Valuing Nature: How an Environmental Ethic Grounds Our Moral Obligations to Combat Climate Change

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Abstract

A large part of the growth of interest in environmental issues witnessed over recent decades has been generated by the wide acknowledgement that our planet's climate is undergoing extensive changes as a result of certain human activities. It is thought that these changes will cause damage to the environment that is unprecedented in modern history. This fact alone sends a clear signal that it is time for us all to carefully consider what our proper relationship to the natural environment should be. This thesis seeks to reject the dominant Western tradition that views nature as possessing only instrumental value. Instead, it seeks to establish the moral considerability of all life forms, by showing that they have interests and a wellbeing that makes them deserving of direct moral concern. Furthermore, it seeks to show that where there are conflicts between the interests of species, the principle of the equal consideration of interests should be used to determine what the morally best course of action should be. The implications of these arguments for climate change policy are shown to be very significant indeed. By showing that all life forms have interests, and that all interests are deserving of equal consideration, we are forced to conclude that human beings must begin the process of ending our current engagement in many activities that are damaging to the environment. This is morally required because it comes at relatively little cost to our interests when considered in the context of the damage that will be done to the interests of others if we fail to do so.

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1. Introduction

Climate change has become one of the major divisive issues of the twenty first century. We hear frequent reports of melting ice caps, rising temperatures and sea levels, increases in climate sensitive diseases, predictions of mass animal extinctions and many more, and the environment is now a regular feature of newspaper front pages, TV news bulletins, and political party manifestoes. As Andrew Dobson points out (2006, p.vii), all this would have been completely unimaginable even as recently as the 1990s. And indeed, a large part of this newfound interest in environmental issues has been generated by the wide acknowledgement that our planet's climate is undergoing extensive changes, and that these changes, if not dealt with expediently, are likely to be both irreversible and have devastating consequences. One of the most authoritative sources of information about climate change is the Intergovernmental Panel on Climate Change (IPCC). To date, it has produced four comprehensive analyses of the causes of climate change, its likely consequences, and the action that will need to be taken to prevent further damage. The analyses have all agreed that temperatures have risen recently, and will continue to rise. Whilst there is some uncertainty surrounding precisely how much temperatures will rise within a given time frame, what is increasingly certain is that if we continue to pump greenhouse gases into the atmosphere at the rate we are currently doing, we will inflict serious harm on human beings, animals, plant life, and ecosystems.

When faced with such a situation and its complexities, there are many senses in which current mainstream ethics appear to be lacking. The task of inquiring into the moral and ethical challenges posed by climate change has been too often neglected by moral philosophers, and perhaps as a consequence, even our best theories face quite severe difficulties in addressing the most salient issues, such as scientific uncertainty, intergenerational equity, contingent persons, non-human animals, and nature (Gardiner 2006). And whilst the climate change problem is quite clearly interdisciplinary in nature, it must be emphasised that it is fundamentally an ethical issue.

Our failure to even begin to mount an adequate response is, I think, also evidence of our failure to give proper moral consideration to: a) those who are not our co-nationals, b) future persons and c) non-human animals and the natural world. Given the apparent magnitude of the consequences of climate change, it is clear that the time has come for that to change, and for absolutely everybody to reflect carefully on how we ought to collectively respond. As Jamieson (1992 p.142) has pointed out, "Science has alerted us to the problem, but the problem also concerns our values. It is about how we ought to live and how humans should relate to one another and to the rest of nature". Moral philosophers therefore ought to have something to say on climate change, and I believe they may also have a duty to act as leaders in suggesting ethical solutions to this grave threat to life. David Miller (2008, p.119) was correct to argue that "what philosophers are uniquely positioned to do is to spell out the reasons we have to change our behaviour to avoid damaging climate change, in other words to ground the ethical and political obligations that we will have to accept if a solution is to be found." The aim of this thesis shall therefore be to make a (very small) contribution to doing just that, and to explore possible answers to one of the major ethical conundrums that contributes to the "perfect moral storm" that is the climate change problem. By investigating what our moral obligations to non-human animals and the natural world ought to be, I hope to show that moral agents are required to act immediately to end all damage to nature outside of that which is strictly necessary.

1.1 A Perfect Moral Storm

Before we move on to look at this issue in detail, I want to briefly explore the two other major ethical problems alluded to above, both of which further complicate how we should respond to climate change. The first can be characterised as a spatial challenge, and concerns how to distribute the burdens of climate change within the current international space, whilst the second is temporal in nature, and concerns the extent to which future persons ought to figure in our moral considerations. I think the spatial problem is very challenging, but not insurmountable, and

I hope to give a succinct summary of why by exploring it just a little further. One of the major problems associated with climate change is its truly global nature. For most of human history, there have been very few, if any phenomena whose effects have been felt so severely so far from their origins. What is peculiar about climate change then, is that the impact of an action is not necessarily realised at its source (either individual or geographical), and becomes dispersed both to other actors and regions of the Earth. What's more, on top of this dispersion of causes and effects, agency is deeply fragmented, meaning that climate change cannot properly be attributed to any single agent or single set of agents. Instead, it is caused by a huge number of individuals and institutions, all of which sit outside any comprehensive structure of agency. This fragmentation generates a profound challenge to humanity's ability to respond, compounded by the fact that the current international system is constituted by states. It has now become clear that states must engage internationally in order to effectively respond to global phenomena, and that the lack of any adequate centralised system of global governance has made it very difficult to unify agency and coordinate a response to a problem of such scale.

It is perhaps helpful to understand the international situation as an example of the Tragedy of the Commons, in which the relevant actors (individual countries) will conclude that it is collectively rational to cooperate and limit overall pollution, but individually rational not to restrict one's own pollution, whatever the others do (Gardiner 2006, p.89). There are such strong incentives for each country to freeride on the actions of others that the outcome will usually be that when each country has the power to choose whether or not to restrict its emissions, each will prefer not to do so, regardless of what the others decide. The difficulties posed by this Commons problem can be further illuminated if we take a look at another key characteristic - institutional inadequacy. It seems that the appropriate means for resolving the Commons problem would be for the actors involved to agree to change the existing incentive structure by introducing enforceable sanctions. This would transform the decision situation by foreclosing the option of freeriding and making collectively rational action also individually rational (ibid.). From

real life experience we know that international negotiations surrounding climate change have been extremely difficult, and major treaties have been relatively unsuccessful. Nonetheless, if this were the only challenge, climate change would not appear to pose any very grave or insurmountable ethical challenges, and it may also be that on a practical level it eventually becomes possible to motivate countries to establish the necessary institutional structures to effectively deal with the problem. The task of distributing the burdens of climate change across the current international space will likely continue to be a difficult one for some time to come, not least because those with substantial political and economic power (who are coincidentally also those best equipped to deal with the problem) have very many interests in resisting action. Nonetheless, whilst current power structures represent a significant obstacle to progress, I think that there are certainly many convincing and well-established arguments for how this ought to be done. Although the practical challenges are therefore quite considerable, we are already reasonably well equipped to deal with the ethical challenges. This is not necessarily to say that any one response is clearly dominant, but just that the literature is saturated with high quality arguments of this nature.

I also think it is worth highlighting the troubling consequences associated with conceiving of climate change as a primarily spatial problem. Whilst the spatial understanding is undoubtedly the dominant one, especially in public discourse, it is important that we understand the ways in which looking at the features of climate change from this perspective critically undermines our ability to appreciate and respond to some of the other very serious ethical challenges. In fact, Gardiner (ibid., pp.94-95) has suggested that the focus on the spatial aspects of the problem may conceal a more sinister set of factors; perhaps not only the public debate, but also the theoretical debate has been corrupted by the fact that it is both easy to engage in self-deceptive behaviour in the face of this complex convergence of problems, and extremely convenient to do so. By focusing on the spatial perspective, we draw attention towards those issues of scientific

uncertainty and global politics that tend to make action seem more problematic, and away from issues of intergenerational or ecological ethics, which tend to demand it.

And indeed, the dispersion of causes and effects, the fragmentation of agency, and institutional inadequacy are also factors that contribute to the intergenerational problem, and it is far less clear how this problem might be solved ethically. This is the second challenge, and I think it will soon become evident why the difficulties it presents are harder to resolve. First of all, because greenhouse gases have a long life span, climate change is a severely lagged phenomenon, and emissions released at any one point in time can have significant effects decades and perhaps even millennia later (Caney 2009, p.163). This means that the upward trend in the atmospheric concentration of greenhouse gases is not easily reversible, and any chance we have of reducing it will require quite some advance planning (Gardiner 2006, p.91). It also means that whilst the climate change we are currently experiencing is the result of emissions let off in the past, the effects of the emissions we are currently releasing will not be fully felt until some time in the future (ibid.). Clearly then, the fragmentation of agency and dispersion of cause and effects are far more serious when we look at climate change from a temporal perspective. The fact that the effects of our current emissions are likely to fall disproportionately on later generations markedly undermines the will to act now, and of course, each new generation is likely to face the same incentive structure (ibid., p.92). Furthermore, given that different generations cannot coexist, it becomes impossible to unify agency in any real sense, and there can never be any assurances that decisions taken now will not be repealed by later generations. The collective action problem viewed from the temporal perspective is therefore particularly grave. Another probable consequence of the lagged nature of the climate change phenomenon is that it will be difficult to motivate those alive today to create the kind of global regime which might be able to competently deal with climate change, because it will probably not be in their interests to do so (ibid., p.91). This set of factors creates a profound moral problem, raising questions about what and how much we owe future generations first and foremost, but also about the ability of typical

political institutions to deal effectively with the problem – especially given that democratically elected governments tend only to be granted relatively short periods in office, and as such, are unlikely to have either the incentives, or the capacity to deal with lagged phenomena.

We have therefore seen how the particular features of climate change create two very serious ethical and practical problems. There is also a third, and it is the one to which this thesis is devoted. For reasons I will explain, I think this third challenge is the most grave in nature, not only because it is not until relatively recently that the questions it raises have been systematically addressed by moral philosophers, but also because providing satisfactory answers to its questions may require some quite fundamental shifts in our ethics themselves. Whereas various more or less convincing accounts of our global obligations to those who live in other regions of the Earth can and have been provided, the nature of our obligations to future persons is underdeveloped, and it is even less clear whether moral philosophy has heretofore successfully provided an account of our duties to animals and nature at all. Each of these ethical challenges would require an entire book to properly address all of the questions raised, and hence, sadly for the purposes of this thesis I will need to limit myself to addressing only one in some detail. I have therefore chosen to focus my attention on suggesting how a solution might be found to what I believe will be the most controversial ethical dilemma, namely, the duties we owe to non-human animals and nature. For thousands of years the Western tradition has operated according to a clear separation of man and nature, and any attempts to change such deeply embedded intellectual and cultural habits are met with great difficulties. Furthermore, widespread and serious damage to the environment in which we live is imminent; if we don't act soon, we risk that that damage will be irreparable.

But whilst ecological issues such as these are at the very heart of the climate change problem, they are not necessarily specific to it. In fact, I want to argue that the negligence we have shown in according due moral consideration to the natural world is *prima facie* wrong, not simply wrong because of its consequences. This means that even if we were able to come up with

the necessary technological solutions to put a halt to climate change, we would nonetheless still be required to accord much greater moral consideration where it is currently lacking. Climate change has sent us a clear signal that this is the case, but it is not the only, or perhaps even primary reason that it is so. However, the potentially dire consequences of climate change may require us to do more or perhaps less to protect nature than a basic ethical framework would, and part of the aim of this thesis will be to outline the extent to which this might be the case. The sources of climate change are very deeply embedded within the infrastructure of current human civilisations, and any real attempts to combat it are likely to have quite substantial consequences for human social life, not least for existing economies, which cannot function without energy. In spite of this, we must not let the difficult road ahead cloud our judgment of what is morally required, which may of course not always be pleasant or easy.

1.2 Scientific Uncertainty and Climate Change

One of the most common objections to the implementation of comprehensive climate change policies is that at present we lack the scientific knowledge required to be certain that the warming we are currently observing is indeed caused by human activity, rather than natural processes. We should therefore be clear that this objection is without basis and ought not to be entertained. The Third Assessment Report of the IPCC concludes that, "Human beings are a significant force in the Earth system, altering key process rates and absorbing the impacts of global environmental changes. The environmental significance of human activities is now so profound that the current geological era can be called the "Anthropocene"" (IPCC 2001, p.784). The Fourth Assessment Report further concludes that the largest growth in greenhouse gas emissions between 1970 and 2004 came from human sources; primarily energy supply, transport and industry, and points out that as the most important anthropogenic greenhouse gas, annual emissions of carbon dioxide have risen by around 80% between 1970 and 2004, from 21 to 38 gigatonnes (IPCC 2007, p.36). And indeed in 2005, "The atmospheric concentration of CO_2 and CH_4...exceed by far the natural range of the last 650000 years. Global increases in CO_2 are due primarily to fossil fuel use, with

land-use change providing another significant but smaller contribution. It is *very likely*[1] that the observed increase in CH_4 concentration is predominantly due to agriculture and fossil fuel" (ibid., p.37). If we continue according to the trends presently observed we will cause further warming and bring about numerous changes in the climate system that would be *very likely* to be larger than those observed during the twentieth century (ibid.). What is interesting then is that despite the fact that there seem to be significant numbers of people who still believe that the evidence for climate change is scarce, the IPCC, a body which has carried out the most thorough, detailed and systematic of all scientific assessments of the trajectory of climate change, does not take the view that it is uncertain, and quite clearly attributes many of the changes taking place within our physical and biological systems to human sources.

Another common misconception is that climate change might actually have quite pleasant effects, especially in cold countries. Whilst it is possible that short-term effects might bring more enjoyable warm weather, we should first of all be aware that anthropogenic warming has the potential to induce some abrupt and irreversible changes, the impact of which could be high (ibid., p.53). Furthermore, the IPCC concludes that there is *high confidence*[2] that recent changes in temperatures have had discernible impacts on physical and biological systems. There is also *very high confidence* that recent warming is profoundly affecting terrestrial biological systems, such as bird migration and egg-laying, and poleward shifts in ranges in plant and animal species, whilst there is *high confidence* that the warming of lakes and rivers is affecting water quality, and that observed changes in marine and freshwater biological systems are associated with this rise in water temperatures, as well as concomitant changes in ice cover, salinity, oxygen levels and

[1] When uncertainty in specific outcomes is evaluated by the IPCC using expert judgment and statistical analysis of a body of evidence, the following likelihood ranges are used to express the assessed probability of occurrence: *virtually certain* >99%; *extremely likely* >95%; *very likely* >90%; *likely* >66% (IPCC 2007, p.27).

[2] When uncertainty is assessed more quantitatively using expert judgment of the correctness of underlying data, models or analysis, the following scale of confidence is used to express the assessed chance of a finding being correct: *very high confidence* at least 9 out of 10; *high confidence* at least 8 out of 10, *medium confidence* about 5 out of 10 (ibid.).

circulation. The real life consequences of these changes may not be immediately obvious, but it is predicted that there will be significant and widespread effects on freshwater availability, (ibid., p.49) meaning that in Africa alone, projections show that between 75 and 250 million people will be exposed to increased water stress due to climate change (ibid., p.50). In Latin America, the yield of important crops is expected to decrease, along with livestock productivity, so that food security will be adversely affected. Small islands are likely to be at severe risk of flooding, storms, and coastal erosion, all of which will threaten life and vital infrastructures supporting the livelihoods of communities (ibid., p.52). Significant losses in biodiversity are also projected to occur throughout many of the Earth's regions (ibid., pp.48-52). We should be clear then that climate change is not likely to result in a world which resembles most people's ideal holiday destination. In fact, it is projected to induce changes which seriously threaten both the quality of life, and life itself.

Nevertheless, it important to acknowledge, as the IPCC (2001, p.575) does, that, "Though the climate models can simulate many aspects of climate variability and extremes, they are still characterised by systematic simulation errors and limitations in accurately simulating regional climate such that appropriate caveats must accompany any discussion of future changes in weather and climate extremes." Whilst climate change is almost certainly taking place, and we can project many of its effects with good levels of certainly, almost everyone agrees that it is very difficult to predict *exactly* what will happen, and to whom. This element complicates matters even further, and an entirely new question of what the appropriate response should be when faced with the kinds of risks climate change poses, and the level of uncertainty which accompanies these risks emerges. At this point it is worth noting that even though the fact that our models are imperfect and uncertainty exists could mean that the effects of climate change will be less severe than is currently predicted, it also means that they could be significantly worse (Shue 2010, p.148). Any ethical response to uncertainty will therefore need to be careful to take account of this. Evidently our current levels of uncertainty do not warrant a head in the sand approach, and

as Gardiner (2010, p.8) argues, "to refuse to act because of uncertainty is either to refuse to accept the global warming problem as it is (insisting that it be turned into a more respectable form of problem before one will address it), or else to endorse the principle that to do nothing is the appropriate response to uncertainty." Given the high potential for climate change to be extremely damaging, any responsible approach will attempt to minimise risk and try to avoid worst-case scenarios. But it is not abundantly clear which approach is the most appropriate, and there are many interesting debates over the strengths and weaknesses of varieties of the precautionary principle, maximin approaches, or cost-benefit analyses as decision-making tools.

We have seen that there are very many complicated ethical challenges involved with climate change, none of which has a clear solution. This thesis focuses on one single aspect – namely, the moral considerability of non-human animals and nature. Its conclusions must therefore be interpreted not as straightforward answers, but within the context of a deeply complex problem which features many different interacting elements. The ways in which these interactions occur can often create different imperatives for action, and it is therefore important to see the problem as a whole (although unfortunately there won't be space here to elaborate how this might be best achieved).

2. Intrinsic Value and Nature

Over the course of the past forty or fifty years a new and in many ways radically different set of ideas and prescriptions has been developed by those who are concerned about the environment. What is now clear is that these developments have led to the crystallisation of a new ideology whose central tenet lies in the belief that many of our social, political and economic problems are caused in part by our relationships with the non-human world (Dobson 2006, p.28). Climate change in particular has been viewed as a consequence of a human belief system which allows and even encourages us to view the natural world as a kind of huge supermarket, rich in resources to be put to use in furthering human ends. Jamieson (1992, p.83) has argued that this dominant value system is at the root of the climate change problem, and is both inadequate and inappropriate for guiding our thinking about how best to deal with it. The moral ideas that have been formulated by many proponents of ecologism have also strongly criticised the mainstream view and set out to challenge the fundamental assumptions upon which it rests. Whilst all of the traditional major ideologies have studied the relationships *between* human beings themselves, what sets ecologism apart from other political ideologies is its focus on addressing the relationships between human beings and the non-human world (ibid.). Its guiding thought is that the non-human world is worthy of moral consideration, at least in part because it possesses a value that is entirely separate from its ability to contribute to human welfare (Baxter 1999, p.51). Importantly, green political theory is not simply a pragmatic argument concerning 'limits to growth'; it stresses that even if resources were infinite there would still be something morally troubling about the ways in which they are currently exploited by human beings.

2.1 The Dominant Western Tradition

Plumwood (2006, p.56) argues that, "The dominant position that is deeply entrenched in Western culture constructs a great gulf or dualism between humans on the one side and animals and

nature generally on the other". Singer (2011, pp.239-241) and Baxter (1999, p.62) attribute the development of this dominant position to certain religious and historical traditions, particularly those of Hebrew and ancient Greek origin, both of which place the human at the centre of the moral universe. Such traditions did not simply maintain that humans were of prime moral significance, (which as we will see later, I think is an entirely plausible view) rather they viewed humans as the *only* beings worthy of moral consideration (Singer 2011, p.239). In order to show this, Singer (ibid., p.239) cites a passage from *Genesis* 1:27-8*:*

> And the fear of you and the dread of you shall be upon every beast of the earth, and upon every fowl of the air, upon all that moveth upon the earth, and upon the fishes of the sea; into your hands are they delivered.

The message couldn't really be more clear: human beings hold a special place in God's divine plan, and there is nothing at all objectionable if humans act in ways that cause fear and dread to all other species. Singer (ibid., p.240) also points out that when Christianity prevailed in the Roman Empire, certain elements of the ancient Greek attitude towards the natural world were absorbed. It was Aristotle's belief that a hierarchy exists in nature such that those with fewer rational faculties exist for the sake of those with more:

> Plants exist for the sake of animals, and brute beasts for the sake of man – domestic animals for his use and food, wild ones (or at any rate most of the them) for food and other accessories of life, such as clothing and various tools. Since nature makes nothing purposeless or in vain, it is undeniably true that she has made all animals for the sake of man.

The dominant Western tradition therefore proposes a natural world whose sole purpose is to be of benefit to human beings, in which human beings are the only morally important members of the planet, and nature itself holds no intrinsic value whatever (ibid., p.241). According to this view, the destruction of nature is only problematic insofar as it may harm human beings themselves. And whilst such beliefs are probably no longer widely accepted in their extreme versions, there are many common practices (factory farming, the luxuriant burning of fossil fuels, the destruction of forests and many more) that point to the preponderance of a human ethic which continues to regard non-human animals and nature as having merely instrumental value.

Morito (2003, p.324) has highlighted how the discontinuity between persons and non-persons is also deeply rooted in the metaphysical tradition represented by the most influential thinkers in modern Western intellectual history. For Kant, the value of human beings and their rational activities could not be explained by reference to anything external to them, while non-human beings and other activities acquired value only by reference to some person as the source of value (ibid., p.323). Similarly, J.S.Mill argued that the values of the learned and high cultured were the only ones that should influence the morals and decision-making procedures of society, again, assuming an axiology which separates the high from the low, the rational from the sensual (ibid.). And of course, Descartes forms this distinction into a particularly extreme dualism that posits rational beings as ontologically separate and detached from the physical realm, saying, "I possess a distinct idea of body, inasmuch as it is only an extended and unthinking thing, it is certain that this I (that is to say my soul by which I am what I am) is entirely and absolutely distinct from my body, and can exist without it" (Descartes 1975 cited in Morito 2003, p.324).

In the face of such a deeply embedded intellectual history of dualism between man and nature, the main challenge ecologists face then, is to successfully extend the boundaries of moral considerability to the non-human living planet. They attempt to give radically different answers to the questions: to whom or what should ethical theory apply, and in respect of the possession of which attributes (Dobson 2006, p.32)? In their attempts to do so, they have used a broad range of arguments and strategies, some of which make use of a large dose of mysticism and metaphor in order to advance the cause of the living planet. As Singer (2011, p.249) puts it, many such views "use language metaphorically and then argue as if what they had said was literally true." However, clearly it is not the case that the only way to recognise the value of the natural world is through intuition, and green theorists have also made many much more sensible rationalist attempts to account for such value (Dobson 2006, p.8). I believe that such attempts provide the most promise in plausibly extending the boundaries of moral considerability to all life forms,

even those that are non-sentient, and it is in this vein that I shall later try to provide my own argument for this.

Baxter (1999, pp.59-63) has proposed that there are broadly two strategies employed by environmentalists who wish to bring non-human animals and/or nature into the realm of moral significance. The first he calls the argument from consistency, and the second the argument from intrinsic value. There are several different ways in which the argument from consistency can be made, but each concentrates on certain features of both the human and non-human experience, such as the capacity to feel pleasure and pain, to be the 'subject of a life', or to be autonomous to some extent (Baxter 1999, p.59). The argument from intrinsic value is also made in a variety of ways, and similarly there can be a variety of interpretations of the term intrinsic value. In general however, it is used to signal that an entity is regarded as being valuable in itself, or that there is something inherent to the nature of the entity which makes it valuable. I think this separation into consistency and intrinsic value strategies is quite misleading, not least because it appears to imply that the concept of ultimate value is not present in consistency arguments, when to my knowledge they all appeal to some notion of the final good, whether it be autonomy, wellbeing, personhood, or something else. Accordingly, I think it is much more helpful to divide attempts to extend moral considerability beyond humans into two categories, which I will call the non-rationalist and rationalist arguments respectively. These represent two quite different strategies – the first seeks to make arguments about why life holds a sacred status, or why it is especially valuable or beautiful, and it is this type of argument that I do not plan to address in this thesis. The second seeks to find some common basis upon which humans, animals and other nature can be accorded moral status. Within this second strategy, there are I think, two sub-strategies. One begins with an analysis of those features that account for the moral considerability of human beings, and then extends that considerability to some non-human animals by demonstrating that those features are also to be found within the animal kingdom. The other turns this approach on its head and instead seeks to identify a characteristic which is common to all living beings (and

often non-living ones too, such as ecosystems), and then shows that this characteristic gives all those in possession of it morally significant interests.

The aim of Chapter 3 will be to assess the most influential ways in which rationalist arguments have tried to extend moral status to non-human animals, nature, or both, and to underline which elements of them are problematic, before suggesting how they might be modified and strengthened. It will also be particularly interesting to note how the adoption of an environmental ethic in which non-human nature is commonly seen as worthy of feature in our decision-making processes would impact the climate change problem, both in calling for immediate action to combat current levels of climate change and preventing further damage. This will be the topic of Chapter 4. However, first of all, we must address the question of intrinsic value, which has been central to environmental ethics. This discussion is crucial in setting the groundwork for my later arguments about the moral status of all life forms.

2.2 Do We Need Intrinsic Value At All?

Whilst I argued earlier that almost all theories about the moral considerability of nature appeal to some account of the ultimate good, more recently, environmentalists and ecologists alike have called for theorists to move beyond the concept of intrinsic value. They have done so in the belief that it is unhelpful for thinking about how and why nature should matter to us (McShane 2007, p.43). In short, the idea seems to be that we should stop fussing over the details and get on with saving the planet. Many environmental pragmatists have contended that claims about the intrinsic value of nature are unnecessary: every environmental policy that we seek to defend using intrinsic value can be defended equally well by showing the likely effects that destroying our planet's nature would have on us and the other things we care about (McShane 2007, p.46). Norton has argued that the concept of interconnectedness provides sufficient basis to afford other species, ecosystems and the biosphere due protection – once we understand that human beings are not able to break free from their natural surroundings, or make the world entirely in

light of human needs, then it will be obvious that it is vital to protect nature (Baxter 1996, p.53). His belief is that many people will not accept the arguments about the ultimate good that exists in nature, and that therefore placing too much emphasis on such a theory risks forfeiting support for key policies (ibid., p.54). Light has also argued that the general public are unlikely to be moved by such claims; they are much more likely to be motivated to act if they are made more aware of the contributions that nature makes to human well-being (McShane 2007, p.46).

The first thing to say in response to such pragmatist arguments is that philosophy is not an exercise in public relations, nor ought it to be. If the main criterion for doing for philosophy is whether or not the public at large is likely to accept its arguments and prescriptions, then we probably may as well stop now. The problem is that unless we do address questions of value, it is very hard to provide a fully convincing account of why we are saving the world, for whom we are saving it, and who/what we should be saving as a priority. Whilst the interconnectedness argument certainly gives us reason to protect nature simply out of human self-interest, it would be incapable of explaining our duties towards nature should some miraculous solution to climate change be found. It is extremely unlikely that humans will be able to develop sufficiently advanced technologies to break the ties of their interconnectedness to nature in the near future, but it isn't impossible that we will gradually learn to be less reliant on nature than we are today. What then? If we can save ourselves should we allow other life to perish?

It is of course important that effective policies are implemented expediently, especially given the urgency of the climate change problem. But it is also important that they are implemented for the right reasons. This ensures that "the full project of the ideology will be consummated, not just those bits of it which happen to overlap with those of rival ideologies" (Baxter 1996, p.55). In situations of real urgency, such as this one, it may well be acceptable to use the wrong reasons to convince the public to allow the right policies to be implemented; that does not mean that we ought to give up on finding the right reasons at all.

2.3 Intrinsic Value

The concept of intrinsic value is probably the most important and contested notion in ethical theory, and as we have just seen, it has been of particular importance to environmental ethics (Jamieson 2008, p.68). Jamieson (ibid., p.69) has called it the "gold standard" of morality, such that "Just as gold is what is of ultimate monetary value, so what is of intrinsic value is what is of ultimate moral value". When philosophers say that something is of intrinsic value, they commonly mean that it is valuable for its own sake, rather than because it possesses the ability to satisfy another end. However, the term has been used in a variety of different ways, and to mean quite different things, both within the wider philosophical tradition, and within ecological philosophy itself. It is important we clarify what these various uses are because some of them are problematic to say the least.

Jamieson (ibid., p.69) identifies four distinct senses of the term 'intrinsic value', and I think they are helpful in clarifying the different ways in which the term is often employed. The first sense is very similar to the common understanding, and rests on a contrast between intrinsic and instrumental value. According to this view, something of intrinsic value is of ultimate value; it is valuable for its own sake. In contrast, something of instrumental value is valuable only because it is conducive to the realisation of what is of intrinsic value (ibid.). If for example, we hold that pleasure is of intrinsic value, we might think that watching television is of instrumental value because it produces pleasure. According to the second sense, the possession of intrinsic value is the ticket that admits entry into the moral community; having intrinsic value is both necessary and sufficient for being an object of primary moral concern (ibid., p.70). Suppose that autonomy were to have intrinsic value in this sense. We would therefore have to conclude that anything that can properly be said to be autonomous should be a member of the moral community and its interests taken account of.

The third sense of intrinsic value introduces quite a different idea, sometimes called "inherent value", as it postulates an intrinsic value that depends entirely on what inheres in the

thing itself (ibid.). This understanding of intrinsic value seems to exclude the possibility of anything relational, so that for example, because my experience of Niagara Falls involves a relation between me and it, it could not be intrinsically valuable (ibid., p.70). Last but not least, the fourth sense of intrinsic value views what is of intrinsic value as independent of valuers (ibid., p.71). The idea here is that there are certain things that are of value, even if nobody were ever to value them – it might be helpful to think of a majestic landscape holding value even if all humans have perished. Here again we find the idea that value inheres in the thing itself, rather than arising out of a relation between the thing and something else.

We have now seen the four distinct ways in which the term intrinsic value is commonly used, and what is fairly clear is that there are quite considerable differences in meaning depending on usage. Kagan (1998, p.279) argues that there appear to be two distinct concepts of intrinsic value, and Jamieson (2008, p.73) also suggest that the first two senses described earlier seem to be getting at one idea, the second two at another. The first concept describes intrinsic value as the value that an object has "as an end" or "for its own sake". On the other hand, the second concept of intrinsic value appeals to a notion of the value that an object has independently of all other objects – the value of that object "in itself." The idea here is essentially that what is of intrinsic value "is in some sense self-sufficient; it does not depend on anything else for its value or existence" (ibid.). This suggests an account of intrinsic value that is, roughly speaking, non-relational, and which philosophers often try to get at by suggesting that it is the value an object would have even if it were the only thing that existed in the world (Kagan 1998, p.278). It is precisely this sense of intrinsic value that has been especially important to environmental ethicists in the non-rationalist tradition, and many proponents of an environmental ethic have employed a notion of intrinsic value that Kagan (ibid., p.280) terms the substantive thesis, according to which a thing's value as an end depends solely upon its intrinsic properties.

Korsgaard (1983) however seeks to show why this conclusion is false, and I hope to demonstrate why I think she is correct to do so. She suggests that the reasoning used to arrive at

a notion of intrinsic value that judges a thing's value as an end according to its intrinsic properties is the result of a serious mistake philosophers make when they conflate what she terms "two distinctions in goodness." These two distinctions are the following: the first is the distinction between intrinsic and extrinsic goodness, whilst the second is between ends or final goods, and means or instrumental goods (ibid, p.169). As we have seen it is standard practice for philosophers to distinguish between intrinsic and instrumental value, along the lines of the distinction made in the first sense of intrinsic value we saw earlier, whereby something holds intrinsic value because it is viewed as an end in itself, rather than simply a means to an end. However, Korsgaard (ibid, p.170) points out that this is not actually what the term 'intrinsic value' means. In fact, to say that something is intrinsically good is not to say that it is an end in itself, instead, it makes a statement about the source of the goodness of the object. Something that is intrinsically valuable is valuable because of the goodness that inheres within it – because of its attributes. The proper meaning of intrinsic value therefore sits much more closely to the third and fourth senses described earlier, whilst the distinction the first and second senses make are actually referring to something quite different. Hence, it is highly misleading to construct a contrast between intrinsic and instrumental value – as a matter of fact, the natural contrast to intrinsic value (the value a thing has in itself) is extrinsic value (the value a thing gets from some other source). Accordingly, the natural contrast to a thing valued instrumentally is a thing that is valued for its own sake, as and end (ibid.).

Korsgaard (ibid., pp.171-172) shows that by acting as if these two separate distinctions essentially amount to the same thing, we end up with a set of potential theories that are all inadequate. Any theory which posits that ends and intrinsic goods are equivalent to each other (i.e. that intrinsic value is the opposite of instrumental value) must lead to either of two theories. The first theory would hold that anything that we value for its own sake must thereby be intrinsically good. As such, the conception of the good becomes entirely subjective, as good things are simply those things that are valued for their own sakes, and of course different people

value different things for their own sakes (ibid.). The second possible theory would have to hold that those things that have intrinsic value ought to be treated as ends in themselves; therefore, choice ought to be a response to a particular attribute we perceive in things – the attribute of intrinsic goodness. By equating the two distinctions in goodness, we are therefore left with a choice between two alternative theories about final goods – either we conclude that goodness is entirely subjective, or we conclude that an object is good only when it possesses some particular attribute (ibid.). This is not a very satisfying conclusion for those of us believe that valuing implies both a subject and an object, and who therefore find it difficult to make any sense of the idea that moral properties are located either entirely in the world, or entirely in the valuer.

A theory which views extrinsic and instrumental goods as equivalent also has some problematic implications. Since intrinsically good things are thought to be good because of the properties that inhere in them, they are often thought to possess that goodness in every single circumstance (ibid.). As such, if there were any good which could be deemed good in some circumstances and not in others, we would be forced to conclude that its value must be extrinsic – i.e. its value is derived from its circumstances. Wellbeing, which as far as I can see could only be good in circumstances where beings with a capacity for it existed, would therefore be an extrinsic good. If extrinsic value and instrumental value are indeed the same thing, then we must also judge that any such thing is merely a means or an instrument (ibid.). But this does not seem to be an attractive conclusion either, simply because there some things (such as wellbeing, love, friendship and so on) that seem to be good only in certain circumstances, but also to be ends in themselves, rather than simply instruments to some other goods. I want to agree with Korsgaard then that it is crucial that philosophers desist from equating the two distinctions in goodness with each other. This is chiefly because clarifying the distinctions has an important consequence: it makes room for some other, more plausible, account of extrinsic value, and suddenly opens up the possibility that something can be extrinsically good, yet also valued as an end. An example of this would be something that was good as an end in virtue of the interest that someone had in it

for its own sake – wellbeing is a fitting case of this. So rather than conflating the two kinds of goodness, we ought to see the ends – means distinction as a distinction in *the way* we value things, whilst the intrinsic – extrinsic value distinction is a distinction in *the circumstances* in which something is objectively good (Korsgaard 1983, p.178).

There has been a lot of discussion on these matters, and especially over whether or a not a good thing gains its value as a result of the interest somebody takes/has in it, with strong proponents on either side of the argument. G.E.Moore made the influential argument that goodness has nothing at all to do with the mental attitudes people take towards things. He suggested that in general, a thing has intrinsic value in virtue of its non-relational properties, and insisted that a thing would have an identical intrinsic value if transferred to another world, simply because:

> To say that a kind of value is "intrinsic" means merely that the question whether a thing possesses it, and in what degree it possesses it, depends solely on the intrinsic nature of the thing in question (Moore 1922, p.260 cited in Korsgaard 1983, p.174).

As such, since a thing's intrinsic nature does not depend on whether anybody likes, needs, or has an interest in it or not, it is deemed to be quite independent of people's desires and interests (ibid.). A thing's goodness is therefore non-relational, in the sense that it simply inheres in the thing itself, and does not arise from any interaction between the thing and a valuer. Moore proposed that in order to establish if something has intrinsic value, we must consider whether the thing is such that, if it existed by itself, in absolute isolation, we should still judge its existence to be good (ibid, p.175). He called this an "isolation test", and there is one particular thought experiment of this nature that has been very influential in environmental ethics. Richard and Val Routley's "last man" argument has been thought by many to have established the existence of the non-relational type of intrinsic value described by G.E.Moore. The "last man" test asks us to suppose that Frank is the last sentient being on the planet. Frank knows for sure that sentient life will never again dwell on Earth, and so, just before dying, he destroys all of the planet's geology and biology, defending his actions by claiming that it doesn't matter because there will never be

any valuers to value it. We are then asked whether or not we accept Frank's justification, and as we might expect, many people do not, feeling that there is something wrong about what Frank did. It is therefore argued that by rejecting Frank's actions, we are showing our commitment to accepting that there can be intrinsic value without valuers. This argument has been very persuasive for many people, but I find it unconvincing. For one thing, we cannot decide that something has intrinsic value simply because of the way lots of people intuitively react to this story. The assertion by ethicist J.L.Mackie (1977, p.62) that "problems solved by just sitting down and having an ethical intuition is a travesty of actual moral thinking" very much springs to mind. Intuitions may point us in the right direction, but absolutely must be accompanied by some convincing explanation of *why* nature has intrinsic value in this particular sense, if we think that it does. In fact, I suspect, as Jamieson does that there may be other more credible reasons why we feel that Frank's destruction of the world is wrong. There could well be some kind of cognitive bias at work here, perhaps one that predisposes humans to react negatively against needless destruction. Or, as Jamieson (2008, p.74) suggests, although in the thought experiment there are no valuers left, we who are contemplating such a world are valuers ourselves, and when contemplating the loss of something many people do in fact find very valuable, it is quite possible that this governs our reaction to the experiment. Or perhaps we feel that non-sentient beings can actually be valuers themselves, and that therefore the destruction of the planet's geology and biology would regrettably decrease their wellbeing (I shall explore this argument further later). I think we must conclude then that while the "last man" argument demonstrates that many people find the idea of destroying all life on the planet very disturbing, it fails to provide a convincing justification for believing that the source of value as an end is located in an object itself.

And indeed, as Korsgaard (ibid., p.187) so eloquently puts it, "No matter how much the philosopher wants to insist that the value of a good thing must be intrinsic and so nonrelational, the sense remains that the goodness of a good thing must have something to do with its goodness *for us*. It cannot merely be a property, metaphysical and simple, which we perceive in

things and respond to in an extraordinary way." So the fact that goodness must lie in some relation to human beings (and as I will argue later, all life forms) is evidently at odds with G.E.Moore's theory that goodness must be entirely non-relational. Korsgaard argues that the advantage of making goodness lie in experiences themselves, is that it banishes our concerns about whether a good thing can in fact exist at all if no one is around to care about it (ibid.). However, she also insists that it is possible to develop a perspective that enables us to explain why ordinary good things are good only in virtue of the fact that people are around to care about them, without also forcing us to conclude that only mental states and experiences can be good (ibid.). This is because we can say that a thing is good objectively either if it is unconditionally good, or if it is a thing of conditional value and the conditions of its goodness are met. So for example, we could argue that wellbeing is conditionally good, and depends upon the existence of beings with a capacity for wellbeing in order to be so. Wellbeing is valued by those beings not as a means or an instrument to some other end, but as an end that is good in itself. I think this is an entirely plausible account of how something can come to be good in itself to those who value it.

However, it may well seem somewhat paradoxical to suggest that the things that are good are good because we desire or choose them, rather than to say that we desire or choose them because they are good. And indeed, Ross (cited in Korsgaard 1983, p.188) insists that, "It is surely clear that when we call something good we are thinking of it as possessing in itself a certain attribute and are not thinking of it as necessarily having an interest taken in it." But when we dig a little deeper, this is not at all clear, and we quickly see that the basis for calling certain properties of a thing its "virtues" is always that they relate in some way to certain conditions of human life. It is therefore our interests and the bases of our interest that make certain qualities virtues, and so it simply cannot be the case the goodness is a non-relational property (ibid.). Bryan Norton (1991, p.171) has further claimed that the belief that value can exist independently of valuers implausibly cuts off any connection between value and human culture, and he suggests that according to such a view, the presence of value "can only be registered by an act of intuition,

regarded as a direct registering of a quality without the relativisation of the property to any theory" (Baxter 1996, p.56). As such, he (1991, p.171) suggests that this approach to the idea of intrinsic value is a disastrous recipe for moral dogmatism – you either 'discover' that an objective value exists, or you do not, and either way there is no room for argument.

In a similar vein, I think it is also interesting to consider whether, even if there were values that simply inhered, it would be very probable that human beings have the cognitive or sensory equipment to discover them at all. J.L.Mackie (1977, p.38) has pointed out that, "If there were objective values, then they would be entities or qualities or relations of a very strange sort, utterly different from anything else in the universe. Correspondingly, if we were aware of them, it would have to be by some special faculty of moral perception or intuition, utterly different from our ordinary ways of knowing everything else." In his lecture "Queerer than we can suppose: the strangeness of science", Oxford professor Richard Dawkins (July 2005) makes a related point when he argues that human beings are wonderfully adapted to the surroundings in which they operate, and suggests that this might very much constrain what we are capable of knowing. He suggests that our brains have evolved to help us survive within "the orders of magnitude of size and speed which our bodies operate at… We are evolved denizens of Middle World, and that limits what we are capable of imagining." The title of his speech was inspired by J.B.S.Haldane's famous assertion that, "my own suspicion is that the Universe is not only queerer than we suppose, but queerer than we *can* suppose. I suspect that there are more things in Heaven and Earth than are dreamed of, or *can be* dreamed of in any philosophy" (Dawkins, July 2005). In making these assertions, both Haldane and Dawkins are attempting to underline how our own sensory and cognitive capacities have a profound effect on what we value and how we value it – the fact that we value the mountains and the trees and the oceans rather than bacteria, or even atoms, may be purely circumstantial. And certainly the notion that we possess some kind of special moral intuition is rather far-fetched.

But to return to the argument proper, and to bring our discussion of intrinsic value together, I hope to have shown that by properly distinguishing between different types of the good, we enable ourselves to say that certain things are valuable only under certain circumstances, or valuable only when certain other things are true or present, without also being forced to say that these kinds of things must be valuable merely as instruments. As Korsgaard (ibid., p.192) puts it, "It makes is possible for us to explain the conditional character of a good thing without rendering that good thing a mere means." Hence, good things can be good in a relational way, because of attitudes taken up towards them or because of other physical or psychological conditions that render them important to a valuer (ibid., p.195). So whilst it is entirely plausible that there are things that are valuable as ends, and which ought to be the direct object of moral consideration, it is quite implausible that value simply inheres, existing without valuers. It is valuers themselves who develop particular valuing attitudes or responses, which can differ in structure – they may have ways of valuing something for its own sake, or ways of valuing something because it is conducive to the other valuable thing (McShane 2007, p.50). Crucially, making the distinction between a thing that is intrinsically good and a thing that is extrinsically good, yet valuable as an end, allows for the possibility that the things that are important to us have an objective value, yet gain that value because they are important to us, rather than because they possess certain inherent properties (Korsgaard 1983, p.195).

Hence, valuers are absolutely central to any theory of goodness and therefore to environmental ethics. As such, I will base my argument around an attempt to show that nature is worthy of moral consideration not because of certain properties that inhere in it, but because there are creatures that value it. However, what I will also argue over the course of the chapter that follows is that the traditional understanding of the term 'valuer' is, in my opinion, the source of a great deal of confusion. We tend to think of valuers as sentient creatures, with fairly complex conscious thought processes, usually human beings. This is the basis on which Korsgaard advances her argument, but I do not think it loses its weight by extending the definition of

'valuers.' What I want to show is that the traditional use of the term is prohibitively restrictive – sentience is not, as has often been claimed, a prerequisite for having interests or being capable of valuing (I will use the idea of having interests and being capable of valuing somewhat interchangeably in what follows). So whilst we have shown that value comes into existence via valuers, we ought also to appreciate that all forms of life can be valuers themselves - they are capable of having interests and greater or lesser degrees of wellbeing, and this very fact means that their interests ought to be taken seriously.

3. The Moral Significance of Nature

As I see it, ethical behaviour produces and preserves value in the world (Varner 1998, p.3). I argued in the previous chapter that value comes into the world via valuers, and my task now is to seek to defend a particular vision of what has value and therefore of the morally good life. My view holds that the satisfaction of morally significant interests is of primary moral value, and I now want to devote the remainder of this thesis to showing that as valuers themselves, non-sentient life forms can properly be counted as having interests worthy of moral consideration. As such, the destruction of non-sentient life (and of course sentient life too) is wrong, all things being equal, and certainly moral agents ought to give its interests equal consideration along with all other interests. In order to demonstrate this I first want to examine the different ways in which rationalist arguments about the moral considerability of non-human animals and nature have been made, before moving on to make my own argument.

As I mentioned earlier, there are broadly two key strategies used by those who would make rationalist attempts to extend moral considerability beyond humans. The first strategy begins by establishing those features that account for the moral considerability of human beings, and then extends that considerability to some non-human animals by demonstrating that those features are also to be found within the animal kingdom. These kinds of arguments tend to fall short of developing a true environmentalist ethic, and although they certainly extend the scope of the dominant Western tradition, in some respects they are recognisably of the same time type (Singer 2011, p.247). One of the most prominent animal rights philosophers, Tom Regan (1988), has argued that it is the similarities and not the differences between humans and animals that are pertinent to their moral consideration. He maintains that it is the fact that human beings are 'subjects of a life' that makes them morally considerable, as we, "want and prefer things, recall and expect things. And all these dimensions of our life, including our pain and pleasure, our

enjoyment and suffering, our satisfaction and frustration, our continued existence or our untimely death – all make a difference to the quality of our life, as lived, as experienced by us as individuals" (Regan 2001, p.44). He seeks to show that some animals have similar experiences to those just described, and therefore "must too be viewed as the experiencing subjects of a life, with inherent value of their own" (ibid.). His conclusion is that it would therefore be inconsistent to deny those animals moral considerability on a par with humans.

The structure of Peter Singer's argument is almost identical, but he identifies sentience, rather than being the subject of a life as the ticket to moral considerability. Singer's defence of animal rights has undoubtedly been hugely influential, both practically and theoretically, and I want to look at it in quite some detail, as although I think he is mistaken about the proper scope of moral considerability, his arguments will be important when we later look at how moral trade offs ought to be made. Singer (2011, p.48) argues that the principle of equal consideration of interests provides the best possible basis for human equality, but that to limit its application to humans is unjustifiable. Accordingly, if we accept the principle of equal consideration of interests, we are also committed to accepting that it appropriately applies to some animals, and that as a result, it may not necessarily be the case that human issues should always take precedence over animal issues.

The argument for this extension of moral considerability is fairly straightforward and simply requires that we develop a clearer understanding of the implications of the principle of equal consideration of interests (ibid., p.49). When searching for the foundations of the principle of equality between all human beings, it becomes apparent fairly quickly that there simply is no factual basis upon which the principle can be plausibly erected. This is because "human beings differ, and the differences apply to so many characteristics" (ibid., p.17) that whichever characteristic we might wish to found equality on (capacity for reason, moral personality, or something else) we will find that human beings' possession of these features differs very widely, and that some humans, such as those suffering from severe cognitive disabilities, may not possess

them at all. Most people find the idea that the severely disabled should be denied any kind of moral status quite repugnant, and even if they did not, the fact that humans do differ in their rational faculties, or moral character, or whatever else, would presumably imply that moral considerability could credibly operate along a continuum. If, for example, we took intelligence to be the ability that confers moral status, we would be forced to conclude that the most intelligent human beings deserve higher status than their less intelligent counterparts. This is not an attractive conclusion, and as Singer (2011, p.20) argues, such proposals are no more than fantastical schemes because, "There is no logically compelling reason for assuming that a difference in ability between two people justifies any difference in the amount of consideration we give to their interests." Hence, equality must be a basic ethical principle, rather than simply an assertion of fact, and it must therefore allow us to make ethical judgments that go beyond a particular personal or sectional viewpoint (ibid.). To use Singer's metaphor, the principle of equal consideration of interests works like a pair of scales, weighing interests impartially regardless of whose they are; all that counts are the interests themselves. We could not therefore give less weight to the pain experienced by the members of a certain race simply because of that fact; to do so would be to draw an arbitrary distinction that is no more logical or justifiable than giving less weight to the pain of somebody who was born in a leap year, or has more than one vowel in his surname (ibid., pp.20-21). Put simply, any of these kinds of factual characteristics are utterly irrelevant to the moral consideration a person is due.

We have therefore seen that the principle of equal consideration of interests requires that our concern for others be not determined by what they are like or what kinds of abilities they possess. This is the crucial point in allowing Singer to extend the boundaries of moral consideration to some animals; just as we concluded that it is on this basis that it is wholly illegitimate to disregard the interests of members of other races, or people who are less intelligent, the principle of equal consideration of interests "also implies that the fact that beings are not members of our species does not entitle us to exploit them" (ibid., p.49). For Singer then,

the very fact of having morally significant interests requires that those interests be given equal consideration, and it is the capacity for having morally significant interests (which Singer equates with sentience) that bestows moral considerability upon all species that can be reasonably said to possess them. Dobson (1996, p.135) has also pointed out that the human – animal species divide is porous, arguing that those who would like to exclude animals from representation should be wary that on a sufficiently inclusive understanding, whatever characteristic we use to distinguish humans from animals, that characteristic would be found to be possessed by some animals as well as humans. And conversely, if we draw the conditions too tightly around membership of the human species, we will likely find some humans who do not possess the necessary attributes, and are therefore, we must assume, consigned to the same fate as animals (ibid.). However, although Singer successfully extends moral status to all sentient creatures, he is very clear that non-sentient life ought not to figure in our moral decision-making, arguing that sentience is a prerequisite for having morally significant interests at all.

This then is the basic argument, and I think it is problematic for several reasons. For those ecologists who are deeply concerned about the arrogant way in which human beings relate to the non-human world, I think Singer's (and Regan's) starting perspective will be troubling, and it does seem quite plausible that there is at least some element of speciesism in taking a position which essentially argues that other living species can only be accorded moral considerability to the extent that they resemble human beings (for example, by having similar kinds of interests to those humans typically have). The principle of equal consideration of interests may well be quite correct in elucidating why the interests of moral beings must be treated equally, *once they have been accorded moral considerability*. However, I think Singer's explanation of why beings ought to be of moral concern at all is mistaken, and if we look closely again at his argument, I hope we will see why. Singer argues that "The capacity for suffering and enjoying things is a prerequisite for having interests at all, a condition that must be satisfied before we can speak of interests in any meaningful way" (ibid., p.50). Non-sentient nature is therefore automatically ruled out of the

moral equation, and we are left with an account of moral considerability which considers all non-sentient nature to be only of instrumental value. Accordingly, its destruction is only regrettable insofar as it may adversely affect sentient creatures (ibid., p.247). As such, we would assume that the goal of climate change policies should be to protect non-sentient nature only up to the point that it is necessary to preserve sentient life and serve its interests. But what reasons does Singer give for asserting that only sentient creatures can have interests, and are they convincing?

Singer (ibid., p.50) claims that it would be nonsense to say that it is not in the interests of a stone to be kicked along the ground by a child because a stone cannot suffer and therefore can have no interests. He goes on to state that, "Nothing that we can do to it could possibly make any difference to its welfare" (ibid.). I think that most people, myself included, would agree with Singer here that it would be very difficult to make sense of increasing or decreasing the welfare of a stone. However, if Singer had picked a non-sentient living being, for example a tree, and made the same statement, "Nothing that we can do to a tree could possibly make any difference to its welfare", we might not be so quick to agree. For it seems to be easy to identify a tree's welfare needs – it needs sufficient water, sunlight and the right kind of soil in order to thrive; without these things it is likely to wither or perhaps die. Even extremely rudimentary organisms, such as single cell organisms have welfare needs that must be met in order to secure their survival, although these needs may be very basic indeed. Many people might therefore feel that it is not at all nonsensical to talk about the welfare or interests of a tree.

Before moving on to look in detail at where this intuition might lead, we should first of all establish what it really means to say that something has interests. I want to suggest, as Varner (1998, p.6) does, that, "To say that a being has interests is to say that it has a welfare, or a good of its own that matters from the moral point of view." This is precisely why the satisfaction of interests constitutes a fundamental moral value, and why, if non-sentient life can be shown to have interests, we must conclude that it ought to be accorded moral status. Many ethicists assume that having desires is both a sufficient and necessary condition for having interests. On this view

then, a being such as a plant can never be said to be of direct moral significance (ibid., p.55). For example, Feinberg argues that:

> an interest…presupposes at least rudimentary cognitive equipment. Interests are compounded of *desires* and *aims*, both of which presuppose something like *belief*, or cognitive awareness (Feinberg 1974, p.52 cited in Varner 1998, p.55).

But do we have reason to believe otherwise? I think perhaps the tendency to equate interests with desires is at least in part a consequence of the ambiguity of what the sentence 'A has an interest in X' can mean. By clarifying what the range of possible meanings is, we come to see that it may be quite incorrect to insist that conscious experience is necessary for having interests. There are at least two different identifiable meanings of this sentence; (1) that A is interested in X and (2) that X is in A's interests (Regan 1988, p.87). These two meanings are logically distinct, in the sense that it is perfectly possible for somebody to be interested in something that is not in his interests (for example, taking harmful drugs), and for somebody to be uninterested in something that is (for example, exercising despite its benefits) (ibid.). We therefore ought to make a clear distinction between what one *takes* an interest in and what one *has* an interest in (Goodin 1996, p.836). While it is clearly impossible for non-sentient beings to *take* an interest in anything, it is possible for them to *have an interest* in something, as I hope we shall see. Regan marks this distinction by speaking of *preference interests* and *welfare interests*: *preference interests* are those things that a person is interested in, those things he wants and prefers, dislikes and wants to avoid. These are the type of interests that (as far as we know) it is impossible for non-sentient beings to have. In contrast, *welfare interests* refer to those situations where having or doing X would increase A's wellbeing. There are plenty of statements we could sensibly make about non-sentient life according to such an understanding, for example, exposure to sufficient sunlight will increase a plant's wellbeing, whilst overwatering will decrease it.

Earlier, I argued that to say that a being has interests, it must have a good of its own that matters from a moral point of view. We might be tempted to conclude that the fact of having welfare interests in the sense that Regan describes them is sufficient to enable us to say that non-

sentient life has morally relevant interests, and therefore moral standing. But whilst establishing the distinction between what one has an interest in and what one takes an interest in is certainly an important part of the puzzle in showing why non-sentient life is worthy of moral consideration, the problem is that it is not entirely clear whether all welfare interests can properly be said to be interests at all in the morally relevant sense (in the sense that having them would entail that an entity has a good of its own that matters morally). R.G.Frey (1980, pp.78-79) insists that for the type of welfare interests Regan describes to be morally significant would be absurd. He suggests that this absurdity would entail that things such as tractors and cave paintings would have morally significant interests, because after all lack of oil and prolonged exposure to rain can harm tractors, and excessive carbon dioxide exposure can harm cave paintings. And indeed, it seems to be quite correct that artefacts such as cars or tractors can be said to need things, such as enough oil or some level of protection from rainwater, in order to be a good instance of their kind. But this does not suffice to show that cars or tractors can have morally significant interests – that is, a good of their own in the relevant sense. Any moral theory that requires us to give consideration to the welfare of tractors or cars when deciding a course of action must surely be wrong.

Precisely because this is the case, I will need to establish two things before I can demonstrate why the fact that plants have welfare needs means that they have morally relevant interests. The first is empirical, and requires me to show that the needs of plants differ in some sense from the needs of artefacts. The second is normative and entails that this difference between plants and artefacts qualifies plants, but not artefacts, for direct moral consideration (Varner 1998, p.62). Ecologists have made a number of attempts to establish that there is an empirical difference between the needs of plants and artefacts. J.L.Arbor (1986, p.337) argues that this difference arises from the fact that the end-states of artefacts are decided by human beings, whilst plants have their own natural end states. Varner (1998, p.65) points out that whilst at first glance this seems plausible, the idea that there is some kind of "natural" course of

development for each species of organism is at odds with modern biological theory. According to modern biology, there is no non-arbitrary way to draw a distinction between a "natural" and a "non-natural" development; as such it is not possible to say it is the "natural" state of an orange tree to be fully blossoming rather than spindly and fruitless. Paul Taylor (1986, pp.123-124) tried an alternative type of argument that sought to show that while both plants and artefacts exhibit goal-directed behaviour, it is impossible to identify the goal of artefacts without considering the intentions of their human designers, whereas the opposite is true of plants, whose goals can be identified without any reference to human purpose. He suggested that in this sense the goals of plants are properly their own, whilst the goals of artefacts are not. But again, Varner (1988, p.66) suggests that this is problematic because it is simply not true. He argues that whilst certain artefacts are clearly goal directed, their goals can be objectively specified quite independently of reference to any human purpose. He gives the example of a team of alien scientists that reaches Earth after a nuclear holocaust and discovers a supply of functional missiles in a cave. With a little experimentation, they discover that the missiles intercept incoming projectiles. So it is entirely possible to provide a teleological explanation of an artefact's path, without the scientists ever understanding a thing about the way humans used it.

So how can we properly distinguish between the kinds of needs plants and artefacts have? I think Varner provides the most compelling argument when he maintains that the reason that plants have needs in a sense in which artefacts do not is simply because plants' subsystems have biological functions whereas artefacts' subsystems do not (ibid, p.67). Of course, it is perfectly possible to provide an etiological account of both biological and artificial functions – for example, the reason a car has a windscreen wiper switch next to the wheel is that it allows the driver to clear the front window of rain that would obstruct his vision. The designer consciously chose to put it there because its being there has this consequence (ibid.). Similarly, the reason a giraffe has such a long neck is to allow it to get nourishment from the leaves of tall trees. And although no designer consciously chose to arrange things this way, this arrangement evolved

because it is adaptive for organisms filling the giraffe's ecological niche (ibid., p.69). Essentially this boils down to the fact that what distinguishes organisms from artefacts is that the former but not the latter are the result of natural selection. Whilst plants have biological needs, artefacts do not. I therefore hope to have successfully established that there is an empirical difference between the kinds of needs plants and artefacts have. What I now need to show is that this empirical difference is morally significant in some way – to show that the biological needs that organisms have qualify them for direct moral consideration.

In order to do this, I want to demonstrate that any mental state utility or crude preference satisfaction account of individual welfare is inferior to some account that includes, as part of the definition of the interests of human beings, a biology-based account of needs (ibid., p.73). By showing that neither mental state nor preference satisfaction theories are credible accounts of human wellbeing, I hope that we will come to understand that there are in fact no morally significant differences between a sentient and non-sentient being's capacity for wellbeing. Whether or not my argument can be convincing will depend ultimately on what we think defines the non-conscious interests of human beings. If we decide that the only reason that the fulfilment of a human being's biological interests is important is because it also has desires and preferences that would be violated if its interests were not fulfilled, then we will have no reason to think that plants necessarily have morally significant interests. But if we decide that the fulfilment of our biological interests is important regardless of whether or not we have actually have a preference, or even would have a preference under ideal circumstances, that could be violated, we will also be able to show that plants have moral standing.

First off, I want to begin by showing why we should reject any theory that identifies the good with a mental state or with the simple satisfaction of our preferences. Those who would deny moral status to non-sentient life often understand the term interests or welfare according to either a mental state or preference satisfaction view. For example, Singer has an undeniably anthropocentric, and strictly preference utilitarian understanding of the term 'interests'. This

explains his refusal to extend the boundaries of moral considerability beyond humans - since preference utilitarians are committed to maximising aggregate happiness/wellbeing through the satisfaction of preferences, they require that an entity be actually capable of having preferences in order for it to be accorded moral standing. It is therefore key that that entity be *conscious* or at least *sentient*. First of all, I want to say that I agree with the guiding principles of utilitarianism; that wellbeing matters, and that moral rules must be tested for their consequences on wellbeing (Kymlicka 2002, p.12). But whilst the basic intuitions of utilitarianism are good, what is problematic is its proponents' tendency to rely on implausible mental state or preference theories.

The most basic form of utilitarianism, welfare hedonism, takes the view that the experience or sensation of pleasure is the chief good (ibid., p.13). This is dubious in itself – we often choose to do things that we find frustrating or unpleasant because we think they are valuable (writing a thesis is a good example!). Furthermore, Robert Nozick's 'experience machine' provides a compelling account of why welfare hedonism simply cannot be the correct account of the ultimate good. He asks us to imagine that we could hook ourselves up to a machine which injects drugs into us, creating the most pleasurable conscious states imaginable. If it were true that pleasure is the greatest good, Nozick argues that surely we would all volunteer to be hooked up to this machine for life. The problem is that in reality, very few people would volunteer – we feel that this kind of life is not really a life at all (ibid.). The second option, the non-hedonistic account of utility, rejects the view that the only experiences worth having in life are those that give us pleasure, and instead argues that many different kinds of experiences are valuable (ibid., p.14). But again, this account cannot escape Nozick's objection. Imagine instead that there were a machine capable of producing a whole range of mental states, from ecstasy, to despair, to fear, to the sense of accomplishment. Would we now volunteer to be hooked up? Clearly the answer is no (ibid.). We have to conclude then, that what we want from life is "something more than the acquisition of any kind of mental state" (ibid.).

If wellbeing is more than simply the achievement of the right set of mental states, perhaps it amounts to the satisfaction of our preferences. According to this view, increasing utility means satisfying our preferences, whatever they may be (ibid.). But again, this fails to be convincing, because it is evidently not the case that satisfying our preferences always contributes to our wellbeing – I might for example, have a preference for eating 10 cakes a week, but if I satisfy such a preference it will surely be bad for my health. It will be bad for me on a physiological level, because it might well stop my heart from working, or clog up my veins with cholesterol. Hence, the preference satisfaction theory appears to be fundamentally flawed because its principle of identifying all interests with desires leaves out my biological interests (Varner 1998, p.58). There is one remaining option available to utilitarians, and I think it is the most plausible (although there are many practical difficulties involved). This fourth account of utility defines welfare as the satisfaction of 'rational' or 'informed' preferences (Kymlicka 2002, p.16). As such, utilitarianism aims to satisfy only those preferences that are formed as a result of full information and sound judgments, we therefore "seek to provide those things which people have good reason to prefer, that really make their life better off" (ibid.). In contrast to the first three views, this view is fairly convincing, but its implications are very interesting. Most importantly, we seem to have dropped the 'experience requirement' – on this view, our welfare is maximised when we do or have the things that are actually good for us, regardless of whether we have a preference for them or not. We therefore seem to have ended up with an account of wellbeing that is much closer to the fulfilment of those things we have an interest in, rather than those things we take interest in. Goodin (1996, p.837). makes a similar argument, insisting that, "The only warrant we can have in the present for asserting that something is in someone's interests are considerations having to do with the objective attributes and values of those things." The satisfaction of our biological needs is an objective need of this sort – for example, we can say that we have an interest in consuming a certain amount of vitamin C or calcium per day because it would be objectively good for us.

Nonetheless, critics could potentially respond by asserting that because human beings are capable of forming preferences about how to live their lives, whilst plants are not, human beings have morally significant interests whereas plants do not. Essentially the argument goes that even if I am not conscious of my interest in eating enough vitamin C every day, because I am capable of having a preference to live a healthy life, it at least has the potential to matter to me if I do not do it. Given that plants are incapable of having preferences at all, it cannot matter to them if they do not get enough of something they need, and they cannot really be said to have interests or a good of their own in a way that matters morally. But we have already shown that actual preferences do not provide an adequate account of wellbeing, because often we may desire things that are not in fact in our interests. As such, we must conclude that it can only be the ability to form rational preferences which correlate with what is actually good for us that is important here. We could argue that the ability to form rational preferences is the factor which grants moral considerability – perhaps this would be because given full information, and the ability to make sound judgments which are unaffected by hyperbolic discounting, weakness of the will and so on, human beings would form certain rational preferences, such as a preference to consume enough of a vitamin a day. This means that when they fail to do so, their informed preferences – those preferences they would have under ideal circumstances – are being violated even if their actual preferences are not. This cannot be said to be the case of plants. But this argument is problematic because it fails to recognise the morally important ways in which something can be biologically bad for a living being, even if it neither actually consciously takes an interest in avoiding it, nor is capable of consciously taking an interesting in avoiding it. To see this, let us have a look an example used in Varner's text (1998, p.60). Suppose there is a cat that desires to go outside and run around even though the feline leukaemia virus is being passed around the local cat population. The cat is literally incapable of taking an interest in not going outside because she does not have the cognitive abilities to comprehend the risk involved with the contraction of the disease. There is no relevant information that we could give the cat that would

change her desires as she simply lacks the ability to form rational preferences. Nonetheless, we would not want to conclude that the fact that the cat only has an interest in not going outside, rather than actually takes an interest in not going outside means that its contraction of the disease is morally insignificant. Perhaps Varner's example would be even more potent if we considered the example of a baby who desired to put a small object in his mouth, on which he might easily choke. It surely does not follow from the fact that the baby is incapable of forming a rational preference to avoid putting the object in his mouth, and therefore simply has (rather than takes) an interest in not doing it that this interest is of no moral significance. If the ability to form rational preferences is a pre-requisite for having one's interests considered, we will be forced to say that almost all non-human animals, along with human babies and young children are not morally considerable at all. Perhaps it could be argued of cats or babies that if they did have the cognitive equipment to understand the risks involved with playing outside or choking on a small object, they would form a preference not to engage in that behaviour. However, this could equally be said of plants, and I therefore see no reason to believe that it demonstrates that the capacity for forming rational preferences is the attribute which admits beings into the moral community.

I therefore hope to have shown first of all that there is an empirical difference between the interests that living beings have and the interests of artefacts: whereas living beings' subsystems have biological functions, artefacts' subsystems do not. We have concluded that the biological functions of human beings' hold moral significance – human beings have an interest in having their biological needs met, even when they neither actually take, nor are capable of taking an interest in their fulfilment. This is because the informed or rational preference account of wellbeing leads us to agree that wellbeing consists neither in the attainment of certain mental states, nor in the satisfaction of preferences, whatever they may be. Instead, the only plausible theory of wellbeing holds that wellbeing lies in the attainment of those things that are actually good for us, regardless of whether we have a preference for them or not. Furthermore,

possession of the ability to actually form rational preferences that could be violated is not a prerequisite for having morally significant interests, and hence, there can be no compelling reason for excluding non-sentient life from moral consideration.

4. Making Moral Trade-Offs: How to Deal with Climate Change

In the previous chapter, I argued against the sentientist view that the capacity to feel pleasure and pain is a prerequisite for having morally significant interests. I tried to demonstrate that all non-sentient life has interests, and that it is on this basis that all life forms are to be granted moral status. I now want to examine in a little more detail what the implications of my theory are for climate change policy, and suggest how we might establish a hierarchy of value to cope with the inevitable conflicts between species.

Climate change has to a large degree been generated by a human ethic which sees no problem with the instrumental use of the natural world. And indeed, for a long time almost nobody thought that there was anything wrong about this. However, this is gradually changing, and climate change itself has acted as a catalyst, forcing everybody to consider what our proper relationship to the environment ought to be. What is particularly striking about the post-industrial world is that the most dramatic changes to its environment are not being externally driven, but rather flow directly from the heart of human societies. It has become clear that humans have the power to remake the global environment in ways we still do not completely understand. What is also clear is that profound anthropogenic changes are already well underway. As humans, our behaviour has been the major precipitating factor in climate change; we have changed the environment in ways that are likely to be very damaging, and only we have the power to prevent further damage. Following an environmentalist ethic has two desirable results: first, it prevents moral actors from unnecessarily harming the natural environment which is *prima facie* wrong, and second, because humans will be prohibited from engaging in those behaviours that are damaging to the environment, the corollary is that further damaging climate change will be prevented. But which practices should an environmental ethic rule out? Should humans be

prevented from causing any loss of wellbeing to the natural environment at all, or are there circumstances under which it is permissible?

The first thing to say here is that generally speaking, people are not going around gratuitously damaging the environment for kicks, but because they stand to benefit from it enormously. I want to take a brief look at how this sits with what I have argued about the value of nature. I have argued that all forms of life are worthy of moral consideration – this means that moral agents (humans) are required to consider the interests and needs of all life forms when deliberating over what course of action to take (Baxter 1998, p.92). However, it quickly becomes evident that if every living thing has interests, there will be an enormous number of interests in the world at any one time, and it will often be impossible to avoid privileging some and thwarting others. As John Passmore (1974, p.123) has put it, "the Jainist principle (of avoiding harm to all living things) is far too strong. This is the more obvious now that we are aware of the minute living organisms which everywhere surround us. In breathing, in drinking, in eating, in excreting, we kill. We kill by remaining alive." We therefore need to seek some principles to order this complex set of considerations – some which can help us think about the degrees to which different forms of life may be supposed to have claims on moral agents. The concern then, is how best to conduct moral trade offs between the interests of living beings, all of which possess moral considerability. As we will see, the fact of the interconnectedness of life forms complicates things even further, and urges ecologism to extend moral concern wherever the connections lead (Baxter 1998, p.94.).

Whilst ecologism tends to argue for the moral considerability of all living things (and often some non-living ones too), it also tends to admit of degrees, granting that some species have more value, which thereby accords them some level of privileged treatment (Baxter 1998, p.74). Freya Mathews (1991, pp.87-89) agrees that if we look at individual members of species this view is tenable, but claims that the fact of ecological interconnectedness equalises, at the level of species at least, the intrinsic value which selves would otherwise possess to different degrees.

She takes the example of blue whales and the krill upon which they feed. She argues that considered separately from each other, it would of course be better to kill an individual krill than an individual blue whale. Mathews maintains that this is because a whale is a far more complex organism, but other plausible arguments could be made, based on sentience, or degree of self-awareness, for example. However, when we consider the interconnectedness of the blue whale and the krill, and we appreciate that the blue whale will die without the krill, Mathews thinks that we will agree that the krill essentially takes on the value that the whale possesses.

With the help of an analogy devised by Baxter (1998, p.78), I hope to show that this is not a credible conclusion. Baxter asks us to consider the relation between two items which possess different degrees of aesthetic value, one is a beautiful oil painting and the other, the oil paints with which it was made. Obviously the oil painting depends on the oil paints for its existence, and the paints and painting are mutually determining. Nonetheless, it does not seem to follow from this interconnectedness of existence that the oil painting and the oil paints become equal in aesthetic value. We do not think that the oil paints are equally as beautiful as the painting even though we know that the painting could not be made without them. It is therefore far from clear that the fact of interconnectedness validates a thesis of equality of value of the interconnected entities. This is not to say that ecological interconnectedness holds no moral significance – at the very least it gives living things an added instrumental value for each other, which may often mean that their preservation becomes a matter of moral importance. I will discuss this further later in the chapter, but first of all I want to propose that the principle of equal consideration of interests, which is often accepted as the correct principle for weighing human interests, does an equally good job of weighing the interests of all life forms against each other. Singer (2011, p.21) writes that, "The principle of equal consideration of interests prohibits making our readiness to consider the interests of others depend on their abilities or other characteristics, apart from the characteristic of having interests." Of course, not everybody will accept my argument that all life forms have interests, but for those who do, it is clear that the

principle of equal consideration of interests must include all those interests that exist. To exclude them would be a form of human chauvinism, which is offensive because it shows arbitrary preference for some things with interests over others with interests of their own.

Now let's take a look at how the principle would require us to act towards the natural world. It is important to recognise that the principle of equal consideration of interests is no more than a minimal principle of equality; it certainly does not dictate equality of treatment, and sometimes actually produces quite inegalitarian results (Singer 2011, p.22). By using it to achieve 'ecological justice' we are not therefore going to end up with an ethic that deems wildflowers to be as valuables as humans, requires humans to eat only naturally fallen fruits, or anything as implausible as that. In fact it is because different life forms have such vastly divergent interests and capacities for wellbeing that it is likely that they will require quite different treatment.

The principle of equality of interests will in some cases lead us to undertake actions which will result in a more egalitarian distribution of wellbeing. For example, suppose there is a group of humans who enjoy eating meat – they like the taste, the texture, and so on. There is also a herd of cows which they raise on their land. Incidentally, this land is also teeming with edible and nourishing non-sentient life. Here the principle of equal consideration of interests tells us that it would not be permissible for the humans to kill and eat the cows. This is because the cows stand to lose much more than the humans stand to gain (they have lots of alternative sources of nourishment to choose from). The relatively small increase in wellbeing the humans would experience as a result of satisfying their desire to eat meat does not justify the reduction of the cows' wellbeing to zero. We cannot privilege human interests simply because they are human interests; as Singer (2011, p.20) puts it, "an interest is an interest, whoever's interest it may be." We see that by acting this way, there is less difference in the level of wellbeing between the humans and the cows. In these kinds of situations, the principle of equal consideration of interests brings about a more egalitarian distribution of wellbeing.

However, there will be situations when weighing interests impartially will also require us to bring about a less egalitarian distribution. Take the example of a group of starving humans who will die or suffer from serious health complications unless they eat the flowers of some plants they come across. The plants are already lacking the nourishment they need, and we should presume (perhaps implausibly) that by eating the flowers, the humans will cause the plants to die as a result. Almost nobody would argue that it would be morally wrong for the humans to eat the flowers. This is because whilst the killing of plant life results in some loss of value (in the form of loss of wellbeing) the overall loss of wellbeing that would occur if the group of humans died would be far greater. Whilst I argued that sentience is not a prerequisite for moral standing, it must also be understood that sentient beings have a greater capacity for wellbeing, and therefore a higher level of value. The pain the humans will experience if they starve will seriously diminish their wellbeing, and if they die, all of their wants and desires will be thwarted. Those who knew them will also mourn their loss. The loss of wellbeing the plant life will suffer is undoubtedly of moral significance, however, it is not comparable to the wellbeing the humans stand to lose. By eating the flowers the humans reduce the degree of wellbeing of the plant life to zero, but have presumably increased their own wellbeing quite substantially – they are no longer suffering from the pains of starvation and are free to pursue their higher level wants and desires. We therefore see that in some cases, acting according to the principle of the equal consideration of interests can cause us to widen rather than narrow the gap between the welfare of two groups of living things.

I think it is possible to outline some kinds of 'rules of thumb' – in other words, ways in which the principle of equal consideration of interests is likely to require us to act towards the natural environment, generally speaking. First of all, it is possible to (roughly at least) split species into two groups, the first possessing both the ability to take an interest in something, and to have an interest in something, the second possessing only the latter. This split more or less works along the sentient/non-sentient divide. In situations in which there is a genuine choice between

causing members of the first group serious harm or death, or harming members of the second group, the principle will generally deem it permissible for that first group to harm or kill members of the second. Sentient creatures are far more complex organisms than non-sentient life forms, and humans especially have a set of particular characteristics that will mean our interests usually ought to take priority. This is in virtue of our capacity of having desires and wants, forming meaningful relationships with our families and friends, of engaging in autonomous behaviour, in planning for our futures and having foresight, of developing a sense of the good, and much more. Non-sentient life has none of these capacities, and other forms of sentient life, if they possess them at all, may only possess them to a lesser degree. It is therefore likely then that human interests will be favoured over animal interests, and animal interests over non-sentient life. The fact of interconnectedness is also important, however. It especially tells us how to act when there are conflicts of interest between non-sentient forms of life. In order to decide the best course of action, we will need to ascertain how much instrumental value each of the life form has for sentient life. If there is a crop growing on land which has high instrumental value because it provides food for humans or animals, we will be justified in killing off the weeds that threaten to inhibit the growth of the crop. This is not because the crop has more value than the weeds, but because the crop is vital for preserving the wellbeing of those who feed on it. We see then, that concerns of instrumental value are morally important and must figure in our calculations.

Some ecologists might feel that the principle of equal consideration of interests is too weak, and object that it seems like human interests will always triumph over the interests of the non-human. It is true that in many situations they will, but we must also appreciate the ways in which humans living today would need to radically alter their behaviour in order to comply with the principle. In fact, many of the behaviours we currently engage in that we know contribute to climate change would have to be stopped. And indeed, the fact that we know that those behaviours could cause far wider damage than was initially imagined (both in terms of scale and

longevity) means that they are even more impermissible. Carbon emission from industry and air travel, methane emissions from the keeping of livestock for slaughter, driving our cars short distances with only one passenger, leaving the heating and lights on, failing to recycle – these behaviours are all major contributing factors to climate change, and none of them would be permitted by an environmental ethic and the principle of the equal consideration of interests (or at least certainly not to the extent they are currently engaged in). In fact, it would require humans to begin the transition process now. Of course, stopping all of the above tomorrow would cause too much damage to the human population for it to be morally permissible. But we must begin the process of using new energy resources, eating far less meat, learning to live with less energy and finding suitable ways of adapting, and so on. This is morally required because it comes at relatively little cost to our interests when considered in the context of the damage that will be done to the interests of others if we fail to do so.

5. Conclusions

In the introduction to this thesis I suggested that climate change is a unique phenomenon in the sense that it is made especially intractable by the fact that there are several major ethical problems that will need to be solved if we are to fully ground our obligations to respond. This thesis has attempted to tackle just one of these challenges, namely that associated with our moral obligations to non-human animals and nature. I have argued that the dualism between man and nature which is so deeply embedded in the dominant Western tradition, and which holds that nature is of nothing more than instrumental value can no longer be supported. This is not because nature has some kind of mystical intrinsic value which simply inheres in it, making it particularly wonderful, beautiful or sacred, but because nature itself brings value into the world.

By distinguishing between different types of the good, I demonstrated that whilst certain things are valuable only under certain conditions, this does not necessarily mean that they can only have value as instruments. Hence, there are things that are ultimate goods because of attitudes taken up towards them, or because of other physical or psychological conditions that make them important to a valuer. One of these objectively valuable goods is wellbeing – and as such, I have tried to suggest that any entity with a capacity for wellbeing is worthy of moral consideration, simply because any damage done to such an entity would stand to decrease its wellbeing and thereby eliminate some of the good in the world. I therefore suggested that the satisfaction of morally significant interests is of primary moral value.

However, in order to show that nature does indeed possess morally significant interests, and is therefore an object of direct moral consideration, it was also necessary to show that nature can properly be said to have interests. I demonstrated this by arguing that the only plausible theory of human wellbeing is the theory of rational or informed preferences. The implication of this theory is that our welfare is maximised when we do or have the things that are actually good

for us, regardless of whether we have a preference for them or not. Such an account of wellbeing takes us much closer to a wellbeing that rests on the fulfilment of those things we *have* an interest in, rather than those things we *take* interest in. Nevertheless, I recognised that whilst some critics might accept that this is the case, they might also argue that the fulfilment of those things we have an interest in can only matter morally to those beings that also have the capacity to take an interest in their own flourishing. But by showing that the crude preference satisfaction theory of wellbeing is inadequate, I concluded that the only credible basis we could have for making moral considerability rest on the capacity for having preferences would be to make it rest on the ability to form rational preferences. However, we quickly saw that in so doing we were forced to exclude almost all non-human animals, along with human babies, children, and the severely cognitively disabled from having moral standing. This must surely be a wrong theory of moral considerability, simply for the fact that almost nobody could agree with it, if for nothing else. We were therefore led to conclude that the moral considerability of a living being can only depend upon its *having* interests; its ability to *take* an interest in anything is entirely irrelevant.

But having established that nature has interests, it becomes clear fairly quickly that we will need to seek some kind of principle that allows us to think sensibly about the degrees to which different life forms have claims on moral agents, and about how to conduct trade offs between the clashing interests of different species. The principle of the equal consideration of interests does a good job of doing just this, as it enables us to take proper account of the interests of all living beings without also leading us to any implausible conclusions about the respective values of different forms of life. Importantly, the principle is properly sensitive to human suffering, whilst also being capable of grounding our obligations to undertake extensive action to combat climate change. In showing that nature has morally relevant interests, and that those interests (along with all the other morally relevant interests in the world) are best considered according to a principle of the equal consideration of interests, I think I have demonstrated that all but strictly necessary damage done to nature is morally wrong. This is because the benefits to human beings are

outweighed by the loss of wellbeing experienced by other life forms. The implications of such a theory for climate change policy are very significant indeed. Importantly, it requires that human beings begin the process of finding new ways to live our lives which will cause significantly less damage to the environment. It does this by showing that there is no morally compelling reason to give more consideration to human interests than to others, and that therefore, any activity in which we are currently engaged that provides small benefits to humans relative to the potential costs to the environment, ought to be put a stop to as soon as possible.

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