**Pre-publication version, Rebekah Humphreys**

**Suffering, sentientism and sustainability: an analysis of a non-anthropocentric moral framework for climate ethics**

**Abstract**

In the light of the current environmental crisis, different approaches to mitigating climate change have been put forward, some more plausible than others. However, despite problems with anthropocentric approaches to global warming (whether these be weak or strong versions of the approach), it seems that because of the largely anthropocentric outlook of the Western world, an internationally united approach to mitigating climate change will (perhaps inevitably) come from human-centred values. But what are the long-term implications of this? Such values need to be at the very least challenged if we are interested in providing justifiable and sustainable solutions to the current crisis. Indeed, this paper will analyse sentientism as an alternative environmental ethic stance and will discuss why it provides a more plausible approach than anthropocentric ones whilst recognising where it falls short.

**Introduction**

Whilst many of the risks climate change poses to other than human life cannot be foreseen, some can be predicted, with probabilistic outcomes given to different climatic world scenarios in relation to a range of mitigation responses (see, for example, the most recent National Climate Assessment report released by the US Global Change Research Program on the current and future impacts of climate change, see USGCRP 2017). Indeed, leading-edge research presented in *Climatic Change* (Warren et al 2018) analyses the risks to ‘priority places’ in the light of different possible futures, from an unmitigated case in which there are no cuts to emissions levels, to a mitigated case in which emissions are restricted to no more than 2 degrees centigrade above pre-industrial levels; the research indicates that up to half of the plant and animal species in these areas of significant diversity could face extinction by 2100 in the former case, with a 25% species loss even in the latter case. Thus even if a scenario in which the levels proposed by the Paris Agreement were met, there would be significant loss in biodiversity (Warren et al 2018; and WWF 2018), and already we can see the impacts of climate change on some species (see Xu et al 2009; Colwell et al 2008; Parmesan 2006; Root et al 2003).

However, in terms of the available literature while there is some focus on species depletion and loss of biodiversity in relation to the impacts of climate change on other than human beings, little focus is given to *individual* animals and *their* flourishing or well-being. And as Palmer rightly claims (2016: 132), there is much more by way of considerations of the impacts on human beings. But in the case of such latter considerations, the discussion by comparison is very different – here, the fulfilment or thwarting of the interests of human beings in relation to climate change appear to be considered over and above the different (but related) considerations linked to the survival of human beings *as a species*. In the light of the largely anthropocentric outlook of the Western world, this is in some way to be expected; humans are deemed to have a higher moral status than nonhuman beings, often in virtue of what are thought to be uniquely human capacities (including capacities deemed to qualify most humans as persons, and as individuals in their own right). In respect of climate change concerns, nonhuman creatures tend to be perceived as ‘belonging to a species’ rather than as beings with individual interests, whether because of anthropocentric reasons relating to, for example, conservation, education and the preservation of ecosystems essential for human survival; or for ecocentrist reasons pertaining to appeals to the intrinsic good of ecosystems and species themselves.

Indeed, individual animals and their interests appear then to get ‘lumped’ into the category to which they belong in terms of species membership, whilst humans appear to retain an elevated status in so far as they are perceived as having interests that matter apart from their contribution (or lack of) to the thriving or furthering of Homo Sapiens; interests which are due moral consideration whether or not the continuance of the species is considered as a separate concern.

This dualism of our inherited philosophical legacy can be seen more prominently in our ideas regarding animals used in commercial practices, particularly intensive rearing; a practice in which billions of animals are made to endure pains, discomforts, frustrations, as well as forced to live a life in which they are prevented from fulfilling their natural tendencies. It is beyond the scope of this paper to discuss the attempted justifications for such treatment; it is sufficient to say here that such attempts usually appeal to farmed-animals’ supposed lack of certain capacities (for discussion of the ethics of factory farming see Humphreys 2014 and 2010).

Whether or not we agree with the claim that such mistreatment of other than humans is partly related to our philosophical legacy, all sentient animals have interests; interests that are all too often not sufficiently considered by human beings. And with respect to an ethics of climate change mitigation in relation to sentient creatures, even if we do not meet the goal of the Paris Agreement, let alone curtail greenhouse gases at a more sustainable level, at least some nonhuman sentient creatures will survive and will probably outlive humanity, but if the interests of sentient beings matter in their own right, then this confers responsibilities to mitigate the devastating impacts of climate change for the sake of actual and future sentient creatures generally, not just for the sake of human beings only.

**Sentientism**

Sentientist philosophers have presented convincing arguments to show why the interests of sentient animals are of direct moral concern, and no more so than Peter Singer who may be seen to exemplify the sentientist stance, at least with regard to his position on that which has moral standing and why. Indeed, while it is to be expected that the complexities of the views of each of such philosophers will diverge considerably (particularly in relation to the ethical theories they support regarding what makes right actions right, what they consider to be of intrinsic value and why, where they locate value or values, and how they deal with conflicts of interests), by definition all such philosophers support the proposition that sentience is both a necessary and sufficient condition for having moral standing; that is, for having interests that are relevant in the moral arena. (For the purposes of this paper it is sufficient to focus on this proposition with regard to a consideration of convergences amongst sentientist theorists, but it should perhaps be noted that this is not the only proposition that would be supported by all adherents of a sentientist viewpoint. See Rodogno 2010 for further discussion of other claims shared by all sentientists).

It is on this basis that Singer effectively presents his argument against that which Richard Ryder first coined ‘speciesism’; unfair discrimination or an unfair weighting of interests based on a morally irrelevant characteristic—in the case of nonhuman beings, lack of membership of the species Homo Sapiens, or lack of supposedly uniquely human characteristics deemed necessary for inclusion in the moral sphere (Ryder 1975: 1-14; Singer 1995: 1-23). For Singer, such speciesism amounts to a failure to recognise sentient creatures as beings to which the principle of equal consideration of interests applies—indeed, in so far as animals have the capacity to suffer, they do have interests, at the very least an interest in not suffering (Singer 1995: 8). As such, the principle of equality, as a principle concerning our treatment of creatures with *interests*, applies not just to human beings but nonhuman ones too and requires that *like* interests be considered equally (but not that all sentient creatures be treated the same). This has serious implications for an ethic of climate change (which will be discussed below).

Despite the soundness of Singer’s argument for extending the principle of equality to animals, there has been a move in animal ethics to attempt to give sentient animals serious (but not necessary equal) consideration via an analysis of the concept of personhood and how it might be applicable to animals; a concept often bound to certain cognate capacities that are thought to allow for a degree of self-awareness over time and planning for the future. Accordingly, while sentience is necessary and sufficient for moral standing, it is not sufficient to qualify a being as deserving of equal consideration. Gary Varner, for example, argues that the lives of persons, in their ability to develop a narrative story of their lives, have interests that are more morally significant than the lives of sentient non-persons (2011: ch.6). And Singer himself considers there to be a distinction between sentient persons and sentient non-persons (a distinction which he believes, like Varner, makes the lives of the latter replaceable in a way that the lives of the former are not), suggesting that while some animals are persons, some humans are not persons (Singer 1995: 20-21). However, even if one denies that some animals have personhood, some possess capacities that may be said to enhance their phenomenological experiences (including, for example, olfactory powers, echolocation, and more finely tuned perceptual faculties generally); capacities that persons may possess to a much lesser degree. Such capacities may add moral significance to the lives of some animals, but not necessarily to persons that lack such capacities.

Admittedly, there are good reasons for claiming that some lives are more valuable than others when interests conflict because some animals may be harmed more by death than others due to, say, their greater or more complex capacities. And after all, the principle of equality, applied correctly, does not require equal treatment but equal consideration of *comparable* interests. But this is very different from claiming that the lives of many sentient beings are replaceable for the very reason that their lack of certain capacities means that they are deemed non-persons. One problem with this is that if such beings have worthwhile lives, then to kill them is to injure them (Clark 1977: 59; see also Humphreys 2014). But besides this, the replaceability stance is susceptible to the argument from marginal cases if it is followed by an attempt to claim that while most sentient animals are nonpersons and thus replaceable, all humans, even marginal ones, should be considered *as* persons (plausibly, this is a move that Singer does not make); that is, should be considered as having lives that are more morally significant than sentient nonhumans, even though some marginal humans may have little quality of life and few developed cognitive capacities compared with those animals that (although sentient) are not classed as persons. (For a discussion of the argument from marginal cases, see Singer 1995).

Varner, for example, provides indirect reasons for giving all human lives equal moral significance whilst rejecting the claim that (in judgments of moral weight) such moral significance should be given to those animals with at least similar cognate capacities to marginal humans; these reasons pertain to the close relationships we form with humans and the fear that would be created if we treated marginal humans in the way we now treat other than human nonpersons (Varner 2011: 253-54).

But this provides no direct ground or justification at a theoretical level for supposing that marginal humans should be given more moral significance than nonhumans that are not classed as persons (for a more detailed response to Varner, see Attfield and Humphreys 2013). The principle of equal consideration of interests, applied to animals, requires that like interests be given equal consideration, and having an interest comparable to another being’s interest is not necessarily dependent on species membership. In any case, we should be wary of slippage from the claim that the lives of certain beings are more valuable by virtue of their possession of certain capacities to the claim that when their interests conflict with beings who lack such capacities, the latter have less weighty interests than the former (in particular, wary of an erroneous move to the claim that supposed nonpersons have a less significant interest in not suffering than persons or that the interests of nonpersons in not suffering become less weighty when the other interests at stake are harnessed to beings that may be said to possess personhood).

That said,whether we grant personhood to certain animals, it is clear that with regard to climate change the interests of all sentient other than human creatures stand to be affected. If their interests are to be given equal consideration to the like interests of humans, then this creates obligations to do much more than aim to meet the target of the Paris Agreement.

**Some Implications: climate ethics**

In this way, sentientism could be seen to offer the environmentalist justifications for mitigations that would pay heed to the significant interests of sentient nonhumans and give those interests equal consideration as the like interests of humans in climate change negotiations, with some sentientists claiming more generally that their normative stance can serve as an adequate environmental ethic (Jamieson, 1998; Varner 2001).

One implication of this is that negotiators would have to ensure that the habitats of wild sentient creatures are sufficiently protected at least to the extent that such creatures can satisfy their basic needs (for a discussion of ‘wildness’ and its different meanings in the context of climate change, see Palmer 2016); such an implication would of course involve refraining from acting in ways that give less weight to like interests, even when our own interests are at stake and especially when those interests are peripheral. The fulfilment of the interests of wild animals depends on at least minimal interference (for further discussion, see Palmer, 2015), and this would involve acting in ways that respect their habitats. Of course, we appear to be failing to avert the negative outcomes of climate change with respect to the homes of a staggering number of members of our own species let alone individuals of other sentient species (it has been estimated that there could be as many as 1.4 billion environmental refugees by 2060 (see Environmental Justice Foundation 2016: 14)). But with regard to nonhuman creatures the situation appears to be at least as dire, considering that the extent of climate refugia is already declining at an alarming rate and is set to decline even further (Warren et al 2018). Indeed, as said above (in this section and at the beginning of the paper), given that climate change is devastating wild populations (ibid.), then this creates positive obligations in respect of devising mitigation and adaption strategies that take the interests of wild creatures into account. (See further John Nolt’s ‘Climate Change and the Loss of Nonhuman Welfare’ (2019) for a discussion harms in relation to wild animals in the context of climate change.)

And yet, in contrast to the aforementioned implication, some hold that it follows from sentientism that human beings should intervene to prevent predation (see Sagoff, 1984; see further Sapontzis 1984), meaning that moral agents in general should intervene to prevent lions, eagles and crocodiles catching and eating their prey. This would of course be contrary to any feasible attempt to combat environmental pressures resulting from climate change. But there is a persuasive case against such interventions in any case. For the wellbeing of prey-species and of predators depends on the process of predation continuing, as does the very existence of predators; if there is value in the lives and the flourishing of predators as well as prey, then it should be allowed to continue. With regard to climate ethics, the continuing operation of natural systems should itself be permitted and necessitates predation.

Underlying the idea that sentientism or more specifically giving equal consideration to the interests of animals implies we should interfere to prevent predation is the assumption that the sentientist stance requires that we should prevent all animal suffering. But neither sentientism nor equality for animals requires this, no more than equality for human requires this; to suppose that it does is to misunderstand what counts as ethical or unethical treatment. That animals suffer in the wild is part and parcel of the life and death cycles of wild animals, cycles on which the healthy functioning of ecological processes depend, and which sustain all life. Besides, interference with predation would contribute to the total suffering in the world, rather than alleviate it (issues arising from the Total View set aside: see Attfield 1995, ch10, for a full discussion of the Total View), not least because it would prevent animals from fulfilling their natural tendencies and potentialities and result in some animals starving to death. This, in turn, would of course to a certain extent disrupt the ecological balance, which could have disastrous consequences for humans and sentient animals, but would certainly undermine any sentientist attempts to tackle the impacts on animals in relation to climate change. Therefore, a coherent sentientist ethic of climate change either must reject the claim that all suffering is intrinsically bad or reject the claim that all suffering should be prevented or reject both.

With regard to sentient creatures the welfare of whom is dependent on human beings, then there is a direct obligation to abolish such methods in any case. This particularly applies in the case of the billions of animals made to ensure severe and prolonged suffering through factory farming methods. We would never consider it justifiable to inflict comparable suffering on humans for the same purposes; for the mass production of meat, that is. (See above for a discussion of impacts of climate change of wild animals.) Accordingly, on the principle of equal consideration of interests, our treatment of factory-farmed animals is not (and will never be) permissible. In relation to climate change, the International Panel for Sustainable Resource Management reports that ‘Agriculture and food consumption… are one of the most important drivers of environmental pressures, especially habitat change, climate change, water use and toxic emissions’ (UNEP 2010: 33), and ‘in the case of intensive agricultural process, growing can also be very polluting due to the use of fertilizers and pesticides. Agriculture also puts pressure on land and water use, as well as energy use’ (UNEP 2010: 29), disproportionately effecting geographic areas which may be classed as ‘food-insecure’ (see FAO 2017a, and FAO 2017b).

It would appear then that taking proper account of the interests of factory-farmed animals, in so far as it would involve at least a move towards abolition, would significantly reduce emissions for the good of all and could well release land for crops for human consumption; land which is currently used to grow soya crops to feed the farm animals reared for consumption, an incredibly wasteful practice (this would have further implications with regard to sustainable land use in relation to issues concerning poverty, malnutrition and equitable global development, distribution problems notwithstanding). (For a further discussion of the ethics of factory farming, see Humphreys 2014 and 2010; for research on the costs borne by humans in relation to factory farming see Tansey and D’Silva 1999; and Henning 2011.)

Overall, then, the negative environmental impacts of intensive food systems in relation to climate change provide reasons to support the abolition of intensive methods of farming (reasons aside from appeals to the suffering endured by intensively reared farm animals). Further, these reasons need not be indirect in the context of sentientism, for such impacts *directly* affect sentient wild animals and human beings. Even though intensive rearing methods would be argued by sentientists to be unjustifiable in any case based on the suffering they cause (that is, irrespective of the environmental devastation it causes), human and nonhuman suffering included, such an argument in relation to climate change would provide another (albeit this time indirect) reason for moving towards more sustainable agricultural methods. Moreover, in the light of the principle of equal consideration – or even just the need for serious consideration – and given at the very least what we already know in relation to climate change and its harmful impacts on wild animals, there is a strong obligation to adopt targets for action that properly consider their species-specific interests.

**Theoretical Challenges**

It seems, then, that sentientism (in relation to pressing environmental concerns), could not only afford genuine protection for and equitable treatment of sentient beings but also propose at least some actions which cohere with obligations to minimise the negative impacts of climate change on humans, nonhumans and ecosystems. And if the principle of equality is applied to animals, which plausibly it should be (Singer 1995), then such obligations are a matter of equity not just in relation to humans, but nonhumans too (Attfield and Humphreys, 2016 and 2017).

Of course a being’s interest in not suffering is certainly a morally significant one in that its fulfilment or frustration can seriously affect its life for better or for worse respectively, seriously impacting on its quality of life (see Goodpaster for the distinction between moral standing and moral significance, 1978). Such an interest can often override other peripheral and even weighty interests (including, for example, an interest in continued existence, for there are some forms of existence that constitute a greater harm than death for the very reason that they cause too much suffering). Nevertheless, it is also reasonable to claim that we can harm not only sentient creatures but nonsentient ones too – which strongly indicates that the latter have interests. And such harms in some cases could be greater than the harms caused in relation to other conflicting interests at stake. In other words, the interests of nonsentient creatures could well outweigh the interests of sentient ones depending on the case in question. Of course, sentientists would reject this proposition on the basis that nonsentient creatures do not have interests of a morally relevant kind.

But this poses a serious challenge for sentientists. Besides issues arising from where to draw the line for sentience (see, for example, Braithwaite 2010) and although there are many disanalogies between sentient and nonsentient life, there is an analogous argument (from the sentient case to the nonsentient one) for holding that nonsentient creatures have interests (even though they do not take an interest in their life); at least interests in, for example, flourishing or thriving after their own kind (see Taylor 1986: 63-68, and Attfield 2014: 12, 24-25, and 49). And our responses to hypothetical scenarios derived from Last Man cases (Routley 1973), in particular the modified thought experiment presented by Attfield (1994: 168) whereby the Last Man needlessly chops down the last tree (a tree that could multiply if left alone), fail to cohere with the sentientist’s claim that there is nothing of value at stake here, as do responses to other thought experiments such as that of Planet Lifeless and Plant Flora, put forward by Donald Scherer (1983). (See further Attfield’s ‘Biocentrism, Climate Change and the Spatial and Temporal Scope of Ethics’ (2019) for an enlightened discussion of these thought experiments.) With regard to an ethic of climate change, we could easily imagine large tracts of biodiverse areas that do not contain sentient life, but do contain many other living things. But sentientists provide no direct reason for protecting such habitats if doing so does not further the interests of sentient creatures. Moreover, if we think that what the last man destroys is of value, or that in destroying Planet Flora we do wrong, or that in destroying large tracts of land containing much nonsentient life we do harm then we have already moved beyond the bounds of sentientism towards a more inclusive approach to environmental concerns that embraces nonsentient (as well as sentient) life. While the sentientist may well afford some protection for the habitats of nonsentient beings—she could, similarly to Jamieson (1998; see also Crisp’s response to Jamieson 1998), appeal to the benefits of such habitats in relation to the wellbeing of all sentient creatures, following a Norton-like (Norton 1991) yet (in contrast) a nonanthropocentric argument—whether such protection would be sufficient is a different matter.

**Overcoming Limitations: ecocentric values**

One move here is to consider whether only some form of ecocentrism would be an appropriate grounding for an environmental ethic, and thus whether we should locate intrinsic value in ecosystems and collective entities and whether we should consider them as bearers of interests. But while moral standing belongs to all and only beings with interests, for all and only such beings are capable of being harmed and benefited or having their own good (see Goodpaster 1978; Feinberg 1974), it is far from obvious that such entities do have interests distinct from the individuals such systems support or the individuals that constitute such entities. Moreover, we should resist the suggestion that systems have moral standing and independent value, for the ‘good’ of an ecosystem may be said to consist rather in the good of its members as individuals. (See further Nolt (2019) and Attfield (2019) for convincing reasons to suppose that it is individuals that have moral standing, as opposed to species.) Of course, those things that are of value do exist in the biosphere, and their existence does depend on the biosphere and its systems as a whole. But it does not follow that the biosphere and its systems are of intrinsic value.

Defenders of ecocentrism also support the view that (as well as systems) species have intrinsic value and moral standing. However, the term ‘species’ denotes an abstract if not general notion identifying a category or set of individual organisms consisting of genetically like individuals and though we can talk in a metaphysical sense of the ‘flourishing’ of a species (and such talk may have rhetorical value), a species in and of itself does not have interests or intrinsic value. Rather it is the individual members of a species that have interests and the well-being or flourishing of individuals that has intrinsic value. Just as a crowd does not count as having moral standing because it is the individuals which make up the crowd that have that standing, the same is true of a species group. What is wrong about eliminating a species is that it cuts off future members of that species, and future members of a species do, or rather would, have a good of their own and moral standing (Attfield 1995: 24-25, and 2014: 39). Further, just as we have obligations regarding future humans, whoever they may be (that is, without knowing their identity (see Parfit 1984: ch.16)), we also have obligations towards future creatures, whatever their identity may be.

In relation to climate ethics, then, while the impacts of climate change may be said, for example, to result in species becoming extinct, it is the individuals (future and present) of those species that stand to be affected by any mitigation and adaptation strategies we adopt. That said, individuals may be susceptible to present and future harms related to climate change for the very reason that they belong to a particular group which is under threat. But, as Palmer plausibly claims in relation to one type of argument involving an analysis of group ‘harms’, ‘it’s not something *other* than the individuals that is harmed’ (2009: 596).

That said, overcoming the limitations of a sentientist account of value need not involve a move towards holism. Indeed, while it may indeed be ‘a fact that environmentalists tend to think like holists’ (Varner 2001: 201), we can take account of the good of all living beings, both sentient and nonsentient, without being required to endorse the view that classes of things (denoted by general terms, such as ‘species’ or ‘systems’) have interests.

Of course, much will depend here on one’s conception of what counts as a morally relevant interest – for the holist direct moral relevance is tied to groups of kinds such as species and ecosystems. But as Varner argues, ‘Holists must either show how species and ecosystems have interests in some traditional sense, or give a convincing account for attributing intrinsic value to them on some other basis. But since holists universally reject the first option, the burden of proof is on the holist to explain why such entities have intrinsic value’ (2001: 202). Besides, endorsing a form of holism would fail to account adequately for the individual interests of creatures currently affected or which stand to be affected by climate change. With regard to the sentientist’s concept of a morally relevant interest, however, direct moral relevance is tied to sentience, but (as noted in the previous section) the possession of sentience is not a necessary condition for moral standing (athough it may be sufficient). Arguably, while sentience is a characteristic that can be considered as morally significant in cases of conflicting interests, all nonsentient creatures have interests in thriving after their own kind, exercising their species-specific tendencies, and fulfilling potentialities.

**Values for a sustainable world**

And yet any policies regarding mitigation and adaptation will probably be human-centred ones, focused on reducing emissions for the sake of human beings only. Of course, there is a strong case for saying that much more strenuous efforts need to be made in this regard in any case. But human beings may well be outlived on this planet by much nonsentient and possibly sentient life, and if we think that the Earth inhabited by such life has a value even in the absence of human beings, then this creates obligations to act in the interests of not just human beings but nonhuman ones too, and not just sentient beings but also nonsentient ones (see Attfield and Humphreys 2016: 8). To illuminate the implied difference here between an anthropocentric approach and a nonanthropocentric one, the author draws attention to the rather significant difference between restricting emissions to no more than 2 degrees centigrade (as agreed in Paris) and reducing the amount of CO2 in the atmosphere to no more than 350 parts per million (as agreed by climate scientists; see, for example, Hansen et al 2008). The former has and would involve mass extinction. The latter is what would be required to return us closer to our Holocene ‘normal’ and would be good for human and nonhuman life.

Admittedly, anthropocentrism may advocate similar environmental practices and policies to nonanthropocentric theories (Norton 1991: 237-43; see also Norton 2008) and attempts to tackle the mammoth problems facing humans in relation to climate change will, most probably, be tackled by a sensitive Norton-like theory. But this is not to say that those policies would be similar in terms of providing reasons for action – and it is these reasons which ultimately will provide the defence for our actions and which will themselves determine whether outcomes are sustainable not just for human beings but for other creatures too.

As Katie McShane argues, the central normative claim of anthropocentrism ‘is not a claim about how we ought to behave. It is a claim about which features of nonhuman things can make them matter in which ways… Claims about why something has value are claims about why we, as moral agents, have a reason to care about the thing’ (2007: 172; see also McShane 2008). This is also true of nonanthropocentric claims; indeed, they are claims about what has value and why. Thus, if anthropocentrism and nonanthropocentrism do propose the same actions, then they will do so for very different reasons based on diverging claims as to what has independent value and thus moral standing: ‘claims about why we as moral agents should care about a thing serve as the grounds for ethical norms concerning the thing’ (McShane 2007: 173). Since it is not the case than only humans have interests, or that only human interests are important in terms of proposals regarding mitigation and adaptation strategies, then we should be wary of the implications and consequences of a theory that considers justifications for actions to be defensible if they appeal directly to human interests only. Forms of enlightened anthropocentrism may well propose actions that are right, but if the reasons given for those actions are discriminatory or unjustifiable then it is not sustainable as a theory that aims, in practice, to tackle pressing environmental problems; problems for which our discriminatory or unjustifiable attitudes towards the nonhuman world are at least partly responsible in any case. In the light of this, we would be prudent not to foster such attitudes through application of a theory that values only human interests.

Similarly, we should be wary of promoting sentientist policies that are based on a direct consideration of the interests of sentient creatures only. Such policies may propose some similar practices to policies based on a direct consideration of *both* the interests of sentient and nonsentient creatures. But sentientist policies would fail to recognise sufficiently those interests the fulfilment (or even mere consideration) of which is not necessarily in the interests of sentient beings or not necessarily tied to their flourishing, including the interests of nonsentient creatures who may well outlive human beings (even if we manage to reduce emissions to a level feasible for the temporal continuance of much sentient human and nonhuman life). If there is value in a world of nonsentient life in the absence of sentient life, then whether we endorse sentientist or alternative nonanthropocentric policies instead becomes of utmost importance in terms of proposing not only defensible but sustainable climate change policies in the interests of all those creatures that are impacted by environmental pressures.

**Conclusion**

To conclude, although sentientism offers a less exclusive and more creditable ethic upon which to base an ethic of climate change than anthropocentrism, it is not clear that it can provide sufficient protection for nonsentient creatures and their environment. On sentientism, the nonsentient world is protected only so far as it promotes the interests of sentient beings. But there is much nonsentient life which has so far not been identified (including most of the life that inhabits biodiverse habitats). Just as this life cannot all be said to promote human interests (Attfield 2014: 76), it also cannot all be said to promote the interests of sentient beings generally, and, therefore, sentientism (similarly to anthropocentrism) provides no sufficient nor direct grounds for protecting the undiscovered nonconscious terrestrial and aquatic plant and animal life the existence of which is a known unknown. Not only this, but if most people do not care about certain habitats or nonsentient creatures nor believe that the protection of certain nonsentient life will not promote their interests, then it is unlikely that sentientism can provide sufficient grounds for protecting those animals and habitats, for sentientist theories imply that we need to be restricted in our use of the environment only if such use does not adversely affect sentient individuals.

An adequate environmental ethic upon which to base climate change mitigation policies needs to recognise the moral standing of all individual creatures, sentient and nonsentient (for further discussion relating to the criterion for moral standing see Routley 1973, Goodpaster 1978, and Attfield 2014). It will be clear by now that the author supports an egalitarian biocentrist stance, not egalitarian in the sense of Taylor’s position which claims that living things have equal inherent worth (Taylor 1986: 75), but in the sense in which like interests should be given equal consideration, whether those interests belong to sentient creatures or nonsentient ones. In relation to an ethic of climate change, biocentrism would endorse far more stringent mitigation policies than sentientism, not least because in recognising the moral standing of all living beings it would consider the interests of all beings to have direct moral relevance (for further discussion on biocentrism and climate change, see Attfield, 2017; see further Humphreys 2016). But the author will not rehearse a discussion of this form of biocentrism and its implications as this has been presented elsewhere (Humphreys 2016; see also Attfield and Humphreys, 2016 and 2017). Suffice it to say here that while sentientism would afford much greater protections for sentient creatures than anthropocentrism if it were used as a foundation for a climate change ethic (for a discussion of the inclusion of the interests of at least some nonhuman beings in climate change policy see McShane 2016), it cannot account for the challenges posed by considering that even in scenarios in which stricter mitigation policies were adopted than those proposed by the Paris Agreement, the interests of most of the world’s living creatures (nonsentient beings), present and future ones included, would fail to be included as beings that should be given direct consideration with regards to appropriate policies and practices. This is unjustifiable if the nonsentient world has a value apart from the interests of human and nonhuman sentient beings, which surely it does. Such a conclusion in respect of climate ethics calls for a proposed target for action that would be good for all living things, and thus a much more ambitious target (of a reduction of CO2) to no more than 350 parts per million, rather than that agreed to in Paris.

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