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How does Buddhism position humanity in relation to nature, and what implications does this have for a Buddhist response to climate change?

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ABBREVIATIONS

- A.* *Anguttara Nikāya*; (trans. F. L. Woodward and E. M. Hare), *The Book of Gradual Sayings*, 5 vols, London, Pali Text Society, 1932-6.
- D.* *Dīgha Nikāya*; (trans. M. Walshe), *The Long Discourse of the Buddha*, London, Wisdom, 1995.
- Dhp.* *Dhammapada*; (trans. Narāda Thera), *The Dhammapada*, London, John Murray.
- Miln.* *Milindapañha*; (trans. I. B. Horner), *Milinda's Questions*, 2 vols, London, Pali Text Society, 1963 and 1964.
- S.* *Samyutta Nikāya*; (trans. C. A. F. Rhys Davis and F. L. Woodward), *The Book of Kindred Sayings*, 5 vols, London, Pali Text Society, 1917-30.
- Vism.* *Visuddhimagga* [of Buddhaghosa]; (trans. Bhikkhu Ñāṇamoli), *The Path of Purification*, 5th edition, Kandy, Buddhist Publication Society, 1991.

Translations given in this dissertation are not necessarily the same as the cited translations. I have made much use of Thanissaro Bhikkhu's translations on the Access to Insight website. For Theravāda *Suttas*, the references follow the Pali Text Society referencing system.

ABSTRACT

There is consensus in the scientific community that climate change is both real, and caused by human behaviour. Acknowledging the threat posed by climate change, government leaders of the world met in December 2009 in Copenhagen in an attempt to come to a legally binding agreement on reducing greenhouse gases to levels which could limit, rather than avert, environmental catastrophe. This attempt has so far been unsuccessful. With pressing questions concerning the human response to climate change as a backdrop, and with the governments of the world struggling to rise to the challenge, this dissertation considers the extent to which there is a Buddhist perspective on nature, how Buddhism sees humanity in relation to nature, and what impact this has, or could have, for a Buddhist response to climate change. By investigating the perspectives on nature exhibited in the Pali canon, it finds that Buddhism essentially sees humanity as part of nature, and suggests a caring and compassionate attitude to the natural world. By looking at the evidence in the Pali canon, as well as considering the teachings and practices of contemporary Buddhist teachers and practitioners, we see that, while traditional Buddhism is not as unequivocally environmentalist as some have suggested, both on a theoretical and practical level, it has much to offer the current debate. Buddhist theories of karma, dependent origination, not-self, and the causes of suffering, offer useful perspectives for our current predicament. Further, they suggest potential solutions. Many contemporary Buddhists are attempting to apply these principles in modern life, often with an emphasis on reconnecting with nature and moving towards sustainability. Perhaps the clearest articulation of this to date is the Buddhist Declaration on Climate Change of Loy, Bodhi and Stanley.

CHAPTER 1: INTRODUCTION

In the 1960s, people became aware of an emerging environmental crisis. Pollution of the air, water and land caused by industrial and agricultural development were impacting on the life and health of humans, as well as other species. Rachel Carson famously articulated the fears of a generation in her book *Silent Spring* (1962).

In 1967, the peer-reviewed journal *Science* included an article by Lynn White Jr. entitled ‘The Historical Roots of Our Ecological Crisis’. In this extremely influential piece (Callicott, 2008), White suggested that the ecological crisis being faced at the time was the result of aggressive technological development, based on science, and that science was rooted in a Judeo-Christian worldview. God created the world, created man in His own image, and gave man dominion over the natural world. This way of conceiving of nature and humanity’s relationship with it, argued White, had resulted in environmental crisis. In order to solve the environmental crisis, he continued, we must change the way we think about nature, and humanity’s relationship with it. In this regard, Buddhism, he suggested, might be a suitable alternative worldview:

The beatniks, who are the basic revolutionaries of our time, show a sound instinct in their affinity for Zen Buddhism, which conceives of the man-nature relationship as very nearly the mirror image of the Christian view.
(White, 1967: 1206)

Whether or not the Judeo-Christian worldview provided the conditions for the current environmental crisis is not the subject of this dissertation, and Christian scholars have certainly refuted White’s remarks (Swearer, 2005: 1-2). Instead, I intend to focus on

whether or not Buddhism can play a part in responding to the environmental crisis, based on its conception of nature, and humanity's place within it.

Forty years have passed since White's article was written, and the environmental crisis is far worse today than he could have possibly imagined. With the exception perhaps of the threat of nuclear war, climate change is the most serious issue that humanity has ever faced. Indeed, it appears to be the most serious issue that planet earth itself has faced in the last 65 million years¹.

Despite claims from certain quarters, there is consensus in the scientific community that climate change is both real, and caused by human behaviour². On 10 November 2007, the UN secretary-general, commenting on climate change, said of the environmental crisis, 'There is an emergency, and for emergency situations we need emergency action' (cited in Spratt & Sutton, 2008: 1). Acknowledging the threat posed by climate change, government leaders of the world met in December 2009 in Copenhagen in an attempt to come to a legally binding agreement on reducing greenhouse gases to levels which could limit, rather than avert, environmental catastrophe. This attempt has so far been unsuccessful.

Further, our window for addressing the threat is soon to close. Until fairly recently, climate-change models predicted that the harmful effects would be experienced by future generations. In the real world, however, the impacts of climate change are arriving much more quickly than the models predicted:

¹ Since the extinction of the dinosaurs.

² The arguments and evidence for this are discussed in chapter 3.

We are all used to talking about these impacts coming in the lifetimes of our children and grandchildren. Now we know that it's us. (Prof. Martin Parry, co-chairman of the IPCC impacts working group, 18 September 2007, cited in Spratt & Sutton, 2008: 9)

Humanity thus finds itself in a predicament. We are facing the greatest threat to our collective existence that we have ever faced, and, even though time is extremely short, the traditional places to which we have looked for help with global matters are proving ill equipped as instigators of the actions required, on a scale required to avert likely catastrophe.

In the wake of all of this, organisations, groups and individuals of different faiths seek to contribute to the debate, and hopefully to the solutions. In 2001, for example, the US Conference of Catholic Bishops published *Global Climate Change: A Plea for Dialogue, Prudence, and the Common Good*. Likewise, the Jewish Climate Initiative was:

... created for the purposes of *Tikkun Olam* - literally 'Repairing the World' in Hebrew - by providing a Jewish response to the climate change crisis³.

Many Buddhists too are seeking, in various ways, to respond to the climate crisis. Stanley, Loy and Dorje's *A Buddhist Response to the Climate Emergency* (2009) for example, is a collection of writings from many key Buddhist teachers, such as His Holiness the Dalai Lama, Thich Nhat Hanh, Bhikkhu Bodhi and Robert Aitken Roshi. Loy, Bodhi and Stanley have, as a result of the material gathered in the compilation of

³ Jewish Climate Initiative, <http://www.jewishclimateinitiative.org/home/about.php>

this book, published the first pan-Buddhist climate-change declaration: *The Time to Act is Now*⁴.

This dissertation seeks to contribute to the debate, by considering how Buddhism conceives of nature in relation to humanity, and how this could inform, and is informing, Buddhist responses to climate change.

Definitions of ‘nature’

Before discussing how Buddhism makes sense of nature, it is first necessary to clarify what is actually meant by the term ‘nature’.

Etymologically, Snyder points out that the word ‘nature’, from the Latin ‘*natura*’, comes ultimately from the word ‘*nasci*’ – ‘to be born’. He continues:

The probably Indo-European root ... is *gen* (Sanskrit *jan*), which provides *generate* and *genus*, as well as *kin* and *kind*.
(Snyder, 1990: 8)

He suggests that the word has two general meanings. The first relates to that which is outside of the realm of human civilisation and human will – ‘the outdoors’. The second meaning encompasses the material world and its phenomena, including humans and that which humans have created. This is Snyder’s preferred definition. He also points out that something may be considered *unnatural* if it is odd or extraordinary (he gives the example of a calf with two heads).

⁴ The full declaration forms appendix one of this dissertation. The declaration will be discussed in chapter four.

Kate Soper⁵ specifies three different uses of the word ‘nature’ in contemporary environmental discussions:

1. That part of the world which lies beyond the human or artificial. This is similar to the first definition given by Snyder.
2. The structures and processes operating in the physical world. Harris (1997: 380) identifies these as being that which is studied by the natural sciences. This roughly equates with the second definition given by Snyder.
3. That which is not industrial or urban. This differs from the first meaning in that it has aesthetic connotations. Soper asserts that this third meaning is that which dominates the discourse of the green (i.e. environmentalist) movement.

Equivalent terms in canonical Buddhism

Some commentators have noted that there is no word within the canonical Buddhist vocabulary that maps closely onto these definitions. Harris (1997: 380-1), for example, provides a list of the most commonly mentioned Indic equivalents of what is meant in the English language by the word ‘nature’. His list consists of *saṃsāra*, *prakṛti* (Pali: *pakati*), *svabhāva*, *pratītya-samutpāda* (Pali: *paṭicca-samuppāda*), *dharmadhātu*, *dharmatā*, and *dharmajāti*.

He observes that none of these terms is an adequate translation of the word ‘nature’:

Saṃsāra ... incorporates elements which, from a Western perspective, encompass both the natural and the supernatural. Consideration of the other terms offered by scholars as Buddhist equivalents of ‘nature’ tend to reveal similar mismatches. (1997: 381)

⁵ Soper, K., 1995, *What is nature? Culture, Politics, and the Non-Human*, Oxford and Cambridge, Mass., Blackwell, p.155, as cited in Harris, 1997: 379-80

There is, then, no obvious directly translatable Pali or Sanskrit word equivalent to what is meant by the word ‘nature’ in English. This is perhaps unsurprising, since we are dealing with two very different philosophical traditions with significantly different ontologies. Because of this, in order to make useful discussion possible, we need to introduce a level of flexibility into our translation of terms. After all, if we were to be as rigid as Harris, we would not be able to translate anything. Words like ‘consciousness’, ‘reality’, ‘world’ and ‘mind’ all have a variety of assumptions and connotations built into them, from a Western scientific and philosophical perspective, and these must be explained when using one of these terms to translate a Pali or Sanskrit word that has a rough equivalence.

Holder (2007) argues that if we broaden our definition of nature to allow for the existence of non-physical existence considered natural by Buddhism, we are able to arrive at a more useful, workable situation – in the sense that this discussion may then help us to arrive at a Buddhist response to climate change:

...from the early Buddhist point of view, we must resist the temptation to equate the natural with the merely physical— and, by inference, we must resist thinking that a process that is not merely physical is non-natural (2007: 118).

Holder takes this more inclusive attitude to working between the Buddhist worldview and that of the West in an attempt to allow useful perspectives and comparisons to emerge. If we allow some aspects which from a Western (scientific) perspective would be considered supernatural, but which from a Buddhist point of view would be considered aspects of the natural world, we are able to find some correlations between East and West:

... the conception of ‘nature’ in the modern scientific sense of the word is absent in the canonical texts. But there is a broad conception of ‘nature’ or ‘natural’ in ancient Buddhism—covered by several different words in Pāli — that seems to be fairly close to our non-technical usage today (2007: 116).

He gives the following words as examples: ‘nature’ (*pakati*), ‘natural’ (*nesaggika*, *pākitika*, *akittima*), ‘naturally’ (*pakatiyā*, *lokanimmānal*), ‘natural world’ (*loka*), and ‘natural phenomena’ (*dhammo*) (2007: 128, note 9). Allowing this broader definition of ‘nature’, we can also include some of the rough equivalents which Harris finds unacceptable: *samsāra*, *svabhāva*, *pratītya-samutpāda* (Pali: *paṭicca-samuppāda*), *dharmadhātu*, *dharmatā*, and *dhammajāti*. Thus, we have a workable basis for discussion.

Ecological perspectives

In trying to conceive of what nature is and is not, it is important to explore how nature functions. This is the study of ecology. For the purposes of this dissertation, it is important to note that there has been a significant paradigm shift in ecology since the middle of the twentieth century. This shift can be summed up as a movement away from a conception of nature as being in balance, and towards a conception of nature as being in flux (Callicott, 2008: 166).

The balance-of-nature paradigm saw ecological systems as having six key inter-related characteristics⁶. That is, they were seen as closed, self-regulating, tending towards a stable equilibrium, changing over time in a predictable way (through

⁶ Pickett, S.T.A., and Ostfeld, R.S., 1995. 'The Shifting Paradigm in Ecology', as cited in Callicott, 2008.

succession), only disturbed in exceptional circumstances, and not including humans as a normal ecological factor.

The flux-of-nature paradigm, which is the current consensus view of ecologists, turns each of these points on its head. This is significant for a discussion of climate change, particularly with regard to the formulation of a workable environmental ethic. After all, if disturbance, disequilibrium and human impact are all characteristics of normal functioning, perhaps the most appropriate response to climate change is to consider it as a normal ecological phenomenon, and therefore do nothing? This would be a misunderstanding of the paradigm, however. Indeed, Pickett and Ostfeld have anticipated and sought to combat such a misunderstanding:

For all its scientific intrigue and poetic beauty, the flux of nature is a dangerous metaphor. The metaphor and the underlying ecological paradigm may suggest to the thoughtless or the greedy that since flux is a fundamental part of the natural world, any human-caused flux is justifiable. Such an inference is wrong because the flux in the natural world has severe limits. (1995: 24)

An appropriate Buddhist ethical position, which takes into account the flux-of-nature ecological paradigm, is discussed in chapter four.

Research methodology

As mentioned above, for Harris (1998) there are significant methodological difficulties involved in any attempt to arrive at an authentic Buddhist environmental ethic. There are a number of canonical languages to choose from, and each of those languages is ‘bound to cultures that possess their own specific modes of development’ (1998: 379). He cites the difficulties encountered by those who first attempted to translate technical Buddhist Sanskrit terms into Chinese. One of the reasons for these

difficulties was that China at the time had a sophisticated philosophical framework already in place. To translate a Buddhist term into Chinese without distorting that term with a number of connotations peculiar to Chinese culture was not easy.

Snyder, somewhat more poetically, puts it this way:

Language is like some kind of infinitely inter-fertile family spreading or mysteriously declining over time, shamelessly and endlessly hybridizing, changing its own rules as it goes (1990: 8).

Harris further argues that one must take various other factors into consideration:

- The amount of time that has passed between our current situation and the time the scriptural works were formulated.
- The personal views and interests of contemporary writers. Buddhists who are drawn to environmentalism, for example, may not be impartial in the way they make sense of Buddhist texts.
- The likelihood that the scriptures represented the views, not of the Buddhist world at the time, but of a relatively narrow elite within that world. ‘Everyday’ Buddhist laypeople may have had very different ideas and practices relating to nature. Indeed, the monastic codes may well have restricted the amount and types of interaction with nature that the writers’ would have experienced. The practice of agriculture, for example, would not have been undertaken by Theravādin monks.

Here Harris is critiquing the historical-critical approach to analysis of Buddhist texts.

This involves the scholar attempting to reconstruct the ‘original’ meaning of the texts

as they were meant to be interpreted by their ‘original’ audience. Certainly this approach should be one aspect of understanding what Buddhism has to offer the debate on responding to climate change, since it attempts an objective view based on primary evidence. For the reasons noted by Harris above, however, this approach alone is not acceptable, since it is impossible to achieve objective accuracy. Inevitably, the reading of the texts is influenced by the socio-cultural context of the interpreter, their knowledge up until that point, as well as by their interests and opinions (Wallace, 2000: 78-9). The fact that Buddhist scholars disagree on interpretations suggests that the historical-critical approach is not a guaranteed method leading to objective results.

Fortunately, the historical-critical approach is not the only available method. Wallace (2000) argues that contemporary Buddhist groups are important sources of insight into the tradition – sources that have in general been overlooked in favour of attempting to reconstruct the opinions of the historical monastic community. Among Buddhist Studies academics, there has been, she argues, a ‘perpetual neglect of Buddhist communities as a group of valid interpreters of Buddhist tradition and as the primary readers of Buddhist texts’ (2000: 80). She sees this as a weakness in the methodology of contemporary Buddhist Studies academics.

For the purposes of this dissertation, it is important to include the perspectives of contemporary practitioners. Given that the issue of climate change is relatively new, and certainly was not considered by the Buddha or by the historical monastic community, the perspectives of contemporary Buddhist teachers are of great value. I have balanced this with a diligent attempt to draw out relevant themes, ideas and

references from the texts themselves. This allows us to compare and contrast the principles of the historical tradition with current thinking, so as to arrive at a more considered perspective than would be likely by using either approach alone. After all, it may be the case that contemporary teachers and writers who call themselves Buddhist and claim to be writing from a Buddhist perspective, have in fact deviated significantly from canonical and post-canonical traditional thinking. Calling oneself a Martian is not enough in itself to guarantee that one does in fact come from Mars.

It is possible to approach the subject of this dissertation in two main ways. Firstly, we can consider how the *principles* of Buddhism can be applied to humanity's relationship with nature, and how we respond to the climate crisis. Secondly, we can look at how Buddhist *cultures* have related to and behaved towards nature. For the purposes of this discussion I have addressed both of these angles to some extent, though I have tended to focus on the first. My reasons for this are twofold: firstly, there is simply not enough space to discuss both of these aspects in enough detail as to be useful; and, secondly, as mentioned above, just because a culture or a person is considered Buddhist, it does not necessarily follow that a particular behaviour or approach is the result of Buddhist ideas or practice. According to Buddhism, all unenlightened humans are subject to greed, aversion and delusion (A.I.201), and Buddhists are no different from anyone else in this regard. Further, a culture results from a complex of influences, not just its current religious affiliation, and it is continuously evolving, over a long period of time. Some of these influences can be considered Buddhist, some not. In the space available, I have considered it more useful, therefore, to focus on theory, and suggest potential applications of that theory.

In order to remain as uncontroversial as possible, I have drawn my primary references for the discussion of Buddhist principles almost exclusively from the Pali canon. This is considered by all Buddhists to be ‘Buddhism’ or rather, the *Dhamma*. This is not true of later texts. Where later texts are particularly relevant to the discussion, however, I have been happy to reference them. I have also included in this discussion the writings and practices of contemporary Buddhist teachers of various traditions, where they have made useful contributions to the formulation of a Buddhist response to climate change.

In the interests of full disclosure, I should point out that I am a Buddhist practitioner and that I am keenly aware of the need to impact on climate change. Throughout my research for and writing of this dissertation, however, I have attempted to remain mindful of my own agenda in the hope that my work may remain as unbiased as possible. At the same time, because I am dealing with the issue of climate change, the subject of this dissertation has required me to involve myself to some extent in what Wallace calls ‘the hermeneutics of retrieval’ (2000: 83). That is, it has been necessary at times to consider the Buddhist texts and tradition in a way that allows the drawing out of new interpretations, which might be useful in addressing our current environmental concerns. Where I have done this, it is my hope and belief that I have remained true to the principles, both of Buddhism in general, and of the texts themselves.

CHAPTER 2: THE SIGNIFICANCE OF NATURE IN BUDDHISM

The deep sense of calm that nature provides through separation [Pali, *viveka*] from the troubles and anxieties that plague us in the day-to-day world functions to protect heart and mind. Indeed, the lessons nature teaches us lead to a new birth beyond the suffering [Pali, *dukkha*] that results from attachment to self. Trees and rocks, then, can talk to us. They help us understand what it means to cool down from the heat of our confusion, despair, anxiety and suffering. (Buddhadāsa, trans. Swearer in Tucker & Williams, 1997: 24-5)

Although several commentators have considered Buddhism to be an obvious spiritual foundation upon which to build an environmentalist position (*cf.* Tucker & Williams, 1997; Badiner, 1990), the significance of nature in Buddhism is certainly not straightforward.

Schmithausen (1997: 11) for example, argues that early Buddhists placed no value on nature, since the natural world is conditioned, and is therefore a place of suffering, decay and death. Keown, too, when considering the ecological dimension of Buddhism, believes that ‘there is more evidence of a negative presupposition about the value and status of the natural world in Buddhism [than a positive one]’ (2007: 97). Harris (1997) has also pointed out the difficulties of attempting to associate Buddhism with the environmentalist movement. He argues that supporters of a Buddhist environmental ethic have in general exhibited ‘a positive indifference to the history and complexity of the Buddhist tradition’ (1997: 378).

Even Japanese Buddhism, with its beautiful gardens and haiku of cherry blossoms and mountains, has been noted for its conflicting attitudes towards nature:

... only a limited Japanese appreciation of nature and wildlife has been identified, and then in a typically narrow emotional, ecological, and intellectual context focusing on single species or aesthetically significant individual natural objects (Kellert, 2005: 306).

Augustin Berque, the French Japanologist, argues that the significant environmental damage caused by the Japanese in the twentieth century is not a movement away from previous environmental ideals but a result of them (Callicott, 1994: 105).

As mentioned in chapter one, we must be skeptical of any assertion concerning the Buddhist attitude towards environmentalism based on the behaviours of people from specific Buddhist cultures. Holder points out that we must also be careful to take into account the significant differences between contemporary environmental discourse and that at the time and place of the Buddha. For example, people at the time of the Buddha were living much more closely to nature with no sense of global economy, big cities, or the possibility that humans could affect nature to such an extent that we would cause a fundamental and devastating change in environmental conditions:

... both the skeptics and the proponents of Buddhist environmentalism start with a contemporary way of framing environmental ethics and try to match that particular approach to environmental ethics with the ancient texts, doctrines, and practices of early Buddhism. ... [This is] like looking for an ancient Buddhist system of measurement by searching for a modern unit of measurement (say, a 'meter') in the Pali texts—finding none, one can imagine the skeptics announcing that the ancient Buddhists therefore had no system of measurement at all. (Holder, 2007: 115)

The key difficulty, according to Holder, is that contemporary environmentalism is based on the intrinsic value of nature. This is a decidedly non-Buddhist position, since Buddhism denies the independent existence of any being or thing. This can be seen in the doctrine of dependent origination (*paṭicca-samuppāda*):

This being, that becomes;
from the arising of this, that arises;
this not being, that becomes not;
from the ceasing of this, that ceases
(S.II.28).

An environmental ethic underpinned by dependent origination will necessarily take a different approach. This approach will be discussed in detail in chapter four.

Is there a general attitude towards nature exhibited in the texts?

De Silva (1990: 15) and others (*cf.* Waldau, 2000; Harris, 2000) have suggested that there are two general approaches to nature found in the Buddhist tradition. One is an appreciation of the natural world as a vision of beauty and a place of delight, as well as a constant reminder of impermanence that can lead the practitioner to a place of peace and tranquility. Harvey (2000: 155) quotes several verses of the *Theragāthā*, a Theravādin text made up of poems attributed to the early *Arahats*, in support of this, for example:

Forests are delightful, where (ordinary) people find no delight. Those rid of desire will delight there; they are not seekers after sensual pleasures
(*Theragāthā*, verse 992)

With clear water and wide crags, haunted by monkeys and deer, covered with oozing moss, those rocks delight me (*Theragāthā*, verse 1070)

Harvey (2000: 155) also notes that, 'For such wilderness-meditators, the environment could itself be a teacher, especially of constant change and impermanence'. He cites Vimala, who provides an excellent example of both impermanence and mindfulness:

The earth is sprinkled, the wind blows, The lightening flashes in the sky. My thoughts are quietened, my mind is well concentrated (*Theragāthā*, verse 50).

The other approach found in the early tradition is to see the natural world as a potentially dangerous place – a good environment for mystics to seek to undermine fear and attachment, but a place that the ordinary person would avoid. There is some evidence of a positive approach towards civilisation and cultivation (Harris, 2000: 125-6).

While some writers (e.g. Harris, Smithausen and Waldau) make much of this ‘second aspect’ of Buddhism with regard to the natural world, it is important to note that these two aspects are by no means given equal weight in the tradition. The emphasis is most certainly on non-harm, and loving-kindness for all beings (Waldau, 2000: 105-6). It should also be remembered that India was largely wilderness at the time of the Buddha. There could have been no sense that being ‘pro-civilisation’ (to use Harris’s term) would one day bring about what McKibben has fittingly termed ‘the end of nature’⁷.

Snyder argues that it is only when a culture becomes alienated from the natural world to some extent, as a result of urbanisation for example, that it begins to have an opinion on it as something ‘out there’ or ‘other’. Until that point it is an integral part of that culture’s experience and to have an opinion on it is similar to having an opinion on gravity, or air (Snyder, 1990: 23).

This does not seem to be the case, however. There are a large number of references made to the natural world in the Buddhist literature, and elements of nature are given

⁷ In 1989 Bill McKibben’s, *The End of Nature*, was first published. In this influential work, he argued that, through pollution and other activities, humans had affected the natural world to such an extent that there was no longer any place which could be considered untouched by humans.

symbolic significance in the Buddhist tradition. As Prayudh observes, ‘From the time the Buddha left his palace Buddhism has been associated with forests’⁸.

Though Gotama was born into a wealthy family, the *Suttas* report that he was born outside, while his mother was standing in a grove of sal in Lumbini (*M.III.123*). He immediately took seven steps, and lotus flowers sprang up as he walked (not, for example, pieces of gold, or something representing human cleverness). He meditated under the shade of a jambo tree as a youth, and was enlightened under a peepul (*M.I.247-9* – the tree is now called the Bodhi tree, or *ficus religiosa*). He died between two sal trees, which responded to his passing:

[The trees] broke out in full bloom, though it was not the season of flowering. And the blossoms rained upon the body of the Tathāgata and dropped and scattered and were strewn upon it in worship of the Tathāgata (*D.II.72*).

The *Jātaka* tales, which tell the story of the previous lives of the Buddha-to-be, make abundant references to the natural world:

Passage after passage celebrates forests, waters, and the Earth’s wild creatures. Here we find a ‘Garden of Delight’, where grass is ever green, all trees bear good fruit to eat, and streams are wet and clean, ‘blue as beryl’. Nearby is a ‘region overrun and beautified with all manner of trees and flowering shrubs and creepers, resounding with the cries of swans, duck and geese...’ Next is reported an area ‘yielding from its soil all manner of herbs, overspread with many a tangle of flowers,’ and listing a rich variety of wild animals: antelope, elephant, buffalo, deer, yak, lion, rhinoceros, tiger, panther, bear, hyena, otter, hare, and more (Kabilsingh 1990: 9)⁹.

The *Jātaka* tales are fables designed to teach lessons to people. Thus the animals tend to be embroiled in very human scenarios, such as the otters (*Jat. 400*) who lost the best portion of their fish because they could not decide how to divide it and asked a

⁸ Prayudh, *Phra Kap Pa*: 4, trans. Swearer, in Tucker & Williams (1997: 33).

⁹ The quotations cited by Kabilsingh are from *Jātaka* IV-V.

third party (a jackal) to help them decide. That said, it should be noted that the tales decide to use characters from the animal world *because the audience could relate to them*. We might consider, by way of a loose comparison, that the stories that speak to the imagination of our children today are often of trains (e.g. Thomas the Tank Engine) and construction vehicles (e.g. Bob the Builder) with similar human attributes to the otters and jackals of the *Jātakas*.

The early Buddhist texts also show an appreciation of the need to protect the environment so that it would continue to support human life. At *A.III.366*, for example, we see this teaching in the story of a man who was uncaring towards a fig tree that provided an abundance of fruit which the local people enjoyed:

Nobody guarded the fruits of that royal tree, and neither did anyone harm one another for the sake of its fruits.

But then a certain man came along who fed upon as much of Steadfast's [the tree's] fruits as he wanted, broke off a branch, and wandered on his way. And the deva who dwelled in Steadfast thought to herself: 'It is astonishing, it is truly amazing, that such an evil man would dare to feed upon as much of Steadfast's fruits as he wants, break off a branch, and then wander on his way! Now, what if Steadfast were in the future to bear no more fruit?' And so the royal fig tree Steadfast bore no more fruit (*A.III.366*).

How does Buddhism position humanity in relation to nature?

According to Holder, 'The conception of "nature" (or the "natural world") and its relationship to human beings are the bases for any environmental ethic' (2007: 116).

How then does Buddhism position humanity in relation to nature?

Humanity as separate from nature

Could it be that the Buddhist tradition, which has seemed so promising as a model to escape the destructive consequences of the Western anthropocentric vision of nature, is as much compromised by the flaws of anthropocentrism as its Western counterpart? (Eckel 1997: 340).

Harvey (2000: 150) points out that Buddhism considers humans to be in a different realm from that of all other animals (*M.III.167-9*). It is a different class of rebirth, and it is considered special, in that the human birth is the ideal birth from which to become enlightened (2000: 150). This is because humans have neither too much pain to make creative responses to stimuli extremely difficult (unlike those in the hell realms), nor too much pleasure to lack the motivation to change (unlike those in the heavenly realms). Further, unlike other animals, humans are considered special because they have the opportunity to reflect on their situation, and they are able to be aware that they are aware.

Not only is a human birth considered special, it is also considered to be rare. Beings reborn as humans compared to non-human rebirths are likened to a pinch of sand compared with the size of the earth (*S.II.263*).

Waldau (2000) argues that the 'lumping mentality' (2000: 94) in Buddhist cosmology, where all animals other than humans are seen as being in one realm, and humans seen as being in a different realm, is problematic. It does not recognise the fundamental differences between different kinds of animals and therefore lays Buddhism open to the charge of speciesism. He concludes, however, that while Buddhism sees humans as special, all in all the tradition's approach to other animals is positive:

The Buddhist tradition confirms the ancient nature of a concern for living things, a concern which has been dominated in the other major religious and philosophical traditions by a tendency towards ethical anthropocentrism ... the insights and approaches which Buddhism offers for respecting other animals as real world entities entitled to the privilege of life without human interference do justify some of the optimistic statements made about the tradition and other animals (Waldeau, 2000: 105).

Humanity as part of nature

Although it is true that Buddhism recognises a human rebirth as being of special importance among all rebirths (at least from the perspective of its potential for spiritual development), for Buddhism, the human being is not something separate from the rest of nature. Harvey (2000: 150) notes that for Buddhism, humans are as much caught up in *samsāra* as any other sentient being. They were not created as some special class of being by a God, and they were granted neither dominion nor stewardship over other animals.

There is no special part of us that stands outside of the natural realm – no permanent, supernatural ‘soul essence’ or eternal self to be found. Holder argues that the continuity between humanity and nature has profound implications for an environmental ethic, since it means that if one wishes to eradicate *dukkha*, one must realise that there is a link between our own suffering and that of other sentient beings (2007: 116).

The difficulty of humans to psychologically position themselves within and as part of nature is nothing new. According to Buddhism, the belief that we are somehow separate and distinct from our environment is a key characteristic of the spiritually ignorant. This ignorance (*avijjā*), for Buddhism, is specifically ignorance of the truth

of dependent origination:

The failure of the human mind to adequately grasp the truth of dependent co-origination, or ‘the together rising up of all things’, remained the consistent concern of Buddhist analysis. ... The object of Buddhist soteriology or process of liberation was to bring that ignorance to an end (Brown, 2004: 888).

Paṭicca-samuppāda or dependent origination (also variously translated as conditioned arising, dependent arising, conditioned co-production and dependent co-origination) is closely related to the Four Noble Truths (Harvey, 1990: 54). It is frequently cited in the canon, though key sources are *S.II.1-133* and *D.II.55-71* and is fundamental to the teachings of Buddhism: ‘Whoever sees Conditioned Arising sees *Dhamma*, whoever sees *Dhamma* sees Conditioned Arising’ (*M.I.191*). As stated in chapter one, *paṭicca-samuppāda* is one Buddhist term that is synonymous with the Western understanding of the word ‘nature’, since we could see the natural world from a Buddhist perspective as that which arises in dependence upon conditions.

Simply put, the doctrine of dependent origination states that all phenomena come into existence based on the coming together of a number of causes and conditions. When those causes and conditions change or cease, the resulting phenomena change or cease. There is nothing separate or independent of causes and conditions¹⁰. Though it applies to all phenomena, the key focus of this teaching for Buddhism tends to be on the concept of the person. According to Buddhism, we have a strong tendency to regard ourselves as separate, distinct and having a self. This is called the ‘I conceit’ or ‘view on the existing group’ (*sakkāya-diṭṭhi*). The ‘group’ being referred to here is one of the five aggregates (*khandas*, literally ‘heaps’) which make up a person. As unenlightened beings, we hold the view that our self, that is, what is essentially us,

¹⁰ For a full explanation of the Buddhist doctrine of dependent origination, see *Vism.* XVII.

resides somewhere in one of these five *khandas*. The Buddha refutes this in his second sermon:

Form, monks, is not self. If form were the self, this form would not lend itself to dis-ease. It would be possible [to say] with regard to form, 'Let this form be thus. Let this form not be thus.' But precisely because form is not self, form lends itself to dis-ease. And it is not possible [to say] with regard to form, 'Let this form be thus. Let this form not be thus.'¹¹ (S.III.66)

Holder argues that the five aggregates which temporarily combine to form a 'person' fall within the natural realm and thus Buddhism considers humans to be essentially a part of nature:

The early Buddhists demonstrated the naturalness of the human person through the well-known Buddhist doctrine of the 'five aggregates' or 'bundles' (*khandhā [sic]*). Human beings are composed of a body, feeling, perceptions, dispositions to action and consciousness (nothing more nor less). All of these aggregates are dependently arisen, causally emergent, and therefore *natural* processes. Human existence is thus a function of psycho-existential factors that fall within a broadly construed understanding of nature. (2007: 117)

The key significance for our current purposes of the concept of not-self (*anattā*) and the doctrine of dependent origination which underpins it, is that humans cannot be considered as being separate from their environment. Though the causes and conditions which temporarily make up 'me' in a relative sense do have a tendency to continue in a recognisable form and to change in a relatively predictable manner (Gethin, 1998: 142-3), for example, I will not suddenly become a plant pot, and will continue to age until I die rather than perhaps becoming a toddler in my seventies, those causes and conditions are not 'me'. This connects 'me' fundamentally and intrinsically with my environment.

¹¹ This verse is then repeated, replacing 'form' with the other *khandas*: feeling, perception, mental fabrications and consciousness.

We are now beginning to unpack the implicit assumption in the title of this dissertation – that there are discreet entities (human beings) relating in some way to something outside of themselves (nature). As noted above, Buddhist not-self theory and the doctrine of dependent origination refute this assumption. We can further consider this by looking at the various analyses of the constituents of the ‘person’ from a Buddhist perspective.

Buddhism has various ways of analysing the processes which make up the person:

- The five *khandhas*: material form, feeling, cognition, constructing activities and consciousness, as already discussed.
- Consciousness and sentient body (*nāma-rūpa*).
- The *Abhidhamma* summary of *dhammas*: mind (*citta*), mental events (*cetasikas*) and form (*rūpa*).
- The six elements (*dhātus*): earth/solidity, water/cohesion, fire/heat, wind/motion, space and consciousness.
- The great primaries/elements (*mahā-bhūtas*): solidity, cohesion, heat and motion (also translated as earth, water, fire and wind or air).
- The twelve sense-spheres (*āyatanas*): the five physical senses and their objects, the mind-organ (*mano*), and *dhammas*, as the objects of this.
- The 18 *dhātus*. These are the same as the 12 *āyatanas*, with the addition of the six types of consciousness, pertaining to the six senses.
- The 12 links (*nidānas*) of dependent origination.

(BUDM04, session 16)

These various analyses are not conflicting but complementary. They can be considered much as one could consider a person as a mind and a body, or a torso, a head and four limbs, or as an intricate network of biological systems, without conflict. For the purposes of this dissertation, therefore, it will suffice to limit ourselves, by way of an example, to a discussion of one of these analyses: the four ‘great primaries’ (*mahā-bhūtas*):

He reviews this same body, however it is placed, however disposed, as consisting of elements thus: ‘in this body there are the earth element, the water element, the fire element and the air element’ (*M.I.57*).

In the practice described above, the meditator is encouraged to investigate his or her body with the mind’s eye, in order to recognise the elemental processes which make up that body. The *Satipaṭṭhāna Sutta* uses the simile of a cow slaughtered by a butcher and then cut up to sell. After it has been cut up, the butcher no longer thinks of ‘cow’, but only of ‘meat’. The contemplation of the elemental constituents of the body is designed to have a similar effect, loosening the sense of self (Anālayo, 2003: 150-1; *Vism.* XI.29).

The significance of Buddhist cosmology

For traditional Buddhism, the universe is made up of many world systems, not just ours. According to Buddhaghosa there are 1,000,000,000,000¹². Life exists beyond our own world system, and one may be reborn into one of six main classes, or realms, of existence: hell being, hungry ghost, animal, jealous god, human, or god. Most of these contain further divisions. When asked when the universe began, the Buddha said that a starting point to cyclic existence (*saṃsāra*) was inconceivable (*S.II.180-1*).

¹² *Manorathapūraṇī* II.340-1 as cited in Gethin (1998: 114).

There are three key qualities of the Buddhist cosmological view that are particularly relevant to the environmental debate, and indeed to a Buddhist response to climate change.

Firstly, the Buddhist vision of the universe is one of a web of processes that are *inter-connected*. If beings are the result of interactions between various processes, to the extent that no self can be found, it becomes as sensible to ensure that the environment is healthy as it is to ensure that I am personally healthy.

Secondly, the Buddhist universe is an *ethical* universe. Beings are born into particular circumstances, and they prosper or suffer, according to karma (Pali: *kamma*). Since positive (*puñña*) karma is primarily generated by loving, generous, kind and mindful mental states and behaviours (A.III.145), the Buddhist universe is one in which it is sensible, even from a ‘self’-centred perspective, to cause as little harm as possible to the environment, since our actions have an impact on other humans, and other living beings, which will have future karmic consequences for us. Indeed, the *Saddharmasmṛtyupasthāna Sūtra*, which is an early Buddhist text, though not of the Pali canon (Harris, 1997: 382), includes specific descriptions of the hell realms that await those who have killed birds or deer without regret, for those who have deliberately destroyed forests by fire and for those who have deliberately caused famine through disrupting water supplies¹³.

¹³ It is interesting to consider the karmic implications of participation in the current globalised economy: ‘As the scale of the economy grows, it also becomes increasingly difficult for us to know the effects of our actions on nature or on other people. These forms of separation stem from and reflect a fragmented world view that is essentially antithetical to the Buddha’s teachings. In fact, modern society is based on the assumption that we are separate from and able to control the natural world. Thus the

Thirdly, the Buddhist cosmological view sees all beings as having the *potential for Buddhahood* (certain Zen Buddhists have even included plants in this), which at least theoretically makes it easier to empathise with other living beings. Contrast this, for example, with the commonly held Christian view that humans have souls, but animals do not¹⁴. Further, various Buddhist sources (e.g. *S.II.128*; *S.II.189-90*) make the point that, since life is beginningless, and the number of births we have taken is innumerable, every living being has at one time or another been our mother or father. Subscribing to this view would, at least theoretically, make it very difficult justify causing harm to other living beings. Destroying the habitat of countless beings through deforestation, or pollution of rivers, for example, is thus antithetical to the Buddhist worldview.

In one sense, Buddhism advocates an ‘unnatural’ path: the conscious cultivation of mental states, the mindful redirection of one’s energies from unskilful to skilful modes. It is the metaphorical opposite of ‘going with the flow’. Indeed the Buddhist practitioner has been called ‘one [who is] bound upstream’ (*Dhp.* 218). It is *not* simply operating ‘naturally’, in the sense of allowing whatever happens to be one’s mental processes (such as craving, hatred and delusion) to continue unchecked. The argument against this, however, is that even from an early Buddhist perspective, the mind is seen as ‘brightly shining, but defiled by defilements which arrive’ (*A.I.10*). That is, the defilements are not fundamental to us or ‘natural’ parts of us¹⁵.

structures and institutions on which we depend are reifications of ignorance and greed--a denial of interdependence and impermanence.’ (Norberg-Hodge, 1997)

¹⁴ Though this view is commonly held, it is a matter of theological debate. For a discussion of this see Jones (2000).

¹⁵ This idea developed further in later Buddhism as *Tathāgatagarbha* (commonly translated as ‘Buddha nature’, though more accurately ‘Buddha embryo’ or ‘Buddha womb’).

Harris likens the universe, from the Theravādin Buddhist cosmological perspective to ‘a vast, unsupervised recycling plant in which unstable entities circulate from one form of existence to the next’ (1997: 383). He further proceeds to say that this seems like ‘an ideal metaphor from the environmentalist perspective’, and then goes on to undermine the validity of this metaphor as being ideal from an environmental perspective. Harris’s critique of the relevance of Buddhist cosmology to Buddhist environmentalism is somewhat odd, however, since a review of the literature finds no reference to this metaphor suggested by anyone other than Harris!

Harris also suggests that modern Buddhists are ‘embarrassed’ of the mythological or pre-scientific Buddhist cosmologies (1997: 382). Further, he considers it to be ‘paradoxical ... that the claims of modernist Buddhists to stand in good harmony with nature seem to be premised on the scientism of the Enlightenment’ (1997: 382-3) because this movement began a process of development which later led to much environmental damage.

Harris provides no evidence that modern Buddhists are embarrassed by Buddhist cosmology, however. Further, there is nothing paradoxical about Buddhists making use of science to justify their positions. Buddhism values three levels of understanding (*paññā*): that which arises from listening (or reading), that which comes as a result of reflection, and that which arises as a result of meditation (*Vism.*XIV.14). Certainly there is a hierarchy of knowledge from a Buddhist perspective, but all kinds of knowledge are valued. It would be strange then, for modern Buddhists to ignore the body of scientific knowledge because science has

been used to develop societies and economies which have caused damage to the environment. Indeed, with reference to the above teaching, the fact that they *do* make use of scientific research is entirely in keeping with tradition. With this in mind, we will now consider the science concerning climate change.

CHAPTER 3: CLIMATE CHANGE – AN OVERVIEW

This chapter provides an overview of the issue of climate change, including recent scientific research, which strongly suggests that this has been caused by human behaviour. It is perhaps useful to point out that, from a Buddhist perspective, scientific research is a valid tool for arriving at conclusions. Though it may not be useful in pointing out the way to absolute reality, it is still useful for helping to determine the laws which govern the material world.

Scientific investigation and Buddhist practice have some important things in common. They both aim to understand what is objectively going on. They both find ways to undermine subjective bias in this attempt, and they both reject faith, instead choosing to test the truth of hypotheses. As the Dalai Lama points out:

...one fundamental attitude shared by Buddhism and science is the commitment to keep searching for reality by empirical means and to be willing to disregard accepted or long-held positions if our search finds the truth is different¹⁶.

Scientific method uses physical experiments, basing its conclusions on that which can be measured using scientific instruments. Buddhism trains the mind so that the practitioner can maintain awareness on the object of investigation for long periods and thus see it more clearly, with minimal distraction or interference from previously conditioned mental and emotional responses to the object. From a scientific perspective, the Buddhist approach would be seen as unscientific. From a Buddhist perspective, the scientific approach would be seen as valid and useful, but limited in

¹⁶ Dalai Lama XIV, 2006, *The Universe in a Single Atom*, New York, Broadway, as cited in Stanley, Loy and Dorje (2009: 35-6).

scope to one level of reality (i.e. the material aspect of conditioned phenomena). Since climate change operates at the material level, however, in order to arrive at a Buddhist response to climate change, it is appropriate to consider contemporary scientific research.

What is climate change?

The term ‘climate change’ is used to denote an increase in air and ocean temperature caused by a change in the make up of the chemical atmosphere. The term is used to denote changes which have already been observed, as well as those which are anticipated.

There has been a 70 per cent increase in greenhouse gas emissions since 1970 (IPCC 2007: 5). Greenhouse gases are gases which lead to a warming of the surface temperature of the Earth. They include but are not limited to carbon dioxide, methane, and nitrous oxide. The increase in temperature which results from the increase in greenhouse gases is currently predicted to be between 2 and 6 degrees Celsius by the end of this century. The increase to date has been 0.74 degrees Celsius (IPCC 2007: 2).

Climate change is an important issue because it affects the viability of existence of both human and other species¹⁷ (Stern 2006: vi). We are living in a situation unprecedented since the beginning of human development. Robert Corell, chair of the Arctic Climate Change Impact Assessment (ACCIA) states:

¹⁷ The 2006 Stern Review predicted a loss of 15-40 per cent of species if the temperature rises by two degrees.

For the last 100,000 years we have been living in a remarkably stable climate that has allowed the whole of human development to take place ... Now we see the potential for sudden changes of between 2 and 6 degrees Celsius. We just don't know what the world is like at those temperatures. We are climbing rapidly out of mankind's safe zone into new territory, and we have no idea if we can live in it. (Cited in Spratt and Sutton, 2008: 3)

Does climate change exist, and is it caused by human activity?

There has been some suggestion, largely from the non-scientific community, that climate change either does not exist, or that it is a natural phenomenon not caused by human activity. These so-called 'climate skeptics' receive significant press. For the sake of thoroughness, therefore, I shall deal briefly with the validity of their position.

A 2004 study, *Beyond the Ivory Tower: The Scientific Consensus on Climate Change* examined every article on climate change published in peer-reviewed scientific journals between 1993 and 2003. Of the 928 articles on climate change the authors found, not one of them disagreed with the consensus position that climate change is happening or is human-induced (Oreskes, 2004).

These findings contrast dramatically with the popular media's reporting on climate change. Another 2004 study (*Balance as Bias: Global Warming and the U.S. Prestige Press* published in the journal of Global Environmental Change July 2004) analysed coverage of climate change in four influential American newspapers (New York Times, Washington Post, LA Times, and Wall Street Journal) between 1988 and 2002. It found that more than half of the articles discussing climate change gave equal weight to the scientifically discredited views of the skeptics (Boykoff and Boykoff, 2004).

The United Nations Intergovernmental Panel on Climate Change (IPCC) is the leading scientific body for the assessment of climate change. It comprises over 2000 scientists from 100 countries. It was established by the United Nations Environment Programme (UNEP) and the World Meteorological Organization (WMO) to provide the world, and particularly policy makers, with a clear scientific view on the current state of climate change and its potential environmental and socio-economic consequences.

The most recent report of the IPCC was published in 2007. It states that:

Global GHG [greenhouse gas] emissions due to human activities have grown since pre-industrial times, with an increase of 70% between 1970 and 2004 ... Most of the observed increase in global average temperatures since the mid-20th century is *very likely* due to the observed increase in anthropogenic GHG concentrations. It is *likely* that there has been significant anthropogenic warming over the past 50 years averaged over each continent (except Antarctica) (IPCC, 2007: 5. Italics from source document.)

The findings of the IPCC have been publicly endorsed by the national academies of science of all G-8 nations, as well as those of China, India, and Brazil.

The evidence strongly suggests, therefore, that the position of the climate skeptics is not supported by the scientific community and is a journalistic phenomenon rather than a branch of scientific thought. Since climate change is analysed by scientists, and since hypotheses concerning climate change are tested by scientists, if the scientific community is in agreement that climate change exists and is caused by human behaviour, it is reasonable to discount the opposing view, unless and until credible evidence supporting that view is found.

Now that we have an overview of the issues around climate change, and we are confident that climate change is a serious problem, and is caused by human activity, we can move on to discuss Buddhist responses to it.

CHAPTER 4: BUDDHIST RESPONSES TO CLIMATE CHANGE

Western Buddhists have taken other initiatives locally, bringing their Buddhist and environmental sensibilities to bear on nuclear waste, consumerism, animal rights, and forest defense. Out of these impulses Buddhist environmental activism is taking shape, based on distinct principles and practices. (Kaza, 2000:160-1)

In 1979, UN development expert R.M. Salas commented that ‘development in its broadest integration demands and awareness of limits’ and concluded that Buddhism, with its emphasis on undermining craving, could provide an ethic for the twenty-first century¹⁸. Salas’s point raises an important question: If Buddhism seeks to undermine craving, should we not also seek to undermine our craving for the environment to remain as it is? And if so, can Buddhists logically have any other response to climate change than to practice non-attachment?

From the perspective of Buddhism, all conditioned phenomena share the ‘three marks’: unsatisfactoriness, insubstantiality, and not-self (*S.II.66-8*; cf. Harvey, 1990: 50–1). One should therefore remain non-attached, as to become attached to phenomena bearing such marks is to guarantee that one will suffer. From this perspective, we could say that Buddhism has no opinion on the environment whatsoever. The entirety of the natural world exhibits the three characteristics. If climate change caused by human behaviour renders the planet uninhabitable, this is, it would seem, no cause for alarm and no reason to grieve. All phenomena are impermanent, including entire ecosystems and the planet as a whole:

There comes a time when the great earth is consumed with flame, is destroyed, and does not exist (*S.III.149*).

¹⁸ Salas, R. M., 1979, Convocation Lecture, University of Colombo, as cited in De Silva (1990: 16).

The second half of this verse is also significant, however:

But for beings — as long as they are hindered by ignorance, fettered by craving, transmigrating and wandering on — I don't say that there is an end of suffering and stress (*S. III.149*).

Beings suffer as a result of ignorance and craving. This does not end, even when the world comes to an end. New worlds come, and unenlightened beings are reborn. In the final analysis, therefore, from a Buddhist perspective, the most appropriate response to climate change is to become enlightened and enter nirvana (Pali: *nibbāna*). It should be noted, however, that nirvana is not heaven. It is not a place beyond the world. When Siddhartha Gotama became the Buddha he remained on Earth for a further 40 years, teaching people the way to experience what he had experienced.

The Buddhist response to suffering, then, is not solely one of non-attachment or contentment with what is. It is equally a *compassionate* response. We must remember that compassion and loving-kindness have been integral to the message of Buddhism from the time of the Buddha onwards. We can look to the hagiography of the Buddha himself for an example of this. According to *Vin. Mv. I.5*, when Gotama first attained enlightenment he was not initially inclined to teach others. He considered the *Dhamma* that he had found to be extremely difficult to comprehend. He thought of the people in the world, so consumed with craving, hatred and ignorance, and believed that they would not be able to realise the truth that he had realised. It is said, however, that the god Brahmā Sahampati came to the Buddha and implored him to teach. The Buddha, using his '*dhamma* eye', surveyed the world and saw that there were a small number of people who might be able to grasp the teaching – a very few with 'but little

dust in their eyes'. Out of compassion for all beings (and not out of any personal need or ego-based desire) he decided to attempt to teach the path to others. He then committed the rest of his life to this endeavour.

According to the system of Buddhist meditations known as the *brahmavihāras* (sublime abodes), compassion arises when *mettā*, or loving-kindness, meets with an awareness of suffering. This aspect of the Buddhist approach is perhaps best discussed in terms of the first precept of Buddhist ethics.

The first precept

Now that we know beyond reasonable doubt that climate change has been caused by human actions, a key factor impacting on a Buddhist response to climate change must be *ahiṃsā*, or non-harm – the first Buddhist precept. This is regarded as the most important precept (Harvey, 1990: 202). Indeed, it is on this first precept that all other precepts are founded. *Ahiṃsā* has even been called 'the distinguishing mark of the *Dhamma*' (Miln. 185). According to the threefold Buddhist path of ethics, meditation, wisdom (*sīla, samādhi, paññā*), the practice of ethics is seen as a foundation for the practice of meditation, and meditation in turn as a foundation for wisdom. We could tentatively argue then that the first precept is in fact the foundation of the entire Buddhist path. Even if we see the threefold path as cyclical rather than hierarchical, with each aspect of the path informing the next (and thus wisdom informs ethics) it is still clear that ethical practice forms an integral part of the Buddhist path.

A beautiful expression of the attitude of *ahiṃsā*, and its corollary *mettā*, can be seen in the following extract from *A.IV.67*. Note the universality of this expression of

goodwill, embracing all beings. This *Sutta* is particularly relevant, therefore, for our discussion of nature and climate change:

I have good will for footless beings,
good will for two-footed beings,
good will for four-footed beings,
good will for many-footed beings.

May footless beings do me no harm.
May two-footed beings do me no harm.
May four-footed beings do me no harm.
May many-footed beings do me no harm.

May all creatures,
all breathing things,
all beings
— each and every one —
meet with good fortune.
May none of them come to any evil
(A.IV.67).

As previously noted, in Buddhism, the principle of non-harm is closely related to wisdom. When we see how the world actually is, we do not think of harming ourselves, or others:

He who has understanding and great wisdom does not think of harming himself or another, nor of harming both alike. He rather thinks of his own welfare, of that of others, of that of both, and of the welfare of the whole world. In that way one shows understanding and great wisdom (A.IV.186).

This principle of non-harm, and its positive counterpart *mettā*, can be used as a guiding principle for a Buddhist response to climate change. This is true both at an individual level, as well as at the community level, and at the level of government.

Climate change, the individual and the *saṅgha*

The master says to the student: ‘See that boat moving way out there on the water? How do you stop it?’ To give a proper answer the student must be able to demonstrate that he has ‘become one’ with the boat. Just as one must penetrate deeply into a koan to solve it, Buddhists around the world have begun to immerse themselves in environmental issues, attempting to approach urgent problems from the inside as well as the outside. An increasing number of practitioner-activists believe that the only way to stop the boat of ecological disaster is to deepen our relationship to the planet and all life within it (Kraft, 1994).

With the threat of great suffering for many beings as a result of climate change, and neither governments nor the market taking sufficient action to remove this threat, it is quite possible that the actions of individuals and communities (including spiritual communities) will be decisive. This being the case, I will now discuss some of the individual and group practices that contemporary Buddhists are utilising and/or developing in response to the environmental crisis resulting from climate change.

Meditation

Meditation is a key practice in most Buddhist traditions. It is therefore unsurprising that it should be considered an important practice in response to climate change:

Meditation can serve as a vehicle for advancing several ends prized by environmentalists: it is supposed to reduce egoism, deepen appreciation of one's surroundings, foster empathy with other beings, clarify intention, prevent what is now called burnout, and ultimately lead to a profound sense of oneness with the entire universe (Kraft, 1994).

Thich Nhat Hanh, the Vietnamese Zen teacher and the first teacher to coin the phrase ‘engaged Buddhism’, has been a keen proponent of meditation practices which encourage the practitioner to realise, through mindfulness practice, their connection with the environment. The fact that he chose to call his Order the ‘Order of Interbeing’ points to this. The following example of a Hanh meditation practice

illustrates how he has reformulated a traditional meditation practice (this practice is based on the *ānāpānasati*, or ‘mindfulness of breathing’ practice) in a way which highlights interconnectedness with one’s environment:

Breathing in, I know that I am breathing in. Breathing out, I know that I am breathing out. Breathing in, I see myself as a flower. Breathing out, I feel fresh. Breathing in, I see myself as a mountain. Breathing out, I feel solid. Breathing in, I see myself as still water. Breathing out, I reflect things as they are. Breathing in, I see myself as space. Breathing out, I feel free¹⁹.

Compare this with the following extract from the *Ānāpānasati Sutta*:

There is the case where a monk, having gone to the wilderness, to the shade of a tree, or to an empty building, sits down folding his legs crosswise, holding his body erect, and setting mindfulness to the fore. Always mindful, he breathes in; mindful he breathes out.

Breathing in long, he discerns, ‘I am breathing in long’; or breathing out long, he discerns, ‘I am breathing out long.’ Or breathing in short, he discerns, ‘I am breathing in short’; or breathing out short, he discerns, ‘I am breathing out short.’ He trains himself, ‘I will breathe in sensitive to the entire body.’ He trains himself, ‘I will breathe out sensitive to the entire body.’ (*M.III.78*)

Rituals and retreats

Other teachers have engaged in similar efforts to connect traditional Buddhist meditation practices with environmental awareness. There is not room here to provide a detailed survey of contemporary Buddhist environmentalist practice. However, a few important examples follow.

Snyder, one of the first and most vocal Western Buddhists to connect Buddhist practice with environmentalism (Kaza, 2000: 162) was an early (1970s) pioneer of the Mountains and Rivers *sesshin*. This involves hours of concentrated, silent walking in nature, as well as formal sitting practice. This style of retreat is now offered in a

¹⁹ Hanh, T. N., <http://www.mindfulnessmeditationcentre.org/breathingGathas.htm>

number of Zen centres on the west coast of America (Kraft, 1994). Hanh, too, has offered retreats specifically for environmentalists. These retreats include sitting practice and talks, and emphasise the connection between looking after ourselves and taking care of the world:

The best way to take care of the environment is to take care of the environmentalist. (Hanh, 1992)

Joanna Macy, who set up the Council of All Beings with co-founder John Seed (Seed *et al*, 1988), runs retreats designed to help participants to recognise themselves as part of the ecosystem, reconnect with the earth, and move from a sense of being overwhelmed to a more engaged position. The retreat includes rituals designed to help retreatants connect with their grief about the planet, as well as guided meditations and visualisation practices, body movement, drumming and imitating natural and animal sounds (Macy & Brown, 1998).

Saṅgha-based environmental practice

Many *saṅghas* (communities of Buddhist practitioners) now consider the environmental impact of their activities. They may seek to reduce waste as part of their Buddhist practice: ‘At most American Buddhist centers, conservation of resources and reduction of waste is a conscious part of communal practice’ (Kraft, 1994). There has also been a long association with vegetarianism in the Western Buddhist *saṅghas*, though the eating of meat was not forbidden by the Buddha. An awareness of the environmental implications of meat eating has often been a factor in the choice made by contemporary Western Buddhists (Kaza, 2005), and some Buddhist centres have made the choice to grow their own organic vegetables (Kaza, 2000: 163).

The Green Gulch Zen Centre in northern California and New York's Zen Mountain Centre have both been involved in environmental activism. Green Gulch formed an affinity group of 'ecosattvas' who developed a Buddhist-based response to the excessive logging of giant redwood trees. Their response, based on the bodhisattva vow to save all beings, has included civil disobedience and trespass on logging company-owned property, as well as the practice of mindfulness and the chanting of the *Mettā Sutta* among the trees. Such actions have been termed 'engaged Buddhism', and it is this aspect of the Buddhist response to climate change to which we now turn.

Engaged Buddhism

Both as individuals and as a species, we suffer from a sense of self that feels disconnected not only from other people but from the Earth itself. As Thich Nhat Hanh has said, 'We are here to awaken from the illusion of our separateness' (Loy, Bodhi & Stanley, 2009).

The term 'engaged Buddhism' was first coined by Thich Nhat Hanh, in describing his approach to seeking peace in Vietnam. Other noted engaged Buddhists include Indian civil rights leader Dr. B. R. Ambedkar, Burmese imprisoned leader Aung San Suu Kyi, exiled Tibetan leader HH Dalai Lama and Thai activist and founder of the International Network of Engaged Buddhists Sulak Sivaraksa (Queen & King, 1996: 2-3). The movements headed by these leaders have focused on the liberation of oppressed people, non-violent resistance against brutal regimes, and social justice.

The place of social action in Buddhist practice is hotly debated. Commentators from Max Weber to Richard Gombrich have argued that Buddhism is essentially apolitical and speaks principally to the individual seeking to transcend society, rather than to a

social movement of Buddhists seeking to reform it (Queen & King, 1996: 18).

Conversely, Rahula, Jones and others see social justice as central to Buddhism from the beginning of the tradition:

Buddhism arose in India as a spiritual force against social injustices, against degrading superstitious rites, ceremonies and sacrifices; it denounced the tyranny of the caste system and advocated the equality of all men; it emancipated woman and gave her complete spiritual freedom²⁰.

Whether or not engaged Buddhism has been traditionally practised, it is certain that concern for the wellbeing of others, noted above in the discussion of *ahimsā*, and expressed in its fullest sense in the Māhāyana symbolism of the bodhisattva, is central to the Buddhist approach. Although engaged Buddhism has so far tended to focus on social justice and resisting oppression, it seems clear that it has a role to play in a Buddhist response to climate change. As previously noted, Buddhist communities are already integrating environmentally friendly practices into their spiritual life. It seems likely that this will only increase over time. Just as Buddhist programmes such as the Zen Hospice Project and Karuna Trust²¹ seek to benefit the dying and the poor, one can anticipate the emergence of Buddhist projects dedicated to helping the world to move towards sustainable living. Organic farms, renewable energy companies, and low impact building projects, for example, could feasibly be engaged in as forms of Buddhist right livelihood. Buddhist education projects could include awareness-raising programmes concerning climate change and sustainability. There have also been calls by contemporary, environmentally concerned Buddhists for political lobbying:

²⁰ (Rahula, 1978 cited in Jones 1995: <http://www.accesstoinsight.org/lib/authors/jones/wheel285.html>).

²¹ For more information on the Zen Hospice project and the Karuna Trust, see <http://www.zenhospice.org/> and <http://www.karuna.org/>.

If political leaders are unable to recognize the urgency of our global crisis, or unwilling to put the long-term good of humankind above the short-term benefit of fossil-fuel corporations, we may need to challenge them with sustained campaigns of citizen action. (Loy, Bodhi & Stanley, 2009)

One example of engaged Buddhism relating to the environment is the case of the ‘ecology monks’ (*phra nak anuraksa*) of Thailand, who, according to Darlington, are ‘at the core of the Buddhist ecology movement’ (Darlington, 1998). These monks are attempting to stem the deforestation of Thailand through a number of means, the most noted of which is perhaps the ordination of trees. This re-purposing of Buddhist ritual for environmentalist ends is eminently practical, and highlights the action-based, as opposed to doctrine-based, approach of the ecology monks (Darlington, 1998). The practice relies on the status of the *saṅgha* in rural Thailand for its effectiveness. The industrialisation of Thailand and reduction of the role of the *saṅgha* in everyday life is a challenge to this (Walter, 2007: 333), and the work of the ecology monks can in one sense be seen as the monks attempt to remain relevant and beneficial in the modern world (Darlington, 1998). The activism of these monks, however, can also be understood as an attempt to protect their traditional habitat. There is a long and respected tradition of forest-dwelling monks in Thailand, and the erosion of the forests is impacting heavily on this traditional way of practice:

... traditions of ascetic monasticism [in Thailand] have eroded as their material forest base has dissolved, helping to pave the way for an emergent activism centred on forest conservation and Buddhist ecology (Walter, 2007: 333).

The *saṅgha* in Thailand is traditionally conservative, and the ecology monks have been criticised for their actions by people, including the government, developers and other members of the *saṅgha*, who regard their actions as inappropriate for monks. In

response, they argue that their actions come out of a ‘radical conservatism’, and are based on the original teachings of the Buddha:

The Buddhist ecologists ... stress their connection with the Buddha's ideas of nature, the origins of the religion, and the Buddha's admonitions to relieve suffering in the world. Their movement does not advocate a new form of Buddhism, they argue, but is an effort to put the basic ideas of the religion in terms that meet the needs of the modern world (Darlington, 1998).

Buddhism for governments

Buddhism tends to speak to the individual, giving advice principally on how the individual should live in order to be happy. We can therefore consider a Buddhist response to climate change from an individual perspective more easily than from a societal or global perspective. Practically speaking, however, in order for the response to be effective, it needs to take place at all levels of society – from the individual to the global. Fortunately, the principles applied to individuals in the Buddhist texts are often applicable to broader sections of society, and there are also some specific teachings given to leaders in the texts. At *A.II.74–6*, for example, advice is given to kings (and for kings, we might also read governments, and even perhaps leaders of large corporations). The text says that when kings act unrighteously (*adhammika*), their example is followed by their subjects. Immoral actions have painful karmic repercussions, some of which are experienced through environmental change. Sun, moon and stars go out of alignment. As a result:

... days and nights, months and fortnights, seasons and years are out of joint; the winds blow wrong, out of season. Thus the gods are annoyed. This being so, the sky-god does not bestow sufficient rain (*A.II.74-6* as cited in Harvey, 2000:115).

This results in poor crops. The people who live on them are weak, and their lives are short.

One could argue that this is simply a primitive attempt to impose ethical constraints on kings, and on people in general, by creating fear of the results of acting immorally. This is one possible reading. A traditional Buddhist would tend not to read it in that way, however, instead taking the teaching at face value, based on the Buddhist understanding of karma theory. It is perhaps interesting to consider this text in the light of the current environmental crisis, and its human-made causes.

We could argue that the current situation is a result of ignorance (i.e. humans could not have known that their actions would have such consequences), and is therefore blameless. Buddhist ethics do not deal ‘blame’, however. They simply note the consequences of actions of body, speech and mind. Skilful (*kusala*) actions, based on positive mental states, have beneficial consequences. The opposite is true for unskilful (*akusala*) actions, based on unskilful mental states.

It is clear that craving was and continues to be a significant motivation for the choices made. Although humans could not have known, based on available scientific evidence, that negative consequences would result, a Buddhist perspective would not have required such evidence in order to advocate for a move towards simplicity and contentment.

The ideal leader in the Buddhist texts is a *Cakkavatti*, or ‘wheel-turning king’ (*D.III* 58–79). This ideal is the ‘political equivalent of a Buddha’ (Harvey, 2000: 114). They

are born with the 32 marks of the great man, as is a Buddha-to-be (*D.III.142–79*) and in death, their corpse should be treated in the same way as that of a Buddha (*D.II.141*). The *Cakkavatti* comes to power not by force, or by divine right, but on the request of the people, who appreciate the qualities of this person, such as their observance of the five precepts (*D.III.63*), that is, their ethical behaviour. It is significant for our current discussion that the role of the leader includes not only looking after the people, but looking after animals and birds as well (Harvey, 2000:114). Buddhism advocates for ‘higher morality as the guiding principle behind the state’²².

The most famous historical figure to attempt the practice of the principles of Buddhism in leadership was undoubtedly the Indian emperor Asoka (c. 268–239 BCE). We are able to get a good sense of Asoka’s approach through his various Edicts, which were carved into rock, and therefore survived into the modern period. They state that he had medicinal herbs planted and grown, both for humans and animals (Rock Edicts: 2), he had wells and watering places made for humans and animals (Pillar Edicts: 7) and he banned the killing of some animals altogether, and other animals at certain times (Pillar Edicts: 5).

Taking his example for our current discussion, we can consider the huge impact that climate change will have on biodiversity. As noted in chapter 3, it has been estimated that a temperature rise of two degrees Celsius would result in the loss of 15–40 per cent of species (Stern, 2006: vi). An analysis presented at MIT of the most recent

²² Gokhale, B. G., 1966, ‘Early Buddhist Kingship’, *Journal of Asian Studies*, p.22, as cited in Harvey (2000: 115).

agreement on climate change, the 2009 Copenhagen Accord²³, suggests that it is unlikely that the commitments made will even limit rising temperatures to two degrees²⁴. Further, these commitments are not legally binding. From a Buddhist perspective, such a response from the governments of the world is clearly unacceptable. Indeed a great number of non-Buddhists (including Stern) have made a similar point.

The Buddhist Climate Change Declaration

*The Time to Act is Now*²⁵ is a pan-Buddhist statement on climate change composed by Zen teacher Dr David Tetsuun Loy, Theravādin teacher Bhikkhu Bodhi and scientist Dr John Stanley. It is based on the input of a number of Buddhist teachers to the book *A Buddhist Response to the Climate Emergency* (Stanley, Loy and Dorje 2009). The Dalai Lama was the first to sign this declaration and it has since been endorsed by Buddhist teachers and scholars from various Buddhist traditions²⁶.

This declaration is the first consolidated effort to articulate a pan-Buddhist response to climate change. After stating the problem, the declaration makes the point that, from a Buddhist perspective, a response to climate change must involve a change in habits and values, based on a change in our understanding of what we need in order to be happy:

Our present economic and technological relationships with the rest of the biosphere are unsustainable. To survive the rough transitions ahead, our lifestyles and expectations must change. This involves new habits as well as

²³ The Accord can be viewed at <http://unfccc.int/resource/docs/2009/cop15/eng/l07.pdf>

²⁴ A video discussion and written summary can be viewed at <http://mitworld.mit.edu/video/748>.

²⁵ See Appendix 1 for the full text.

²⁶ For a full list of teacher and scholar signatories and their affiliations see http://www.ecobuddhism.org/index.php/350_target/350_target/signatories_main/signatories_teachers

new values. The Buddhist teaching that the overall health of the individual and society depends upon inner well-being, and not merely upon economic indicators, helps us determine the personal and social changes we must make. (Loy, Bodhi & Stanley, 2008)

The declaration suggests the Four Noble Truths as a useful model for considering the environmental crisis and for developing a suitable response to it, 'because the threats and disasters we face ultimately stem from the human mind, and therefore require profound changes within our minds' (Loy, Bodhi & Stanley, 2009). It argues that the environmental crisis has been caused by greed, ill will and delusion on a collective scale, as well as a disconnection from each other and from the Earth. Buddhism, as a way to move beyond this, could therefore be of great benefit in our current global predicament.

It is interesting to note that many of the changes suggested by the declaration are not specifically Buddhist. It recommends, for example, using high-efficiency light bulbs and appliances, properly insulating our houses and workplaces, and driving the most fuel-efficient car we can. In short, it asks individuals to reduce their carbon footprint. At the strategic level, it asks for a move to renewable resources, a halt to the building of new coal plants, a move towards a sustainable economic model and an end to deforestation. The key measurable target it asks us, and the governments of the world, to adopt is for safe level of carbon dioxide in the atmosphere. According to a number of climatologists, including NASA's Dr James Hansen, this is no more than 350 parts per million.

The Time to Act is Now is of great interest with regard to our current discussion. It is endorsed by Buddhists from different schools, it bases its position on Buddhist

principles, and it makes specific, practical recommendations for change based on them, both for individuals and for decision makers. It is exactly this kind of response, combined with committed action based on it, that is required if environmental catastrophe is to be averted. The fact that it makes practical recommendations which are not specifically Buddhist also allows it to contribute to a wider voice for change.

CHAPTER 5: CONCLUSIONS

There has never been a more important time in history to bring the resources of Buddhism to bear on behalf of all living beings. The four noble truths provide a framework for diagnosing our current situation and formulating appropriate guidelines—because the threats and disasters we face ultimately stem from the human mind, and therefore require profound changes within our minds. (Loy, Bodhi & Stanley, 2009)

The threat posed by climate change is a serious one. Current predictions estimate a rise of between two and six degrees Celsius in the next 100 years (IPCC, 2007: 2). Even a two per cent increase is enough to cause the extinction of between 15 and 40 per cent of the species on the planet (Stern, 2006: vi). We have no idea whether the Earth can support human life at these temperatures. There is consensus within the scientific community that climate change is real and is caused by human behaviour. This means that humans have the opportunity to change their behaviour and, it is hoped, avert environmental catastrophe.

This dissertation has considered the extent to which Buddhism can contribute to the debate around responses to climate change, and what that contribution might be, based on Buddhist perspectives regarding nature and humanity's relationship to it. Using references from the early Buddhist tradition, as well as from the teachings and practices of contemporary Buddhists seeking to respond to climate change, it has been possible to make a number of assertions. These are summarised below.

There are two basic attitudes towards the natural world exhibited in the texts. The first is to consider the natural world as a delightful and beautiful place, which acts as a constant reminder of impermanence and can promote mindfulness, tranquility and

peace (Harvey, 2000: 155). The second is to see it as a dangerous place which is best avoided by ordinary people (Harris, 2000: 125-6). We have seen, however, that these two attitudes are by no means given equal weight in the tradition. Buddhism considers that the most appropriate response to the natural world is one of loving-kindness (*mettā*), rather than fear.

If one delves deeper into the philosophy of Buddhism, it becomes clear that, while on one level Buddhism has these attitudes towards the natural world, as something external and separate from humanity, at a more fundamental level, it sees no difference between humanity and the natural world at all. The theories of not-self (*anattā*) and dependent origination (*paṭicca-samuppāda*) assert that the ‘person’ (and therefore by extension ‘humanity’) does not exist except as a temporary coalition of natural psycho-physical processes that are fundamentally interconnected.

This is important in the formulation of a Buddhist response to climate change, since it acknowledges the fundamental interconnection between humanity and the environment. From a Buddhist perspective, therefore, one motivation for seeking to act well towards the nature is that we are intricately connected with it, to the extent that there is no part of ourselves that we can identify as something which is in any way separate and distinct from the natural world.

The fact that humans and the natural world are fundamentally connected is not necessarily reason enough to act in a positive way towards the environment.

According to Buddhism, all conditioned phenomena (this includes the entirety of the natural world) have the three characteristics (*tilakkhaṇa*): impermanence (*anicca*)

suffering or unsatisfactoriness (*dukkha*) and not-self (*anattā*). To attempt to avert environmental catastrophe out of an attachment to things staying as they currently are, or out of an emotional need for one's own life, the life of other sentient beings, or the life of the entire planet to continue, and for it to continue without suffering, is therefore not in accordance with Buddhism. It will inevitably result in suffering. This does not, however, suggest that one should do nothing.

Buddhism provides a number of motivations for acting to avert environmental catastrophe. We have seen that loving-kindness (*mettā*) and compassion (*karuṇā*) are central to the Buddhist approach, and that these emotions are not just reserved for ourselves, our families, or our species, but for all sentient beings. These are the positive counterparts of the first precept in Buddhism – that of non-harm (*ahiṃsā*), which again concerns all sentient beings. This aspect of Buddhism has led to the rise of 'engaged Buddhism'. Engaged Buddhists seek to make positive change in the world, as part of one's Buddhist practice.

The precepts are based on the concept of karma (Pali: *kamma*). Different religions have different conceptions of karma. From a Buddhist perspective, karma theory states that actions have consequences, these actions can be of body, speech or mind, and it is the motivation from which one acts that carries the most karmic weight. Positive or skilful (*kusala*) actions will yield positive results (such as good fortune in this lifetime, and a fortunate rebirth in future lifetimes). The opposite is also true. Thus it makes sense from a karmic perspective to act well towards the environment, out of a sense of concern for all beings, as this will be beneficial towards oneself.

Indeed the Buddha stated that although the world will one day end, the suffering of unenlightened beings does not (S.III.149).

The Buddhist concept of rebirth, which is closely linked to that of karma, is further motivation for acting well towards the natural world. Firstly it means that, even though those currently alive may be dead by the time the worst consequences of current human behaviour bears fruit, it is quite likely that ‘we’ (or more precisely, future beings causally connected with us) will be reborn in various forms in the future, some of which will be human or animal, and will therefore experience these consequences. Secondly, because, according to Buddhism, we have been born again and again throughout beginningless time, all beings have at one time or another been our close relative²⁷.

From a Buddhist cosmological perspective, a human birth is both rare and precious. It is more likely that a one-eyed turtle will rise from the depths of the sea and put his head through a plough share floating in the sea than it is that we will be born human (M.III.129). Further, the human realm is the ideal realm from which to attain enlightenment. The hell realms are seen as too painful to allow much conscious development, and the heavenly realms are seen as too pleasurable to provide the motivation for spiritual practice. The animal realm does not appear to allow much self-reflection. From a Buddhist perspective, then, the Earth is a highly supportive

²⁷ The *Brahmajāla Sūtra* states that ‘A disciple of the Buddha should have a mind of compassion and cultivate the practice of liberating sentient beings. He must reflect thus: throughout the eons of time, all male sentient beings have been my father, all female sentient beings my mother. I was born of them, now if I slaughter them, I would be slaughtering my parents as well as eating flesh that was once my own. This is so because all elemental earth, water, fire and air -- the four constituents of all life -- have previously been part of my body, part of my substance.’
(<http://www.purifymind.com/BrahmaNetSutra.htm>)

environment for spiritual practice, whenever it can support human life, and should therefore be protected.

The Buddhist responses to climate change that are already beginning, and will no doubt continue to develop, are based on the perspectives and motivations detailed above. The responses so far include the reinterpretation of traditional meditation practices to give them an environmentalist context, such as the *gathas* of Hanh, the Mountains and Rivers *sesshin* instigated by Snyder and the work of Macy. There is also an increased awareness of the environmental impact of Buddhist communities and an attempt to reduce that impact. As the Buddhist Declaration on Climate Change shows, contemporary Buddhists from all schools are now articulating arguments for practical, far-reaching changes towards sustainability both at individual and strategic levels. These changes are vital, and must be swift, if we are to bring the climate back into balance, and thus be effective in our practice of the first precept:

We have a brief window of opportunity to take action, to preserve humanity from imminent disaster and to assist the survival of the many diverse and beautiful forms of life on Earth. Future generations, and the other species that share the biosphere with us, have no voice to ask for our compassion, wisdom, and leadership. We must listen to their silence. We must be their voice, too, and act on their behalf. (Loy, Bodhi & Stanley, 2009)

APPENDIX 1

The Time to Act is Now: A Buddhist Declaration on Climate Change

Today we live in a time of great crisis, confronted by the gravest challenge that humanity has ever faced: the ecological consequences of our own collective karma. The scientific consensus is overwhelming: human activity is triggering environmental breakdown on a planetary scale. Global warming, in particular, is happening much faster than previously predicted, most obviously at the North Pole. For hundreds of thousands of years, the Arctic Ocean has been covered by an area of sea-ice as large as Australia—but now this is melting rapidly. In 2007 the Intergovernmental Panel on Climate Change (IPCC) forecast that the Arctic might be free of summer sea ice by 2100. It is now apparent that this could occur within a decade or two. Greenland's vast ice-sheet is also melting more quickly than expected. The rise in sea-level this century will be at least one meter—enough to flood many coastal cities and vital rice-growing areas such as the Mekong Delta in Vietnam.

Glaciers all over the world are receding quickly. If current economic policies continue, the glaciers of the Tibetan Plateau, source of the great rivers that provide water for billions of people in Asia, are likely to disappear by mid-century. Severe drought and crop failures are already affecting Australia and Northern China. Major reports—from the IPCC, United Nations, European Union, and International Union for Conservation of Nature—agree that, without a collective change of direction, dwindling supplies of water, food and other resources could create famine conditions, resource battles, and mass migration by mid-century—perhaps by 2030, according to the U.K.'s chief scientific advisor.

Global warming plays a major role in other ecological crises, including the loss of many plant and animal species that share this Earth with us. Oceanographers report that half the carbon released by burning fossil fuels has been absorbed by the oceans, increasing their acidity by about 30%. Acidification is disrupting calcification of shells and coral reefs, as well as threatening plankton growth, the source of the food chain for most life in the sea.

Eminent biologists and U.N. reports concur that “business-as-usual” will drive half of all species on Earth to extinction within this century. Collectively, we are violating the first precept—“do not harm living beings”—on the largest possible scale. And we cannot foresee the biological consequences for human life when so many species that invisibly contribute to our own well-being vanish from the planet.

Many scientists have concluded that the survival of human civilization is at stake. We have reached a critical juncture in our biological and social evolution. There has never been a more important time in history to bring the resources of Buddhism to bear on behalf of all living beings. The four noble truths provide a framework for diagnosing our current situation and formulating appropriate guidelines—because the threats and disasters we face ultimately stem from the human mind, and therefore require profound changes within our minds. If personal suffering stems from craving and ignorance—from the three poisons of greed, ill will, and delusion—the same applies to the suffering that afflicts us on a collective scale. Our ecological emergency is a larger version of the perennial human predicament. Both as individuals and as a species, we suffer from a sense of self that feels disconnected not only from other people but from the Earth itself. As Thich Nhat Hanh has said, “We are here to awaken from the illusion of our separateness.” We need to wake up and realize that the Earth is our mother as well as our home—and in this case the umbilical cord binding us to her cannot be severed. When the Earth becomes sick, we become sick, because we are part of her.

Our present economic and technological relationships with the rest of the biosphere are unsustainable. To survive the rough transitions ahead, our lifestyles and expectations must change. This involves new habits as well as new values. The Buddhist teaching that the overall health of the individual and society depends upon inner well-being, and not merely upon economic indicators, helps us determine the personal and social changes we must make.

Individually, we must adopt behaviors that increase everyday ecological awareness and reduce our “carbon footprint”. Those of us in the advanced economies need to retrofit and insulate our homes and workplaces for energy efficiency; lower thermostats in winter and raise them in summer; use high efficiency light bulbs and appliances; turn off unused electrical appliances; drive the most fuel-efficient cars possible, and reduce meat consumption in favor of a healthy, environmentally-friendly plant-based diet.

These personal activities will not by themselves be sufficient to avert future calamity. We must also make institutional changes, both technological and economic. We must “de-carbonize” our energy systems as quickly as feasible by replacing fossil fuels with renewable energy sources that are limitless, benign and harmonious with nature. We especially need to halt the construction of new coal plants, since coal is by far the most polluting and most dangerous source of atmospheric carbon. Wisely utilized, wind power, solar power, tidal power, and geothermal power can provide all the electricity that we require without damaging the biosphere. Since up to a quarter of world carbon emissions result from deforestation, we must reverse the destruction of forests, especially the vital rainforest belt where most species of plants and animals live.

It has recently become quite obvious that significant changes are also needed in the way our economic system is structured. Global warming is intimately related to the gargantuan quantities of energy that our industries devour to provide the levels of consumption that many of us have learned to expect. From a Buddhist perspective, a sane and sustainable economy would be governed by the principle of sufficiency: the key to happiness is contentment rather than an ever-increasing abundance of goods. The compulsion to consume more and more is an expression of craving, the very thing the Buddha pinpointed as the root cause of suffering.

Instead of an economy that emphasizes profit and requires perpetual growth to avoid collapse, we need to move together towards an economy that provides a satisfactory standard of living for everyone while allowing us to develop our full (including spiritual) potential in harmony with the biosphere that sustains and nurtures all beings, including future generations. If political leaders are unable to recognize the urgency of our global crisis, or unwilling to put the long-term good of humankind above the short-term benefit of fossil-fuel corporations, we may need to challenge them with sustained campaigns of citizen action.

Dr James Hansen of NASA and other climatologists have recently defined the precise targets needed to prevent global warming from reaching catastrophic “tipping points.” For human civilization to be sustainable, the safe level of carbon dioxide in the atmosphere is no more than 350 parts per million (ppm). This target has been endorsed by the Dalai Lama, along with other Nobel laureates and distinguished scientists. Our current situation is particularly worrisome in that the present level is already 387 ppm, and has been rising at 2 ppm per year. We are challenged not only to reduce carbon emissions, but also to remove large quantities of carbon gas already present in the atmosphere.

As signatories to this statement of Buddhist principles, we acknowledge the urgent challenge of climate change. We join with the Dalai Lama in endorsing the 350 ppm target. In accordance with Buddhist teachings, we accept our individual and collective responsibility to do whatever we can to meet this target, including (but not limited to) the personal and social responses outlined above.

We have a brief window of opportunity to take action, to preserve humanity from imminent disaster and to assist the survival of the many diverse and beautiful forms of life on Earth. Future generations, and the other species that share the biosphere with us, have no voice to ask for our compassion, wisdom, and leadership. We must listen to their silence. We must be their voice, too, and act on their behalf.

(Loy, Bodhi & Stanley, 2009)

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