The Social Life of Blame in the Anthropocene

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ABSTRACT: The Anthropocene can be understood as a crisis of blame: it is not only a geological era but also a political zeitgeist in which the marks of human agency and culpability can be perceived nearly everywhere. Treating global climate change as a metonym for this predicament, I show how life in the Anthropocene reconfigures blame in four ways: it invites ubiquitous blame, ubiquitous blamelessness, selective blame, and partial blame. I review case studies from around the world, investigating which climate change blame narratives actors select, why, and with what consequences. Climate change blame can lead to scapegoating and buck-passing but also to their opposites. Given that the same ethical stance may lead to radically different consequences in different situations, the nobleness or ignobleness of an Anthropocene blame narrative is not a property of the narrative itself, but of the way in which actors deploy it in particular times and places.

KEYWORDS: Anthropocene, attribution, blame, causality, climate change, discourse, responsibility, Risk Society

Introduction: The Anthropocene and the Crisis of Responsibility

The subtitle of a seminal article on the Anthropocene poses a question: "Are humans now overwhelming the great forces of nature?" (Steffen et al. 2007) The authors answer in the affirmative, but one could as easily do the opposite. Humans have not overwhelmed nature: the earth system retains its ability to surprise, defy, and elude us (Hulme 2011). Besides, it is not "humans" who are disturbing the planet: it is *particular* humans (Westerners, consumers, fossil fuel elites, etc.), under particular historical (modern), political (neoliberal), and economic (capitalist) circumstances (Chakrabarty 2009: 216; Malm and Hornborg 2014; Sayre 2012). The Technocene, the Econocene, or the Capitalocene would be more accurate terms, suggest some scholars (Malm and Hornborg 2014: 4)—or perhaps the Westocene, the Richocene, or the Consumocene.

These concerns are valid, but they must not divert all of our attention. Call it what we may, attribute it to whom or what we may, we *do* live in an age in which at least *some* human activities are so greatly altering the earth system that, arguably, "[n]ot a hair or a crumb of it is still 'natural', if 'natural' means nature being left to itself" (Beck 1992: 81). We must discuss this predicament under one heading or another. For convenience, but fully cognizant of the liabilities of the term, I will use the word "Anthropocene."

I will examine specifically the case of global climate change. This phenomenon is often taken as a yardstick, metonym, or epitome of the Anthropocene more generally (see for example Sayre 2012; Steffen et al. 2007). This is not simply due to the magnitude of global warming's impacts,

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but also to their ubiquity and boundlessness. By altering the atmosphere—the biosphere's basic medium—climate change leaves essentially nothing untouched (McKibben 2006[1989]). This condition is, in my view, the essence of the Anthropocene concept. The *idea* of climate change, too, is now omnipresent "across the full parade of human endeavours, institutions, practices and stories." (Hulme 2009: 322) And that idea, quite independently of any actual climatic impacts, is now altering people's lives in real material ways (see for example Degawan 2008; Rudiak-Gould 2014; Weisser et al. 2013).

With human influence comes moral liability, and it is here that I focus my analysis. I am not the first to take this approach: Anthony Giddens considers the "crisis of responsibility" (Giddens 1999: 8) to be central to understanding our new human relationship with nature, and Jesse Ribot contends that climate change has ushered in "a new politics of cause and blame" (Ribot 2013: 168; also see Taddei 2008). What still requires scholarly attention, though, is the manifold ways in which this climatic crisis of responsibility plays out in specific places and situations and in the hands of specific actors. The literature on climate change ethics (see in particular Caney 2005; Gardiner 2011; Garvey 2008) queries who we *ought* to blame for climate change, but I am more concerned in this article with who *does* get blamed, by whom, in what situations, for what reasons, with what consequences. If I make an ethical intervention, it is only to suggest that we attend to the goodness or badness of the *consequences* of climate change blame narratives used in real situations.

The Climate of Blame: Four Propositions

I begin with four propositions about climate change and blame that emerge from the literature on climate change, the Anthropocene, and culpability. My aim is to illustrate the multiplicity of blame narratives for climate change that are logically possible, without advocating or opposing any of them. Strictly speaking, *blame* implies that an agent has acted in such a way as to cause something harmful despite having been able to foresee that consequence and act differently (see Kermisch 2012 for a useful discussion). But I will use the word in a slightly wider sense, encompassing not only agents being blamed for causing climate change but also events being blamed on (attributed to) climate change (see Hulme 2014). As will become apparent later in this article, the social life of climate change blame rarely makes a hard distinction between these two meanings of "blame"; and since this article is essentially empirical rather than philosophical in its aim, I will follow suit.

Proposition 1: Climate Change Invites Ubiquitous Blame

Climate change can make everything and everyone blameworthy. It is indeed perfectly suited to this sort of creeping accusation. First, it is, or at least is often understood to be, invisible (Rudiak-Gould 2013). To not be able to *see* it anywhere is to be able to choose to *perceive* it everywhere, if one so wishes. Second, it is omnipresent: weather affects every, or very nearly every, living thing, so its influence can always be suspected. Third, it extends human agency to the sky—which, in the Western imagination, is understood to be the last truly wild thing, the only perfectly untouchable "domain of the gods" (Donner 2007; McKibben 2006[1989]). Western adherents of "the cult of the wilderness" seek out "pristine" nature partly because they imagine it to be refreshingly removed from human politics and accusation. Now that climate change has made the most "natural" thing into a human artifact, that apolitical realm is lost: "There's nothing there except us" (McKibben 2006[1989]: 76).[1] The result is that, in the Anthropocene,

we seem to be reinventing the belief of some traditional societies that there is no such thing as a natural death. If an octogenarian expires one hot summer afternoon, perhaps he would have survived if not for global warming. "Natural causes," "acts of God," "death from old age" are now always contestable causal narratives.

Even so, is it not the case that certain phenomena remain outside of the reach of climate change, and therefore outside of the realm of blame? Certainly. But the number of such exceptions seems to shrink by the day. Surely earthquakes, tsunamis, and volcanic eruptions are still "natural hazards" that humans do nothing to cause—or perhaps not (McGuire 2006). Surely the deepest ocean ecosystems will remain unscathed by a warming earth—or perhaps not (Yasuhara et al. 2014). Surely *individual* weather events will always remain unattributable, even in principle, to human activity: climate change merely "loads the dice," and while one can become suspicious if one rolls twenty double-sixes in a row, none of those individual lucky rolls can be attributed to dice-loading (see Allen 2011). Or maybe not. The increasing intensity of the signal of climate change in the noise of weather (Britain's record-breaking rainfall, Australia's unprecedented heat, California's superlative drought, the world's most powerful storm ever recorded at landfall), combined with improved statistical techniques for disentangling signal from noise, have now made it possible for climatologists to say that particular events would almost certainly not have occurred but for manmade global warming (Allen and Lord 2004; Allen 2003, 2012; Peterson et al. 2013). Climate ceases to be merely an index of prevailing conditions and regains its older status as a *cause* of particular events (Fleming and Jankovic 2015; Hulme 2015). As climate change intensifies and attribution science advances, the human fingerprint will be detected on more and more events, and humans will asymptotically approach a world in which nothing is an accident.

Even if some things will forever remain outside of the reach of climate change, it hardly matters. An attribution of blame requires only the *perception* of a causal link. Citizens did not wait for climate attribution science to mature before eagerly pinning the climate change tail on the weather donkey (see in particular Hamblyn 2009; Yale Project on Climate Change Communication 2012). Can climate change influence the orbits of the earth and the moon? Definitely not. But that does not stop many inhabitants of the Marshall Islands from chalking up a solar eclipse to the phenomenon of "climate change" that they have heard about on the radio (Rudiak-Gould 2012).

If everything is blamable, everyone is blamable too. Carbon footprints vary wildly between individuals and between nations, but none of them is truly zero. After carbon dioxide, soot is the largest contributor to climate change and much of it derives from the cooking stoves of the developing world's poorest citizens (Bond et al. 2013). And can anyone on earth say that every gram of carbon dioxide they have ever emitted has been needed for survival, not simply wanted for pleasure? The result, with all harms blamable and all individuals accusable, ends up looking a lot like two apparently unrelated societies: the Risk Society, a "post-tradition" society preoccupied with accusations of industrial harm (Beck 1992; Giddens 1999), and the Azande, a "traditional" people preoccupied with accusations of witchcraft (Evans-Pritchard 1937). In both, the scope of blame is nearly unlimited. In the Risk Society, "[t]he radius in which one can search for side effects remains largely open. Recently an overdose of DDT was even found in Antarctic penguins" (Beck 1992: 27). In Azande society, "[i]f blight seizes the ground-nut crop it is witchcraft; if the bush is vainly scoured for game it is witchcraft; if women laboriously bale water out of a pool and are rewarded by but a few small fish it is witchcraft" (Evans-Pritchard 1937: 63). And anyone may be a witch; one may even be a witch without knowing so oneself (Ibid.: 119–120). The societies are indeed alike: neither have a notion of "nature" through which to evade blame. The Risk Society was forced to give up that concept, while the Azande never had it in the first place. In the era of anthropogenic climate change, we are all witches.

Proposition 2: Climate Change Invites Ubiquitous Blamelessness

Climate change can make nothing and no one blameworthy. Indeed, the same attributes of climate change—invisibility, boundlessness, ubiquity—that make crimes of everything and criminals of us all also do precisely the opposite. Philosopher Daniel Dennett discusses what he calls "the specter of creeping exculpation" (Dennett 1984: 156): the fear that as science progresses, more and more phenomena will be explained materially without reference to human agency, and accountability will therefore collapse. Climate change may inspire a similar fear. The more phenomena we can link empirically to a warming climate, the more ills we can say were not caused by any individual person, policy, politician, community, or nation. "Humans" may still be at fault, but such a category is "socially disembodied … vague, ambiguous, unnamed and uncounted, and ultimately empty" (Swyngedouw 2010: 228). If it cannot be pinned on anyone in particular, it might as well be pinned on no one at all.

The moral intuitions that allow people to mete out culpability in everyday life break down. "Warmer temperatures," writes Cass Sunstein, "are a product not of an identifiable perpetrator or any human face, but of the interaction between nature and countless decisions by countless actors. … There are no obvious devils or demons here." (Sunstein 2006: 34) The enormous geographical and temporal separations (can an unborn generation be a victim? can a dead generation be a perpetrator?); the entanglement of plaintiffs and defendants (can we call George W. Bush a climate change victim, because "his children and grandchildren will grow up in the same unstable and devastated world" (Marshall and Lynas 2003) as everyone else?); the fuzziness of foreseeability (were people morally obligated to reduce their greenhouse gas emissions upon publication of the IPCC's First Assessment Report in 1990? or could they reasonably wait until the second, third, fourth, or fifth assessment report?); and thorny issues of agency and demandingness (can the single mother who must drive to work to support her children be accused of "voluntarily" contributing to climate change?)[2]—all of these issues conspire to make blame extraordinarily difficult to assign (see Jamieson 2007).

This condition of "organized irresponsibility" is typical of the Anthropocene. As Beck writes, when human activities begin to perturb basic physical processes, "there is a general complicity, and the complicity is matched by a general lack of responsibility. Everyone is cause and effect, and thus non-cause." (Beck 1992: 32) All of this helps to explain why even those scholars who do not for a second doubt the anthropogenic origins of climate change nonetheless treat it analytically as a *natural* hazard. Patrick Nunn is a scholar of human-environment interactions and by no means a climate change "skeptic", but he is willing, even so, to declare that "the projected effects of future sea-level rise (and other effects of future climate change) on Pacific Island environments are not *in any meaningful sense* 'human impacts.'" (Nunn 2003: 226, my emphasis; for another example see Ford 2012: 20). Anthropogenesis from such a remote and abstract human source is not anthropogenesis at all.

Proposition 3: Climate Change Invites Selective Blame

Climate change can make *some* things and *some* people blameworthy. The logic of Proposition 1 can be applied to some harms and human agents, the logic of Proposition 2 to others. And there are many reasonable grounds on which to make such a differentiation. Anthropogenic forcing made, for instance, England's anomalous warmth in November 2011 *sixty-two* times more likely (Massey et al. 2012), while it had no detectible influence on, for instance, the 2011 floods in Thailand (Oldenborgh et al. 2012). There is every reason, then, to be selective about which events enter the moral realm. Individuals' carbon footprints differ from one another by one,

two, or perhaps even three orders of magnitude. Nations' carbon footprints vary from 80,000 metric tons of carbon dioxide equivalent (Kiribati) to nearly 10 billion (China)—a factor of over 100,000. Cooking stoves in Pakistan emit (blameless) "survival emissions," while private jets in Dubai emit (blameworthy) "luxury emissions": by this principle, the world's very poorest are entirely innocent of greenhouse gas pollution, while the world's richest are anything but. Moreover, some individuals have benefitted enormously from the fossil fuel economy, while others have not (Caney 2005), and some people are financially or otherwise capable of polluting less while others are not (Ibid.). Perhaps everyone is blameless except for the tiny "clique of white British men" (Malm and Hornborg 2014: 3) who decided in the nineteenth century to lay the foundation for a fossil fuel-based global economy.

A victims-and-perpetrators narrative becomes possible. The North is living high at the expense of the South. The West is trampling on the rest. The fossil fuel industry is hoodwinking consumers. Governments are letting down their citizens. Past generations are hurting the present one. The present generation is hurting future ones. The list of possible heroes-and-villains narratives of climate change is long.

Proposition 4: Climate Change Invites Partial Blame

Climate change can make whatever and whoever we want blameworthy. Bias feeds on ambiguity, and given the material and moral complexity of climate change, there is more than enough ambiguity to go around. How aware of climate science does an individual have to be before his or her air miles can be counted as sins? In what year does historical responsibility begin? If a factory spews pollution, are its owners to blame, its workers, or those who consume its products? Where exactly should the line be drawn between survival emissions and luxury emissions? Is driving to work a luxury, if one could choose instead to quit one's job, collect welfare, and live in poverty? Very different reasonable answers to these questions are possible, so one can pick and choose according to any number of desires, agendas, assumptions, and prejudices (Hulme 2009: xxviii). "If you want to cast blame, there are always loopholes for reading the evidence right" (Douglas 1992: 9). The nebulous nature of climate change makes it, like invisible radiation and microscopic toxins, "particularly open to social definition and construction" (Beck 1992: 22).

Bias inevitably creeps in. The most obvious kind is what psychologists call the "self-serving bias": the intellectual gymnastics that people engage in to absolve themselves of culpability. "The south blames the north, cyclists blame drivers, activists blame oil companies, and almost everyone blames George Bush" (Marshall and Lynas 2003). But there are many other possible biases, not all of them self-serving. Indeed any worldview, conceptual scheme, or narrative can direct people towards certain climate change blame narratives and away from others. The word "blame" often calls to mind images of finger-pointing and scapegoating, but the extensive ethnographic literature on the topic proves that it can be many things besides this. Blame is sense-making: it contributes to "creating understandable causal relationships, identifying agents of harmful behaviour, and finding solutions that convey a sense of security and moral order" (Jasanoff 2005: 24). Blame is problem-solving: it tells people how to respond to harms (Minnegal and Dwyer 2007). Blame is political action: who is faulted for disaster makes and unmakes leaders (Hsu 2000). Blame is oppression: it can be used to add insult to injury (Farmer 1992), to mystify power relations (Bourdieu 1994), to needlessly self-flagellate (Robbins 2004), to engage in witch hunts in both the idiomatic and the literal sense (Oster 2004). Blame is emancipation: it can form counternarratives of responsibility (H. A. Smith 2007). It is hard, indeed, to imagine a moral system or a human society without a notion of blame. The challenge now is to apply this

fascinating literature to global climate change, the twenty-first century's "dominant overarching narrative of human responsibility" (Hamblyn 2009: 224).

Deploying Climate Change Blame

I now review the scholarly literature on the way in which climate change blame narratives are deployed in real-world situations, grouping the many case studies into three sections that are loosely thematic and regional in focus.[3]

Passing the Buck: The Global Climate Regime and the West

Blame is loudest when the stakes are highest, and the stakes are rarely higher than at the United Nations Framework Convention on Climate Change (UNFCCC) negotiations. Trillions of dollars, not to mention the fate of the climate system, rest on who accepts how much responsibility for past and future emissions. Geographer Diana Liverman's critical study of UNFCCC politics (Liverman 2009) begins by noting that, in these negotiations, some elements of the moral narrative are predetermined: the unit of responsibility is assumed to be the nation (rather than the individual, for instance), and nations are said to have "common but differentiated responsibility" for reducing greenhouse gas emissions—a marriage of Ubiquitous Blame ("common") and Selective Blame ("differentiated"), in which all nations are guilty but some are far guiltier than others. Liverman goes on to show that, even if all nations agree to these basic premises, there is ample room for disagreement about responsibility. A nation's carbon guilt can vary hugely according to which specific greenhouse gases and carbon sinks are entered into the equation, whether "survival" and "luxury" emissions are counted differently, to what extent long-industrialized nations are held accountable for past emissions ("historical responsibility"), and which year's emissions levels are taken as the baseline against which nations are expected to cut back.[4] Proposition 4 (Partial Blame), and the self-serving bias more specifically, come into play. The question of the baseline year illustrates this well. Brazil objected to the 1987 baseline year suggested in a 1990 World Resources Institute report on the grounds that unusually widespread forest fires that year would exaggerate the country's carbon guilt. The former Soviet bloc pushed for a 1990 baseline in hopes of taking credit for the large, unintended drop in industrial activity and emissions that occurred when the Soviet Union collapsed in 1991. Japan advocated a 1995 baseline so that their spike in hydrofluorocarbon emissions since 1990 would not count against them. Liverman is clear about the motivations: "underlying the position of many nation states was the desire to minimise their actual obligation to reduce greenhouse gas emissions" (Liverman 2009: 292).

Micro-studies of individual national governments give further insight into how the climate change "'hot potato' is passed in the face of the threatening ecological disaster" (Beck 1992: 33). Russia's government-owned newspaper, *Rossiiskaya Gazeta,* worked to deflect blame by pointing to US climate inaction or by claiming that warming is, or may be, natural (Wilson Rowe 2009). Brazilian policymakers frame soot—a major contributor to climate change that comes mainly from the developing world—as a survival emission, thus limiting their country's complicity. They argue that Northern governments' focus on that contributor is an unethical attempt at Proposition 1 (Ubiquitous Blame) thinking (Lahsen 2004, 2007). Policymakers in Trinidad and Tobago employ numerous discursive maneuvers to draw attention away from the fact that this oil- and gas-exporting nation has the world's second highest per capita carbon dioxide emissions: they imply that the country's climate vulnerability entails climate innocence (going so far as to speak of local oil rigs as casualties of sea level rise rather than causes of it);

they describe the country as a "small island state" rather than a petrostate; they focus on the country's small total footprint rather than its enormous per capita footprint; and they helped to create the Alliance of Small Island States (AOSIS) in order to join the ranks of the climate-innocent (Hughes 2013). The result has been business as usual and the rejection of climate-friendly mass transit and renewable energy proposals (Ibid.).

Government buck-passing operates on the sub-national level as well. Severe flooding has struck England in 2000–2001, 2007, 2012, and 2013–2014, and the possibility of linking some or all of these incidents to climate change has been mooted by journalists, government officials, and more recently scientists (Met Office 2014). Climatologist Miles Allen imagines that such attributions will open the door to lawsuits—to Proposition 1 (Ubiquitous Blame) thinking, and with it *more* recrimination, accountability, and blame. "[I]n theory," he writes, "one day people driving up the local hill in their SUVs might be contributing to the cost of replacing the [flood-damaged] floors in Vicarage Road" (Allen 2003: 892). One day, perhaps, but for now quite the opposite seems to be occurring—geographer John Handmer suggests that UK government officials' eagerness to attribute the floods to climate change is just another way of invoking Proposition 2 (Ubiquitous Blamelessness) and neutralizing blame:

> [W]ith the blame primarily directed at climate change the pressures to learn and adapt were largely oriented toward global environmental change rather than long standing inadequacies in the government's approach to climate hazard management. It seems likely that the severe flooding of autumn 2000 may be blamed on climate change as a way of shifting responsibility, rather than as a signal to rethink policy. (Handmer 2003: 52)

Handmer concludes, lachrymosely, that "[e]ven where [climate change] is allegedly a high priority, this is often because it serves other purposes—or because it is of interest to the groups developing the policy agendas." (Handmer 2003: 51) All of this lends credence to the fears of some fishermen in Victoria, Australia, who worry that public servants will begin attributing wildfires to global warming to divert attention from their own mismanagement of the land (Minnegal and Dwyer 2008: 77–78).

Buck-passing at the governmental level is undoubtedly abetted by buck-passing at the grassroots level, and there is plenty of it in evidence in the literature. An ethnographic study of climate change attitudes in a Norwegian village (Norgaard 2006) documents the micro-processes of self-exoneration. Norway has one of the world's best educated, most politically active and environmentally aware citizenries, but much of the country's prosperity depends on North Sea oil drilling. Norgaard's informants negotiate this paradox by engaging in "implicatory denial": they fully accept that climate change is real, severe, and caused by people like themselves, but they avoid internalizing that knowledge in a way that would require behavior change. They call upon national narratives of Norwegians as good, honest, humble, and nature-loving people; they point to Norway's small size and historical oppression by larger neighbors; they draw attention to the US's larger carbon footprint; they focus on Norway's small national footprint rather than its large per capita footprint; and they argue that Norwegian oil is, though dirty, less dirty than many other varieties on the global market. Swiss focus group participants exculpate themselves for climate change by looking to government officials and technocrats for a solution; by pointing to other people's inaction; by portraying sustainability as an unreasonably onerous duty; by claiming that one person's actions count for nothing; and by highlighting other arenas of life in which they are virtuous (Stoll-Kleemann et al. 2001). British interviewees shift blame on the US ("I'm absolutely disgusted with them … Other countries are suffering as a result of their selfishness") or industry ("it's not humans that ruin this planet … It's *greed*, company greed") (Lorenzoni et al. 2007: 451).

What these case studies illustrate, above all, is Proposition 4: that climate change blame is biased, and that this bias is very often of the self-serving variety. It is important to note, though, that self-serving does not always mean morally bankrupt: for a low-income country to limit its climate liability is self-serving, but not ethically unsound. Also, even in the unsentimental arena of international relations, more than just self-serving bias is at play. US President Barack Obama, Maldives former president Mohammed Nasheed, and Marshall Islands former president Jurelang Zedkaia, among other leaders, have taken unilateral action and made unilateral pledges to sharply reduce their countries' emissions—Proposition 1 (Ubiquitous Blame) in action. A minority of Western consumers have done the same (Baer and Reuter 2011).

More Sinned Against Than Sinning: The Pacific Islands and the Arctic

When it comes to climate change, the Pacific Islands and the Arctic have much in common. They are the origin of the two most recognizable "climate change canaries" (Hamblyn 2009): sinking islands and drowning polar bears. They face unusually severe, or at least unusually dramatic, impacts: the threat of widespread inundation in the Pacific and the world's highest rates of warming in the Arctic. They have a long history of being regarded as collateral damage of foreign-caused ecological catastrophes such as nuclear testing (Orlove et al. 2014). Their populations are small, and a high proportion are indigenous people who can lay claim to images of the "ecologically noble savage."

For all of these reasons, the Pacific and the Arctic can easily inspire Proposition 3 (Selective Blame) thinking: they are the perfect victims of climate change (Barnett and Campbell 2010: 71–72). And indeed actors in both regions deploy this argument. Leaders of island nations in the Pacific and elsewhere formed the Alliance of Small Island States, whose claim to small footprints and large vulnerability have made them "the conscience of the climate change negotiations" (Ibid.: 101). The governments of Tuvalu, Palau, and the Marshall Islands have floated the idea of suing industrialized nations for their greenhouse gas emissions in the International Court of Justice (see Jacobs 2005). In 2005, Inuit leader Sheila Watt-Cloutier petitioned the Inter-American Commission on Human Rights claiming that US greenhouse gas emissions violate Inuit communities' human rights (Nuttall 2009: 294) (the petition was ultimately dismissed). In 2008, Alaska Natives facing environmentally-induced migration from their island home filed suit against 24 major fossil fuel companies for their complicity in creating the climate crisis, the case known as *Kivalina v. ExxonMobil et al.* (Shearer 2011).[5]

Carbon innocence has thus been the public face of Pacific and Arctic climate activism. But the situation on the ground is often more complex. While Sami leaders do not hesitate to protest the injustice of wind turbines and other climate change mitigation schemes that encroach on their traditional herding grounds, they find it difficult to claim blamelessness for All Terrain Vehicle- and helicopter-using reindeer herders (author's fieldwork 2008). In the low-lying Marshall Islands, I have documented a surprising prevalence of Proposition 1 (Ubiquitous Blame) thinking (Rudiak-Gould 2012, 2014). Despite having a population of only 60,000 and per capita emissions less than a tenth that of Americans, and despite being aware of their country's small size compared to "the big countries" of the world, Marshallese civil society tends to espouse a Proposition 1-like "universal blame" for climate change, with a special emphasis on their own complicity, and to favor local mitigation over protest of other countries' emissions. In Kiribati, many locals are aware of the concept of climate change-induced sea level rise and the Proposition 3 (Selective Blame) logic that it invites, but they persist in attributing erosion to local actions such as the clearing of coastal vegetation and the construction of seawalls and causeways (Kuruppu and Liverman 2011: 663).

The Otin Tai Declaration, a statement on climate change issued in 2004 by religious leaders from 15 Pacific countries and territories, blends Proposition 1 (Ubiquitous Blame) and Proposition 3 (Selective Blame). Part of the declaration reads:

> [C]limate change … is not an act of God. It is a result of human economic and consumer activities that pollute the atmosphere and lead to climate change. Most of these polluting emissions come from highly-industrialized countries. Our response … should be to act in love toward God's creation and to reduce the pollution that is contributing to climate change. By placing us on the earth, God has given us both the right to use it and the responsibility to do so with care … Members of the governing bodies of [fossil fuel] companies should consider the theological views of churches that address climate change and recognise what their companies are doing to God's creation. (Pacific Council of Churches 2004)

The references to highly-industrialized countries and fossil fuel companies imply Proposition 3, but the use of the words "human," "our," and "us" seem to invoke Proposition 1. Proposition 1 thinking in the Pacific may appear to be a species of "blaming the victim," but it also opens the door to local agency (Barnett and Campbell 2010: 71–72; Farbotko and Lazrus 2012; Rudiak-Gould 2014).

A village-level case study from coastal Papua New Guinea illustrates many of these points. The Murik face resettlement due to severe coastal erosion (Lipset 2011), and like any human community confronted with misfortune they try to make moral sense of their predicament. Some locals, either unfamiliar with or skeptical of scientific discourses of anthropogenic climate change and sea level rise, attribute the high tides to members of the in-group: either sorcery by a disgruntled villager eager to cause harm to his neighbors, or neglect of the old magical formulae that once kept the sea at bay. Other locals interpret the erosion in scientific or quasi-scientific registers: the world is warming, causing distant ice to "break" and seas to rise. This is described as a phenomenon in "nature": a kind of Proposition 2 (Ubiquitous Blamelessness) logic is invoked, and the discourse of climate change ends up leading away from rather than toward human culpability. This can be used strategically, as Proposition 4 (Partial Blame) would predict. For instance, a villager named Makus tells this story:

> Pame's kin got angry because I built a house on their beach. They cut down one of the coconut palms [my father] planted. So I cut down one of their coconut palms. That was where it ended until the sea destroyed the beach and they began to accuse me of bespelling the beach. "No," I objected. "It is nature. It is cyclical. It is seasonal. Ice broke." (Ibid.: 37)

Lipset's study demonstrates the too-easy slippage from climate innocence to climate impotence, and, more generally, some of the pitfalls of the public uptake of climate science. Those Murik who understand sea level rise in quasi-scientific terms (as a phenomenon in "nature") wash their hands of the whole affair. Meanwhile, it is those locals who understand sea level rise in scientifically unsound ways, as a result of sorcery or insufficient protective magic, who feel that something can be done. In the "blameless" communities of the Pacific and the Arctic, the discourse of innocence is double-edged.

The Pedagogy of the Climate-Oppressed? Sub-Saharan Africa, Latin America, and Southeast Asia

Studies in rural African and Latin American communities that have little or no awareness of climate science show that, when strange weather strikes, people tend to find culprits close to home. Sometimes this is small-scale Proposition 1 (Ubiquitous Blame) thinking: villagers in

Ghana feel they are being punished for their own laziness (Eguavoen 2013) and indigenous farmers in Mexico worry that they are reaping the consequences of their own waning respect for spirits, plants, and animals (W. D. Smith 2007). Sometimes it is small-scale Proposition 3 (Selective Blame) thinking: nearby enemies are to blame, whether they be witches (Artur and Hilhorst 2012; Miguel 2005), tree-fellers (BBC World Service Trust 2010: 18), prostitutes (Sheridan 2012: 231), feckless government officials (Ibid.), or members of the younger generation who have neglected to conduct rain-bringing ceremonies (Eguavoen 2013; Shaffer and Naiene 2011).

For proponents of wide-scale Proposition 3 thinking, in which the North is guilty of causing climate change and the South is innocent, these kinds of discourses will be seen as "a (misdirected) sense of social injustice" (Artur and Hilhorst 2012: 532)—in other words, a false consciousness. Climate education therefore becomes a kind of pedagogy of the oppressed. "Poor rural farmers," writes an anthropologist, "should be made aware of the actual causes of global climate change and not left believing that their management practices are responsible for causing climate change." (Eguavoen 2013: 21) Similarly, a spate of weather-inspired witch-lynchings in Mozambique prompted calls for the National Institute of Meteorology to educate citizens about the real causes of climate change (Artur and Hilhorst 2012: 532). Reconfiguration of blame upon exposure to climate science is indeed plausible. Although anecdotal, the following account by a development worker and climate justice advocate may be telling:

> We ran a workshop last year [with] communities from around Gabon … There were a number of elders from the Baka community in the northeast of Gabon, and they listened very intently to what caused climate change … carbon emissions and greenhouse gases, and they were completely unhappy about this … They said … "We thought we had done something against the forest to cause all these awful things to happen to us, because in all of our lifetimes we've never seen things like this—rain during the dry season, dry during the rainy season, flowers that won't bloom, bees that won't pollinate. We thought we had done something to violate the sacred order of the forest, and now you're telling us that it's actually people who live in cities who've done this." And this was quite a nasty shock for them … They'd assumed responsibility for climate change because they weren't sure of the causes. (Crawhall 2010)

The Sahel provides a particularly rich example. The boundary between this semi-arid savanna belt and the Sahara to the north shifts over time, with large swathes of savanna reverting to desert during drought years. Desertification in the Sahel contributed to widespread famine in the 1970s and, more recently, in 2010 (see Nyong, Adesina, and Elasha 2007). Is climate change to blame? Different answers to this question have been offered, with interesting consequences for culpability and accusation (see Hulme and Kelly 1993). As Orlove and colleagues document (2014: 260), the international development community has traditionally regarded environmental degradation and human hardship in arid regions as essentially local issues. Remedies have been sought in local land management reform (for instance, policies to prevent overgrazing) and poverty alleviation: this has been the assumption in the 1977 UN Conference on Desertification, the 1992 Earth Summit, and the Permanent Interstate Committee for Drought Control in the Sahel. Meanwhile, foreign drivers of change are framed out. Critical scholars have argued that this establishes an unjust blame regime based on a perverse application of Proposition 3 (Selective Blame): this is a "well-crafted politics of selective attention" in which "the emitting nations absolve themselves of responsibility for redress for the vast majority of the earth's vulnerable" who inhabit arid regions (Ribot 2014: 269).

Climate change emerges as a possible counternarrative to this "symbolic violence" (Bourdieu 1994) committed upon the inhabitants of the Sahel. A group of African academics and development workers attempt such a counternarrative when they criticize the "tendency for

Western researchers to lay the blame for climatic and environmental change in the Sahel at the door of indigenous land-use practices," ignoring the fact that "[g]lobal economic activity may well have contributed significantly to the recent environmental changes that have occurred in the Sahel" (Nyong et al. 2007: 795). American journalist Stephan Faris (2007) uses a hypothesized link between global warming and violent conflict (see Barnett and Adger 2007) to argue that the Darfur genocide was caused by a climate change-induced drought, not by racial hatred between Arabs and Africans. Proposition 2 (Ubiquitous Blamelessness) naturalizes the war and acquits the locals. But Faris takes his argument one step further, invoking Proposition 3 (Selective Blame): "Among the implications arising from the ecological origin of the Darfur crisis, the most significant may be moral. If the region's collapse was in some part caused by the emissions from our factories, power plants, and automobiles, we bear some responsibility for the dying" (Faris 2007).

So attribution to climate change looks emancipatory. But it may not always be. If Crawhall is correct to report that the Baka elders greeted the climate change get-out-of-jail-free card as a "nasty shock" rather than a welcome relief, we can understand why: as in the Pacific, innocence implies impotence. This may be part of the reason why even some communities that are aware of global climate change and the powerful influence of foreign elites nonetheless choose to shoulder some of the blame for changing weather: we have forsaken our egalitarian ways (Hitchcock 2009), offended the ancestors (Patt and Schröter 2007), and lost our ecological "presence of mind" (W. D. Smith 2007: 230–232). Redressing these local ills may seem far more realistic than convincing the world's richest nations to dismantle the engine of their economic supremacy. Besides, the get-out-of-jail-free card can be played by the guilty too. The Khartoum government has used the causal narrative of climate change to deny its complicity in the Darfur genocide, and the United Nations has used the same bogeyman to excuse its failure to prevent the killings (Buhaug et al. 2008: 28). Buhaug and colleagues note that, despite the lack of solid evidence linking climate change to conflict, the mere *appearance* of such a link "could influence how armed conflicts are perceived and justified. In struggling, illiberal regimes, global warming may constitute a much-needed political escape, as no single country is to blame for the adverse environmental developments" (Ibid.).

This is Proposition 2 thinking, the "specter of creeping exculpation," of a rather insidious variety. Not only does climate change inspire scapegoating, it may itself become the scapegoat. Sociologist Luz Vazquez-Garcia (2012) documents the attempts of Mexico's state-owned oil giant, Pemex, to attribute severe erosion (1.37 meters per year) in coastal Tabasco to climate change-induced sea level rise rather than their own offshore oil development (the explanation favored by the local fishermen who stand to lose the most from such erosion). In the Philippines, Catholic priests are beginning to teach their congregations that environmental disasters are caused by climate change, not by the will of God (Hamilton 2007). But this seems to lead not to a Proposition 3 appreciation of social injustice but to a Proposition 1 stance in which locals are no less responsible for mending their polluting ways than are rich consumers in the West. As Jesse Ribot observes, "[t]he continued shunting of blame back to climate does the double work of occluding local causality while continuing to displace blame onto the hazard—as act of God, nature, *or today anthropogenic climate change*." (Ribot 2013: 167, my emphasis) "God" and "climate change" are indeed alike as explanatory frameworks: they can be used as easily to remove moral significance from a situation as to add it.

Something even worse seems to be occurring in REDD (Reducing Emissions from Deforestation and Forest Degradation) programs, which seek to curb climate change by providing monetary incentives for communities to preserve forests, particularly in Southeast Asia, sub-Saharan Africa, and Latin America. In one sense, the assumption behind this program is Proposition 3

(Selective Blame): rich nations created climate change so they must foot the bill for fighting it, even when the battle is being waged far outside of their own borders. But in another sense, the underlying assumption is Proposition 1 (Ubiquitous Blame): everyone contributes to climate change so everyone must help solve it, rich nations by giving money, forest-dwellers by giving up control of their land. The result, argue REDD's opponents using quintessential Proposition 3 arguments, is that climate change blame falls falsely and hypocritically on shifting cultivators and other small-scale users of forest resources, while enormous, environmentally unsound oil palm "forests" are given a free pass and industrialized countries are allowed to off-shore their carbon-reduction obligations (Degawan 2008: 54; Erni 2009; Griffiths 2008: 20).

Here we see a rather sinister development: the idea of anthropogenic climate change becomes, rather than a revealer of systemic injustice, just another tool in service of its mystification. It becomes, in a word, an ideology. Marxists will be disturbed by this turn of events, but perhaps not surprised: bitter experience has taught the radical Left that *any* discourse—even Marxism itself, in the hands of Soviet elites—can be twisted into an ideology. Is climate education a pedagogy of the oppressed, or a pedagogy in service of the oppressors? There are no easy answers to this question.

Conclusion: Blame Consequentialism in the Anthropocene

I hope I have made clear that the answer to Ulrich Beck's question, "can intangible, universal afflictions be organized politically at all?" (Beck 1992: 49), is a resounding yes. In fact, it is precisely the intangibility and ubiquity of climate change that makes it so malleable to diverse political agendas. Climate change is sharpening the human conscience as well as "engendering its own forms of irresponsibility" (Szerszynski 2010: 12)—and if I am correct to regard climate change as a microcosm of expanding human influence more generally, the same can be said about the Anthropocene as a whole. To be sure, the political agenda that is most in evidence in the case studies I have examined is of the latter sort: organized irresponsibility and the fine art of blame-shifting. This result will undoubtedly be of little surprise to adherents of the "realist" school of international relations, or to Foucauldians and Nietzscheans who believe that people always manipulate discourse to achieve power. But this cynical conclusion is not entirely warranted. "With luck," writes David Hughes, "Port of Spain and New Orleans will assemble and export a product too rare to have a recognized name: carbon conscience" (Hughes 2013: 579). The case studies I have reviewed show that this product, though indeed rare, *is* being assembled and exported, at least occasionally. Small Pacific nations are taking on more environmental guilt than they have to. Western journalists are asking their readers, and themselves, to admit complicity in a far-off tragedy. Farmers in Latin America and Africa are asking what they, too, could do to repair the disturbed universe. Inuit activists are using their moral high ground to be environmental champions, not environmental layabouts.

I hope I have also shown that whether conscience or irresponsibility emerges as the outcome is not a straightforward function of the Anthropocene blame narrative itself. Rather, it is a function of how that narrative is deployed, where, when, and by whom. In my own academic discipline, anthropology, the strong (indeed, almost universal) tendency has been to espouse blame narratives partaking of Proposition 3 logic: it is Westerners, rich consumers, Northern governments, industrial executives, neoliberalism's apologists, and so forth who are at fault for the ravages of the Anthropocene, while indigenous communities, the poor, the South, etc. are faultless (see for example Baer and Reuter 2011; Barker 2008; Crate and Nuttall 2009). But perhaps anthropologists ought to take other blame narratives seriously as well. My implication in

the introduction to this article that there is no one correct moral reading of the Anthropocene is relativist in a sense, but it should not be taken as carte blanche approval of all possible ethical stances. As I have shown, those stances have real and often tragic consequences for human communities. But it is the *deployment* of a stance, the motivation behind it and the consequence it causes, that are morally lamentable, not the stance itself. For US President Barack Obama to point a finger at the United States is conscientious; for Canadian Prime Minister Stephen Harper to do so is craven. For the residents of Kivalina to lay the blame on fossil fuel corporations is courageous; for residents of Trinidad and Norway to do so is cowardly. Chalking the Darfur conflict up to climate change is a kind of greenwashing in the hands of the Khartoum government, an act of soul-searching in the hands of a Western journalist. Some moral readings of the Anthropocene may indeed be inherently offensive. But that deontological approach must be balanced with a consequentialist one. And when it is consequences rather than first principles that concern us, ethical debate is insufficient: ethnographic, on-the-ground investigation is required, and much more of it than we currently possess.

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NOTES

1. A Republican congressman once complained about the gloominess of Democrats: remark on the lovely weather, he said, and they'll start talking about global warming. What is at issue here is not so much negativity versus positivity, but morally charged speech versus morally neutral speech. The modernist assumption that the weather is blameless has made it the ideal topic of small talk, but human influence on the climate puts that into doubt.
2. In a recent interview, James Lovelock stated, "it's you, me and everyone else who drives their cars to work, who burn fuel to keep warm in the winter [that are causing climate change] … [M]ost of the things we're doing, we have to do … I don't like accusations of guilt" (Nelles 2014: F3).
3. Another sort of climate change blame, unfortunately out of the scope of this article due to space restrictions, is the flinging of accusations following an inaccurate weather forecast (see in particular Taddei 2009).

4. Another wrinkle, not mentioned by Liverman because it is not usually at issue in UNFCCC negotiations, is the question of production-based versus consumption-based emissions. For instance, if a Chinese factory is in business only because American consumers buy its products, are the factory's emissions therefore the responsibility of the United States? The answer to this question makes a substantial difference in national carbon accounting and therefore climate change guilt (see Davis and Caldeira 2010).
5. This carbon David-and-Goliath story is Proposition 3 (Selective Blame) thinking par excellence. But it was Proposition 2 (Ubiquitous Blamelessness) that carried the day: the lawsuit was eventually dismissed on the grounds that "global warming is too ubiquitous to be 'fairly traceable' to the defendants' emissions" (Shearer 2011: 121).

   Compare this to *Massachusetts v. Environmental Protection Agency (EPA),* a 2007 US Supreme Court case in which several US states and cities sued the EPA to compel it to regulate greenhouse gas emissions, claiming climate change-induced damage to the coastline of Massachusetts. The Court ruled 5–4 in favor of the petitioners. The majority opined that the EPA's failure to regulate greenhouse gases did contribute (though not singlehandedly) to coastal erosion in Massachusetts—quintessential Proposition 1 thinking. Meanwhile, Chief Justice Roberts' dissenting opinion argued that the chain of causation from EPA inaction to the erosion of particular shorelines was much too distant and tenuous—classic Proposition 2 thinking.

REFERENCES

Allen, Myles. 2003. "Liability for Climate Change." *Nature* 421, no. 6926: 891–892.

Allen, Myles. 2011. "Al Gore Is Doing a Disservice to Science by Overplaying the Link between Climate Change and Weather." The Guardian. http://www.guardian.co.uk/environment/2011/oct/07/al-gore-science-climate-weather (accessed 5 February 2013).

Allen, Myles. 2012. "The Climate of the Climate Change Debate is Changing." The Guardian. http://www.guardian.co.uk/environment/2012/jul/11/climate-change-debate-weather?intcmp=239 (accessed 16 July 2012).

Allen, Myles, and Richard Lord. 2004. "The Blame Game." *Nature* 432: 551–552.

Artur, Luis, and Dorothea Hilhorst. 2012. "Everyday Realities of Climate Change Adaptation in Mozambique." *Global Environmental Change* 22, no. 2: 529–536.

Baer, Hans A., and Thomas A. Reuter. 2011. "The Global Movement for a Safe Climate and Environmental Sustainability: Introduction." *The Australian Journal of Anthropology* 22, no. 2: 255–256.

Barker, Holly M. 2008. "The Inequities of Climate Change and the Small Island Experience." *Counterpunch*, 4 November.

Barnett, Jon, and W. Neil Adger. 2007. "Climate Change, Human Security and Violent Conflict." *Political Geography* 26, no. 6: 639–655.

Barnett, Jon, and John R. Campbell. 2010. *Climate Change and Small Island States: Power, Knowledge and the South Pacific.* London: Earthscan.

BBC World Service Trust. 2010. "Africa Talks Climate Research Report: Executive Summary." BBC World Service Trust and British Council. http://africatalksclimate.com/sites/default/files/01-Executive Summary.pdf (accessed 30 April 2012).

Beck, Ulrich. 1992. *Risk Society: Towards a New Modernity.* Trans. Mark Ritter. London: Sage.

Bond, T. C. et al. 2013. "Bounding the Role of Black Carbon in the Climate System: A Scientific Assessment." *Journal of Geophysical Research: Atmospheres* 118, no. 11: 5380–5552.

Bourdieu, Pierre. 1994. *Language and Symbolic Power.* Trans. Gino Raymond and Matthew Adamson. Cambridge, MA: Harvard University Press.

Caney, Simon. 2005. "Cosmopolitan Justice, Responsibility, and Global Climate Change." *Leiden Journal of International Law* 18: 747–775.

Chakrabarty, Dipesh. 2009. "The Climate of History: Four Theses." *Critical Inquiry* 35, no. 2: 197–222.

Crate, Susan A., and Mark Nuttall. 2009. "Introduction: Anthropology and Climate Change." Pp. 9–36 in *Anthropology & Climate Change: From Encounters to Actions,* ed. Susan A. Crate and Mark Nuttall. Walnut Creek, CA: Left Coast Press.

Crawhall, Nigel. 2010. "Climate Change in Africa: Adaptation, Traditional Knowledge and Meteorology." The Gaia Foundation. http://www.gaiafoundation.org/galleries/podcasts/climate-change-africa-adaptation-traditional-knowledge-and-meteorology-nigel (accessed 30 April 2012).

Davis, Steven J., and Ken Caldeira. 2010. "Consumption-Based Accounting of CO2 Emissions." *Proceedings of the National Academy of Sciences* 107, no. 12: 5687–5692.

Degawan, Minnie. 2008. "Mitigating the Impacts of Climate Change: Solutions or Additional Threats?" *Indigenous Affairs* 1–2: 52–59.

Dennett, Daniel. 1984. *Elbow Room: The Varieties of Free Will Worth Wanting.* Cambridge, MA: MIT Press.

Donner, Simon D. 2007. "Domain of the Gods: An Editorial Essay." *Climatic Change* 85: 231–236.

Douglas, Mary. 1992. *Risk and Blame: Essays in Cultural Theory.* New York: Routledge.

Eguavoen, Irit. 2013. "Climate Change and Trajectories of Blame in Northern Ghana." *Anthropological Notebooks* 19, no. 1: 5–24.

Erni, Christian. 2009. "Shifting the Blame? Southeast Asia's Indigenous Peoples and Shifting Cultivation in the Age of Climate Change." *Indigenous Affairs* 1–2, 38–49.

Evans-Pritchard, E. E. 1937. *Witchcraft, Oracles and Magic among the Azande.* Oxford: Clarendon Press.

Farbotko, Carol, and Heather Lazrus. 2012. "The First Climate Refugees? Contesting Global Narratives of Climate Change in Tuvalu." *Global Environmental Change* 22, no. 2: 382–390.

Faris, Stephan. 2007. "The Real Roots of Darfur." *The Atlantic Monthly,* 1 April. http://www.theatlantic.com/doc/200704/darfur-climate (accessed 8 September 2014).

Farmer, Paul. 1992. *AIDS and Accusation: Haiti and the Geography of Blame.* Berkeley: University of California Press.

Gardiner, Stephen M. 2011. *A Perfect Moral Storm: The Ethical Tragedy of Climate Change.* Oxford: Oxford University Press.

Garvey, James. 2008. *The Ethics of Climate Change: Right and Wrong in a Warming World.* London: Bloomsbury Publishing.

Giddens, Anthony. 1999. "Risk and Responsibility." *The Modern Law Review* 62, no. 1: 1–10.

Griffiths, Tom. 2008. *Seeing "REDD"? Forests , Climate Change Mitigation and the Rights of Indigenous Peoples.* Forest Peoples Programme.

Hamblyn, Richard. 2009. "The Whistleblower and the Canary: Rhetorical Constructions of Climate Change." *Journal of Historical Geography* 35: 223–236.

Hamilton, Jon. 2007. "In the Philippines, Religion and Nature Collide." NPR. http://www.npr.org/templates/story/story.php?storyId=15222134&sc=emaf (accessed 7 April 2015).

Handmer, John. 2003. "Adaptive Capacity: What Does It Mean in the Context of Natural Hazards?" Pp. 51–70 in *Climate Change, Adaptive Capacity and Development,* ed. Joel B. Smith, Richard J. T. Klein, and Saleemul Huq. London: Imperial College Press.

Hitchcock, Robert K. 2009. "From Local to Global: Perceptions and Realities of Environmental Change Among Kalahari San." Pp. 250–261 in *Anthropology & Climate Change: From Encounters to Actions,* ed. Susan A. Crate and Mark Nuttall. Walnut Creek, CA: Left Coast Press.

Hsu, Cho-yun. 2000. "Chinese Attitudes toward Climate." Pp. 209–222 in *The Way the Wind Blows: Climate, History, and Human Action,* ed. Roderick J. McIntosh, Joseph A. Tainter, and Susan Keech McIntosh. New York: Columbia University Press.

Hughes, David McDermott. 2013. "Climate Change and the Victim Slot: From Oil to Innocence." *American Anthropologist* 115, no. 4: 570–581.

Hulme, Mike. 2009. *Why We Disagree about Climate Change: Understanding Controversy, Inaction and Opportunity.* Cambridge: Cambridge University Press.

Hulme, Mike. 2011. "Reducing the Future to Climate: A Story of Climate Determinism and Reductionism." *Osiris* 26, no. 1: 245–266.

Jacobs, R. E. 2005. "Treading Deep Waters: Substantive Law Issues in Tuvalu's Threat to Sue the United States in the International Court of Justice." *Pacific Rim Law and Policy Journal* 14, no. 1: 103–128.

Jamieson, Dale. 2007. "The Moral and Political Challenges of Climate Change." Pp. 475–482 in *Creating a Climate for Change: Communicating Climate Change and Facilitating Social Change,* ed. Susanne C. Moser and Lisa Dilling. Cambridge: Cambridge University Press.

Jasanoff, Sheila. 2005. *Designs on Nature: Science and Democracy in Europe and the United States.* Princeton and Oxford: Princeton University Press.

Kuruppu, Natasha, and Diana M. Liverman. 2011. "Mental Preparation for Climate Adaptation: The Role of Cognition and Culture in Enhancing Adaptive Capacity of Water Management in Kiribati." *Global Environmental Change* 21: 657–669.

Lahsen, Myanna. 2004. "Transnational Locals: Brazilian Experiences of the Climate Regime." Pp. 151–172 in *Earthly Politics: Local and Global in Environmental Governance,* ed. Sheila Jasanoff and Marybeth Long Martello. Cambridge, MA: MIT Press.

Lahsen, Myanna. 2007. "Trust through Participation? Problems of Knowledge in Climate Decision-Making." Pp. 173–196 in *The Social Construction of Climate Change: Power, Knowledge, Norms, Discourses,* ed. Mary E. Pettenger. Aldershot, UK: Ashgate Publishing Limited.

Lipset, David. 2011. "The Tides: Masculinity and Climate Change in Coastal Papua New Guinea." *Journal of the Royal Anthropological Institute* 17, no. 1: 20–43.

Liverman, Diana M. 2009. "Conventions of Climate Change: Constructions of Danger and the Dispossession of the Atmosphere." *Journal of Historical Geography* 35, no. 2: 279–296.

Lorenzoni, Irene, Sophie Nicholson-Cole, and Lorraine Whitmarsh. 2007. "Barriers Perceived to Engaging with Climate Change among the UK Public and Their Policy Implications." *Global Environmental Change* 17, no. 3–4: 445–459.

Malm, Andreas, and Alf Hornborg. 2014. "The Geology of Mankind? A Critique of the Anthropocene Narrative." *The Anthropocene Review* 1, no. 1: 62–69.

Marshall, George, and Mark Lynas. 2003. "Why We Don't Give a Damn." *New Statesman,* 1 December.

Massey, N. et al. 2012. "Have the Odds of Warm November Temperatures and of Cold December Temperatures in Central England Changed?" Pp. 1057–1059 in *Explaining Extreme Events of 2011 from a Climate Perspective,* ed. T. C. Peterson, P. A. Stott, and S. Herring. American Meteorological Society. http://www1.ncdc.noaa.gov/pub/data/cmb/bams-sotc/2011-peterson-et-al.pdf (accessed 7 April 2015).

McGuire, Bill. 2006. "Climate Change: Tearing the Earth Apart?" *New Scientist,* 27 May.

McKibben, Bill. 2006[1989]. *The End of Nature.* New York: Random House.

Met Office. 2014. "The Recent Storms and Floods in the UK." UK Met Office and Centre for Ecology and Hydrology. www.metoffice.gov.uk/media/pdf/1/2/Recent_Storms_Briefing_Final_SLR_20140211.pdf (accessed 11 March 2014).

Miguel, Edward. 2005. "Poverty and Witch Killing." *Review of Economic Studies* 72, no. 4: 1153–1172.

Minnegal, Monica, and Peter D. Dwyer. 2007. "Foragers, Farmers and Fishers: Responses to Environmental Perturbation." *Journal of Political Ecology* 14: 34–57.

Minnegal, Monica, and Peter D. Dwyer. 2008. "Fire, Flood, Fish and the Uncertainty Paradox." *The Australian Journal of Anthropology* 19, no. 1: 77–81.

Nelles, Drew. 2014. "'I Don't Like Accusations of Guilt'." *The Globe and Mail,* 12 July.

Norgaard, Kari Marie. 2006. "'We Don't Really Want to Know': Environmental Justice and Socially Organized Denial of Global Warming in Norway." *Organization and Environment* 19, no. 3: 347–370.

Nunn, Patrick D. 2003. "Nature-Society Interactions in the Pacific Islands." *Geografiska Annaler* 85, no. 4: 219–229.

Nuttall, Mark. 2009. "Living in a World of Movement: Human Resilience to Environmental Instability in Greenland." Pp. 292–310 in *Anthropology & Climate Change: From Encounters to Actions,* ed. Susan A. Crate and Mark Nuttall. Walnut Creek, CA: Left Coast Press.

Nyong, Anthony, Francis Adesina, and B. Osman Elasha. 2007. "The Value of Indigenous Knowledge in Climate Change Mitigation and Adaptation Strategies in the African Sahel." *Mitigation and Adaptation Strategies for Global Change* 12, no. 5: 787–797.

Oldenborgh, G. J. van, A. van Urk, and Myles Allen. 2012. "The Absence of a Role of Climate Change in the 2011 Thailand Floods." Pp. 1047–1049 in *Explaining Extreme Events of 2011 from a Climate Perspective,* ed. T. C. Peterson, P. A. Stott, and S. Herring. American Meteorological Society.

Orlove, Ben, Heather Lazrus, Grete K. Hovelsrud, and Alessandra Giannini. 2014. "Recognitions and Responsibilities: On the Origins and Consequences of the Uneven Attention to Climate Change around the World." *Current Anthropology* 55, no. 3: 249–275.

Oster, Emily. 2004. "Witchcraft, Weather and Economic Growth in Renaissance Europe." *The Journal of Economic Perspectives* 18, no. 1: 215–228.

Pacific Council of Churches. 2004. "Otin Tai Declaration." http://www.oikoumene.org/en/resources/documents/wcc-programmes/justice-diakonia-and-responsibility-for-creation/climate-change-water/otin-tai-declaration (accessed 17 September 2014).

Patt, Anthony G., and Dagmar Schröter. 2007. "Perceptions of Environmental Risks in Mozambique: Implications for the Success of Adaptation and Coping Strategies." *Policy Research Working Paper 4417,* The World Bank Development Research Group, Sustainable Rural and Urban Development Team. http://www-wds.worldbank.org/servlet/WDSContentServer/WDSP/IB/2007/11/29/000158349_20071129093000/Rendered/PDF/wps4417.pdf (accessed 11 May 2012).

Peterson, Thomas C., Martin P. Hoerling, Peter A. Stott, Stephanie C. Herring, eds. 2013. "Explaining Extreme Events of 2012 from a Climate Perspective." *Bulletin of the American Meteorological Society* 94, no. 9: S1–S74.

Ribot, Jesse C. 2013. "Cause and Blame in the Anthropocene - Vulnerability Still Does Not Just Fall From the Sky (Author's Preface to 'Vulnerability Does Not Just Fall from the Sky: Toward Multi-Scale pro-Poor Climate Policy')." Pp. 164–172 in *Handbook on Climate Change and Human Security,* ed. Michael R. Redclift and Marco Grasso. Cheltenham, UK: Edward Elgar.

Ribot, Jesse C. 2014. "Politics of Misrecognition: Framing Out Liability under a Changing Sky (Comment on Orlove et al. 'Recognitions and Responsibilities')." *Current Anthropology* 55, no. 3: 269.

Robbins, Joel. 2004. *Becoming Sinners: Christianity and Moral Torment in a Papua New Guinea Society.* Berkeley: University of California Press.

Rudiak-Gould, Peter. 2012. "Promiscuous Corroboration and Climate Change Translation: A Case Study from the Marshall Islands." *Global Environmental Change* 22: 46–54.

Rudiak-Gould, Peter. 2013. "'We Have Seen It With Our Own Eyes': Why We Disagree about Climate Change Visibility." *Weather, Climate, and Society* 5: 120–129.

Rudiak-Gould, Peter. 2014. "Climate Change and Accusation: Global Warming and Local Blame in a Small Island State." *Current Anthropology* 55, no. 4: 365–386.

Sayre, Nathan F. 2012. "The Politics of the Anthropogenic." *Annual Review of Anthropology* 41: 57–70.

Shaffer, L. Jen, and Leocadia Naiene. 2011. "Why Analyze Mental Models of Local Climate Change? A Case from Southern Mozambique." *Weather, Climate, and Society* 3, no. 4: 223–237.

Shearer, Christine. 2011. *Kivalina: A Climate Change Story.* Chicago: Haymarket Books.

Sheridan, Michael J. 2012. "Global Warming and Global War: Tanzanian Farmers' Discourse on Climate and Political Disorder." *Journal of East African Studies* 6, no. 2: 230–245.

Smith, Heather A. 2007. "Disrupting the Global Discourse of Climate Change: The Case of Indigenous Voices." Pp. 197–215 in *The Social Construction of Climate Change: Power, Knowledge, Norms, Discourses,* ed. Mary E. Pettenger. Aldershot. UK: Ashgate.

Smith, William D. 2007. "Presence of Mind as Working Climate Change Knowledge: A Totonac Cosmopolitics." Pp. 217–234 in *The Social Construction of Climate Change: Power, Knowledge, Norms, Discourses,* ed. Mary E. Pettenger. Aldershot. UK: Ashgate.

Steffen, Will, Paul J. Crutzen, and John R. McNeill. 2007. "The Anthropocene: Are Humans Now Overwhelming the Great Forces of Nature?" *Ambio* 36, no. 8: 614–621.

Stoll-Kleemann, S., Tim O'Riordan, and Carlo C. Jaeger. 2001. "The Psychology of Denial Concerning Climate Mitigation Measures: Evidence from Swiss Focus Groups." *Global Environmental Change* 11: 107–117.

Sunstein, Cass R. 2006. "On the Divergent American Reactions to Terrorism and Climate Change." http://www.columbialawreview.org/assets/pdfs/107/2/Sunstein.pdf (accessed 4 February 2010).

Swyngedouw, E. 2010. "Apocalypse Forever?: Post-Political Populism and the Spectre of Climate Change." *Theory, Culture and Society* 27, no. 2–3: 213–232.

Szerszynski, Bronislaw. 2010. "Reading and Writing the Weather: Climate Technics and the Moment of Responsibility." *Theory, Culture and Society* 27, no. 2–3: 9–30.

Taddei, Renzo. 2008. "Blame: The Hidden (and Difficult) Side of the Climate Change Debate." *Anthropology News* 49, no. 8: 45–46.

Taddei, Renzo. 2009. "The Politics of Uncertainty and the Fate of Forecasters: Climate, Risk, and Blame in Northeast Brazil." Pp. 287–296 in *Weather, Local Knowledge and Everyday Life: Issues in Integrated Climate Studies,* ed. Vladimir Jankovic and Christina Barboza. Rio de Janeiro: MAST.

Vazquez-Garcia, Luz. 2012. "Actors and Projects Defining 'Local Challenges': The Case of Coastal Fishing Communities in the Gulf of Mexico." Presented at "Adaptive Challenges Facing Coastal Communities" panel, Society for Applied Anthropology annual meeting 2012.

Weisser, Florian, Michael Bollig, Martin Doevenspeck, and Detlef Müller-Mahn. 2013. "Translating the 'Adaptation to Climate Change' Paradigm: The Politics of a Travelling Idea in Africa." *The Geographical Journal* 180, no. 2: 111–119.

Wilson Rowe, Elana. 2009. "Who Is to Blame? Agency, Causality, Responsibility and the Role of Experts in Russian Framings of Global Climate Change." *Europe-Asia Studies* 61, no. 4: 593–619.

Yale Project on Climate Change Communication. 2012. "Extreme Weather and Climate Change in the American Mind: September 2012." New Haven, CT: Yale Project on Climate Change Communication. http://environment.yale.edu/climate/files/Extreme-Weather-Public-Opinion-September-2012.pdf (accesseed 12 October 2012).

Yasuhara, Moriaki, Hisayo Okahashi, Thomas M. Cronin, Tine L. Rasmussen, and Gene Hunt. 2014. "Response of Deep-Sea Biodiversity to Abrupt Deglacial and Holocene Climate Changes in the North Atlantic Ocean." *Global Ecology and Biogeography* 23, no. 9: 957–967.