall that the constituents of an animal’s welfare are those things that are non-instrumentally good for it. So we can’t explain the claim that flying is non-instrumentally good for a bird but not a fish by appealing to the very claim that flying is non-instrumentally good for a bird but not a fish.

Rather than appealing directly to the claim that flying is good for a bird but not for a fish, we might instead appeal to certain facts about the nature of birds and fish. Birds must reach high places to mate, they must survey the ground from high distances

to find food, they must take to the air to avoid predators, and so on.¹⁸ None of these claims are true of fish. Here, however, we must remember the definition of welfare: positive welfare is that which is non-instrumentally good for some subject. If unimpeded flight is only good for birds in virtue of what it allows birds to accomplish, then it is not non-instrumentally good. Indeed, even though fish and birds are very different types of creatures, it seems they both benefit from a similar good, namely unimpeded movement, and it is this fact that explains why birds benefit from unimpeded flight.¹⁹ Of course, unimpeded movement is not itself a very plausible candidate for a non-instrumental good. Animals move in order to do other things, such as eat, mate, or play—generalizing a bit, we might say that they move in order satisfy desires, seek pleasures, and avoid pains—and it is the ability to partake of these sorts of activities which more plausibly contribute to an animal’s welfare.²⁰

Welfare invariabilism is not committed to the claim that the constituents of welfare are accessible to all welfare subjects. As I show below, some theories of welfare posit welfare constituents that certain nonhuman animals plausibly cannot obtain. Theoretical contemplation, for instance, may be a constituent of welfare, but it is not an activity in which fish are likely to engage.²¹ If some elements of welfare are inaccessible to some animals but not others, then welfare invariabilism can recover some of the intuitive pull of welfare variabilism. When we think about the welfare of animals, it is important that we specify the type of animal under discussion. The reason isn’t that certain theories of welfare apply to some animals and not others; the reason is that some welfare constituents are available to some animals but not others. If we want to improve the welfare of some animal, we need to know which welfare goods an animal is capable of appreciating.

If welfare is a unified concept and if welfare is a morally significant category across species, it seems as if invariabilism is the better option. Invariabilism is the simpler view, and it avoids the explanatory pitfalls of variabilism at little intuitive cost. While we should certainly leave open the possibility that variabilism is the correct view, in what follows I will assume invariabilism.²²

16. See [Lin 2018](#) for discussion and a defense of welfare invariabilism.

17. Of course, not all species of birds fly, so unimpeded flight is not a welfare constituent for *all* birds. In this discussion *birds* is implicitly restricted to *flying birds*.

18. Again, obviously, these claims aren’t true of *all* birds.

19. A distinct explanation is that flying exemplifies the essence of being a (flying) bird and that swimming exemplifies the essence of being a fish and that exemplifying one’s species-relative essence contributes to one’s *flourishing*. In this case, one’s degree of flourishing is the non-instrumental good that determines one’s welfare. See [Hursthouse 1999](#), especially chapter 9, for more on the concept of ‘flourishing.’

20. Depending on one’s preferred theory of welfare, these activities might be valuable for their own sake or they might be valuable for the positive mental states they engender.

21. Welfare invariabilism implies that *if* theoretical contemplation were a welfare constituent, then *if* a fish engaged in theoretical contemplation, it would be non-instrumentally good for that fish.

22. If variabilism is true, then determining capacity for welfare is likely to be much more difficult because we’ll have to figure out the right theory of welfare for each of the animals that we care about.

Theories of Welfare and Their Capacity Implications

Determining the ideal allocation of resources among different types of animals will require making comparisons of welfare across disparate groups of animals. Making comparisons of welfare across disparate groups of animals will require, among other things, understanding the constituents of welfare for different animals. In this section I discuss in broad strokes the manner in which different theories of welfare postulate differences in capacity for welfare. (I here set aside the practical difficulty of actually developing empirically-reliable metrics for measuring capacity for welfare. I take up this difficulty in the second entry in the series.)

Traditionally, theories of welfare are divided into three categories: hedonistic theories, desire-fulfillment theories, and objective list theories.²³ According to hedonistic theories of welfare, welfare is the balance of experienced pleasure and pain.²⁴ According to desire-fulfillment theories of welfare, welfare is the degree to which one's desires are satisfied.²⁵ According to objective list theories of welfare, welfare consists of the achievement, creation, instantiation, or possession of certain objective goods, such as love, knowledge, freedom, virtue, beauty, friendship, justice, wisdom, or happiness.²⁶

Evaluating the implications of these three families of theories for nonhuman animals is not easy, in no small part due to the large internal variation within the families of theories, the details of which would take us too far afield from the present topic.²⁷ Nonetheless, some general remarks can illuminate the manner in which a theory of welfare can bear on differences in capacity for

welfare across species. There are two non-exclusive ways animals might differ in their capacity for welfare: they might differ with respect to the number of welfare constituents they can attain, or they might differ with respect to the degree to which they can attain those welfare constituents. An animal that can attain more kinds of welfare goods and more of those goods will have a higher capacity for welfare than an animal that lacks access to as many and as much.

On some theories of welfare, certain welfare constituents will be inaccessible to many nonhuman animal welfare subjects.²⁸ This fact is most obvious for objective list theories. The basic idea is that "the range of forms and levels of well-being that are in principle accessible to an individual is determined by that individual's cognitive and emotional capacities and potentials. The more limited an individual's capacities are, the more restricted his or her range of well-being will be. There are forms and peaks of well-being accessible to individuals with highly developed cognitive and emotional capacities that cannot be attained by individuals with lower capacities" (McMahan 1996: 7). Suppose that one believes that the constituents of welfare are varied and include love, friendship, knowledge, freedom, virtue, wisdom, and pleasure. A species-typical adult human being can experience any of these goods. For many nonhuman animals, however, differences in capacities will render some of these goods unattainable. Octopuses are solitary creatures and thus plausibly will never experience true friendship or love. If theoretical contemplation is a requirement for wisdom, then frogs plausibly will never experience true wisdom. If moral agency is a requirement for virtue, fish plausibly cannot be virtuous. Hence, if some form of objective list theory is correct, and the constituents of welfare are as philosophers have generally described them,²⁹ then many nonhuman animals will have a lower capacity for welfare than species-typical adult hu-

23. This tripartite division traces back to [Parfit 1984](#), though it's hardly exhaustive of the contemporary literature. See [Woodard 2013](#) for a novel classificatory scheme that introduces 16 distinct categories.

24. In some classificatory schema of welfare theories, *hedonistic theories* is replaced with the broader category *mental state theories*. A theory is a mental state theory if and only if the constituents of welfare are mental states. Hedonism is by far the most popular mental state theory, so for simplicity's sake I will avoid discussion of the broader category.

25. According to some versions of desire theory the relevant desires need not be one's *actual* desires. For instance, *full information theory* defines welfare in terms of the desires that a suitably idealized version of oneself would hold if one were fully informed. See [Tiberius 2015](#): 164-166 for more on full information theory.

26. Both hedonistic theories and desire-fulfillment theories could be understood as objective list theories, but in the context of the traditional classificatory scheme, it's understood that the goods of an objective list theory go beyond the mere experience of pleasure or satisfaction of desires.

27. See [Fletcher 2016a](#) for an overview.

28. The modal status of this claim is a bit unclear. Even if the welfare constituents discussed in this paragraph are inaccessible to nonhuman animals in the actual world and in nearby possible worlds, it doesn't follow that these welfare constituents are *necessarily* inaccessible.

29. See [Finnis 2011](#), [Fletcher 2013](#), [Fletcher 2016b](#), [Lin 2014](#), [Lin 2017](#), [Hooker 2015](#) for recent work in the objective list tradition.

man beings.³⁰

Hedonists of a certain stripe might also hold that some welfare constituents are inaccessible to nonhuman animals. According to traditional accounts of hedonism, the value of a given pleasurable experience is the product of the experience's intensity and its duration. However, the hedonist John Stuart Mill added a third component to this calculation: the quality of the pleasure. Mill distinguished so-called higher pleasures from so-called lower pleasures. According to Mill, both humans and nonhuman animals can experience lower pleasures, but only humans have access to higher pleasures. Higher pleasures make a greater contribution to welfare than lower pleasures and for this reason Mill famously contended that "It is better to be a human being dissatisfied than a pig satisfied; better to be Socrates dissatisfied than a fool satisfied. And if the fool, or the pig, are of a different opinion, it is because they only know their own side of the question. The other party to the comparison knows both sides" ([Mill 1861](#): chapter 2).³¹

Even if a theory of welfare holds that its welfare constituents are accessible to all welfare subjects, human and nonhuman alike, it might be the case that animals characteristically differ with respect to the degree to which they can attain those welfare constituents. Take hedonism, for example. Suppose one rejects Mill's distinction between higher and lower pleasures so that the value of a pleasurable experience is just the product of its intensity and duration. It could be the case that differences in social, emotional, or psychological capabilities affect the characteristic

intensity of pleasurable (and painful) experiences.³² (Differences in neuroanatomy might even affect the characteristic duration of animal experiences.³³) Many philosophers believe that differences in capacities affect the characteristic phenomenal range of experience. For example, Peter Singer writes, "There are many areas in which the superior mental powers of normal adult humans make a difference: anticipation, more detailed memory, greater knowledge of what is happening and so on. These differences explain why a human dying from cancer is likely to suffer more than a mouse" ([Singer 2011](#): 52). Peter Vallentyne writes, "The typical human capacity for well-being is much greater than the typical mouse capacity for well-being. Part of well-being (what makes a life go well) is the presence of pleasure and the absence of pain. The typical human capacity for pain and pleasure is no less than that of mice, and presumably much greater, since we have, it seems plausible, more of the relevant sorts of neurons, neurotransmitters, receptors, etc. In addition, our greater cognitive capacities amplify the magnitude of pain and pleasure" ([Vallentyne 2007](#): 213).³⁴

There are, however, countervailing considerations. While it's true that sophisticated cognitive abilities sometimes amplify the magnitude of pain and pleasure, those same abilities can also act to suppress the intensity of pain and pleasure.³⁵ When I go to the doctor for a painful procedure, I know why I'm there. I know that the procedure is worth the pain, and perhaps most importantly, I know that the pain is temporary. When my dog goes to the vet for a painful procedure, she doesn't know why she's there or whether the procedure is worth the pain, and she has no idea how

30. This quote from [Kagan 2019](#) nicely summarizes ways in which objective list welfare constituents might be inaccessible, in whole or in part, to certain nonhuman animals: "First of all, then, people have deeper and more meaningful relationships than animals, with more significant and valuable instances of friendships and love and family relations, based not just on caring and shared affection but on insight and mutual understanding as well. Second, people are capable of possessing greater and more valuable knowledge, including not only self-knowledge and knowledge of one's family and friends, but also systematic empirical knowledge as well for an incredibly wide range of phenomena, culminating in beautiful and sweeping scientific theories. Third, people are capable of a significantly greater range of achievements, displaying creativity and ingenuity as we pursue a vast range of goals, including hobbies, cultural pursuits, business endeavors, and political undertakings. Fourth, people have a highly developed aesthetic sense, with sophisticated experience and understanding of works of art, including music, dance, painting, literature and more, as well as having a deeper appreciation of natural beauty and the aesthetic dimensions of the natural world, including the laws of nature and of mathematics. Fifth, people have greater powers of normative reflection, with a heightened ability to evaluate what matters, a striking capacity to aim for lives that are meaningful and most worth living, and a remarkable drive to discover what morality demands of us" (48).

31. See also this passage: "Now it is an unquestionable fact that those who are equally acquainted with, and equally capable of appreciating and enjoying, both, do give a most marked preference to the manner of existence which employs their higher faculties. Few human creatures would consent to be changed into any of the lower animals, for a promise of the fullest allowance of a beast's pleasures; no intelligent human being would consent to be a fool, no instructed person would be an ignoramus, no person of feeling and conscience would be selfish and base, even though they should be persuaded that the fool, the dunce, or the rascal is better satisfied with his lot than they are with theirs. They would not resign what they possess more than he for the most complete satisfaction of all the desires which they have in common with him. If they ever fancy they would, it is only in cases of unhappiness so extreme, that to escape from it they would exchange their lot for almost any other, however undesirable in their own eyes. A being of higher faculties requires more to make him happy, is capable probably of more acute suffering, and certainly accessible to it at more points, than one of an inferior type" ([Mill 1861](#): chapter 2).

32. I discuss the specific capabilities that might make a difference in the second entry in the series.

33. For example, differences in neural processing speed might give rise to differences in the subjective experience of time. Thus, for a given minute of objective time, some animals might experience more or less than a minute of subjective time. I discuss this possibility in more detail in the third entry in the series.

34. Vallentyne is not himself a hedonist. He adds, "Moreover, well-being does not depend solely on pain and pleasure. It's controversial exactly what else is relevant — accomplishments, relationships, and so on — but all accounts agree that typical humans have greater capacities for whatever the additional relevant items are" (*ibid.*).

35. See [Akhtar 2011](#) for general discussion of this point.

long the pain will last.³⁶ It seems intuitively clear that in this case superior cognitive ability reduces rather than amplifies the painful experience.³⁷

Another way to potentially get a handle on the phenomenal intensity of nonhuman experience is to consider the evolutionary role that pain plays. Pain teaches us which stimuli are noxious, how to avoid those stimuli, and what we ought to do to recover from injury. Because intense pain can be distracting, animals in intense pain seem to be at a selective disadvantage compared to conspecifics not in intense pain. Thus, we might expect evolution to select for creatures with pains just phenomenally intense enough (on average) to play the primary instructive role of pain. Humans are among the most cognitively sophisticated animals on the planet, plausibly the animals most likely to pick up on patterns in signals only weakly conveyed. In general, less cognitively sophisticated animals probably require stronger signals for pattern-learning. If pain is the signal, then we might reasonably expect the phenomenal intensity of pain to correlate inversely with cognitive sophistication.³⁸ If that's the case, humans might experience (on average) the least intense pain in all the animal kingdom.

These considerations are important and often overlooked, but ultimately they are orthogonal to the current discussion. The question is not whether differences in characteristics contribute to the realization of more or less welfare but whether these differences contribute to the capacity for more or less welfare. I think the answer to the latter question is clearer than the answer to the former. Advanced social, emotional, and intellectual complexity opens up new dimensions of pleasure and suffering that widen the range of experience. Martha Nussbaum puts the point this way: "More complex forms of life have more and more complex capabilities to be blighted, so they can suffer more and different types of harm. Level of life is relevant not because it gives different species differential worth per se, but because the type and degree of harm a creature can suffer varies with its form of life" (Nussbaum 2004: 309). For example, the combination of physical and emotional torture plausibly generates the possibility of greater overall pain than physical torture alone.

Conversely, the combination of physical and emotional intimacy plausibly generates the possibility (whether typically realized or not) of greater overall pleasure than physical intimacy alone.³⁹ Analogous considerations apply to objective list theories. Such theories postulate that differences in social, emotional, and cognitive capacities affect the degree to which many intrinsic goods can be obtained.

Desire-fulfillment theories also appear to predict differences in capacity for welfare. Some authors have argued that because "[h]uman desires are more numerous and more complex than those of nonhumans" (Crisp 2003: 760), species-typical adult humans have a greater capacity for welfare than nonhuman animals. This argument can be challenged on several fronts. First, it's not obvious why cognitive, affective, or social sophistication should affect the number of desires an animal has. For every flower in the meadow, a honey bee might have a strong desire to visit that particular flower. These desires would all be of the same type, but they would be numerous. Second, it's not clear what the relationship is between welfare and number of satisfied desires. Derek Parfit (1984: 497) offers an objection to the simple view according to which welfare increases summatively by satisfied desires. An addict might experience a strong desire to take her drug of choice every few minutes and satisfy that desire. But even if the addict's life contains many more satisfied desires than the non-addict, it seems the non-addict leads a better life. Third, even granting that humans have many complex desires and the more desires one has the higher one's capacity for welfare, desire strength still needs to be accounted for. A praying mantis's desire to mate might be stronger than any desire humans ever experience. Together, these considerations cast some doubt on the claim that desire-fulfillment theories of welfare are committed to the position that humans generally have a greater capacity for welfare than nonhuman animals. These considerations don't, however, suggest that capacity for welfare is uniform across all animals. It's uncertain which characteristics affect desire strength, number, and complexity, but whatever those characteristics are, it's plausible that they vary across species.

The bottom line is that most (though not all) plausible theories

36. See Broom 2007: "For some sentient animals, pain can be especially disturbing on some occasions because the individual concerned uses its sophisticated brain to appreciate that such pain indicates a major risk. However, more sophisticated brain processing will also provide better opportunities for coping with some problems. For example, humans may have means of dealing with pain that fish do not, and may suffer less from pain because they are able to rationalise that it will not last for long. Therefore, in some circumstances, humans who experience a particular pain might suffer more than fish, whilst in other circumstances a certain degree of pain may cause worse welfare in fish than in humans" (103).

37. A similar story can be told about pleasurable experiences. The knowledge that a given pleasurable experience is fleeting or undeserved or bad for one's health can reduce enjoyment of the experience. My dog seems to enjoy her dog treats more than I enjoy my ice cream at least in part because I eat my ice cream with a guilty conscience.

38. Alternatively, it might be the statistical regularity of the pattern rather than the phenomenal intensity of the pattern that would be assisted by cognitive sophistication. Thanks to Gavin Taylor for this point.

39. Even ignoring the combinatory effects, it might be the case that intellectual, emotional, and social pleasures generally outstrip mere physical pleasures in intensity (and conversely for pains).

of welfare suggest differences in capacity for welfare among animals.⁴⁰ The exact differences and their magnitudes depend on the details of the theories and on various empirical facts. For our purposes, what's important is that many (though not all) of the features that plausibly influence capacity for welfare also recur in the literature on moral status, discussed below. The overlap between features that are relevant to capacity for welfare and features that are relevant to moral status sometimes begets conceptual confusion that hinders clear thinking on this complicated topic. But the overlap also makes the empirical investigation of properties relevant to the ideal allocation of resources among animals somewhat simpler.

Moral Status

We turn now to moral status and begin with some basic definitions. An entity has moral standing⁴¹ if and only if it has some intrinsic moral worth (no matter how small).⁴² The interests of an entity with moral standing must be considered in (ideal) moral deliberation; the interests of an entity with moral standing cannot (morally) be ignored, though its interests can be overridden by the interests of other entities with moral standing. Put another way, an entity with moral standing can be wronged. You can damage a coffee mug, but you can't wrong a coffee mug (though by damaging the coffee mug you might wrong its owner).

Philosophers have generally proposed two features which might, either independently or in conjunction, confer moral standing: sentience and agency. Sentience in this context is the capacity for valenced experience or, more simply, the ability to feel pleasures and pains.

⁴³ Agency in this context is the capacity to possess desires, plans, and preferences.⁴⁴ Almost certainly, all sentient agents have moral

standing.⁴⁵ It's likely that sentience is sufficient on its own for moral standing, though that view is just slightly more controversial. The view that agency on its own is also sufficient for moral standing is more controversial still and hangs on substantive disagreements about the nature of agency.⁴⁶

Defining moral status is trickier.⁴⁷ David DeGrazia writes, "Moral status is the degree (relative to other beings) of moral resistance to having one's interests—especially one's most important interests—thwarted," adding "A and B have equal moral status, in the relevant sense, if and only if they deserve equal treatment" ([DeGrazia 1991](#): 74). Thomas Douglas writes, "To say that a being has a certain moral status is, on this view, roughly to say that it has whatever intrinsic non-moral properties give rise to certain basic moral protections," adding "[o]ther things being equal, a being with higher moral status will enjoy stronger and/or broader basic rights or claims than a being of lesser moral status" ([Douglas 2013](#): 476). And Shelly Kagan writes, "The crucial idea remains this: other things being equal, the greater the status of a given individual, the more value there is in any given unit of welfare obtaining for that individual" ([Kagan 2019](#): 109). For our purposes, I'll let moral status be the degree to which the interests of an entity with moral standing must be weighed in (ideal) moral deliberation or the degree to which the experiences of an entity with moral standing matter morally.

Strictly speaking, moral status is a property of individuals. However, in both the philosophical literature on the subject and in informal discussions, it's common for authors to ascribe moral status to species. One might speak of the moral status of cows or chickens. Moral status is ascribed to higher taxonomic ranks too. One might speak of the moral status of octopuses (an order) or the moral status of insects (a whole class). Moral status is even ascribed to groups that lack a taxonomic correlate, like

40. See, inter alia, [Višak 2017](#) for an argument in favor of the so-called *self-fulfillment theory of welfare*, according to which "a maximally well-off dog or squirrel is faring just as well as a maximally well-off human. An individual's cognitive and emotional capacities do not necessarily determine how well off this individual can be" (348).

41. Moral standing is also sometimes called 'moral patienthood' or 'moral considerability.'

42. Moral standing should be distinguished from moral *agency*. Moral agency is the capacity to be morally responsible for one's actions or the capacity to owe moral obligations to other beings. Moral standing does not entail moral agency.

43. Note that this is the narrow understanding of sentience. The broader (and more common) understanding of sentience equates it with phenomenal consciousness (i.e., sentience is the capacity for *any* sort of experience, valenced or not).

44. Note that agency is sometimes understood to require something like rational deliberation. This thicker sense of agency would obviously be more restrictive than the thin sense in which agency might be sufficient for moral standing. Still, there is considerable disagreement as to what constitutes a desire, plan, or preference, and one's views on this issue will influence one's views on which animals have moral standing and/or one's view on the plausibility of agency as sufficient for moral standing.

45. The theological-minded might prefer a view on which moral standing is grounded in the possession of a Cartesian soul. But on most such accounts, the possession of a Cartesian soul grants sentience or agency or both. So even most theologians will agree that all sentient agents have moral standing because they will think that the class of moral agents is coextensive with the class of beings with Cartesian souls.

46. Agency is harder to define than sentience, and this definition complicates the debate over whether agency is sufficient for moral standing. If even crude desires, plans, and preferences are enough for agency, then it appears that creatures like spiders qualify as agents, which may by itself be a reason to suspect agency is insufficient for moral standing ([Carruthers 2007](#)). Moreover, if one sets the bar too low for agency, then it will be hard to exclude sophisticated computer programs, like [OpenAI Five](#) playing Dota 2. Although it is certainly possible that digital minds can acquire moral standing, there is widespread agreement that current programs do not have such standing.

47. Note that some authors use the term 'moral status' the way I'm using the term 'moral standing.' This terminological difference should be distinguished from the case where an author uses the terms the way I am but who thinks that there are no degrees of moral status, in which case moral status collapses to moral standing.

fish. ('Fish' is a gerrymandered grouping of three evolutionarily distinct classes.⁴⁸)

In all these cases, ascription of moral status to a taxonomic group is non-literal. Taxonomic groups are abstract entities. They are neither sentient nor autonomous. They don't have moral standing, let alone moral status.⁴⁹ An ascription of some level of moral status to ants, say, is shorthand for one of three things. It might mean that all (or perhaps the vast majority of) ants have the exact same moral status. (This is more plausible if there are relatively few levels of moral status.) It might refer to the average (either mean or median) moral status of ants. Or it might signify the moral status of a 'species-typical' ant, which may come apart from the average moral status of actual ants. In either case, the ascription may be restricted to species-typical adult members of the group or it may apply to all individuals within the taxon.

Degrees of Moral Status

A central question in the literature on moral status is whether moral status admits of degrees. There are two main positions with regard to this question: (1) the unitarian view, according to which there are no degrees of moral status and (2) the hierarchical view, according to which the equal interests/experiences of two creatures will count differently (morally) if the creatures have differing moral statuses.

Peter Singer is a representative proponent of the unitarian view.⁵⁰ Singer writes, "Pain and suffering are bad and should be prevented or minimized, irrespective of the race, sex or species of the being that suffers. How bad a pain is depends on how intense it is and how long it lasts, but pains of the same intensity and duration are equally bad, whether felt by humans or animals" (Singer 2011: 53). This view follows from what Singer calls the principle of equal consideration of interests, which entails that "the fact that other animals are less intelligent than we are does not mean that their interests may be discounted or disregarded" (Singer 2011: 49). However, as Singer and other unitarians are quick to stress, even though intelligence doesn't confer any additional intrinsic value on a creature, it's not as if cognitive sophistication is morally irrelevant. Recall the Singer quote discussed above: "There are many areas in which the superior mental powers of normal adult

humans make a difference: anticipation, more detailed memory, greater knowledge of what is happening and so on. These differences explain why a human dying from cancer is likely to suffer more than a mouse" (Singer 2011: 52). So for Singer and other unitarians, even though mice and humans have the same moral status, it doesn't follow that humans and mice have the same capacity for welfare. Hence, alleviating human and mice suffering may not have equal moral importance. Humans are cognitively, socially, and emotionally more complex than mice, so in many cases it will make sense to prioritize human welfare over mice welfare.

Shelly Kagan is a representative proponent of the hierarchical view.⁵¹ He writes, "A hierarchical approach to normative ethics emerges rather naturally from two plausible thoughts. First, the various features that underlie moral standing come in degrees, so that some individuals have these features to a greater extent than others do (or in more developed or more sophisticated forms). Second, absent some special explanation for why things should be otherwise, we would expect that those who do have those features to a greater extent would, accordingly, count more from the moral point of view. When we put these two thoughts together they constitute what is to my mind a rather compelling (if abstract) argument for hierarchy" (Kagan 2019: 279). The basic idea is that moral standing is grounded in the capacity for welfare and the capacity for rational choice. Plausibly, some animals have a greater capacity for welfare and rational choice than others. If possessing the capacity for welfare and rational choice confers moral status, then the possession of those capacities to a greater degree should confer more moral status.

The question of whether moral status admits of degrees also intersects with the question of distribution of realized welfare among animals. Tatjana Višak (2017: 15.5.1 and 15.5.2) argues that any welfare theory that predicts large differences in realized welfare between humans and nonhuman animals must be false because, given a commitment to prioritarianism⁵² or egalitarianism,⁵³ such a theory of welfare would imply that we ought to direct resources to animals that are almost as well-off as they possibly could be. For example, suppose for the sake of argument that a mouse's capacity for welfare maxes out at 10 on some arbitrary scale and a human's capacity for welfare maxes out at 100 on the same scale. If there is a human being that currently

48. 'Fish' is a [paraphyletic group](#). Any taxonomic group containing all fish would also contain [tetrapods](#), which are not fish.

49. I'm here bracketing any ecocentrist or relationist views that reject an individualist conception of moral status.

50. Other unitarians include Elizabeth Harman, Martha Nussbaum, and Oscar Horta.

51. Other proponents of the hierarchical view include Peter Vallentyne, Jean Kazez, and of course John Stuart Mill.

52. Prioritarianism is the view according to which additions to welfare matter more the worse off the person is whose welfare is affected. See [Parfit 1997](#) for more discussion.

53. Egalitarianism is the view according to which a subject's welfare is weighted by its standing relative to the welfare of other subjects, with more equal distributions of welfare better than less equal distributions of welfare. See [Hausman & Waldren 2011](#) for more discussion.

scores 10 out of 100 and a mouse that currently scores 9 out of 10, prioritarianism and egalitarianism imply, all else equal, that we ought to increase the welfare of the mouse before increasing the welfare of the human. Even for those of us who care about mouse welfare, this seems intuitively like the wrong result. After all, the mouse is doing almost as well as it possibly could be, whereas the human is falling well short of her natural potential.

Kagan agrees that this result is intuitively unacceptable. He writes, “I find it impossible to take seriously the suggestion that this inequality is, in and of itself, morally objectionable—that the mere fact mice are worse off than us is morally problematic, and so we are under a pressing moral obligation to correct this inequality. Yet that does seem to be the conclusion that is forced upon us if we embrace both egalitarianism and unitarianism” (Kagan 2019: 65). Rather than fault theories of welfare that predict unequal distributions of welfare, Kagan invokes degrees of moral status to resolve the conflict of intuitions.⁵⁴ By adjusting level of welfare to account for moral status, Kagan’s position delivers the verdict that prioritarianism and egalitarianism need not necessarily prioritize a mouse’s welfare over a human’s welfare, even if the mouse’s welfare is lower in absolute terms than the human’s welfare.⁵⁵

Ultimately, from a practical standpoint, the difference between the unitarian approach and the hierarchical approach may not be very deep. It might be thought that although the hierarchical approach can countenance prioritizing animals according to their moral value, the unitarian approach cannot. As we’ve already seen, however, that’s not the case. A unitarian like Singer believes that similar pains count similarly, no matter if it’s a mouse or a human that experiences the pains. But it doesn’t follow from this claim that mice lives have the same moral value as human lives. Indeed, there is broad consensus among unitarians that mice lives don’t have the same value as human lives. Proponents of both camps agree that some animals are more valuable than others.

For instance, Martha Nussbaum, a unitarian, writes, “Almost all ethical views of animal entitlements hold that there are morally relevant distinctions among forms of life. Killing a mosquito is not the same sort of thing as killing a chimpanzee” (Nussbaum 2004: 308). Elizabeth Harman, another unitarian, makes a similar point: “Consider a healthy adult person’s sudden painless death in the prime of life and a cat’s sudden painless death in the prime of life. Both of these deaths deprive their subjects of future

happiness. But the person’s death harms the person in many ways that the cat’s death does not harm the cat. The person’s future plans and desires about the future are thwarted. The shape of the person’s life is very different from the way he would want it to be. The person is deprived of the opportunity to come to terms with his own death and to say goodbye to his loved ones. None of these harms are suffered by the cat. Therefore, the person is more harmed by his death than the cat is harmed by its death” (Harman 2003: 180). Even Singer admits, “When we come to consider the value of life, we cannot say quite so confidently that a life is a life and equally valuable, whether it is a human life or an animal life. It would not be speciesist to hold that the life of a self-aware being, capable of abstract thought, of planning for the future, of complex acts of communication and so on, is more valuable than the life of a being without these capacities” (Singer 2011: 53).⁵⁶

In this respect, the unitarian view is hardly distinguishable from the hierarchical view. Jean Kazez, a proponent of the hierarchical approach, writes, “If a life goes well or badly based (at least partly) on the way capacities are exercised, then what is built-in value, more precisely? It’s natural to think of it in terms of capacities themselves. The more valuable of two lives is the one that could amount to more, over a lifetime, if both individuals had a chance to ‘be all that you can be.’ If capacities are what give value to a life, then to compare animal and human lives, we must compare animal and human capacities” (Kazez 2010: 86). In broad outline, the traits, features, and psychological capabilities that, for the proponent of the hierarchical view, determine moral status, are the same sorts of traits, features, and psychological capabilities that do the heavy-lifting for the unitarian in ensuring there is an ordering of capacity for welfare. Indeed, this connection is, for the hierarchy proponent, no accident. Kagan writes, “So lives that are more valuable by virtue of involving a greater array of goods, or more valuable forms of those goods, will require a greater array of psychological capacities, or at least more advanced versions of those capacities. [...] More advanced capacities make possible more valuable forms of life, and the more advanced the capacities, the higher the moral status grounded in the possession of those very capacities” (Kagan 2019: 121). So if asked how to allocate resources across dissimilar animal taxa, both views would appeal to the same general sorts of features, even if the underlying theoretical role those features play in the respective views is different.

54. Another option is to reject views with distributive requirements like egalitarianism and prioritarianism. Neither Kagan nor Višak endorse this option.

55. Note that Kagan’s position does *not* entail that prioritarianism and egalitarianism will *never* demand that we prioritize a mouse’s welfare over a human’s welfare. Depending on the exact difference in moral status, it might, for example, be the case that we ought to prioritize a mouse’s welfare over a human’s welfare when the mouse is a 4 out of 10 and the human is a 60 out of 100.

56. Note that Singer is not necessarily endorsing this view; only saying that it cannot be rejected out of hand as speciesist.

What Determines Moral Status

Suppose for the moment that moral status does admit of degrees. To understand where animals rank in terms of moral status, we must first understand why moral status differs across the animal kingdom. Kagan tells us that “if people have a higher moral status than animals do, then presumably this is by virtue of having certain features that animals lack or have in a lower degree. Similarly, if some animals have a higher status than others, then the former too must have some features that the latter lack, or that the latter have to an even lower degree” (Kagan 2019: 112). What are these features? Philosophers have proposed a long list of capacities that plausibly contribute to moral status. Kagan mentions abstract thought, creativity, long-term planning, self-awareness, normative evaluation, and self-governance (Kagan 2019: 125-126). Kazez invokes intelligence, autonomy, creativity, nurturing, skill, and resilience (Kazez 2010: 93). DeGrazia cites cognitive, affective, and social complexity, moral agency, autonomy, capacity for intentional action, rationality, self-awareness, sociability, and linguistic ability (DeGrazia 2008: 193). None of these authors claim that their lists are exhaustive.

Another idea is that capacity for welfare itself plays a large role in determining moral status. Both Peter Vallentyne (2007: 228-230) and Kagan (2019: 279-284) have argued that moral standing is grounded in the capacity for welfare and the capacity for rational choice. Because those capacities admit of degrees, they argue, moral status too must come in degrees.⁵⁷ There are two possible readings of these positions. One reading is that capacity for welfare directly determines (at least in part) moral status. The other reading is that moral status is grounded in various capacities that also just so happen to be relevant for determining capacity for welfare. The first interpretation runs the risk of double-counting. Even before considering moral status, we can say that lives that contain more and more of non-instrumental goods are more valuable than lives that contain fewer and less of those non-instrumental goods. It’s not clear why those lives should gain additional moral value—in virtue of a higher moral status—merely because they were more valuable in the first place.

57. The view that welfare capacity or rational agency ground moral standing does not automatically generate a commitment to degrees of moral status, even if welfare capacity and agency admit of degrees. For one thing, although capacity for welfare and capacity for rational choice admit of degrees, the possession of these capacities does not: one either possesses these capacities or one does not. Put another way, one is either a welfare subject or not; one is either a rational agent or one is not. An analogy: Age admits of degrees. In many jurisdictions one must be 18 years old to vote, and there are good arguments that there should be some age restrictions on voting. But those arguments don’t imply that the older one is, the more one’s vote should count.

58. As a reminder, these are merely some *theoretical* difficulties. Actually measuring and comparing these features across animals *in practice* raises a slew of different but no less vexing problems. I discuss these problems in the second entry in the series.

59. In a recent [talk at Notre Dame](#), Eric Schwitzgebel offers a more extreme version of the same problem concerning divergent AI: Divergent AI would have human or superhuman levels of some features that we tend to regard as important to moral status but subhuman levels of other features that we tend to regard as important to moral status. For example, it might be possible to design AI with immense theoretical and practical intelligence but with no capacity for genuine joy or suffering. Such AI might have conscious experiences with little or no emotional valence. Just as we can consciously think to ourselves, without much emotional valence, there’s a mountain over there and a river over there, or the best way to grandma’s house at rush hour is down Maple Street, so this divergent AI could have conscious thoughts like that. But it would never feel wow, yippee! And it would never feel crushingly disappointed, or bored, or depressed. It isn’t clear what the moral status of such an entity would be: On some moral theories, it would deserve human-grade rights; on other theories it might not matter how we treat it.”

For this reason, I think it makes more sense to think that capacity for welfare does not play a direct role in determining moral status, though many of the features relevant for welfare capacity are also relevant for moral status.

Most, if not all, of the capacities discussed above come in degrees. An animal can be more or less sociable, more or less intelligent, and more or less creative. So if two animals have all of these capacities, but the first animal has the capacities to a much greater extent, the first animal will have a higher moral status. In Kagan’s words: “Psychological capacities play a role in grounding one’s status. And statuses differ, precisely because these capacities seem to come in varieties that differ in terms of their complexity and sophistication. That is to say, some types of animals have a greater capacity for complex thought than others, or can experience deeper and more sophisticated emotional responses” (Kagan 2019: 113). Of course, even if we were confident that philosophers had identified the full list of features relevant to the determination of moral status—and philosophers themselves are not confident that they have—many problems would remain.⁵⁸

One problem is whether and how to weight the features. Octopuses are incredibly intelligent, creative creatures—but they are also deeply asocial. Ants are plausibly much less intelligent and creative, but they tend to live in densely populated mounds, with so-called [supercolonies](#) containing millions of individual ants. Kazez frames the problem this way: “There are many capacities to which we assign positive value, but we don’t always have a definite idea of their relative values. If we’re trying to rank bower birds, crows, and wolves, it depends what’s more valuable, artistic ability (which favors the bower bird) or sheer intelligence (which favors the crow) or sociability (which favors the wolf). We’re not going to be able to put these three species on separate rungs of a ladder, in any particular order, and neither is the situation quite as crisp as a straightforward tie. We just don’t know how to assign them a place on the ladder, relative to each other” (Kazez 2010: 87-88).⁵⁹

A further complication is what Harman calls combination effects: “A property might raise the moral status of one being

but not another, because it might raise moral status only when combined with certain other properties” (Harman 2003: 177-178). For example, it might be the case that a certain degree of autonomy is required before some prosocial capacities contribute to moral status. Maybe nurturing behavior that is entirely pre-programmed and instinctive counts for less than love freely given. Honey bees and cows both care for their young, but if we think cows have a greater capacity for rational choice than honey bees, then the same level of juvenile guardianship might raise the moral status of cows more than honey bees.⁶⁰

There is also the question of whether moral status is continuous or discrete. If moral status is continuous, then on some arbitrary scale (say 0 to 1), an individual’s moral status can in theory take on any value. If moral status is discrete, then there are tiers of moral status. Arguments can be marshalled for either position. On the one hand, it seems as if many of the features that ground moral status—such as general intelligence, creativity, and sociability—vary more-or-less continuously. Hence, even if for practical purposes we ascribe moral status in tiers, we should acknowledge moral status’s underlying continuity. On the other hand, continuity of moral status raises a number of intuitive conflicts. Many people have the intuition that human babies have the same moral status as human adults despite the fact that adults are much more cognitively and emotionally sophisticated than babies.⁶¹ Many people also have the intuition that severely cognitively-impaired humans, whose intellectual potential has been permanently curtailed, have the same moral status as species-typical humans.⁶² And many people have the intuition that normal variation in human intellectual capacities makes no difference to moral status, such that astrophysicists don’t have a higher moral status than social media influencers.⁶³ These intuitions are easier to accommodate if moral status is discrete.⁶⁴

A further question is, if moral status is discrete, how many tiers of moral status are there? Kagan conjectures there are only about six levels of moral status (Kagan 2019: 293). He writes, “The

idea here would be to have not only a relatively small number of groupings, but also a relatively easy way to assign a given animal to its relevant group. After all, it would hardly be feasible to expect us to undertake a detailed investigation of a given animal’s specific psychological capacities each time we were going to interact with one. This makes it almost inevitable that in normal circumstances we will assign a given animal on the basis of its species (or, more likely still, on the basis of even larger, more general biological categories)” (Kagan 2019: 294).⁶⁵ If there are only a handful of tiers, getting the exact number right is going to be important. A model on which there are five tiers of moral status could have drastically different implications for how we should allocate resources than a model with seven tiers of moral status.

Finally, if moral status is discrete, we need to know how much more valuable each tier is than the preceding tier. Is it a linear scale or logarithmic? Something else entirely? Is the top tier only marginally better than the next-highest tier? Is it twice as valuable? Ten times as valuable? Again, different answers to these questions could have drastically different implications for how we should allocate resources across animals.

Status-Adjusted Welfare

As I’ve emphasized, capacity for welfare and moral status are distinct concepts. Nonetheless, they are closely related, both in theoretical and practical terms. In theoretical terms, capacity for welfare is potentially relevant for determining moral status. In practical terms, anyone interested in comparing the moral value of different animals will have to grapple with both potential differences in capacity for welfare and potential differences in moral status. It would be convenient, then, if there were a single term that could capture both welfare and moral status. Fortunately, there is.

Status-adjusted welfare is welfare weighted by the moral status

60. In a recent [talk at Notre Dame](#), Eric Schwitzgebel offers the example of “a superpleasure machine but one with little or no capacity for rational thought. It’s like one giant, irrational orgasm all day long. Would it be great to make such things and terrible to destroy them, or is such irrational pleasure not really something worth much in the moral calculus?”

61. One might account for these intuitions by appeal to the potential capacities that babies possess. See [Harman 2003](#) for discussion and criticism of this idea.

62. One might attempt to skirt this difficulty by appeal to *modal* capacities. Although the cognitively-impaired human does not have the potential to develop species-typical intellectual and emotional sophistication, in nearby possible worlds, the person *does* possess this potential. See [DeGrazia 2016](#) for discussion and criticism of this idea.

63. See [Kagan 2019](#): 164-169 for more discussion of this issue. (Note that this example is for illustrative purposes only. I make no claim as to an actual difference in intelligence between astrophysicists and social media influencers. [And even if astrophysicists were smarter, social media influencers might score higher on other morally relevant traits, like empathy.]

64. If moral status is a continuous gradient and determined at least in part by social, affective, or intellectual capability, then some humans will likely have a higher status than others. If moral status is instead a discrete series of layers, then a single layer may encompass all humans. The likelihood of this possibility depends on how many layers there are.

65. Importantly, Kagan is not merely suggesting that we divide moral status into six tiers for practical purposes. He believes there actually are six tiers (give or take a couple) of moral status. This position follows from his (tentative) commitment to *practical realism*, the view that “moral rules are to be evaluated with an eye toward our actual epistemic and motivational limitations” ([Kagan 2019](#): 292).

of the creature for whom the welfare obtains.⁶⁶ It's calculated by multiplying quantity of welfare by some number between 0 and 1, with 1 being the highest moral status and 0 being no moral standing. Status-adjusted welfare is neutral on the question of degrees of moral status. Unitarians assign all creatures with moral standing the same moral status, so for the unitarian, status-adjusted welfare just collapses to welfare. Status-adjusted welfare is a useful common currency both unitarians and hierarchists can use to frame debates. Of two interventions, all other things being equal, both camps will prefer the intervention that produces the higher quantity of status-adjusted welfare.

I began this post by posing a fundamental question: what is the ideal allocation of resources among different groups of animals? One good answer⁶⁷ is: whatever allocation maximizes status-adjusted welfare. Reflection on status-adjusted welfare might change the way we hope to allocate resources. It seems to me that much of the animal welfare movement's allocative decision-making implicitly assumes an ordering of animals by moral status or capacity for welfare. Fish are exploited in greater numbers than mammals and birds, but fish are generally perceived to be less cognitively and emotionally complex than mammals and birds and thus their interests and experiences are given less weight. Arthropods are exploited in even greater numbers than fish, but they are generally perceived to be even less cognitively and emotionally complex and thus are afforded even less weight. These judgments appear to be largely intuition-driven, informed by neither deep philosophical rumination nor robust empirical investigation. As such, most of these judgments are unjustified (though not exactly irrational). Maybe these judgments are true. Maybe they are not. More likely, they aren't really precise enough to evaluate. It's one thing to say that mammals have a greater capacity for welfare or higher moral status than fish. It's another thing to say how much higher. Two times higher? Five times higher? A thousand times higher? If the goal is to maximize status-adjusted welfare, then the answer matters.

66. Another term that might be used to capture both moral status and capacity for welfare is 'moral weight.' Although 'status-adjusted welfare' isn't a perfect term, I think 'moral weight' suffers from two problems. First, to my ear, it doesn't sound agnostic between the hierarchical approach and the unitarian approach. One informal way of describing unitarianism is 'the view that rejects moral weights.' Second, the term is ambiguous. It might mean that different individuals can have the same interest but weight it differently (e.g., it matters morally that the person in extreme poverty puts a different weight on receiving \$100 than Mike Bloomberg does) or it might mean that different individuals with interests of the same weight might not count the same (e.g., the interests of the individual with higher moral status takes priority, i.e., the hierarchical approach).

67. A maximizing act consequentialist who believes welfare is the only thing of intrinsic value will endorse this answer. However, other normative theories will deliver different answers. For example, some theories will say that a world in which status-adjusted welfare is maximized but unevenly distributed might be worse than a world in which status-adjusted welfare is not maximized but is more evenly distributed. More obviously, axiologies that hold that *welfare* isn't the only intrinsic value won't believe that *status-adjusted* welfare is the only thing that should be maximized.

68. If pasture-raised cows lead net-positive lives, then on some consequentialist views, reducing the stock of pasture-raised cows may actually be a net-negative intervention.

69. See the section on intensity of suffering in Stephen Warren's "[Suffering by the Pound](#)" for more detail.

70. See Luke Muehlhauser's "[Preliminary Thoughts on Moral Weight](#)" for the best justified estimates of which I'm aware. Muehlhauser's ranges are extremely large, appropriately reflecting our deep uncertainty about the subject.

Objections

The main contention of this post is that considerations of moral status and capacity for welfare could change the way we wish to allocate resources among animals and between human and non-human cause areas. In this section I consider five objections to that contention.

Won't Intensity of Suffering Swamp Concerns about Moral Status and Capacity for Welfare?

The conditions in which various animals are raised differ markedly. The life of a pasture-raised beef cow is very different and probably much better than the life of a battery-caged layer hen. These differences need to be accounted for when evaluating the cost-effectiveness of an intervention. All other things equal, an intervention that reduces the stock of factory-farmed chickens is probably more impactful than a similar intervention that reduces the stock of pasture-raised cows.⁶⁸ Of course, measuring the comparative suffering of different types of animals is not always easy. Nonetheless, it does appear that we can get at least a rough handle on which practices generally inflict the most pain, and several experts have produced explicit welfare ratings for various groups of farmed animals that seem to at least loosely converge.⁶⁹ Our understanding of moral status and capacity for welfare is comparatively much weaker, and very few informative, authoritative estimates of comparative moral status have been produced. The estimates that do exist vary widely and the ranges are large.⁷⁰ Thus, according to this objection, data on intensity of suffering will generally swamp our tentative, uncertain concerns about moral status and capacity for welfare.

The first point to note about this objection is that it is merely a practical objection. If we did possess reliable data on moral status and capacity for welfare, nothing in this objection suggests that we should ignore it or that that information would inevitably be less important than intensity of suffering considerations. It's certainly true that determining comparative moral value is a daunting task. But daunting is not the same as impossible.

Determining which animals are sentient is also a daunting task, but it appears possible to at least make [some progress](#) on that question. Given a similar effort, it's plausible that we could make progress on questions of moral status and capacity for welfare. Hence, even if it's currently the case that intensity of suffering considerations swamp moral status and capacity for welfare considerations in our decision-making, there's no reason this need always be the case.

Secondly, it's not so clear that we do possess an adequate understanding of relative suffering among different groups of animals. There are a number of experts and animal welfare groups who have rated the welfare conditions of farmed mammals and birds. Even if these ratings were generally in agreement and generally accurate, they would only cover a small fraction of animals directly exploited by humans. Aquaculture has exploded over the last three decades,⁷¹ and the animal welfare movement has only recently begun to grapple with the welfare implications of aquaculture's rise. Still less attention is devoted to other species. More than [290 million farmed frogs](#) are slaughtered every year for food. More than [2.9 billion farmed snails](#) are slaughtered per year for food (plus more for their [slime](#)). And more than [22 billion cochineal bugs](#) are slaughtered annually just to produce carmine dye.⁷² Even if the numbers+suffering approach is the right one, we still have a lot of work to do to understand the conditions in which different groups of animals are raised.

Finally, understanding differences in capacity for welfare is directly relevant for determining relative suffering across different groups of animals. Consider two worrisome trends on the horizon. Entomophagy is steadily gaining wider acceptance, and as a result, new insect farms are opening every year and old ones are ramping up production. On the other hand, the demand for octopus meat continues to outpace wild-caught supply, and as a result, groups in Spain and Japan are developing systems to intensively farm octopuses. It's difficult to know in advance which trend will produce more suffering. However, if we had a better understanding of the differences in capacity for welfare between insects and cephalopods, we might be able to make better predictions.

Aren't capacity for welfare and moral status multidimensional or action-relative or context-sensitive?

One worry is that capacity for welfare and moral status might be significantly more complicated than I have thus far presented

71. See, for example, Figure 1 in the FAO's 2018 "[The State of World Fisheries and Aquaculture](#)" report.

72. The farming of cochineal may cause [an additional 4.6 to 21 trillion deaths](#), primarily nymphs that do not survive to adulthood.

them. In the discussion above, I have assumed a unidimensional analysis of both capacity for welfare and moral status. That is, I have assumed that we can assign a single number for an animal's capacity for welfare or moral status and then compare that number to the numbers of other animals. But if either capacity for welfare or moral status is multidimensional, measuring and comparing those items becomes much more difficult.

If the objective list theory of welfare is correct, then capacity for welfare is almost certainly multidimensional. Suppose one animal has a greater capacity for pleasure and friendship, and a different kind of animal has a greater capacity for wisdom and aesthetic appreciation. Which animal has a greater capacity for welfare? If certain goods are incommensurable, there may not be an all-things-considered answer. Moral status also appears plausibly multidimensional. The characteristics that philosophers have proposed contribute to moral status can plausibly come apart. If both intelligence and empathy contribute to moral status, how are we to compare creatures that score high on one but not the other?

It's certainly true that the multidimensionality of either capacity for welfare or moral status would complicate measurement and comparison of status-adjusted welfare. But I don't think the appropriate response to this potential difficulty is to give up on investigating capacity for welfare and moral status. If we were able to weight the various dimensions of welfare or status, we could combine the weighted average of different dimensions into a single metric. Of course, if the various dimensions are incommensurable, the situation is much trickier. However, there is a rich philosophical literature on [incommensurable values](#), and several strategies for dealing with this problem are at least in principle open to us. So the multidimensionality of capacity for welfare or moral status does not by itself doom the usefulness of status-adjusted welfare.

A related worry is that moral status might be context-sensitive or action-relative. James Rachels puts it this way: "There is no characteristic, or reasonably small set of characteristics, that sets some creatures apart from others as meriting respectful treatment. That is the wrong way to think about the relation between an individual's characteristics and how he or she may be treated. Instead we have an array of characteristics and an array of treatments, with each characteristic relevant to justifying some types of treatment but not others. If an individual possesses a particular characteristic (such as the ability to feel pain), then we may have a direct duty to treat it in a certain way (not to

torture it), even if that same individual does not possess other characteristics (such as autonomy) that would mandate other sorts of treatment (refraining from coercion)” (Rachels 2004: 169). He concludes, “There is no such thing as moral standing simpliciter. Rather, moral standing is always moral standing with respect to some particular mode of treatment. A sentient being has moral standing with respect to not being tortured. A self-conscious being has moral standing with respect to not being humiliated. An autonomous being has moral standing with respect to not being coerced. And so on” (Rachels 2004: 170).⁷³

I’m not sure Rachels is right, but his position is reasonable and deserves consideration. Yet even if his basic idea is correct, I don’t believe the objection dooms the project. The idea that context helps shape which actions are morally permissible is hardly novel or controversial. For instance, adult humans and human infants both have moral standing. But because adults and infants possess different characteristics, the same demand for autonomy renders different actions morally appropriate. In most cases, it would be wrong to restrict an adult’s movement; in most cases, it would be wrong not to restrict an infant’s movement. So I think it’s possible to retain the notion that moral standing is binary, while acknowledging that different characteristics call for different treatments.

Because our understanding of moral status is so incomplete, Shelly Kagan urges us to adopt a pragmatic approach to the topic. He acknowledges that it might be the case that “certain capacities are relevant for a given set of moral claims, while other capacities are the basis of different claims. If so, then a creature with advanced capacities of the one kind, but less advanced capacities of the other, would have a relatively high moral status with regard to the first set of claims, but a low moral status with regard to the second set” (Kagan 2019: 114). However, he believes that “while we may someday conclude that it is an oversimplification to think of status as falling along a single dimension, for the time being, at least, I think we are justified in making use of the simpler model” (Kagan 2019: 115). Since comparative moral value is so neglected within the animal welfare movement, there may be significant returns on relatively shallow investigations of the subject long before we are stymied by complications like multidimensionality.

Might Welfare Constituents or Moral Interests Be Non-Additive?

I have suggested that we should frame the value of interventions in terms of status-adjusted welfare. If we were to compare the value of an intervention that targeted pigs with an intervention that targeted silkworms, we should consider not only the amount of welfare to be gained but also the moral status of the creatures who would gain the welfare. One way this strategy could be mistaken—or at least significantly more complicated—is if welfare or moral interests are not straightforwardly additive.

Suppose that hedonism is true and suppose that a silkworm’s capacity for pleasure and pain is roughly one one-thousandth that of a pig’s. Does that mean that, all else equal, one thousand silkworms at maximum happiness are worth one pig at maximum happiness? Not necessarily. It might be the case that the tiny pleasures of the silkworms never add up to the big pleasure of the pig. The same might be the case for moral interests. If silkworms have a moral status one one-thousandth that of a pig’s, then, if moral interests are non-additive, it doesn’t follow that the interests of a thousand silkworms—not to be confined, say—are equal in value to the interest not to be confined of a single pig.

Jean Kazez puts the point this way: “The difficulty of the idea of an exchange rate arises on any view about the value of lives, but most obviously on the ‘capacity’ view. The valuable capacities you get in a chimpanzee life you never get in a squirrel life, however many squirrels you add together. And what you get in a human life you never get in an aurochs life, no matter how many. That’s at least some reason to look askance at the notion of equitable trading of lives for lives. Say that it’s just happiness that makes a life valuable. Pretend chimpanzees are extremely happy, and squirrels only slightly happy. It does not seem true that one chimpanzee life is worth some number of squirrel lives, if you just put enough together. If you had to save one chimpanzee or a boatload of squirrels, it might make sense to save the chimpanzee; you might coherently think that that will give one individual a chance at a good life, which is better than there being lots of fairly low-quality lives” (Kazez 2010: 112).⁷⁴ Hence, if welfare constituents or moral interests are non-additive, we may not be able to use status-

73. For defenses of a similar position, see [Valentyne 2007](#) and [Sachs 2011](#).

74. Kazez adds, “As I put it in the last chapter, species can be very roughly ranged along a ladder. Individual human lives do have more value than individual aurochs lives, because they involve more valuable capacities. If that ranking meant there was an exchange rate, with one human life worth 100 aurochs lives, or something of the sort, then we could get a grip on the ‘profligacy point.’ If you kill more animals to save a human being than a human life is worth, then that’s profligate ... and disrespectful. But granting there’s a ranking doesn’t mean recognizing any exchange rate. If one human life has more value than one aurochs life, there’s nothing that says that there must be an equivalence between one human life and 10, or 100, or 1,000, or any number of aurochs lives. And that’s not a matter of speciesist prejudice. The same is true when two animal species are compared. Chimpanzee lives may have more value, typically, than squirrel lives. It doesn’t follow that one chimpanzee is ‘worth’ 10 squirrels, or 100, or 1,000” (Kazez 2010: 112).

adjusted welfare to compare interventions.⁷⁵

Although I grant that this position has some initial intuitive appeal, I find it difficult to endorse—or, frankly, really understand—upon reflection. For this position to succeed, there would have to exist some sort of unbridgeable value gap between small interests and big interests. And while the mere existence of such a gap is perhaps not so strange, the placement of the gap at any particular point on a welfare or status scale seems unjustifiably arbitrary. It's not clear what could explain the fact that the slight happiness of a sufficient number of squirrels never outweighs the large happiness of a single chimpanzee. If happiness is all that non-instrumentally matters, as Kazez assumes for the sake of argument, we can't appeal to any qualitative differences in chimpanzee versus squirrel happiness.⁷⁶ (It's not as if, for example, that chimpanzee happiness is deserved while squirrel happiness is obtained unfairly.) And how much happier must chimpanzees be before their happiness can definitively outweigh the lesser happiness of other creatures? What about meerkats, who we might assume for the sake of argument are generally happier than squirrels but not so happy as chimpanzees? There seems to be little principled ground to stand on. Hence, while we should acknowledge the possibility of non-additivity here, we should probably assign it a fairly low credence.

Isn't Probability of Sentience already a Good Enough Proxy for Moral Status and Capacity for Welfare?

According to another objection, when we evaluate the impact of various interventions, we should discount the welfare that would be gained by different kinds of animals by the probability that those kinds of animals are sentient.⁷⁷ Cows are plausibly more likely to be sentient than fish; fish are plausibly more likely to be sentient than insects, and so on. Having adjusted for these differences, no discounts for moral status or capacity for welfare are necessary. An animal's probability of sentience is already a good enough proxy for capacity for welfare and moral status.

Two points are worth mentioning in response. The first is that our uncertainty about moral status and capacity for welfare is much

greater than our uncertainty about which creatures are sentient. In his [2017 Report on Consciousness and Moral Patienthood](#), Luke Muehlhauser puts the issue this way: "In a cost-benefit framework, one's estimates concerning the moral weight of various taxa are likely more important than one's estimated probabilities of the moral patienthood of those taxa. This is because, for the range of possible moral patients of most interest to us, it seems very hard to justify probabilities of moral patienthood much lower than 1% or much higher than 99%. In contrast, it seems quite plausible that the moral weights of different sorts of beings could differ by several orders of magnitude. Unfortunately, estimates of moral weight are trickier to make than, and in many senses depend upon, one's estimates concerning moral patienthood" ([Muehlhauser 2017: Appendix Z7](#)).⁷⁸ Ignoring capacity for welfare and moral status means ignoring considerations that could drastically alter the way different interventions are valued.

Secondly, it's not clear if the ranking of animals by probability of sentience will map neatly onto the ranking of animals by moral status or capacity for welfare. We might be uncertain that insects are sentient but come to think that if they were sentient, they would have extremely fast [consciousness clock speeds](#), multiplying their subjective experiences per objective minute compared to large mammals. Consequently, in a ranking of expected sentience, insects might rank just below crustaceans; but in a ranking of expected moral value, insects might rank far above crustaceans. So not only would using sentience probabilities as proxy for moral status underestimate our uncertainty, such usage might also misalign the way we would ideally like to prioritize species.

In short, I agree that when calculating the value of a particular intervention, we should discount the welfare gain at stake by the probability that the animals to be affected are sentient. But sentience is no substitute for capacity for welfare or moral status. Hence, we should discount for probability of sentience and moral status.

75. Jamie Mayerfield makes a similar point about comparing human pains: "I said that my intuitions favor the claim that we should prevent one person from experiencing the pain of torture rather than prevent a million others from experiencing the pain of acute frustration. But in fact my intuitions favor an even stronger claim. It seems to me that when the difference in intensity is this large, no difference in the number of sufferers can justify the more intense suffering. The severe torture of one person seems worse than the painful frustration of any number of people" ([Mayerfield 1999: 183](#)). See [Carlson 2000](#) for more discussion.

76. Alternatively, one might adopt [John Stuart Mill's conception of happiness](#) and hold that chimpanzee happiness is the product of higher pleasures and squirrel happiness is the product of lower pleasures. If no amount of lower pleasure could equal any amount of higher pleasure, then one would have a reason to prefer chimpanzee happiness to any amount of squirrel happiness. However, that position is (a) implausible and (b) seems to abandon the principle that happiness is the only thing that matters.

77. For general discussion of whether and how to discount for probability of sentience, see [Sebo 2018](#).

78. Uncertainty in a cost-effectiveness estimate is not necessarily proportional to uncertainty in a given parameter. And there may be specific instances in which we are more uncertain about sentience than about moral status. (For example, if one thought agency were sufficient for moral standing, one might be able to estimate the moral status of, say, an advanced AI program even if one were unsure whether the AI were sentient.) Nevertheless, the general point appears sound: given the typical difference in uncertainties, reducing uncertainty about moral status and capacity for welfare is normally going to be more impactful than reducing uncertainty about sentience.

Doesn't Status-Adjusted Welfare Require a Commitment to a Problematic Form of Moral Realism?

Finally, one might be concerned that moral status is just not a real thing. It's very hard (though not quite impossible) to be an anti-realist with respect to sentience. Even if we can never reliably access the fact, it seems like there is a fact of the matter about whether or not a particular animal feels pleasures or pains. But it's much easier to question the nature of moral status and imagine that moral status is just a human construct—that there's no there there.

Nevertheless, I think most of us are committed to taking status-adjusted welfare seriously. If one is uncomfortable with degrees of moral status, utilitarianism is a live option. Denying that any creatures have moral status, however, implies that there is no moral difference between harming a person and harming a coffee mug.⁷⁹ But most of us feel there is a moral difference, and this difference is explained by the fact that the person has moral standing and the coffee mug does not. One might also be wary of differences in capacity for welfare. If so, there are theories of welfare that can accommodate this intuition, such that all welfare subjects have the same capacity. But if one thinks intensity of valenced experience or cognitive sophistication or affective complexity contribute to welfare, then one ought to be open to the idea that different sorts of psychological and neurological capabilities give rise to differences in capacity for welfare.

Of course, even if there is a fact of the matter about moral status and capacity for welfare, learning these facts is going to require lots of empirical data about the relative capacities of different types of animals. Gathering the relevant data will probably require cooperating with a large swath of scientists. This cooperation might be hindered by the perception that moral status and capacity for welfare aren't scientific properties. Convincing scientists to undertake experiments that will shed light on a property they might not think even exists could be tough. It's hard enough to get the relevant scientists interested in investigating sentience. Won't this talk of moral status and capacity for welfare, the objection asks, scare away the very allies we need to resolve our uncertainty about status-adjusted welfare?

Maybe. But biologists, neuroscientists, and comparative psychologists already investigate many of the features we care about. If necessary, we could fund further work in this vein without

reference to comparative moral value. Even if the investigation of some features would require convincing scientists to take status-adjusted welfare seriously, that's a practical difficulty, and little reason by itself to stop thinking about moral status and capacity for welfare.

Conclusion

Animals differ in all sorts of ways: their neural architecture, their affective complexity, their cognitive sophistication, their sociability. This variation may give rise to differences in phenomenal experience, desire satisfaction, rational agency, and other potentially morally important traits and features. When we allocate resources between human and non-human causes and among different non-human animals, we are implicitly making value judgments about the comparative moral value of different species. These value judgments ought to be made explicit, and they ought to be grounded in both the details of our most plausible range of philosophical theories and the attendant relevant empirical facts. Although we should not be confident in any particular philosophical theory, if a plurality of plausible theories suggest that psychological capacities affect characteristic moral value, we should be sensitive to those differences when we allocate resources across interventions and cause areas that target different animals. In this post I have attempted to develop a broad conceptual framework for analyzing the impact and importance of capacity for welfare and moral status. Much work remains to be done to make reasonably precise the magnitude of difference that such considerations could make to our allocative decision-making. Measuring and comparing capacity for welfare and moral status is not going to be easy. But making progress on this issue could greatly advance our ability to improve the world.

Credits

This essay is a project of [Rethink Priorities](#). It was written by Jason Schukraft. Thanks to Marcus A. Davis, Neil Dullaghan, Derek Foster, David Moss, Luke Muehlhauser, Jeff Sebo, and Saulius Šimčikas for helpful feedback. If you like our work, please consider [subscribing to our newsletter](#). You can see all our work to date [here](#).

79. One might adopt a position on which moral properties (like moral status) exist, but they're not grounded in mind-independent properties. [Metaethical constructivism](#) is one such view. If antirealism is the view that moral properties do not exist, then constructivism is not antirealist. (Mind-dependent properties are still properties, after all.) Whether such a view is worthy of the mantle of realism is, however, [contentious](#).

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