Animal Welfare and Environmental Ethics: It's Complicated

Ian J. Campbell

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Abstract: In this paper I evaluate the possibility of convergence between animal welfare and environmental ethics. By surveying the most prominent views within each of these respective camps, I argue that animal welfare ethics and *ecological* theories in environmental ethics are incommensurable in virtue of their respective individualistic and holistic value theories. I conclude by arguing that this conceptual clarification allows us to see that animal welfare ethics can nevertheless be made commensurable with theories in environmental ethics according to which value primarily resides in individuals, rather than in collectives and communities.

1. The Breakup

Consider Dave, an altruistic software developer whose monthly charitable contributions include Oxfam, Friends of Animals, and the Sierra Club. Dave's contributions to Oxfam suggest that he values human life and welfare. His support for Friends of Animals, moreover, indicates that he does not restrict his welfare concerns to humans—Dave is no anthropocentrist. Finally, his contributions to the Sierra Club show that he values nature and wants to see it preserved, untrammeled by human beings. At first glance, Dave's support for Friends of Animals may seem quite congenial to his support for the Sierra Club. Indeed, if one were to classify Dave's concerns into two groups it seems natural to say that he has a concern for human welfare on the one hand and for the welfare of nonhuman natural entities on the other. Such a classification would gain support from the fact that environmentalists and animal welfarists have many common enemies, for example animal agriculture (which, in addition to causing animal suffering, is responsible for 18% greenhouse gasses measured as CO_2 equivalent (Steinfeld et al., 2006: xxi)).

But to a certain kind of environmental philosopher, an ethic that grants moral standing to individual animals, but not to things like species and ecosystems, has more in common with an anthropocentric ethic than it does with an environmental ethic. J. Baird Callicott was the first to advance this surprising idea that, at their respective ethical foundations, environmentalism and animal welfarism are sharply distinct, and even opposing, causes in his influential and polemical 1980 article "Animal Liberation: A Triangular Affair." At the time Callicott wrote that article, the efforts of environmental ethicists were focused on the debate between anthropocentrists, who endorse a human-centered ethic that considers nonhuman natural entities only to the extent that they promote or hinder human ends, and animal welfarists, who extend direct moral consideration to animals. Callicott's aim in this provocative piece was to draw attention to a

neglected third party to the debate, a holistic ecological ethic, which, drawing on Aldo Leopold's "land ethic," finds the primary locus of moral value in the "integrity, stability, and beauty of the biotic community" (Callicott, 1980: 320; Leopold, 1989: 224-5). The ecological ethic, for Callicott, represents a radical break from the other two positions because it rests on a different theoretical foundation. Anthropocentrism and animal welfare ethics both extend moral consideration to an individual human, or an individual non-human animal, on the basis of that individual's possession of some capacity or characteristic that is taken to be morally relevant (e.g., reason, agency, sentience). Callicott's ecological ethic, by contrast, is a holistic ethic that attributes moral value primarily to ecological communities, and assigns differential moral value to the individuals that constitute that community on the basis of their relative contribution to the integrity, stability, and beauty of that community. A difference that emerges right away between animal welfare ethics and an ecological ethic is that the latter has a much larger domain: the "higher," sentient animals who are the beneficiaries of an animal welfare ethic only constitute roughly 4% of species in the biotic community, and a much smaller percentage of individual biotic entities (Wheeler, 1990: 1040). But more importantly, even where the domains of moral concern for animal welfarism and environmental ethics overlap—namely, in their mutual moral concern for "higher" wild animals—the two theories deliver deep and intractable practical divergences. Because an ecological ethic assigns value to individual entities on the basis of their contribution to the integrity of an ecosystem, "lower" animals, even plants, microbes, and minerals, may merit greater moral consideration than "higher" sentient animals (Callicott, 1980: 319). Callicott's paper thus drove a wedge between animal welfare and what came to be the canonical position within environmental ethics: a holistic, ecological ethic.

A large body of literature has arisen in response to Callicott's polemical piece. Many ecological ethicists have followed Callicott in maintaining that animal welfare ethics and ecological ethics are incommensurable at the level of principle and incompatible at the level of practice.[1] The two are thought to be incommensurable at the level of principle because there does not appear to be any obvious way to adjudicate conflicts between, on the one hand, the primary value individual animals have on a welfare ethic, and, on the other hand, the variable and differential value individual members of the biotic community have on the basis of their contribution to the integrity and stability of that community. This is especially problematic because the practical incompatibility of these two fields over their common domain of wild sentient animals is significant. I'll present two clear cases.

Natural Predation. When we spell out the implications of a welfare view that asks us to decrease the suffering and death of animals, it looks as though we would be required to put an end to natural predation, if doing so were in our power. On the other hand, environmentalists, who find no fault in carnivorous predators, have sometimes taken this result to be a reductio ad absurdum of animal welfare ethics (see e.g., Sagoff, 1984: 302-4). Carnivorous predators, in their killing and eating of prey, act precisely within the bounds of the trophic niche into which they have adapted, a niche that has normative significance on a

[1] See e.g., Hargrove 1992, xiiff; Sagoff 1984; Rawls 2003; Rolston 1988: 146-159 & 179-186; 2012, 68.

holistic environmental ethic because these carnivorous predators indispensably contribute to the good of the whole ecological community; without these predators managing the populations of their prey, the latter would overcrowd their habitat and destabilize the trophic pyramid.

Invasive Animals. From an environmental perspective, species extinction is a moral evil of special concern because the loss of the last representative of a species is not just the loss of one individual, but also the loss of an integral role in the biotic community. In this connection, consider the feral goats on San Clemente Island—originally left on the island by Spanish explorers—whom the U.S. Fish and Wildlife service asked the U.S. Navy to systematically slaughter because of the threat they posed to three of the island's endangered endemic plant species (Keegan, Coblentz and Winchell, 1994). The slaughter of thousands of sentient animals to save endangered plants could never be justified on an animal welfare ethic, but the decision to eliminate the goats is an action endorsed by an ecological ethic, which "prefer[s] [endangered] plant species, especially species in their ecosystems, over sentient animals that are introduced misfits" (Rolston, 2012: 68).

There are even sharper divergences on issues concerning the nonsentient members of the biotic community, which only merit indirect moral consideration on a welfare ethic. As we saw in the San Clemente Island case, plants, and especially endangered plant species, are direct moral patients on an ecological ethic. But on an animal welfare ethic, whether, and to what extent, a plant, species, or ecosystem has value depends entirely upon its value to individual sentient animals. For instance, it might generally be the case that we should protect wilderness areas because they are instrumentally valuable as habitats for individual sentient animals and perhaps even finally valuable to humans as places of beauty and settings for recreation. But a welfare ethic's valuation of plants, species, and ecosystems is a wholly contingent matter. It might be the case that every individual sentient animal would be better off if it lived in an artificial environment and relied on industrialized agriculture for its food. Moreover, human aesthetic sensibility could change to such a degree that we cease to find value in natural environments. Martin Krieger, for instance, has noticed that because "the demand for rare environments is a learned one," and because "conscious public choice can manipulate this learning so that the environments which people learn to use and want reflect environments which are likely to be available at low cost" that therefore "the advertising that created rare environments can also create plentiful [sc. plastic] substitutes" (1973: 451). In such cases, animal welfare ethics might in fact endorse the destruction of natural environments to make way for artificial environments that better serve the interests of sentient animals. From an environmental perspective this shallow ecology would be unacceptable.

2. Reunited At Last?

Despite this apparently hopeless situation, there are philosophers on both sides of the divide who think that the two causes are, to a greater or lesser degree, compatible. One

approach to the problem has been the attempt, from both sides, to demonstrate that the two theories agree on certain practical issues.[2] These attempts at single-issue reconciliation are commendable, but their narrow focus leaves much to be desired. A more ambitious sort of reconciliation has been the attempt to show that the apparently divergent theoretical foundations of the two movements can be brought closer together. In what follows I will consider and evaluate two influential attempts of this latter sort. Callicott later came to regret the polemical terms in which he originally framed the divide in "A Triangular Affair" (1989, 4). In two later papers he attempted to bring the two causes back together again by recasting animal welfarism on the foundation of a holistic value theory so as to eliminate the problem of incommensurability (1985a; 1988). Callicott argued that the animal welfare ethic of Mary Midgley (1983)—which holds that domestic animals merit moral consideration on the basis of the social bonds we have historically formed with them in the "mixed community" of humans and animals—is compatible with, and even complementary to, Leopold's land ethic. According to Callicott, both views share a fundamentally Humean understanding of ethics as grounded in altruistic feelings, and both are axiologically holistic —Midgley's theory finds moral value in the "mixed community," Leopold's in the "biotic community." By bringing the two theories under a "common theoretical umbrella," Callicott hoped that he had eliminated the problem of incommensurability and provided a means by which environmental ethicists and animal welfarists could resolve conflicts in a systematic way (1988: 169). While the payoff of commensurability would certainly be great, this form of reconciliation, which essentially requires welfarists to adopt a new account of why domestic animals have value, has found few converts. In the conclusion of this paper, I will have more to say about Callicott's attempt to reconcile these two fields.

For now I will focus on Dale Jamieson's more ambitious attempt to demonstrate that there never was a real division between the two fields in the first place. A careful analysis of Jamieson's argument will provide us with the occasion to more carefully survey the divisions between and within animal welfare and environmental ethics, so as to see more precisely where and why the fields diverge. The argument of Dale Jamieson's 1998 article "Animal liberation is an Environmental Ethic" can be summarized as follows:

1. An animal welfare ethic is capable of "valuing such collectives as species, ecosystems, and the community of the land" just as "urgently and intensely" as an environmental ethic can (1998, 46)

[2] For example, Gary Varner, who is roughly an animal welfare theorist, has argued that animal welfarism endorses the same actions that an environmental ethic does with respect to the therapeutic hunting of obligatory management species (2002). On the other side of the rift, P.C. Paquet and C.T. Darimont, both of them conservation biologists, have argued that the destruction of habitat for large North American mammals should be a concern for conservationists and welfarists alike because individual animals in anthropogenically-disturbed environments undergo significant suffering, and often death, and have therefore called for the development of a "wildlife welfare ethic" among conservationists (2010).

2. The difference between the fields of animal welfare and environmental ethics is no greater than the differences among those fields' respective competing theories (1998, 42; 53)
3. Therefore, there is no good reason to think that an animal welfare ethic is not an environmental ethic.

Jamieson argues for (1) by specifying three important value distinctions. On his view

(i) The source of value must be "sentientist," but the content need not be (i.e., a potential valuee can only be valuable to a sentient valuer, but the valuee need not itself be a sentient entity);
(ii) Sentient animals are of primary value, but this does not exclude the possibility of derivative (i.e., indirect) value for nonsentient entities, species and ecosystems;
(iii) Even if nonsentient nature does not have objective intrinsic value, sentient beings are capable of "intrinsically valuing" nonsentient entities, species, and ecosystems (i.e., valuing them for their own sakes) (1998: 47-8).

For Jamieson, these distinctions create room for a welfarist valuation of nature that can be just as urgent and intense as an environmentalist's. On the one hand, ecosystems can be of derivative value to the sentient animals that live within them, and this gives us just as much reason to preserve these systems as do environmentalists' attributions of primary value to those systems. Moreover, according to Jamieson, human beings need not find objective intrinsic value in nature in order to urgently and intensely value it. According to Jamieson, we can "intrinsically value" these ecological systems—i.e., value them for their own sakes—without thinking that value is an objective feature of these natural systems.

The second premise in Jamieson's argument appeals to the infighting within the respective welfare and environmentalist camps and tries to show that these are not properly unified camps. Since there is little consensus about what unites these two groups in the first place, there is little reason to exclude animal welfare ethics from the environmentalist club. As evidence of the divisions within animal welfare ethics Jamieson cites the rift between Peter Singer's utilitarian and Tom Regan's rights-based animal welfare ethic (1998: 53). He claims that the distance between these two views is no greater than that between animal welfarism and environmental ethics. Jamieson also cites the debates between three major figures in ecological ethics—Holmes Rolston, III, J. Baird Callicott, and Bryan G. Norton—as evidence for the "deep divisions" within environmental ethics (1998: 53). His idea is that the difference between animal welfare ethics and any of these major environmental views is no greater than the differences between these views that uncontroversially qualify as environmental ethics. Thus, because an animal welfare ethic is capable of urgently and intensely valuing nature in the way Jamieson describes, there is no good reason to exclude animal welfare ethics from the environmental camp.

In what follows I will argue that Jamieson overstates his case by showing that there is much more convergence within the camps of animal welfare ethics and environmental ethics than Jamieson lets on. In fact, the features that most clearly unite these theories within their respective camps are precisely the features in virtue of which animal welfare ethics and ecological ethics most sharply diverge.

3. Animal Welfare Ethics

Peter Singer's utilitarian and Tom Regan's rights-based animal welfare ethic are both forms of moral extensionism which extend the boundaries of a traditionally anthropocentric moral theory by demonstrating that animals also satisfy the morally relevant criteria of the theory in question. In his 1973 book *Animal Liberation*, Singer argued that it is inconsistent, on utilitarianism, not to include sentient animals within the moral community since they satisfy the utilitarian morally relevant criterion of sentience. A few years later, in *The Case for Animal Rights*, Regan extended a traditionally anthropocentric "rights-based" ethic to include the higher mammals. For Regan, an entity merits moral consideration as a member of the rights holding community just in case it is the "Subject-of-a-life", which involves having beliefs, desires, a sense of one's own future among other things (1983: 243). Jamieson correctly noticed that "Tom Regan […] spent much of [his career] distinguishing his view from that of Peter Singer" (1998: 53), but a careful survey of their divergences reveals that the differences between these two views are not at all deep, especially in contrast to views in environmental ethics. In particular, the two views have a surprisingly large convergence with respect to their domain, their practical deliverances, and their individualistic value theories.

First, the difference in scope between the two theories is not nearly as great as some suggest. Singer's utilitarianism extends moral consideration to sentient animals and he does not shy away from line drawing, claiming that the line below which an entity is no longer morally considerable lies "somewhere between a shrimp and an oyster" (1975: 179). In comparison with the utilitarian view, some have described the domain of Regan's view as much more restricted (Hargrove, 1992: x; Callicott, 1985a: 365-6). Regan does indeed restrict his discussion of animals that meet the subject-of-a-life criterion to "mentally normal mammals of a year or more," but it is important to notice that he only does this in order to avoid the problems with the "line-drawing question," and claims that mammals are "well beyond the point where anyone could reasonably 'draw the line'" (1983, 78). Thus, the domain of sentient animals and that of the animals who meet the subject-of-a-life criterion are likely much more coextensive than is often noticed. For the present purpose of characterizing the relation between animal welfarism and environmental ethics it is also worth noticing that, from an environmental perspective, the two welfare views are quite close: over 96% of living species fall outside the welfarist's domain of direct moral concern, so the fact that the two theories might respectively consider a larger or smaller portion of the remaining 4% of species seems to be a relatively minor difference.

Secondly, the practical issues of greatest concern for both Singer and Regan are factory farming (as well as the hunting and trapping of wild game) and the use of animals in science, and with respect to these issues they both call for vegetarianism and oppose testing on animals, even though their respective theories call for these actions on the basis of predictably distinct principles. On Singer's utilitarianism, vegetarianism is obligatory because a domestic animal's interest not to suffer a miserable life as a meat machine, or, if the animal has better living conditions in the wild, its preference to go on living, has greater weight in the utilitarian calculus than a human's interest in eating meat. By contrast, Regan's rights view prohibits the eating of factory-farmed, hunted or trapped animals because killing an animal is a violation of that animal's right not to be harmed. But despite this difference at the level of reasons and principles, with respect to the issue of vegetarianism, Singer's utilitarianism and Regan's rights view converge at the level of practice.

For Regan, the most pointed difference between his and Singer's views concerns the use of animals in science: where utilitarianism calls for reform, the rights view calls for the total abolition of the use of animals in education, toxicity testing, and scientific research (Singer, 1975: 85-6; Regan, 1983: 364-392; 2004: 194). On a utilitarian view, the wrongness of animal research depends upon the total aggregate harms and benefits of the research. In almost every case, the enormous harm done to animals outweighs the benefits of such research, but Singer does countenance the possibility of the calculus working out in favor of using animals for research (1993: 280–321). On Regan's view, by contrast, no human or animal is ever to be treated "as if her value were reducible to her possible utility for others" (1983, 393). However, it is only in these rare cases that utilitarian and rights-based welfare ethics diverge on the use of animals in science. On the practical issues of most concern to both welfare theories, there is nearly complete overlap.

Finally, and most importantly for present purposes, both of these theories have an individualistic, or atomistic, value theory. The rights view and utilitarianism are both individualistic in the sense that the primary loci of value are the individual animals that satisfy the morally relevant criterion of the theory in question. Thus, the two major animal welfare views, to a very large extent, converge in domain, in practical deliverances, and in their individualistic theoretical basis.

4. Ecological Ethics: A New Environmental Ethic

Ecological ethics developed in response to a challenge posed by Richard Routley in his influential 1973 address to the World Congress of Philosophy entitled "Is there a need for a new, an environmental ethic?" In that address Routley showed, on the basis of four influential thought experiments, that the "dominant Western ethical traditions" are incapable of capturing our intuitions about the value in and our responsibilities to nature (1973, 207). The best-known of these thought experiments is that of "the last man," who, "surviving the collapse of the world system lays about him, eliminating, as far as he can,

every living thing, animal or plant" (1973, 207). According to Routley, the Last Man does not act wrongly on any traditional western ethical theory, because these dominant ethical traditions assign only instrumental value to nonhuman natural entities and to nature as a whole. The intuition that there is something wrong with what the Last Man does is supposed to motivate the development, on a nontraditional basis, of a new environmental ethic, one that would vest nonhuman natural entities with intrinsic value, making them moral patients and thereby securing for them a moral standing against the last man's destruction.[3]

The first and by far the most influential attempts to develop a new environmental ethic were the ecological ethics of Holmes Rolston, III, J. Baird Callicott, and Bryan G. Norton, all of whom took their inspiration from the land ethic of American forester Aldo Leopold, who famously found the primary locus of value in nature in the "integrity, stability, and beauty of the biotic community" (Leopold, 1989: 224-5). Rolston, Callicott and Norton are moreover precisely the figures whose infighting Jamieson cites as evidence for the "deep divisions" within environmental ethics (1998, 53). When one surveys the infighting among these figures, one does indeed find real divergences, but I will now go on to show that they noticeably do not diverge on the issues that most clearly divide ecological from animal welfare ethics.

Holmes Rolston III's ecological ethic is the earliest and by far the most influential. In his 1975 paper, "Is there an Ecological Ethic?," Rolston argued that, unlike attempts to extend old ethical theories so as to include all of nature, a genuine ecological ethic begins with a new ecological value theory. Whereas the moral community of classical ethics includes only individuals who possess certain morally relevant capacities, on an ecological ethic, the individual constituents of a biotic community have value based on their relative contribution to the integrity and stability of that community. The holistic theoretical basis of the ecological ethic is, moreover, what most distinctly sets it apart from the traditional ethics Routley originally criticized: on this holistic ethic, nonsentient animals, plants, microbes, and even minerals can merit greater moral concern than higher sentient animals if they play a more important role in promoting the good of the ecological community. This holistic character of the ecological ethic is a feature of Rolston's view that leaves a lasting impression on subsequent ecological ethics. A second, and equally radical feature of Rolston's view, namely his commitment to the idea that value in nature is mind-independent, found fewer converts.[4]

[3] An animal welfarist might respond that the only thing wrong with what the last man does is that he kills animals to whom he ought to extend moral consideration (as sentient beings or subjects-of-a-life). But the last man example can be modified to rule out this objection. Consider (to take the broadest animal welfare criterion) Mr. Last Sentient Animal, who sets out to destroy all the remaining plants and nonsentient animals. Many have thought that there is still something wrong with Mr. L.S. Animal's destruction, and have answered Routley's call for a new environmental ethic that vests intrinsic value in "higher" as well as "lower" animals and the rest of nonsentient nature.

Starting in 1979 J. Baird Callicott also began developing an ecological ethic, explicitly responding to Routley's call for a new environmental ethic. Callicott's ethic is also ecological in the first instance, finding its groundwork in Aldo Leopold's attribution of moral value to integral and stable biotic communities.[5] But although he, like Rolston, at first maintained the centrality of mind-independent intrinsic value, Callicott later came to think that value is always and only a two-place relation that requires both a conscious valuer and a valuee. He therefore revised his view as one that finds what he calls "truncated intrinsic value" in nature, which he takes to be "value we ascribe to something for itself even if it has—since nothing does [...]—no value in itself" (1992, 132). However, although Rolston has never managed to reconvert Callicott and those he has influenced to what Jamieson called the "old-time religion" of mind independent value (1998: 45), both Rolston and Callicott continue to maintain that the relevant unit of moral concern is the whole ecological community, and they therefore largely converge on policies that promote the integrity and stability of that community.[6]

The fact that the distinction between the two most prominent ecological views makes little or no difference in terms of policy motivates a third camp in ecological ethics: a kind of pragmatism, championed most notably by Bryan G. Norton, which claims that the divergent theoretical justifications of two views are inconsequential if the views converge at the level of practice and policy (Norton, 1984; 1986; 1991).[7] Norton has likewise been a sharp critic of Rolston's notion of mind independent value (1992; 1996), and he is additionally a sharp critic of both Rolston and Callicott's nonanthropocentrism, that is, their commitment to the idea that value in nature depends in no way on human interests in nature. Norton instead advocates for a view he calls "Weak Anthropocentrism" which sees nature not only as "a mere satisfier of fixed and often consumptive values [but] also [as] an important source of inspiration in value formation" (1984: 135). But it is important for my purposes to notice that, for all his skepticism about the importance of nonanthropocentrism and the tenability of the thesis of objective intrinsic value, Norton still betrays a thoroughly holistic and ecological perspective on the way nature should be valued. Norton has argued explicitly that "nonindividualism" (i.e., holism), rather than nonanthropocentrism, is what gives environmental ethics its distinctive character (1984). Perhaps most tellingly, even in

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[4] For other positions that countenance "objective intrinsic value" in nature, but not necessarily an ecological axiology, see Agar 1997; Attfield 1981; Lee 1996; McShane 2007; Miller 1982; 1989; Taylor 1981b; 1983

[5] Callicott is an authoritative interpreter of Leopold, and has continued to refine his reading of Leopold throughout his life. A full consideration of Callicott's reading of Leopold is beyond the scope of the present paper, since his later work on Leopold does not to any significant degree, distance him from the camp of ecological holists. For useful critical treatments of Callicott's later interpretation, see Lo (2001) and Newman et. al. (2017).

[6] For views that likewise posit value theories roughly equivalent to Callicott's "truncated intrinsic value" see Routley and Routley, 1980; Godfrey-Smith, 1980; and Elliot, 1992.

[7] For other pragmatist positions see Weston, 1985 and Katz, 1987.

his attempts to move *Toward Unity Among Environmentalists*, Norton chastises partisans of individualistic value theories for not

> "[...] adopting policies on difficult, real-world cases such as elk destroying their wolf-free ranges, feral goats destroying indigenous vegetation on fragile lands, or park facilities overwhelmed by human visitors" (1991: 222).

He likewise criticizes such theories as unsound because, on such a view, "it can never be fair [...] to kill 10 percent of the elk population because it exceeds the capacity of its range" (1991, 223). Despite his pragmatic critiques of nonanthropocentrism and mind-independent value, Norton maintains a distinctively ecological perspective on nature's value.

Two aspects of value have played a role in the foregoing discussion of ecological ethics. The first concerns its metaphysical and epistemological status: Rolston tries to "defend all the objectivity [he] can for natural value;" for Callicott all value is "virtual value [...] actualized upon interaction with consciousness;" and Norton thinks that value in nature is "weakly anthropocentric" (Rolston, 1982: 127; Callicott, 1985b: 271; and Norton, 1984). There is no denying these metaphysical and epistemological divisions between these groups. However, for all their metaphysical and epistemological differences, Rolston, Callicott, and Norton are of one accord in their commitment to the holistic character of nature's value, whether objective, virtual or anthropocentric. We can therefore see that the three major theories of ecological ethics converge to a surprising degree: because they all share a holistic, ecological value theory, their domains of moral concern have complete overlap, and they largely converge at the level of practice on policies that promote the integrity and stability of the biotic community.

5. Animal Welfare and Environmental Ethics: It's Complicated

With these discussions of animal welfare and ecological ethics in mind, let us return to Jamieson's argument for why animal welfare is an environmental ethic. The first premise of Jamieson's argument is that ecological ethicists have no monopoly on valuing nonsentient nature. Animal welfarists, he argues, can recognize two forms of derivative value in nature: the instrumental value of nonsentient nature to sentient animals, and the instrumental or even final value of natural places to human beings as settings of recreation and objects of aesthetic wonder.

We are now in a position to see why this will not satisfy an ecological ethicist. This habit of referring the value of nature entirely to the interests of sentient beings is precisely the feature of classical ethical systems that Routley originally criticized when he called for a new environmental ethic. The ecological ethics that developed in response to Routley's challenge were then attempts to do better than simply to value nature for its capacity to satisfy the interests of sentient beings. The derivative value Jamieson finds in nonsentient nature thus does not provide it with the protection ecological ethicists insist that it merits:

on the one hand, with technological advances, we may find that the instrumental needs of sentient animals are better met by creating artificial environments in which they are sustained by industrial agriculture; on the other hand, deriving the final value of nature from the interests of individual humans leaves little room for criticizing the development of artificial environments, which might better satisfy our ever-changing tastes. Ecological ethics, by contrast, take these natural systems to be the primary objects of moral concern and insist that the good of integral and stable ecological systems in no way derives from the services they provide us. Thus, although it is true that an animal welfarist can value nonsentient nature in the way Jamieson describes, these ways of valuing are importantly disanalogous from, and often incompatible with, the way ecological ethicists value nature.

The second premise of Jamieson's argument states that there are "deep divisions among environmentalists and among animal liberationists" and that "the divisions within each of these groups are just as deep and profound as the differences between them" (1998: 42). But I believe that my analysis of the major constitutive theories of each camp has shown that the differences among them are not nearly as deep as Jamieson claims they are. It is true, as Jamieson tells us, that "Tom Regan has spent much of [his career] distinguishing his view from that of Peter Singer," but, as I argued above, Regan and Singer's views for the most part converge in domain, in practice, and especially in their atomistic theoretical foundations (1998: 53). And although it is true that there is infighting among ecological ethicists, I showed above that these disagreements only concern the metaphysical and epistemological status of mind-independent value. The three major camps of ecological ethics are in one accord when it comes to the holistic character of ecosystemic value whatever its epistemological or metaphysical status.

Finally, these convergences are significant because it is precisely in virtue of their the respective holism and individualism that ecological and animal welfare ethics are incommensurable at the level of theory and incompatible at the level of practice. The two are incommensurable at the level of theory because there does not appear to be any way to measure the primary value of animals on a welfare ethic against the differential value an ecological ethic assigns to them on the basis of their functional role in a community. This incommensurability is amplified by the practical intractability of the two causes, an intractability that stems from the fact that promoting the good of the whole ecological community often involves favoring and promoting the good of entities that are only of derivative value on a welfare ethic over the interests of the sentient or rights holding animals which are of primary value on a welfare ethic.

The fact that the divergences between the two fields primarily comes down to the structure of their respective value theories provides some much needed conceptual clarity in the discussions of this divide. Moreover, this result allows us to see that, although welfarism is decidedly not compatible with ecological ethics, it is commensurable with a more marginal family of theories in environmental ethics that have individualistic theoretical foundations. An animal welfare ethic, as I explained above, is best understood as an extension of traditional anthropocentric ethics to individual animals who possess the

capacities that the theory in question recognizes as morally relevant. By expanding the morally relevant criteria of a given animal welfare theory, a similar sort of extension can expand the moral community to individual lower animals and plants. An ethic of this sort actually predates academic philosophers' attempt to develop a new environmental ethic. Albert Schweitzer began to argue in the early 20th century that ethics should be extended to all entities that exhibit a will-to-live (1987: 307-329). In the early 1970's Christopher Stone and Laurence Tribe both argued for an extension of legal and moral rights to all nonhuman biological entities in accordance with the liberation movement's call for an extension of equality to the oppressed (Tribe, 1974; Stone, 1975). But the most prominent theory in this tradition is Paul Taylor's biocentrism (1981a; 1981b; 1983; 1986). On Taylor's view, a biological entity has inherent worth just in case it is a teleological center of a life, an entity that "has a good of its own which can be furthered or damaged by moral agents" (1981a: 314). The teleological-center-of-a-life criterion includes all biotic entities within the moral community. We can think of Taylor's view as a version of Regan's rights view extended to a much larger moral community and, accordingly, with more complex principles to adjudicate between conflicting claims between rights holders (e.g., to justify human's need to override the rights of plants, or animals, for food) (1986: 256-314).

With regard to the question whether biocentrism counts as an environmental ethic, we need simply to recognize that the theory does in fact give us grounds for criticizing the Last Man's destruction. But when we turn to the relationship between ecological and biocentric ethics, we find, perhaps surprisingly, that the divergence between these two internecine camps of environmental ethics is even greater than that between ecological and animal welfare ethics.

One might think that biocentric ethics are more akin to ecological ethics than to animal welfare ethics because the two former views take all biotic entities to be morally considerable. But there is another sense in which the difference between ecological and biocentric ethics is quite great, a fact that we can see by recognizing biocentrism's kinship with welfare ethics. John Rodman seems to have been the first to articulate these similarities:

> Why do our 'new ethics' seem so old [...]? Because the attempt to produce a 'new ethics' by the process of 'extension' perpetuates the basic presuppositions of the conventional modern paradigm, however much it fiddles with the boundaries (1997, 95).

Given this kinship, it's little wonder that welfarists are much more sympathetic to an individualistic environmental than they are to new ecological ethics. Tom Regan foresaw the compatibility of the still-incipient view of biocentrism and his own rights view in *The Case for Animal Rights*. Although he fiercely opposes holistic environmental ethics—which he disparagingly refers to as "environmental fascism," and claims that "[e]nvironemental fascism and the rights view are like oil and water: they don't mix"—Regan does

countenance the possibility of a "rights-based environmental ethic," which would be compatible with his own rights view (1983: 362):

> The implications of the successful development of a rights-based environmental ethic, one that made the case that individual inanimate objects (e.g. this redwood) have inherent value and a basic moral right to treatment respectful of that value, should be welcomed by environmentalists [...] A rights-based environmental ethic remains a live option, one that, though far from being established, merits continued exploration [...] Were we to show proper respect for the rights of individuals who make up the biotic community, would not the community be preserved (1983: 362-3)?

Taylor's biocentrism is such a theory: an environmental ethic that accords individual natural entities the right to respectful treatment on the basis of the fact that they are teleological centers a life with goods of their own. Because the domain of direct moral concern is much larger on biocentrism than on Regan's rights view, there will be conflicts between the rights of "subjects-of-a-life" and those of "teleological centers of life" who do not meet the former criterion. But the relevant fact to notice is that the two theories share the same atomistic theoretical foundation and rights-based paradigm. Biocentrism and Reganic animal welfarism therefore share the feature that Callicott hoped to establish through his development of the "Midgley-Leopold biosocial moral theory," namely, "a common theoretical structure," by which "we are provided a means, in principle, to assign priorities and relative weights and thus to resolve [...] conflicts in a systematic way" (1988, 169).

Moreover, a utilitarian environmental ethic could, in principle, be derived from and made commensurable with its welfarist counterpart. If the fundamental axiom of utilitarianism is the equal consideration of interests, one could develop a quasi-utilitarian environmental ethic that relied on a broader understanding of interests. Singer of course claims, with emphasis, that "[t]he capacity for suffering and enjoyment is *a prerequisite for having interests at all*," but this is not the only way to understand the notion of an interest (1975: 8). Alternatively, we might think that a thing has interests just in case there are facts of the matter about what does and does not contribute to its good. Regan has pointed out this ambiguity in the notion of an interest:

> [t]o speak of A's interests in X might mean either (a) that A is interested in [...] X or (b) that X is in A's interest (that X will contribute to A's good, or well-being, or welfare). If [...] we mean [the latter] then it is an open question whether the class of beings which can have moral standing is coextensive with the class of beings having the capacity for consciousness (1981: 22).

On this broader conception of "interest," one might develop a utilitarian environmental ethic, which extends moral consideration to the "interests" of all biotic entities, and which would, in principle, be commensurable with a utilitarian animal welfare ethic.

Even so, it is important to notice that although these individualistic environmental ethics might be compatible with their respective animal welfare counterparts, both theories will still be incompatible with a holistic environmental ethic for the same reasons that their animal welfare counterparts are. The universal biotic community, whose good is the primary concern of a holistic environmental ethic, does not respect the rights or the interests of its individual constituents. Therefore the "answer" to the rhetorical question with which Regan ended his discussion of a rights-based environmental ethic:

> [w]ere we to show proper respect for the rights [or the interests] of the individuals who make up the biotic community, would not the community be preserved (1983: 363)?

is "no." As I showed in outline in §1, promoting the holistic good of the biotic community—e.g., by removing or killing invasive feral animals, or by reintroducing natural predators who manage the populations of their prey—involves violating the rights and failing to consider the interests of its individual constituents. Finally, the divergences between a biocentric/utilitarian environmental ethic and an ecological ethic are even greater than those between a rights-based/utilitarian animal welfare ethic and an ecological ethic, because the former pair have a much larger domain of individuals whose rights or interests are violated by a holistic ecological ethic.

Ecological ethicists who, like Callicott, try to reconcile their view with animal welfarism by making the latter's value theory more holistic are not going to satisfy animal welfarists, who are unlikely to abandon what they regard as a perfectly adequate ethical system for one that fails to respect the rights and interests of the individuals that their systems are designed to protect. Moreover, attempts, like Jamieson's, to dissolve the boundaries between the two camps are unlikely to succeed because the features that most distinctively characterize the two groups are mutually exclusive. Finally, the reconciliation of an animal welfare ethic with an individualistic environmental ethic, although it provides the type of reconciliation that Callicott attempted, does nothing to solve the problem that Callicott initially saw. To show the compatibility of an animal welfare ethic and utilitarian or rights-based environmental ethics simply moves the problem of incommensurability into the camp of environmental ethics and, moreover, amplifies the practical divergences between the two views insofar as they now have a larger number of cases on which to disagree.

Callicott first described the relationship between anthropocentrism, animal welfare and ecological ethics as a "Triangular Affair;" Mark Sagoff later confirmed Callicott's views and argued that the relationship between animal welfare and environmental ethics amounts to a "Bad Marriage" with a "Quick Divorce;" in his later attempt to reconcile the

two fields, Callicott declared them “Back Together Again;” and where Sagoff and the early Callicott saw a broken relationship, Jamieson saw a “Hollywood Romance” (Callicott, 1980; Sagoff, 1984; Callicott, 1988; Jamieson, 1998, 52). I contend that, if there is a romance here, the best we can say is that “It’s complicated.”

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Ian Campbell is a PhD Candidate at Princeton University and a visiting graduate fellow at Humboldt-Universität zu Berlin (2017-2018). His research interests concern questions about intrinsic value in nature, the metaphysical status and value of species and ecosystems, the relationship between environmental ethics and more traditional branches of ethical inquiry, and climate change ethics. Address: 40 Riemenschneiderweg Berlin, Germany 12157. Email: ijc@princeton.edu.