

Buddhist Contributions to Climate Response

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THIS paper is an exploration through a Buddhist lens of the deeply challenging topic of climate change. I briefly review the impacts of climate change, framing the discussion in terms of people and places already suffering from climate crises. My focus then turns to the disturbing questions, why aren't people more concerned? and how has climate denial become normalized? I suggest that climate denial represents an environmental privilege for those in the developed world, fueled by polarized worldviews. Well-known figures in the West such as Al Gore and Bill McKibben insist that we (and particularly those in the developed world) have a moral responsibility to mitigate climate suffering and work toward a sustainable future. While most climate discussions are framed primarily in scientific terms, a growing body of research looks at the social and psychological aspects of climate change. In this context, I investigate an ethical role for Buddhism in addressing climate denial through Buddhist teachings and practices. As skillful means, these contributions can be helpful to a wide range of people, not just those who consider themselves Buddhist. I suggest that non-harming, compassion, mindfulness, and other accessible Buddhist principles can provide the foundation for a climate ethic based on true understanding of human interdependence with climate systems.

1. Climate Change Impacts

To set the stage for this discussion, I look briefly at the nature and scope of climate change, pointing out the necessity for taking action. Understanding climate change requires confronting both the complex global biogeophysical systems and the limits to human adaptive capacity. Though many still debate the consequences of global warming, I argue here that we must be proactive with responsive action, drawing on religious as well as scientific resources.

The physical predictions for climate change are well described and accepted by climate scientists around the world. These are summarized

in the most recent report of the Intergovernmental Panel on Climate Change (IPCC) released in April, 2014.¹ The warming atmosphere has already accelerated melt rates of ice shelves in the Arctic, Antarctica, and Greenland. Glaciers in almost all mountain ranges of the world are retreating rapidly, and thawing permafrost threatens to release unprecedented amounts of methane that would further accelerate climate change. With warmer days and nights now a global trend, growing seasons have shifted, encouraging pest migration into new forests and croplands. Ocean waters are becoming gradually more acidic, thinning the protective shells of many mollusks. Coral reef organisms have been particularly hard hit by changing sea temperatures and harsh sun. On both land and sea, species of all kinds are shifting their ranges, with unpredictable consequences.

Climate models indicate that feedback from interlocking global systems will generate unexpected impacts and irreversible changes. Extreme weather events and climate-related disasters will become more common and generate widespread human suffering. Key economic centers along the coasts are coping with sea level rise and associated storm and tide surges. Melting glaciers on the Tibetan Plateau are causing flooding in many great Asian rivers, impacting people, croplands, cities, and ecosystems in East, South and Southeast Asia.² In yet other areas of the world, rising temperatures are causing longer heat waves, more extreme and hotter wildfires, and more severe long-term droughts. Already people are migrating away from climate stressed areas in search of new homes and livelihoods.³ City, state, and national government budgets are being stretched beyond capacity by climate-related disasters. In some areas, people face widespread famine, in others, emotional stress and social chaos.

All predictions point to many more rough years as atmospheric levels of carbon dioxide, methane, and nitrous oxide continue to rise. We now know that even if we made significant changes to reduce these levels of greenhouse gases, human societies will still have to deal with the unfolding consequences of carbon that is already loaded into the atmosphere. Very quickly we are speaking of not just, as we say in Buddhism, the suffering of 10,000 beings, but the suffering of a 100,000 tens of 10,000 beings.

2. Understanding Denial

The science of climate change has clearly entered the domain of public discourse. Yet the scientific facts alone are not yet generating sufficient

motivation for wide-scale global policy change. Political resistance has blocked carbon tax proposals, carbon emission targets, and mitigation planning for climate change impacts. It has become increasingly apparent that human behavior and attitudes are determining the direction of planetary climate, whether driven by greed, fear, or ignorance.

In June 2013 I attended one of a series of conferences held at Garrison Institute in New York entitled “Climate, Mind and Behavior.” This institute has taken up the mission of developing climate conversations among social scientists, particularly psychologists and sociologists. Because of the Institute’s spiritual orientation, they are also interested in a role for Buddhist perspectives. Panel sessions raised questions such as: How will people manage the suffering generated by climate change? How can professionals in psychology and social science help cities, regions, and states find approaches that work? How do we understand “mitigation,” “adaptation,” and “resilience” as psychological and social concepts to complement the use of these terms in the natural sciences?

Academic scholarship has increased rapidly in this area, with research centers, curricula, and social psychological studies now finding critical mass. At the University of Otago in New Zealand, for example, they are studying *energy* cultures to determine how people make decisions about transportation choices, electricity use, and personal purchases. The research program is tied to energy education programs to test and apply results directly.⁴ Recent publications draw together studies from a variety of perspectives. The 2013 anthology, *Engaging with Climate Change*, reports findings related to climate anxiety, apathy, despair, uncertainty, and risk.⁵ A recent issue of the *Journal of the Study of Religion, Nature, Culture* contributes papers linking religious perspectives to climate concerns and human behavior.⁶ Many studies raise the question: why are people not paying attention to climate change? Why are they not galvanized into action? A number of theories have been proposed; for example, a 2014 book by George Marshall is entitled: *Don’t Even Think About It: Why Our Brains Are Wired to Ignore Climate Change*.⁷

2.1 Three Psychological Explanations

In order to consider Buddhist tools for working with climate denial, I first review three common psychological explanations. These are summarized in a Norwegian climate study by sociologist Kari Marie Norgaard.⁸ The first explanation is known as the *information deficit model*. In this model the assumption is that people do not know enough

to take action. If they knew more, they would respond with appropriate steps to reduce impacts. This is an axiomatic tenet in most environmental (and climate) education. We assume that by providing people with all the facts about climate change, they will then be motivated to take action. However, this proves not to be true. Psychologists describe flawed mental frameworks that limit people's ability to understand the scope of climate change. It turns out that knowledge in and of itself is not nearly so motivating as emotional engagement. Studies show that even well informed people may be paralyzed by too much knowledge or a sense that one's personal actions will not really make a difference.⁹ Another body of literature describes the media's role in highlighting uncertainty and raising doubt about climate science. While this is due in part to normative journalistic practices, it is also fueled by disinformation campaigns organized by climate change skeptics.¹⁰

The second explanation draws on what psychologists call *cognitive dissonance*, that people are able to hold two completely conflicting ways of viewing things in their minds without impacting their daily lives. For example, people observe and respond to short-term weather patterns and adapt to the current state: if it is a little hotter than usual, they wear lighter clothing or turn up the air conditioning. If it is a little colder than usual, they wear heavier clothing or turn up the heat. People make simple behavioral adjustments all the time to manage their comfort levels, usually understood as mechanisms for personal self-care. Climate concerns are held in another part of the brain, the place of cognitive learning in the cerebral cortex. According to this model, people can know about the impacts of climate change but still act in everyday life as if their actions had no relationship to climate change. As a general rule, people tend to discount the risks of long-term impacts relative to more immediate threats.

The third explanation focuses on *emotional blocks* limiting response to climate change. There can be tremendous insecurity, fear, and anxiety tied up with climate change predictions. It is, by now, a common media sight to witness the terror and overwhelm from massive flooding due to climate stress, or the despair and discouragement from extreme drought in ranching country. Such emotional states reverberate empathically between viewers and those caught in the climate cross hairs. We sense, if even vaguely, that such a disaster could strike close to home and we, too, might experience such difficult and unpleasant emotional states. Further, people in developed countries may feel a sense of helplessness and guilt around global inequalities, a fear of being seen as a bad and uncaring person. Such difficult emotions are not easy to manage; no one

really likes to experience these feeling states, especially when they are associated with lack of personal control. For some, climate change may generate an even broader ontological insecurity, a sense of threat to the entire continuity of life accompanied by a significant loss of meaning.¹¹

2.2 Six Types of Psychological Response to Denial

Psychological response to climate change has been documented through annual surveys conducted by the Pew Charitable Trust since 2009. Based on these broad samples of adult climate response from across all states in the U.S., researchers have described six psychological response types they call the “Six Americas.”¹² In order of increasing denial, these are: “the alarmed,” “the concerned,” “the cautious,” “the disengaged,” “the doubtfuls,” and “the dismissive.”

The 16% identified as “the alarmed” (as of September 2012) believe the facts presented by climate science and hold the greatest understanding about global warming. This group is the most informed and involved and also the most motivated. They are characterized by liberal political views and a belief in the effectiveness of government action. The next 29%, “the concerned,” report some exposure and understanding of climate change and some degree of concern; they know that something ought to be done but have few specific details. Over half endorse a stewardship ethic related to care for God’s creation as relevant to climate change. For the third group, the 21% labeled as “the cautious,” climate change is on their radar screen and they are starting to take note of it as an important phenomenon. Some may have learned about climate change from their children sharing information from school. However, they are unlikely to take action because they tend to be politically or socially inactive.

The remaining 30% of the sample are more actively constructing denial through their attitudes and actions or inaction. The “disengaged” (9%) have other pressing priorities and no extra energy for paying attention beyond the primary needs for safety, food, water and shelter. Those labeled “doubtfuls” (13%) aren’t sure they should even believe in climate change. They are willing to take seriously the claims by climate skeptics that anthropogenic climate change is a hoax. The “dismissive” (8%) represents the relatively small number of people who are actively working to discredit climate change. Many of these efforts are supported by well-funded institutes, media corporations, and political advocacy.

Is there a relationship between religious perspectives and climate perspectives? The surveys reveal clear affiliations between certain types of religious identities and degrees of concern and motivation. Those on

the left end of the spectrum that show the most concern tend to be associated with progressive or moderate religious values typical of liberal Protestant denominations. Those on the right end of the spectrum who show the least concern and greatest denial tend to be associated with evangelical or traditional religious beliefs. In general, correlations reflect general religious values more than specific denominations. This work offers some insight into the potential relationship between religious belief systems and attitudes of denial toward climate change.

2.3 Mechanisms of Social Construction of Denial

To further understand the mechanisms that support denial, I turn to Norgaard's in-depth study of climate perspectives in Norway. This year-long ethnographic study engaged Norgaard in many aspects of social life in this northern European country of highly educated and environmentally concerned people. Her findings indicate that climate attitudes are not only personally held but are culturally constructed through social norms and patterns. The work challenges the psychological explanations discussed earlier that place the locus of denial entirely within the individual. Because her case focus is a developed country, it suggests there may be parallel norms operating in other developed countries such as the United States, Japan, and Australia. It also raises the possibility that one could identify social norms and attitudes in specific *religious* traditions that favor the social construction of denial.

As described by Norgaard, Norwegians are highly engaged in their local communities, politically active in local governance, socially active with neighbors and peers, and physically active in the outdoors. They could hardly be called apathetic. Norgaard observed several key factors that actively contributed to the social construction of denial.¹³ First she noticed there were no appropriate social spaces for discussing climate change. Political meetings focused on local concerns and governance questions, often budget or policy issues. Climate change impacts were simply too far away for local governance agendas. Recreational settings also did not offer a place to discuss difficult issues such as climate change. In these settings (the gym, the outdoors, the bar) people were supposed to recover from life's stresses and not talk about hard things. In educational settings, teachers expressed the need to stay optimistic for future generations, thus limiting discussion of climate impacts and uncertainty. In sum, the dominant and normative social settings actively put constraints on what people could discuss.

Norgaard also pointed to Norwegian emotional norms that tend to favor maintaining control, a norm that is also prevalent in the United

States. She found three typical emotional responses to climate change. First, it is common to take a “tough” attitude and not to show feelings of powerlessness and uncertainty, even if you are indeed experiencing these emotional states. Second, it is important to “stay cool,” to not be too serious about anything, but especially not something as monumental as climate change. Third, it is important to “be smart.” If you want to engage climate change, then you need to be informed and have good answers for the challenges that lie before us. All three conversational patterns favor maintaining a sense of personal control and avoiding a sense of loss of control from facing the realities of climate change.

In all aspects of Norwegian social and conversation activity, Norgaard found tremendous pressure to conform. Above all else, it was critical to meet social standards to maintain standing in one’s social group. Thus it was unacceptable to ask difficult big questions and appear to be the nail sticking up. It was much easier to learn no more than was necessary and to keep attention focused on more socially acceptable topics. Furthermore, for mental health, it was important to focus only on what one person could do to be effective and keep a positive attitude toward life. In sum, the everyday ingredients of social norm formation actively supported the construction of denial. Her conclusion was that denial is not an afterthought. It is a convenience, a construction, and perhaps even a privilege.¹⁴

2.4 Climate Denial as Privilege

The possibility that climate denial is a privilege raises moral and ethical issues in the realm of environmental justice and equity. Human suffering from climate change is far greater in the developing world than in the developed world. Should not people with greater financial assets, education, and physical security be concerned for those who must face climate change with far fewer resources? Norgaard suggests that “people occupying privileged social positions encounter ‘invisible paradoxes’—awkward, troubling moments they seek to avoid, pretend not to have experienced (often as a matter of social tact), and forget as quickly as possible once those moments have passed.”¹⁵ Such paradoxes are particularly acute in the arena of energy extraction and production. Mountain top removal of coal, hydrologic fracking for methane, and tar sands mining are now common, if extreme, methods for supplying ever rising appetites for energy use in the developed world. They tend to take place in areas where local cultures have little say over the impoverishment of their homelands. People in privileged socioeconomic classes have almost no contact with these operations and their

destructive impacts on the environment. It is simpler to actively maintain a state of denial than to engage the moral complexities that arise in confronting climate change. This is both cognitive dissonance in action and socially constructed denial. We could call this an *environmental privilege* of the developed world. Environmentally privileged people thus reproduce existing power relations as they enact denial in everyday life.

3. Buddhist Contributions to Climate Dialogue

I have been focusing on the role of denial in climate change because I believe this offers an avenue where religions can work with climate psychology and social values. Before turning to Buddhism specifically, let me review five key capacities relevant to climate action and organized religion as identified by Gary Gardner.¹⁶ First, religions can engage their members, and for some denominations, this is a very large number of people who may be influenced or educated by religious positions. Second, religions can draw on moral authority to address climate change. Such authority is held by religious leaders in all faiths, as well as by respected religious texts. Third, religions provide meaning by shaping worldviews. A religious message or set of values related to protecting the environment can provide a platform for discussing climate change. Fourth, religions can use their physical and financial resources strategically to encourage energy conservation, develop social resilience, and make morally responsible investments. The cumulative effect of such choices can have a significant impact, as evidenced by the contributions of Interfaith Power and Light and the Interfaith Center on Corporate Responsibility.¹⁷ Fifth, religious communities have tremendous potential for building social capital to respond to climate change.

Despite these advantageous capacities, religions may also present barriers to taking up the challenges of climate change. Religious leaders can be reluctant to discuss climate issues with their congregations, thus unintentionally colluding with a certain level of social denial supported by their congregations. The religious message may require greater emphasis on salvation, on the ultimate personal religious goal rather than on worldly goals. Sometimes religious organizations can be aggressively obstructive in their actions to maintain climate denial. This is clear in the Six Americas study that identifies a link between evangelical beliefs and active dismissal of the realities of climate change.

The 2013 issue of the *Journal for the Study of Religion, Nature, Culture* provides an overview of some of the actions that have been

taken by religious leaders and organizations. A number of denominations have issued climate position statements or developed initiatives such as the Green Sanctuary Program, adopted by many Protestant churches.¹⁸ Many denominations include disaster relief service as part of their social mission and are ready to contribute when climate crises hit. Religious coalitions such as the World Council of Churches, Alliance of Religions and Conservation, and Interfaith Power and Light are able to advocate for climate awareness and action at the global level, leveraging their denominational resources to support initiatives.

How active have Buddhist groups been in the climate conversation? Stanley et al, authors of *A Buddhist Response to the Climate Emergency*,¹⁹ were highly motivated to engage Tibetan teachers and leaders because the Tibetan plateau north of the Himalaya Mountain range is the birthplace of so many critically important rivers systems of Asia—the Ganges, Brahmaputra, Salween, Yangtze, Mekong, and Irawaddy. They created a Buddhist Declaration on Climate Change that has been signed by 65 Buddhist leaders in 13 countries, including Gyalwang Karmapa XVII, Ven. Bhikkhu Bodhi, Joseph Goldstein, and Jan Chozen Bays, among others.²⁰ Buddhist temples have also initiated alternative energy projects in India, Japan, Canada, and Australia and participated in interfaith actions such as the Interreligious Dialogue on Climate Change, 2012.²¹ Climate web resources for Buddhists can be found at Ecobuddhism.org and OneEarthSangha.org as well as on Joanna Macy's extensive website for *The Work That Reconnects*.²²

Certainly, many basic Buddhist teachings and practices could be engaged in relationship to climate change. These would include the precepts or moral guidelines based on non-harming, as well as the central law of conditioned interdependence and causation that reflects a systems, or holistic, ecological worldview. Buddhist texts emphasize liberation from suffering through insight awareness based in meditation, and this practice could be applied to climate-related suffering. Perhaps most important may be the practices that strengthen intention and compassion on behalf of others. All of these are very rich offerings and can easily be applied to moral and ethical dilemmas deriving from climate change impacts. Furthermore, they are accessible to non-Buddhists or those not affiliated with any religion as skillful means for addressing the consequences of climate change.

However, it should be acknowledged that Buddhist leaders and organizations have limited influence in the wider global context of climate change. Certainly they have limited influence on the biophysical

world itself where ice sheets are melting, storms are becoming more severe, and sea level is rising. Likewise they have relatively limited influence on climate science or global policy regarding carbon emissions and the fossil fuel industry. For example, while individual Buddhists have participated in actions protesting the Keystone XL pipeline, there are few, if any, Buddhist environmental groups addressing this issue as a top priority. Buddhists, in general, have fairly limited religious influence on the climate denial campaign or the industrial scope of big carbon polluters. Naming these limitations is important so as not to overstate the possibilities at hand.

Having surveyed the territory, I find the greatest potential for a Buddhist contribution to lie within the psychological, ethical and social aspects of climate change. Through philosophical analysis and mindfulness practice, I believe that Buddhist teachings can make a significant offering that parallels Buddhist contributions to other environment and social justice issues. In this paper, I suggest three avenues for engaging Buddhist thinking in this challenging climate conversation. These are: 1) exposing dualistic thinking, 2) developing Buddhist climate ethics, and 3) building capacity for resilience.

3.1 Exposing Dualistic Thinking

Polarized views are one of the biggest impediments to progress with climate change. They generate tremendous suffering. Typically they are expressed as humans versus nature, the economy versus the environment, the developing world versus the developed world. Dualistic views tend to exaggerate differences rather than emphasizing commonalities. They reinforce oppositional positions, reducing creativity for shared solutions. From a Buddhist perspective, these positions would be seen as reflecting false views or false understanding of the self. It is this inflated idea of the self as one's central identity that blocks collaboration. Climate deniers and climate believers both form identity groups around their views, often defining themselves in opposition to the other. A similar oppositional pattern may exist between climate victims and climate benefactors. Yet seen from an interdependent lens, all parties live on the same planet with a single interconnected climate system. Denial functions very effectively to reinforce egocentric views and personal defenses. It is not uncommon for people to defend their personal environmentally privileged positions in public policy stances or to use denial to refute factual observations of climate reality. The North Carolina state legislature, for example, has passed a bill determining how high the sea can rise on their coastline.²³ The phrase "climate

change” was so politically charged that it did not appear anywhere in the legal policy. As a result of such limiting views, the scale of human and ecological suffering is minimized or dismissed.

Taking a sociological view, we can see that climate change perspectives often reflect differences in status, gender, race, governance structures, geography, cultures. We can use analytic reasoning to examine who is espousing which views in ways that provide political leverage and perpetuate oppositional thinking. Much has been written by people of the global South who are experiencing climate change more dramatically than people in the more well off North.²⁴ Regions and nation states with high levels of energy production show particularly great extremes that divide people into climate-derived socioeconomic classes. Climate privilege generates have and have-not groups in relation to health and poverty, food and security, transportation and pollution. Poor countries such as Bangladesh and Tuvalu, for example, find themselves at the helpless end of the climate mitigation spectrum. I suggest that such widely accepted dualistic thinking plays a key role in maintaining global power relations and climate silence.

Buddhist teachings on dualistic thinking are rich in philosophical analysis and practice options. I see two arenas where Buddhist thinkers and leaders could provide some insight into dualistic thinking as an obstacle to effective climate action. The practice field would be represented in Buddhist practice centers, in religious organizations, and with Buddhist religious leaders. Discussing dualistic thinking would be a natural extension of dharma topics already typical at Buddhist centers. These include such things as understanding interdependence of self and other, the influence and manifestations of ego and power, the challenge of refraining from polarizing views, the core practice of self reflection as part of action. This sort of teaching is cultural work, aimed at shifting the operational field from conflict to collaboration, from discord to respect.

In terms of philosophical analysis, individual writers and thinkers may be able to use Buddhist principles to promote climate policies that minimize polarized views. This might be seen as “small b” Buddhist work, serving the wider community. Drawing on a Buddhist approach, these thought leaders could facilitate dialogue through hearing all sides for their particular truths, based on direct experience with climate impacts. Buddhists or those using Buddhist ideas and practices may be in a good position to help create the conversation spaces flagged by Norgaard as currently unavailable in normal social discourse. Such spaces might make it possible to see how climate change affects all

parties. The emphasis would be on shared outcomes, thus reducing actions driven by self-interest. This is a natural reflection of Buddhist principles and fits well with Buddhist practice efforts.²⁵

3.2 Developing a Buddhist Climate Ethic

Ethics, including religious ethics, offer fundamental guidelines for minimizing suffering through practicing restraint. A climate ethic would frame such guidelines in the context of minimizing suffering or impact to the global climate through individual and social practices. Like other ethics, the aim is social stability, allowing human society to flourish without being continually under threat of harm.

A Buddhist climate ethic would be based in Buddhist ethical principles and a Buddhist understanding of human psychology. Buddhist texts explain human behaviors in terms of desire: the grasping or craving after something and the development of ego-identification with the particular craving. Suffering is explained as the perpetual human tendency to be “hooked” by addictive needs and short-term gratification. The three most basic desires are: 1) greed, the desire for more of something, 2) aversion, the desire for less of something, and 3) delusion, the desire for illusory options or self-made fantasies. Ignorance of one’s own desire patterns inevitably generates a state of suffering. Liberation from suffering comes from “seeing” the patterns with awareness insight.

With this basic Buddhist framework and some insight into the key role of denial, we can look at how the three aspects of desire might support climate change denial. Certainly, greed for the never-ending mountain of consumer goods keeps people entertained and oblivious to climate change. The more energy, connectivity, and comfort people desire, the less likely they are to be interested in the sources upon which their life supports depend. Understanding desire and practicing restraint can help reduce climate impacts from overconsumption. Likewise, aversion to complex and socially challenging situations such as climate change can quickly shut down conversations. Aversion polarizes dialogue over energy and transportation choices while carbon levels continue to rise. Perhaps delusion is the most prominent feature in climate denial; it is simply easier to pretend another better future will unfold, despite the observable facts, or pretend a technological fix will be found to save us from a climate-caused dystopia.

3.2.1 Supporting Well-Being

First, I propose that a Buddhist climate ethic support the goal of well-being broadly defined. Well-being is another phrase for contentment or

satisfaction, *santutthi*, in Pali. In Buddhist teachings, contentment is explained as the absence of grasping, the absence of desire. The state of satisfaction is free of pulls toward or away from identity-enhancing objects or activities. Well-being can be defined at multiple levels in support of a climate ethic. At the individual level, this would mean safe health, meaningful work, a sense of internal control in the face of climate change. At the social level, this would mean a safe and stable civil society, with appropriate governance and market structures to support community well-being under climate change. At the global level, this would mean the capacity to engage in collaborative support for planetary well-being. Spiritual well-being would reflect right relationship with self and community as well as right relationship with the natural world. It would be marked by ethical clarity and intention to refrain from harming as well as respect for other non-Buddhist ethical paths.

3.2.2 Practicing Non-harming and Compassion

Second, I propose that non-harming and compassion be the foundational concepts in a Buddhist climate ethic (as in all Buddhist ethics). Non-harming aligns well with the *precautionary principle*, an important policy principle that is well established in Europe and inscribed in European Union law. This approach is supported by a deep and thoughtful philosophical and scientific literature.²⁶ In brief, this principle advises restraint where the degree of harm is unknown. Many drivers of climate change such as extreme energy extraction, carbon dioxide pollution, and overconsumption would be moderated by application of the precautionary principle. Efforts to mitigate climate change and develop adaptive measures are based on reducing harm from climate change impacts where possible.

The principle of non-harming is an ethical path toward contentment, the reduction of desire and craving. This can be a spiritual or secular project. The small Buddhist country of Bhutan has extended this principle to develop a policy goal for national well being, measured as *Gross National Happiness*.²⁷ Bhutan is promoting this approach as a viable alternative to the global economic standard of GNP, gross national product. At University of Vermont, the Gund Institute of Ecological Economics is developing indicators for Vermont in support of legislation that would adopt gross national happiness as a measure of state well being. This is one effort to develop policy choices that could support a viable climate ethic based on the principle of non-harming.

The practice of non-harming is guided by five primary Buddhist

precepts for human action that help cultivate compassion, the caring for others' well-being as equal to and interdependent with one's own well-being. These five are: 1) not harming life; 2) not taking what is not given; 3) not participating in abusive relations; 4) not speaking falsely; and 5) not using intoxicating substances or behaviors. Each of these could be developed in depth in relation to climate change. Practicing these precepts in the context of climate change would provide social support for choosing sustainable behaviors. The core question becomes: what is our ethical obligation in the context of climate change? Knowing how dependent human society is on climate stability, what then must we do? Buddhist ethics view the individual as an active agent in a vast web of relationships where every action generates effects. Based on this worldview, I would argue that attaining ecological and economic sustainability under the challenges of rapid climate change *requires* ethical engagement. Individuals taking climate ethics seriously as an expression of non-harming and compassion could help lead actions toward ethically appropriate social, political, and economic policies.

The practice of compassion represents the internalizing of an understanding of non-harming. The cultivation of compassion could serve as a direct counter to the stifling qualities of denial. Though one may not have a direct personal experience with climate change, it is possible to develop compassion for the experience of others. For this to be a genuine response it must be based on actual facts on the ground, not some version of denial. The practice of compassion also provides a platform for living with grief and other emotional states generated by what may be devastating and irretrievable losses. Non-harming and compassion together then serve as the core practice orientation for working with the impacts of climate change.

3.2.3 Working with a Long View of Time

Third, I propose that a Buddhist climate ethic rest on the foundational law of karma, or cause and effect. To cultivate a long-term commitment to work ethically to mitigate climate impacts, this ethic could draw on the Buddhist sense of deep time. This is described in Buddhist texts in terms of multiple "kalpas," i.e. an unfathomable stretch of time before (and after) humans on earth. A karmic understanding of time derives naturally from a Buddhist perspective. Most everyday activity tends to be viewed in the very short time frame of an individual human life, based on our general tendency toward self-referencing. A climate ethic could emphasize the long eons of climate time, shifting perception to a more complete or appropriate scale for human endeavor. This would

help move the climate conversation away from denial and place it in more of a cosmic generational perspective. Such a long view of time develops useful virtues for working with climate change, such as humility, patience, perspective, endurance, and equanimity. Each of these are described in Buddhist ethical teachings as mutually supportive in the development of an awakened person. Equanimity is one of the Four Immeasurables, a virtue boundless in its positive contribution to a stable society. Climate change impacts will not be eliminated overnight; it will take many people's efforts over many decades to accomplish planetary climate stability. A climate ethic based in the practices of non-harming and compassion, and a deep view of time is one that can serve for the long scope of this project.

3.3 Building Capacity for Resilience

The third arena for Buddhist action is building capacity for resilience. This very practical concept is part of current discussions related to climate impacts, following close on two other dominant approaches. The first is *mitigation*, or efforts to dampen the inevitable impacts of sea level rise and storm flooding, often through mechanical means such as barriers, channels, dams. The second is *adaptation* to what has already changed, often in the form of preparedness actions. Building *resilience* is building the capacity to rebound psychologically, socially, economically, and politically from a climate impact. I believe Buddhist practice tools have a great deal to offer in this arena.

Mindfulness practice has become very popular and well known in the west, with active movements to bring mindfulness-based stress reduction (MBSR) techniques to schools, hospice, prisons, and business places.²⁸ Through deliberate attention to body, breath, and mind, the mindfulness practitioner becomes more fully engaged in the present moment. This sort of grounded presence is what you would want for emergency workers if they are dealing with a climate crisis in your town. I would not be surprised to see mindfulness training developed for climate disaster emergency response teams. The cover story on a recent issue of the new magazine *Mindfulness* features an Oregon police force that has taken mindfulness training to help them stay calm in emergency situations. Such training would help reduce anxiety, speculation, and projection about what is happening in a climate-related event and assist people in figuring out what is needed to return to normal social functioning. This is a very practical application of Buddhist skillful means. As Vietnamese Zen teacher Thich Nhat Hanh often says, "The most precious gift we can offer others is our presence."²⁹

To build capacity for resilience, it is necessary to include—not suppress or resist—the troubling emotions associated with climate change. I am suggesting here that emotional self-knowledge builds capacity for helping others break through denial. Two people working professionally in this arena are Joanna Macy and Susanne Moser. For some time, Macy has offered in-depth trainings on working with fear, grief, despair, and anger in the face of life-threatening environmental destruction. She teaches people how to accept environmental uncertainty and still be effective in tackling what needs to be done. Her exercises enable people to break the habits of helplessness and look directly at difficult emotions as well as guilt related to global inequities. As Macy points out, actually doing the work and breaking through denial generates energy.³⁰ It is holding these powerful emotions back that keeps people from finding the energy to meet the climate situation directly.

Climate change social scientist Susanne Moser has been speaking to people in the U.S. Congress and in higher education about using social science communication skills as well as Buddhist practices as a form of skillful means in climate work. In an article on leadership for climate change work, she writes about three key capacities. The first is being able to speak clearly and calmly about what is real. The second is being able to hold paradox, to feel what is in conflict and yet still be able to move forward. The third is being able to do grief work, accepting that climate change means people will be grieving the loss of the world as they know it. Good leaders need to be comfortable with their own grief work if they are to help others effectively.³¹

Stability and calmness increase the capacity for building social resilience in community. Buddhist virtue ethics clearly value equanimity and stability. The Dalai Lama models this beautifully in his steady presence in the midst of such devastating blows to his people and society in the past 50 years. As he says, “Because we all share this planet earth, we have to learn to live in harmony and peace with each other and with nature. This is not just a dream, but a necessity.”³² He models how to be with the suffering in the world and still take effective action. This will be critical as climate conditions deteriorate in the various ways that I have outlined—flooding, fires and heat, extreme weather conditions, loss of food crops. The Buddhist practice of equanimity means staying centered in the midst of changing climate conditions and being prepared for the impacts on social and economic support systems. Families, schools, governance structures all will struggle to make ends meet and stay afloat during the unexpected and unimaginable.

The Buddhist concept of *sangha* may offer another model for build-

ing capacity for resilience. Along with Buddha and dharma, sangha is said to be one of the three priceless treasures in Buddhism. Investing effort in building community strengthens the wider sangha of all beings. Thai engaged Buddhist activist Sulak Sivaraksa refers to this as doing “small b” Buddhist work. We might see it as an antidote to the social gaps identified by Norgaard that undermine climate response capacity. Sangha can be strengthened through supporting local ecological relationships, local governance structures, or neighborhood initiatives. It might mean coordinating disaster preparedness on a neighborhood block, taking steps to reduce consumption, or cultivating friendships to build social resilience.³³ Deepening awareness practice in a local experience of sangha can increase knowledge and attention to local seasons, weather, and a sense of living well in place. This is “small b” Buddhism in service to sustaining life, skillful means for climate change.

4. Buddhist Leadership for Climate Responsiveness

This paper has focused primarily on key Buddhist philosophical teachings and practices that may be useful in the global response to climate change, particularly in penetrating the privilege of denial. In this last section I suggest specific leadership roles for Buddhist teachers and activist/writers informed by Buddhist principles. With climate change rolling forward at unprecedented rates, causing suffering in multiple social and environmental arenas, leadership of all kinds is much needed. I propose three arenas in which Buddhist thinkers can play a leadership role in relation to climate change, giving voice to the ideas and practices described in this paper.

First, they can show *intellectual leadership* in the important realms of exposing dualistic thinking where it creates damaging polarization and political paralysis. Buddhist mind training is very strong in this capacity, pointing to the original polarization of self and other. Buddhist thinkers could take up the analytical task of deconstructing climate denial, particularly the western environmental sense of privilege in relation to climate comfort. With careful study of cause and effect and insight into the psychology of emotions, Buddhist thinkers are well positioned to identify some of the root causes of climate denial. This might be successful as a sangha discussion topic, drawing on shared insights across a range of personal experiences.

Second, Buddhist teachers are expected to offer *ethical leadership*, both as role models for students and as teachers articulating specific principles applicable to Buddhist climate ethics. As described earlier in

the paper, this would include practices of restraint, e.g. not consuming, avoiding energy and food sourced through extreme harm, managing personal impact. It would also mean promoting positive paradigms of well-being, drawing on Buddhist principles of contentment and equanimity. Buddhist teachers could also work with the central principles of non-harming and compassion as reflected in the many conundrums presented by climate change. This might mean choosing a specific arena impacted by climate change, either a natural habitat or a social neighborhood, where compassionate practice could be put in action. Or it could mean choosing a daily practice in relation to food, work, waste, or energy that would reduce climate harm. Buddhist teachers could engage the public in discourse based in a karmic view of deep time as a way to understand the long history of climate change and imagine the long future ahead.

Third, Buddhist teachers can provide *social leadership* to help build community resilience, both within the spiritual community as well as the larger communities of town, ecosystem, region. I am very impressed with the social leadership provided by the Soka Gakkai Buddhist community in its many global initiatives to mitigate environmental suffering.³⁴ I believe other Buddhist groups could learn a great deal from their commitment and social organization. In the context of a mindfulness or meditation setting, Buddhist teachings can facilitate personal work with troubling emotions that block action. The path for this work has been well blazed by experienced activists and thinkers trained in Buddhist philosophy and psychology.³⁵ As more people gain familiarity with this work they can carry the leadership task forward to effect positive social response to the threats of climate change. In sum, I believe these proposed Buddhist contributions can be based in principle, be strategic and effective, and be heartfelt in their motivation.

5. Conclusion

Thinking creatively to apply Buddhist teachings and leadership to climate change is a task of our times. Climate change cannot be ignored. It offers widespread opportunity to apply powerful Buddhist teachings in a contemporary setting and deepen personal practice. In light of the stubborn persistence of climate denial, this paper has offered specific responses to climate change from a Buddhist religious, ethical, and spiritual perspective. It is very much a starting point for dialogue and further engagement. As part of the 2013 symposium on *Buddhism and the Environment*, I offer this paper as a call to others to join the conversa-

tion—with scientists, social scientists, environmentalists, people of faith, and especially with those who are suffering the devastating impacts of climate change. This is a sober charge that will require much imaginative thinking and strong spirit. Right here in the midst of this great challenge is the opportunity for great joy and intimacy in approaching this fragile but resilient life.³⁶

NOTES

¹ The Fifth Assessment Report (AR5) is available at <http://www.ipcc.ch/report/ar5/>.

² See, for example, M. Monirul Qader Mirza, "Climate Change, Flooding in South Asia and Implications," *Regional Environmental Change* 11(1): 95–107, March 2011.

³ The United Nations High Commissioner for Refugees (UNHCR) has expanded its focus to include climate change induced displacement of refugees. See current initiatives at <http://www.unhcr.org/pages/49e4a5096.html>.

⁴ See research study results at http://www.otago.ac.nz/oerc/energy_cultures.html.

⁵ Weintrobe, Sally, ed. *Engaging with Climate Change: Psychoanalytic and Interdisciplinary Perspectives*. New York: Routledge, 2013.

⁶ Key articles are summarized by R. Veldman, A. Szasz, R. Haluza-DeLay, "Climate Change and Religion." *Journal for the Study of Religion, Nature, Culture* 6(3): 255–275, 2012.

⁷ To be released by Bloomsbury U.S./International in September, 2014. George Marshall interview comments on climate denial can be found at www.climatedenial.org.

⁸ *Living in Denial: Climate Change, Emotions, and Everyday Life*. Cambridge, Massachusetts: MIT Press, 2011. Key drivers are summarized on pages 63–95.

⁹ Kellstedt, Paul, Sammy Zahran, and Arnold Vedlitz, "Personal Efficacy, the Information Environment, and Attitudes toward Global Warming and Climate Change in the United States," *Risk Analysis* 28 (1): 113–126, 2008.

¹⁰ For example: Jacques, Peter, Riley Dunlap, and Mark Freeman, "The Organisation of Denial: Conservative Think Tanks and Environmental Skepticism," *Environmental Politics* 17 (3): 349–384.

¹¹ Norgaard, p 81.

¹² Reports available at <http://environment.yale.edu/climate-communication/>.

¹³ Factors contributing to social construction of denial are reported in Norgaard Chapter 4, pages 97–135.

¹⁴ Norgaard, pages 216–220.

¹⁵ Ibid, p 217.

¹⁶ Gardner, Gary. *Inspiring Progress: Religions' Contributions to Sustainable Development*. New York: W.W. Norton, 2006

¹⁷ See <http://www.interfaithpowerandlight.org/IPL> and www.iccr.org.

¹⁸ Religious climate positions are summarized at the Forum on Religion and Ecology at Yale, <http://fore.research.yale.edu/climate-change/statements-from-world-religions/>; the Green Sanctuary is described at <http://www.uua.org/environment/sanctuary/>.

¹⁹ Stanley, John; Loy, David; and Gyume Dorje, eds. *A Buddhist Response to the Climate Emergency*. Boston: Wisdom Publications, 2009.

²⁰ See http://www.ecobuddhism.org/bcp/all_content/buddhist_declaration/.

²¹ The conference report is posted at <http://safcei.org/wp-content/uploads/2012/03/Sri->

[Lanka-Interfaith-Dialogue-on-Climate-Change-report.pdf](#).

²² See www.joannamacy.net.

²³ Reported at <http://abcnews.go.com/US/north-carolina-bans-latest-science-rising-sea-level/story?id=16913782>. Earlier the Department of Environmental Conservation had removed climate change links from their website, see <http://thinkprogress.org/climate/2014/03/12/3397541/nc-climate-links-removed/>.

²⁴ See, for example, Eric Posner and David Weisbach, *Climate Change Justice*, Princeton, NJ: Princeton University Press, 2010; and Brian Tokar and Eirik Eigliad, *Toward Climate Justice: Perspectives on the Climate Crisis and Social Change*, Communalism Press, 2010.

²⁵ At Spirit Rock Meditation Center in Woodacre, California, the 2014 Earth Day celebration focused on climate change in response to calls from members to teachers to address the issue. See <https://www.spiritrock.org/earth-day-2014>.

²⁶ See, for example, Jale Tolsun, *Risk Regulation in Europe: Assessing the Application of the Precautionary Principle*. Springer Publications, 2013, and Carolyn Raffensperger, *Precautionary Tools for Reshaping Environmental Policy* Cambridge, Massachusetts: MIT Press, 2006.

²⁷ See <http://www.gnhbhutan.org/about> and <http://www.grossnationalhappiness.com/>.

²⁸ See <http://www.mindfullivingprograms.com/whatMBSR.php> for program philosophy and www.umassmed.edu/Content.aspx?id=41254 for ongoing trainings.

²⁹ For more information about Thich Nhat Hanh's life and teachings, see wikipedia.org/wiki/Thich_Nhat_Hanh.

³⁰ Macy's despair work principles and exercises are described in Macy, Joanna and Molly Young Brown, *Coming Back to Life: Practices to Reconnect Our Lives, Our World*. Gabriola Island, Canada: New Society Publishers, 1998.

³¹ See Moser, Susanne C., "Getting real about it: Navigating the psychological and social demands of a world in distress." In: *Sage Handbook on Environmental Leadership*, Rigling Gallagher, Deborah, Richard N. L. Andrews, and Norman L. Christensen eds., pp. 432–440, SAGE Reference Series on Leadership, Sage, 2012.

³² From the Dalai Lama's Nobel Peace Prize lecture, December 1989, available at <http://www.dalailama.com/messages/acceptance-speeches/nobel-peace-prize/nobel-lecture>.

³³ See, for example, a neighborhood initiative in Portland, Oregon - PREP, Planning for Resilience and Emergency Preparedness, <http://www.preporegon.org/>.

³⁴ See, for example, the April 2014 issue of *SGI Quarterly* on renewable energy, <http://www.sgiquarterly.org/feature2014apr-1.html>.

³⁵ e.g. Joanna Macy, Susanne Moser, John Seed, and others.

³⁶ This paper was presented in an earlier version to the 2013 Buddhism and Environment Symposium in Los Angeles. My gratitude to symposium hosts, Dr. Yoichi Kawada, Soka University, and Dr. Duncan Williams, University of Southern California, Center for Japanese Religions and Culture. My thanks also to Rebecca Gould and Nancy Wright for helpful review comments.