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The Ethics of Climate Change: Considering Scale and Responsibility

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“As human beings, we are vulnerable to confusing the unprecedented with the improbable. In our everyday experience, if something has never happened before, we are generally safe in assuming it is not going to happen in the future, but the exceptions can kill you and climate change is one of those exceptions.”—*Al Gore*¹

Climate Change is arguably the defining issue of the present era. Humanity’s use of fossil fuels since the dawn of the industrial age has brought about unprecedented advances in technology, wealth, and well-being. However, there is a price associated with this material progress. Unheard of quantities of carbon dioxide and other greenhouse gasses (GHGs) have been released into the atmosphere.² According to the Intergovernmental Panel on Climate Change (IPCC), “the last three decades [have] been successively warmer at the Earth’s surface than any preceding decade since 1850.”³ Over the past few decades, there has also been a degree of uncertainty about the relationship between the warming and human activities. Over time, a veritable consensus of scientific evidence has concluded that human activities *are* driving the warming of the planet. The issue remains highly politicized, and though some debate continues in political circles, there is very little debate in the scientific community relating to the fundamental notions of a warming planet and its underlying causes. Presently, any argument concerns how much harm is caused by warming, who is responsible for it, and who is responsible for mitigating its damage. Some climate skeptics, such as climatologist Dr. Roy Spencer, still hold that mild warming is merely a nuisance or may even be beneficial. Groups such as the IPPC, on the other hand, warn that the effects of climate change may be self-reinforcing and catastrophic in scale in the very near future.⁴ Despite uncertainty, the potential economic, environmental, and human consequences of climate change, including possible increases in tropical storm activity and rising sea levels, garner global attention.⁵

For the past several decades, various entities and institutions ranging from international to local in scale have engaged in political and ethical discourse on the topic of climate change. The now famous *Brundtland Report* represents this discussion in its infancy. The report published by the United Nations World Commission on Environment and Development (WCED) in 1987 outlined international goals for sustainable development and global cooperation in recognition of humanity’s increasingly global impact on the environment.⁶ Climate change was

¹ SPIEGEL. "SPIEGEL Interview with Al Gore: 'I Am Optimistic'" SPIEGEL ONLINE. November 2, 2009. Accessed March 1, 2014. <http://www.spiegel.de/international/world/spiegel-interview-with-al-gore-i-am-optimistic-a-658673.html>.

² Intergovernmental Panel on Climate Change Working Group I. "Summary for Policymakers." IPCC - Intergovernmental Panel on Climate Change. September 27, 2013. Accessed March 1, 2014.

³ Ibid.

⁴ Roy Spencer, “Global Warming Theory in a Nutshell,” *Global Warming 101*, <http://www.drroyspencer.com/global-warming-101> (accessed April 12, 2014). Roy Spencer, “Global Warming,” *Global Warming: Natural or Manmade?*, <http://www.drroyspencer.com/global-warming-natural-or-manmade> (accessed April 12, 2014). Intergovernmental Panel on Climate Change Working Group I. "Summary for Policymakers."

⁵ Ibid.

⁶ World Commission on Environment and Development, *Our Common Future* (Oxford: Oxford University Press, 1987)

yet to be a central issue at the time of the report, which focused more on sustainable development and conservation in the context of economic equity and progress.

The report was followed in 1992 by the Earth Summit in Rio de Janeiro, Brazil. The Earth Summit continued the sustainability discourse initiated by the *Brundtland Report*. However, in Rio, the issue of climate change took on its now characteristic importance and paved the way for an international Climate Change Convention⁷ in 1997 under the auspices of the Kyoto Protocol. The Kyoto Protocol is in essence an international treaty intended to place binding obligations on member states to reduce GHG emissions. The overarching principle in the Kyoto Protocol is the notion of “common but differentiated responsibilities” with respect to climate change.⁸ The idea is that developed nations which have produced the majority of GHGs and have benefitted the most from their production should bear the majority of the burden to mitigate climate change by reducing GHG emissions and assisting transitioning states.⁹ However, of the original 197 nations that attended the convention, only 191 signed and ratified the treaty. Notably, two of the largest polluters, the United States and Canada, opted out.¹⁰

It may seem that non-participation in the Kyoto Protocol represents a dubious ethical path. Certainly, those developed nations which opted out have received ample criticism for doing so. However, with consideration to climate change, the “right” actions are not easily decided upon.

This article will perform a close inspection of the ethical issues surrounding climate change. This research shows that climate change is an ethical issue that transcends space, time, and culture. A review of the literature reveals that the ethical implications of climate change are highly dependent on scale, perspective, worldview, and a host of intangibles that are difficult to measure. In donning a multitude of ethical lenses, this article will illuminate the intractable nature of the debates surrounding climate change mitigation and economic development. Ultimately, this article will survey the state of ethical discourse on the topic of responsibility leading inevitably to a discussion of scale and its role in the ethical schema.

The complexity of climate ethics can hardly be overstated. In his seminal paper on the topic, Stephen Gardner calls climate change the “perfect moral storm.”¹¹ Gardner broadly addresses the fundamental moral questions facing the present generation, such as what is the global ceiling for carbon? How should the well-being of current generations be weighed against that of future generations? Gardner neither answers nor attempts to answer these questions. His thesis, however, is that the moral questions presented by climate change are beyond challenging and highly susceptible to moral corruption. He observes that the diverse, complicating factors

⁷ U.N. Conference on Environment and Development (1992), UN.ORG, <http://www.un.org/geninfo/bp/enviro.html>

⁸ Kyoto Protocol to the Convention on Climate Change (Bonn: Climate Change Secretariat, 1998)

⁹ Ibid.

¹⁰ Ibid.

¹¹ Stephen M. Gardner, "A Perfect Moral Storm: Climate Change, Intergenerational Ethics and the Problem of Moral Corruption." *Environmental Values* 15, no. 3 (August 2006): 397-413. Environment Complete, EBSCOhost (accessed January 18, 2014).

associated with climate change ethics “threaten our ability to behave ethically” due to scope, scale, perception, and politics.¹²

Gardner’s “storms” converge like those that sundered the Andreas Gale in Sebastian Junger’s book *The Perfect Storm*. The first two storms are composed of the following characteristics: Dispersion of Causes and Effects, Fragmentation of Agency, and Institutional Inadequacy. The Global Storm addresses the spatial dimension of the aforementioned characteristics. The impacts of carbon emissions are not restricted to the area around the source (dispersion). Multiple agents contribute to the problem (fragmentation of agency). Finally, there is no global mechanism of accountability to enforce climate decisions (institutional inadequacy).

Gardner observes that the most ubiquitous themes in climate ethics are tied to Hardin’s “Tragedy of the Commons,” which advocates regulation via “mutual coercion, mutually agreed upon,” and the Prisoner’s Dilemma whereby scientific uncertainty, self-interest, and the embedding of culture may prevent individual actors from responding appropriately.¹³ He also points out that developing nations are poorly equipped to hold responsible parties accountable. Moreover, if a developed state were to acknowledge the need for global cooperation on climate change, they may be required to capitulate responsibility towards other global issues like poverty or inequity—an admission few developed nations seem ready to make.

In addition to spatial variables, there are temporal variables to address in climate change ethics. Hence, Gardner calls the second storm the Intergenerational Storm. Gardner observes that climate change is a “severely lagged phenomenon.”¹⁴ CO₂ may stay in the upper atmosphere anywhere from 5 to 35,000 years.¹⁵ The effects are back-loaded and deferred. Thus, today’s conditions are largely the responsibility of previous generations, and present contributions will likely only affect future generations—who may or may not ever exist. This situation presents a temporal dispersion problem and a temporal fragmentation of agents responsible for addressing the climate problem. Temporally fragmented agents cannot work in unison and must act on faith that their counterparts in future generations will act in accordance to plans set in motion by previous generations. Gardner warns that it is likely that present leaders are biased towards the

¹² Ibid. 398. In his seminal 1968 article, “The Tragedy of the Commons,” Garret Hardin examines the interaction between self-interest and common resources, illustrated at least in part by a hypothetical scenario involving multiple herdsmen grazing cattle on public lands (see references). Initially, each herdsman utilizes the public resource equally. However, self-interest eventually motivates one herdsman to increase the size of his herd. It follows that the other herdsmen acting on their own self-interest also increase the size of their herds in order to maximize their own benefit from the land. Eventually, the carrying capacity of the land is surpassed to the detriment of all the herdsmen. From this logic, Hardin argues that only a system of regulation, “mutual coercion, mutually agreed upon,” can prevent such excesses, thereby protecting the public interest in common resources (p. 1247). The Prisoner’s Dilemma is a thought exercise in the canon of Game Theory (see Poundstone, 1992) used to explore the tension between rational self-interest and cooperation in situations where the actors involved are unaware of how counterparts will act. The thought experiment is sometimes presented in narrative as a case of two suspect criminals (A and B) who face a variety of outcomes based on their decision to act out of self-interest or cooperation without prior knowledge of how their counterpart will act. If suspect A and suspect B both confess, both will serve long prison sentences. If either confesses and the other is silent, the silent suspect will receive a long prison term while the confessor goes free. If both remain silent, they each receive a minimal prison term.

¹³ Ibid. 399

¹⁴ Ibid. 402

¹⁵ Ibid. 403

interests of present generations. This bias for the present leads to an iteration of effects and policy failures over time, whereby today's inaction will affect additional future generations that may or may not be spared. Moreover, future generations will be faced with the same ethical conundrums present generations face.

Finally, Gardner addresses an additional form of inadequacy, which combined with the spatial and temporal storms, leaves humanity on the precipice of a very slippery ethical slope. The final storm Gardner addresses is that of "theoretical ineptitude."¹⁶ Gardner does not go into specifics but asserts that even our best theoretical models do not handle the future very well. At least two aspects of modern culture are at play. First, despite great scientific advances, predicting future events with certainty and specificity is still beyond reach. Secondly, human evolution has engendered little capacity to sense slow-moving processes, and the instant-gratification culture of modern society has compounded deficiencies in long-term thinking.

Given these challenges, Gardner's final commentary addresses the high possibility of moral corruption in the face of climate change. Leaders may engage in strategies of distraction, complacency, unreasonable doubt, selective attention, delusion, pandering, false witness, and hypocrisy. Gardner observes that many of these strategies are already at play—particularly selective attention. Policy-makers tend to emphasize the challenges presented by the Global Storm, thus, present generations miss the ethical implications of the Intergenerational Storm and Institutional Inadequacy completely. It seems with each subsequent generation that current governments are doing their best to mitigate climate change, given the anarchic international situation, but in reality, this situation allows the metaphorical "can" to be kicked down the road iteratively. However, there is far more to this ethical narrative.

While Gardner observes the ethical challenges of climate change more generally, ethicists Ian Smith and Robert Atfield examine the issue on an individual and/or mediated scale. Most of the present discourse on climate ethics, Kyoto in particular, focuses on the accountability and responsibility of states. What about individual actors? Ian Smith expands Gardner's observations and explores Atfield's attempt to define individual culpability to climate change.¹⁷ Atfield argues for mediated responsibility between individuals, an argument that could easily be extended to include mediated culpability of collective actors such as corporations or businesses. He employs a model called the "Harmless Torturer" to assign mediated responsibility. In the case of the Harmless Torturer, 1,000 torturers turn 1,000 dials. Each click of the dial does not inflict a noticeable amount of pain on the tortured. However, the cumulative effect causes a great amount of pain.¹⁸ The Harmless Torturer model argues there is mediated responsibility due to the combined effects of each individual's actions. Atfield further applies this model to GHG emissions and climate change. Although Atfield's work does not address corporations or other collective entities specifically, it is arguably applicable.

However, Smith argues it is inappropriate to apply Atfield's model to the corporate model. In doing so, Smith makes a strong argument against consequentialism, because in the acts of any particular individual in the Harmless Torturer model, the effects are not bad. However, Smith also cites Derek Parfit saying, "mistakes in moral mathematics that people can make,

¹⁶ Ibid. 407

¹⁷ Ian Smith, "On Explaining Individual and Corporate Culpability in the Global Climate Change Era," *Journal of Business Ethics* 112, no. 4 (January 21, 2013): 551-558.

¹⁸ Ibid. 552

where the mistake in question is in ignoring sets of acts while assuming that ‘if some act is right or wrong because of its effects, the only relevant effects are the effects of this particular act.’”¹⁹ Essentially, Parfit is pointing out that singular actions which contribute to a collective harm may, in fact, be wrong actions.

Smith makes four central arguments against the mediated responsibility of corporations and/or individuals. First, not all GHG effects are negative, so there are problems with defining these emissions as “bad.” Secondly, carbon emission acts are not malicious as in the Harmless Torturer and therefore cannot be considered “wrong.” He also questions whether corporations are moral entities. Finally, he observes Gardner’s intergenerational ethics problem considering that current climate effects are due to CO₂ that was dispersed long ago.²⁰

The first two arguments are relatively self-explanatory, albeit incomplete. However, the question as to whether corporations are moral entities and Gardner’s deferment problem require more examination. Essentially, Smith argues that corporations do not have “belief-desire,” and as a consequence cannot act as moral entities or be held culpable for their GHG activities.²¹ Secondly, because of Gardner’s deferment problem, any GHGs that individuals or corporations produce will not harm existing people—if anything, they will harm future people that may or may not exist. Therefore, their responsibility for the harms of these GHGs is in question. As an example, Smith demonstrates that corporations are currently not held legally liable for GHG emissions because of an inability to find persons who have been harmed by their emissions. He also points out that GHGs have never been classified as a pollutant in the ethical sense, because water vapor is also a GHG. He states, “I am quite confident, we do not want to admit that water is a pollutant.”²² However, there are several problems with Smith’s position on individual culpability.

Smith illustrates a variety of important ethical issues associated with climate change; however, his final analysis is problematic for several reasons. (1) Most of us are now aware of the eventual harm of GHG emissions. Therefore maliciousness may apply. (2) There are positives to every action though CO₂ benefits do not negate the harm entirely. (3) Corporations act as collective consciousness. It could be argued that the operations of varying opinions on a shareholder board do not differ substantially from the cognitive functions of an individual mind. Therefore, corporations may indeed have beliefs and desires. (4) Anything in excess could be considered a pollutant. In a flood, homes are “polluted” with water. However, Smith rightly points out the intergeneration problem. It is difficult to assess culpability for harm to individuals who do not yet and may not ever exist. For answers to these questions, ethicists must look at a broader spectrum of ethical lenses.

Ultimately, addressing or not addressing climate change has economic, social, and environmental costs. A central question in ethical discourse asks who is responsible for paying these costs. Many models have been designed to work out a distribution of burden, and while the

¹⁹ Ibid. 552

²⁰ Ibid. 554

²¹ Ibid. 554; Belief-Desire-Intent Model is a model of human reasoning and intention (see Bratman, Michael). Smith uses the model in this context to differentiate between humans, as rational actors, and corporations which he perceives to be lacking this necessary human-like reasoning and therefore ethically unaccountable.

²² Ibid. 556

specifics of these models will not be discussed here, the ethical framework upon which they are based will be examined.

Edward Page examines three current methodologies of distributing the burdens of climate change: The Oxfam Model, The Caney Model, and the Global GFI Model.²³ Each model weighs “ability-to pay” and responsibility variables to assign a burden percentage to each nation. By exploring these models, Page offers a review of the factors at play when deciding burden attribution. Additionally, Page offers a duty-based ethic. Page works from the assumption made by the United Nations Framework Convention on Climate Change (UNFCCC) that climate change should be dealt with in the Kyoto model of “common but differentiated responsibilities [CBDR].”²⁴ The United Nations seems to believe that all serious ethical models presently put forth point to the ultimate conclusion of CBDR with only philosophical novelty separating any one approach. However, Page argues that the differences in philosophical basis have strong bearing on the appropriateness and outcome of a given burden model.

First, Page asserts that current GHG emissions by countries only reveal a portion of their responsibility. Because GHGs are cumulative, much of the climate harm was caused by people who are no longer alive, as explained by Gardner. This raises the question: should current generations carry that burden? There is also the problem of future contributions to the problem demonstrated by developing and transitional nations. As a model for attributing burden, Page identifies two paths: strict liability and conditional liability. Page defines “strict liability” as liability stemming from a nation unknowingly causing climate harm, while “conditional liability” stems from knowingly causing harm.²⁵ Depending on whether an ethical system places burden on a society for harms caused unknowingly, these two factors provide the starting dates for recording burden liability in different temporal locations. The first is the start of the industrial revolution and the other around 1992 when climate change was understood to be “real.” This question of “when” a society’s GHG emissions become that society’s burdens has the potential to dramatically alter the burden attributed to a particular state and the responsibility landscape, as a whole.

There is also a flip-side to the burden question that asks not “who has contributed GHGs and how much?” but “who has benefited from these GHG emissions?” Page identifies the issue of “non-identity” in assigning culpability to present generations.²⁶ This proposal, a subset of the “beneficiary pays” philosophy, argues that present people are beneficiaries of GHG emissions as they would not exist at all were it not for industrialization. Therefore, their very existence implies a share in the burden of mitigating climate harms. Even so, this factor is further complicated by the “non-reciprocity problem,” whereby beneficiaries never agreed to receive benefit contingent on a moral debt owed to their contemporaries that did not benefit.²⁷ While the present generation may owe their existence and wealth to GHG emissions, they did not

²³ Edward A. Page, "Distributing the Burdens of Climate Change," *Environmental Politics* 17, no. 4 (August 2008): 556-575. Environment Complete, EBSCOhost (accessed January 18, 2014).

²⁴ *Ibid.*; Kyoto Protocol to the Convention on Climate Change

²⁵ Page, "Distributing the Burdens of Climate Change." 559

²⁶ *Ibid.*

²⁷ *Ibid.*

knowingly enter into a beneficiary agreement to pay a future debt for this benefit, thereby making it very difficult to assign culpability to them.

Yet another factor considered by Page is the “ability to pay.” Page is looking for causal responsibility, beneficiary responsibility, and the ability to pay in any viable burden model. He examines various approaches: egalitarianism which he argues unfairly asks the wealthy to “level down” to universal poverty, prioritarianism which is the current paradigm of capitalism and is increasing the inequity gap, and the distributive ideal of sufficiency which holds that “benefits and burdens should be distributed so that people have the sufficient capacity to pursue the values they care about.”²⁸ He does not prescribe a particular “ability-to-pay” model. Conversely, he argues that the appropriateness of a model is dependent on other factors.

Page suggests that different distributive principles might hold sway on different geographic scales. He also suggests that the model of distributing responsibility amongst countries discounts the non-contributors (poor individuals) and major contributors/beneficiaries (rich individuals) within a country. Moreover, he advises that the methodology used to identify responsible parties and the model used to calculate burden should remain separate. Of the three models under examination, he found the Greenhouse Development Rights (GDR) model to be both philosophically and pragmatically legitimate, mainly because it accounts for both national and individual responsibility and all the other factors previously mentioned.²⁹ Still, he finds that there is no single principle or approach at present that works completely.

Each of the ethical explorations up to this point consider climate change an issue of ethical economics or pragmatism, but there are additional perspectives to consider. Eleanor Brown argues that a proper framework for dealing with climate change will entail both market and moral forces.³⁰ Her argument is substantiated with anecdotal and intuitive evidence implying that most of society agrees that they have a moral responsibility to the environment. She also argues that this common morality is best expressed at the community level. Her position is ultimately a mixture of natural law and virtue.

Brown advocates a new paradigm towards the earth’s air and international waters under the auspices of a new concept of the commons. She argues that Hardin’s Tragedy of the Commons Model is a false dichotomy between free-markets and regulations. Both of these extremes have problems: regulations are difficult to administer, while free-markets, focused on

²⁸ Ibid. 565. Egalitarianism, as discussed by Edward Page, is the theory of equal distribution of goods and benefits to all people. Page finds this theory problematic in that it “looks favourably [sic] on outcomes that reduce inequality even when this is in the interests of no one.” Page distinguishes Prioritarianism from Egalitarianism. Prioritarians do not subscribe to the notion that equality is a desirable end. They do, however, observe a deontological duty towards the less fortunate. As for the distributive ideal of sufficiency, this theory embraces the notion that a certain level of well-being is necessary for each person to pursue the ideals they care about. Benefits and Burdens should be distributed to a degree to allow for a reasonable expectation of attaining one’s goals but no further.

²⁹ Ibid. 571. The Greenhouse Development Rights is a model for climate change burden attributions that calls for an ‘emergency climate programme’ (ECP). Burden attribution under this model would be handled by a GHG ‘emissions budget’ and a formula with weighted variables. The global emissions budget would be divided amongst countries by a proportional index with historical contribution to GHGs weighted at 40% and ability to pay weighted at 60%.

³⁰ Eleanor Weston Brown, “A Common Morality: Toward a Framework for Designing Fiscal Instruments to Respond to Global Climate Change,” *Widener Law Review* 15, no. 2 (March 2010): 391-408. Academic Search Complete, EBSCOhost (accessed January 18, 2014).

short term gain, do not always engender long-term stewardship. She notes, “the increasing shift toward privatization of things which humanity once thought irreducible to exclusive ownership, reflects, at best, a misguided confidence in imperfect markets, and at worst, an exercise by the powerful to further concentrate wealth and control of precious global resources”³¹ On the other hand, she cites the tendency of society to harm the publically-held commons when there is no self-interested owner to grant the environment a commodity value, as noted by Hardin. As a result, Brown advocates a hybrid model of responsibility. She demonstrates this model by building a continuum based on the ancient Roman land law that divides earth’s resources. This continuum begins with things divinely ordained to all people and ends with actual private property. In between, there are various hybrid states of land ranging from stewarded (semi-private) to conserved land (regulated commons). While not addressing climate issues specifically or prescriptively, Brown offers a useful perspective on the global commons involved in the climate change predicament. Another of Brown’s contemporaries, Menno Kamminga, offers even more insight beyond the typical economic and pragmatic arguments.

Ethics do not exist in a vacuum. There are many other factors to consider for an ethical system to exist beyond the realm of thought experiments. Kamminga argues that the ‘modes of moral discourse’ framework, devised by James Gustafson, is a valuable addition to the climate ethics discourse.³² He particularly looks at Kyoto. Gustafson’s four modes include: ethical, prophetic, narrative, and policy. Kamminga’s goal is to highlight the insufficiency of purely ethical modes of attributing responsibility and mitigation of climate change. Such an endeavor disregards political and cultural realities. His argument suggests a different kind of pluralist approach, “climate ethics that is pluralist: broad and interdisciplinary, yet presumably also conflictual and tragic.”³³ He argues that a pragmatic and actionable ethical system must fit amongst the varied structures of politics, identity, and culture. He also insists that such a model must be ethically viable, whether or not climate skeptics are correct.

Kamminga observes that ethical discourse, as found in deontology and consequentialism, insists that rational methodology be developed that appropriately describes a moral basis for tackling climate change. However, he argues that such a discourse alone cannot tackle the problem in a ‘real world’ situation. The various forms of ethical discourse as mentioned in other literature might delineate responsibilities based on “ability to pay,” “aiding the worst off,” or “the greatest happiness principle.”³⁴ However morally and ethically sound these utilitarian and deontological theories, there is no guarantee of nations working together to adopt them.

Kamminga provides several examples of non-ethics based criticism of ethical methodologies towards climate change. For instance, narrative discourse reveals a criticism that ethical discourse assumes a world community “that does not, cannot (and perhaps should not) exist.”³⁵ From a policy perspective, following ethical theory might be deemed revolutionary,

³¹ Ibid. 406

³² Menno R. Kamminga, "The Ethics of Climate Politics: Four Modes of Moral Discourse." *Environmental Politics* 17, no. 4 (August 2008): 673-692. Environment Complete, EBSCOhost (accessed January 18, 2014).

³³ Ibid. 674

³⁴ Ibid. 675-76

³⁵ Ibid. 677

because “states are agents of local rather than global justice,” and it stands to reason that taking actions against state interests in the name of global interests could be considered treasonous.³⁶ By revealing the criticisms of these alternate modes or lenses, Kamminga opens the door to a broader climate discourse. Kamminga’s narrative discourse takes into account the morality of national identities and cultural stories. Narrative discourse finds that morality only exists within communities and that the “nation remains the largest social unit compatible with notably redistributive sacrifices for others.”³⁷ He does, however, note the potential of altering national narratives, as Al Gore’s work on climate change has done, towards developing community-based climate solutions. However, narrative discourse has limitations in the realm of policy and international cooperation.

Policy discourse, on the other hand, “asks what is desirable within the limits of the possible.”³⁸ This discourse also acknowledges that human action is rarely driven by a concern with ethics. While moral considerations certainly influence individual and collective behavior, self-interest seems the more persistent consideration particularly at scales larger than the family, community, or state. Policy must demonstrate results based on concrete actions which benefit the state. However, on the international stage, governance is anarchic making policy difficult if not impossible. Policy is also constrained by the “actual moral foundation of the contemporary climate regime.”³⁹ Regimes such as Kyoto are still devised along the status quo morality of industrialization and growth. Kyoto itself, the author insists, was a “small miracle.”⁴⁰

Finally, Kamminga’s prophetic discourse comes in two flavors—indictment and green politics. Indictment is a criticism of the status quo and its root causes. “It shows dramatically how far human society has fallen from what it should be.”⁴¹ The indictment discourse is most apparent in apocalyptic and utopian environmental narratives. Then, there is green politics which focuses on a shift away from anthropocentrism to biocentrism or ecocentrism, decentralization, and limits on growth. Current approaches to climate change are criticized by the green politics lens for being overly anthropocentric as in the *Brundtland Report* or overly accepting of the status quo as in most of the modern environmentalism movement. In the green politics discourse, new political arrangements range widely from anarchy to world government.

Ultimately, each of these narrative lenses must be taken into account when devising an ethical framework—for it may be unethical to create a framework that will never be used and never help anyone. To this degree, Kamminga notes the usefulness of the prophetic lens. He points out that it is unlikely that Kyoto will meet its goals. Basic values must change, and there lies the role of the prophetic lens. Green politics, while idealistic and limitedly useful in the current regime, provides a vision for what society ought to be. However, it fails the incrementalism test of policy. These value shifts require too much speed. Kamminga insists that

³⁶ Ibid. 677

³⁷ Ibid. 678

³⁸ Ibid. 680

³⁹ Ibid. 681

⁴⁰ Ibid. 683

⁴¹ Ibid. 684

“climate ethics should become pluralist by making room for all four perspectives with their shared yet different articulations of climate morality and promoting critical interactivity between them for the purposes of mutual recognition and limitation.”⁴² Kamminga’s prescription is optimistic and lofty, indeed.

Each of the insights shared by the various ethicists recounted in this paper represents a portion of what must be considered as society moves forward to address climate change. Issues of “who should pay” and “who *can* pay” will likely continue to complicate the task of establishing an effective international climate regime. Still, it seems that something must be done. It is encouraging that such an admirable amount of intellectual muscle has been put to the task of determining what the “right” way to proceed is. However, in lieu of or in spite of a common ethical compass across nations, it is time to put *actual* muscle to the task of mitigating climate change. If not, no one may be around to discuss whether it was handled ethically or not! The challenges ahead are daunting. It seems they will reveal our innermost divisions of identity, ideology, and economy. It is likely that in the process, some will bear unreasonable burden, and some will shoulder unreasonable consequences. But most importantly, it is possible that in addressing these challenges, humanity may finally put to bed old divisions and antiquated notions of isolation and independence—or it may not, for which it is possible that the consequence will be most dire. Still, international regimes such as Kyoto are heartening. Such an international treaty, whatever its faults, indicates an understanding of a common interest and an acknowledgement of at least some universal values. In studying the ethics of climate change, humanity has tapped into the most fundamental of questions—who are we and what do we stand for? How we answer these questions, will likely diffuse into every aspect of our ethical lives from here to perpetuity.

⁴² Ibid. 689

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