Violent silence: framing out social causes of climate-related crises

Jesse Ribot

Published online: 23 Jun 2022.

Submit your article to this journal ↗

Article views: 110

View related articles ↗

View Crossmark data ↗

Routledge
Taylor & Francis Group

FORUM ON CLIMATE CHANGE AND CRITICAL AGRARIAN STUDIES

Check for updates

Violent silence: framing out social causes of climate-related crises

Jesse Ribot

School of International Service, American University, Washington, DC, USA

ABSTRACT

Climate change is a problem of unimaginable scope and magnitude – in cause, implication and responsibility. Predominant and ostensibly scientific frames for evaluating climate-related loss and damage focus on the climate events as the primary cause. This approach clouds out and silences the many non-climatic, social and political-economic, causes of crises. Framing the social back in highlights a fuller range of causes and potential solutions. It is also contentious as it locates cause in decisions, policies and institutions – indicating responsibility and blame. Choosing a social and political-economic analytic has implications for action and ethics as it broadens response abilities and responsibility.

Like sex, hunger was shameful, indecent, unclean. It was made untouchable, taboo. (*The Geography of Hunger*, de Castro 1952)

No one would say that a lack of money in the world is the reason there are poor people; yet, many blithely suggest that a lack of food is the reason a billion go hungry. (Beyond the scarcity scare, Lappé 2013, 227)

The land of the southern poor is rich and mostly unpolluted, yet access to ownership of goods and resources for meeting vital needs is inhibited by a system of commercial relations and ownership which is structurally perverse. (*Laudato Si'*, Pope Francis 2015, 37)

The prognosis is in the hands of those who are willing to get rid of the worm-eaten roots of the structure. (*Black Skin, White Masks*, Fanon 1986 [1952], 13)

… there are perhaps contradictory simultaneous human impulses regarding causality, which elites can exploit. (Calmon, Daniela P. G. Personal Communication, April 18, 2022, e-mail.)

Whither causality?

It may seem that starvation is caused by a lack of food, yet Sen (1980) showed that modern-era food crises occur where there is more than enough food for everyone.[1]

---

[1]It is important to note that Sen's analysis is based on a neoclassical notion that takes initial conditions (i.e. assets and endowments) as given – without tracing histories of where they came from (Ribot 1995, 2014). The other analysts I cite go further to locate the causes of crisis in the very causes of the distribution of those assets. As Fine (1997, 630) states, 'the micro-foundations of the entitlement approach are to be rejected because of their inability to address satisfactorily

Sen (1980, 620) expressed ' … disquiet about this focus on food, and the importance attached to it to the exclusion of other variables,' opening our eyes to a broader array of proximate and structural causes of hunger. Today, there are reasons for disquiet about the focus on climate change as the cause of crises, and the importance it is now afforded to the exclusion of other variables (Hulme 2011; Lahsen and Ribot 2021; Cottier et al. 2022). Sen, among many others in famine and agrarian studies (de Castro 1952; Watts 1983; Blaikie 1985; Fine 1997, 633; de Waal 1997; Devereux 2000, 27; Wisner, Blaikie, and Cannon 2004), understood how simplistic explanations of famine misguided and hindered famine prevention and response. Simplistic assumptions that crises following climate events are caused by those events have the same effect. They cloud out the many causes of, and, thus, potential protections against, crises. How do we conduct a full analysis of the causes of climate-related disasters? We do so by understanding the fragilities that crises reveal and the causes of these fragilities.

The crises that follow extreme climate events expose pre-existing vulnerabilities of the agrarian world and farm households. The precarious are plunged into hunger, famine, economic loss or dangerous dislocation while the secure are barely affected (Watts and Bohle 1993; Blaikie et al. 1994; Ribot 1995). Indeed, Marshall Sahlins (1972, 111, 114–130) labels disasters 'revelatory crises,'[2] as they make underlying vulnerabilities visible – yanking the vail off of present but hidden structures of unequal power, wealth, protection, exposure. Soloway (1994) applied this notion to drought, and Mostafanezhad (2020) and Achiume, Gammeltoft-Hansen, and Spijkerboer (2020) to Covid19. Further back, even our term 'apocalypse' comes from the Greek word for an uncovering, disclosure, or revelation.[3] In cases of climate change, Covid19, or any other hazard, damages are socially stratified by pre-existing vulnerabilities (Turner 2016). The distribution of damages has social and political-economic causes (Sen 1981; Watts 1983; Nixon 2011). In short, there are social and political actions and structures responsible for the differentiated vulnerabilities that turn hazard into crisis for some (Blaikie et al. 1994; Wisner, Blaikie, and Cannon 2004). This essay explores the veiling and unveiling of the causes of vulnerability and crisis while attending to the attribution of responsibility. It also includes responsibility and its absence in the causal analytic of vulnerability.

While *triggered*[4] by climate stress, the evidence is overwhelming that 'climate-related' damages are stratified by historical, social and political-economic arrangements

---

the social relations and structures through which famines are fundamentally caused.' Limits to entitlements approaches are not taken up in this article.

[2]Sahlins (1972, 114) frames crises as revelatory, citing Firth (1959) who wrote of what a famine can 'reveal.'

[3]https://www.merriam-webster.com/dictionary/apocalypse#learn-more.

[4]Viewing hazards as 'triggers' rather than cause enables analysts to include the causes of the fragilities that enable hazards to result in damages. Watts (1991, 15) states, 'Climate, "over-population" and war, while potentially significant as proximate or trigger factors, have been substantially discredited as primary factors.' Fine (1997, 637) writes of 'proximate events that trigger and distribute its [entitlement failure's] incidence.' Pelling (2003, 47) explains, 'The challenge today is to integrate agency and structure in examinations of the production of vulnerability, in specific places, whilst also acknowledging the importance of physical systems in generating hazard that can trigger disaster.' Wisner, Blaikie, and Cannon (2004, 61) point to how ' … most government agencies charged with such responsibilities as "environment," "health and welfare" and "public safety" generally still deal with disasters as though they are *equivalent to* the hazards that trigger them.' In an 'aetiology of hunger,' Nally (2011, 4) considers 'droughts, floods, and crop failures are "trigger factors," though not necessarily an "underlying cause," of famine' and quotes Arnold (1988) who says famines are 'a symptom rather than a cause of social weakness.' Temudo and Cabral (2021) also describe climate change as a trigger of rural conflict in Guinea Bissau. While all crisis can be explained by the vulnerabilities, a definitional matter, the stratification of damages is certainly a function of stratified vulnerabilities.

that render some people secure and others vulnerable. The social basis of crises, the vulnerabilities, are often evident. In Bangladesh, cyclone fatalities declined by 150-fold (from over 500,000 to 3400 deaths) between the cyclones Bohla and Sidr that hit the same coastline with similar intensities and surges in 1970 and 2007. The decline was due to planning and reforms on the ground (Bern 1993; CEDMHA 2007; Batha 2008; Government of Bangladesh 2008; MFDMB 2008). In 2020, Cyclone Amphan, the strongest cyclone on record in the Bay of Bengal, registered fewer than 30 deaths – due to effective government action (Kelman and Ahmed 2020). The ability to respond was identified and acted upon. Vulnerability and damage were reduced.

When weather – ordinary or extreme – meets precarity, damages can follow (Blaikie et al. 1994; Wisner, Blaikie, and Cannon 2004) – precarity is social and political-economic. The 1943 West Bengal famine, blamed on crop disease, was caused by well-functioning markets that allocated food away from the hungry; there was enough to feed all and no absolute shortage (Sen 1981).[5] The 1959–1960 famine in China was produced by a depravedly extractive administration, not drought (Jisheng 2012). The 2011 Somali famine was a product of 'interplay of livelihoods, clan and politics,' not drought (Majid and McDowell 2012, 37). In 2005, 'the disaster in New Orleans after Katrina was unnatural and man-made,' (Bullard and Wright 2009, 2); the 1300, disproportionately African-American, fatalities resulted from a long history of government negligence, not the hurricane (White House 2006; Hayes 2009; also see Somers 2008). Damages were a function of conditions on the ground – conditions that don't fall from the sky.

Yet, weather and associated damage often seem to drop randomly from nowhere – as we always face uncertainties. Indeed, as some argue, uncertainty 'defines our times' (Scoones 2019, 5; also see Taddei 2008; Beck 1992). Uncertainty, implies unpredictability such that knowledge, planning and control over the future are indefinite. But this indefinite future does not absolve society and its planners of responsibility, it also does not imply that the past did not have a definite causal logic. Future uncertainty does not mean we cannot trace back the origins of already manifest outcomes. Uncertainty is forward looking. It is about futures. Yet, the past is a certainty, as we can observe what has happened and we can often uncover why. The past can be known as it is completed, inscribed upon the present, and often legible. Vulnerabilities, as they are about a predisposition in the present, contribute to the sense of uncertainty about futures – even when those vulnerabilities and their causes are well understood. The vulnerable are prone in known ways.

Critical realist Bob Jessop (1982, 2014) has characterized this relation between future uncertainty and clear readings of past cause as 'contingent necessity.' Uncertainties make planning and control over the future difficult. They do not, however, override or erase the causes of what has come to pass. We may not have been able to predict the convergence of historical trends, but their convergence, which could have happened or not, explains the outcomes we observe. The implication for responsibility and blame derives from the fact that it is often possible, even in an uncertain world, to identify who or what caused a given outcome – even when that outcome was caused by known or ignored uncertainties. Indeed, we can identify who ignored or poopooed

---

[5]As Fine (1997, 635) observed ' … there is many a slip 'twixt cup and lip when it comes to the access to, as opposed to the supply of, food.… '

conventions like the precautionary principle. We can understand causality by the ignoring, invention or misreadings of (un)certainties and of wisdom.[6]

In an essay about ignoring precaution, Russell (1924) argued that the hubris of science causes damage – as Daedalus learned when he gave Icarus wings. Icarus – burnt by the sun – provides a good precautionary tale for climate change. Indeed, given uncertainties, 'greater humility and vigilance are required' (Scoones 2019, 5); and, when they are not applied, their absence is cause, and, there is fault. This article, however, is not concerned with causes of the future. It focuses on past causes. I explore the causes of crises – which can include, concretely, how uncertainty is misread, generated and abused, and what was known and unknown. The study of causality is not about planning – despite having planning implications. It is about explanation of that which is immutably inscribed that can then, in a forward-looking moment, inform action or planning. The past is a complex multifaceted composite, and at times cause cannot be discerned, but even when unknown it is not uncertain (Nally 2011, viii–ix). It is, simply, what happened – no matter how much we quibble over it.

Since de Castro's (1952) exploration of the political basis of hunger in Brazil, and Sen's (1981) India famine studies, we have had more and more nuanced approaches to vulnerability studies. Why, then, are these vulnerability approaches, that point to social and political-economic causes of crisis, not more widely used? Why is there continuous slippage back into hazard-oriented explanations of damage? 'Why,' as Oliver-Smith (2013, 1) asks, 'are the problems I saw 40 years ago after the Peruvian earthquake of 1970 still with us when we have learned so much about their drivers?' In this article I suggest there are many reasons – not the least of which can be found in the threatening nature of social causality. Cause is social and thus political. The ability to trace a line from damage back to individuals, institutions, or their actions, inactions, ideologies or beliefs, indicating possible responsibility, makes it contentious.

Uncertainty too can evoke relations of blame. Giddens (1999) argues that the idea of 'risk' is ' … bound up with the aspiration to control and particularly with the idea of controlling the future.' He poses that hazard and danger were traditionally taken as givens – acts of nature and God – but risk is new. It is a preoccupation with the future. Here nature and God are external to society. Giddens (1999, 8) calls human-induced uncertainties 'manufactured risk' – responded to by insurance or the welfare state and argues that 'the transition from external to manufactured risk is bringing about a crisis of responsibility… .' It shifts the cause of risk itself to human action – and so does the ability to control, or even insure against, external uncertainties and hazard. The ability to act aligns cause with action and inaction, bringing about responsibility.

In all societies, people seek cause for pain and suffering, and in the analysis of cause lies responsibility (Calebresi 1975; Douglas and Wildavsky 1982; Wilkinson 2010). Any analytic frame that shows cause in human action can be used to evoke blame and liability, and is, therefore, avoided by some and sought by others. The choice or avoidance of a frame depends on purpose, position, alliances. Causality is contentious, about interest, so choosing frames that place it in the external and blameless is the easy way out – and helps maintain the appearance of neutrality in 'scientistic' endeavors – like modeling the relation between a storm and a subsequent disaster. Because there is purpose in

---

[6]Of course, there is even causality in lies and misinformation (Badrinathan 2021).

analyzing cause, and in how we place responsibility, there is also normative choice in and of the frames we bring to this analytic endeavor (see Calebresi 1975; Forsyth 2008, 756 on Blaikie 1985; Cronon 1992; Lakoff 2010). Sticking to a biophysical hazard-driven causal model is very different from choosing a social-causal model to explain disaster (Cottier et al. 2022).

In this article, I explore why causality is such a contentious and morally complex arena, how it embeds social norms and values, and the role of social values in the choice of causal frames. I evoke human exceptionalism and the nature of human nature as the root of moral values (*a la* Arendt), arguing that it is with values – moral or other – that analysts choose analytic frames to interrogate causality. This choice of frames, and the causes they steer us to, establishes or occludes potential responses and responsibilities – with responsibility then recursively turning back to shape the choice of frame. I ask what causes (and responsibilities) *hazard* and *vulnerability* analytic frames for the analysis of crises can reveal and what they might hide – bringing us to the violent silences (see Kashwan and Ribot 2021) that are generated by predominant frames of hazard-based 'climate-impact' analytics. These frames tend to concentrate on the hazard, thus silencing the agrarian histories that push so many farmers and pastoralists to the edge of subsistence; histories that produce the precarities that make it easy for a mere storm or drought to push them over the edge. I end with a call for a 'sociodicy' of climate change – a fuller social analysis of the causes of the vulnerabilities that enable hazards to trigger damage.

Contentions of causality: bringing 'should' back in

In risk society there is a new moral climate of politics, one marked by a push-and-pull between accusations of scaremongering on the one hand and of cover-ups on the other. (Giddens 1999, 5)

Responsibility is a contested site, with partisans of particular normative outlooks arguing for attributions of responsibility, while their opponents deny or reassign the attributions. (Jamieson 2015, 36)

Cause, especially of crisis, points to responsibility.[7] Thus, its attribution is constantly disputed. The analysis of cause always has a purpose – a human objective – or we would not seek to know it. As legal scholar Guido Calebresi (1975, 106) explains, ' … in law the term "cause" is used in different guises but always to identify those pressure points that are most amenable to the social goals we wish to accomplish…. Where goals differ, so does the practical definition of causation.'[8] Using what is now a timely example, Calebresi (1975, 105) explained that ' … so far as legal language is concerned, the "cause" of a disease would depend on how, at any given time, it could be most easily controlled.' Thus, he explains, the cause of tuberculosis in the nineteenth century would include inadequate exposure to sunlight and poor living conditions. Today the causes would include the failure to be inoculated. Or, it is due to inequalities – 'a

---

[7]Of course, responsibility is contentious too – as it is the contentious content of causality. 'Responsibility is a contested site, with partisans of particular normative outlooks arguing for attributions of responsibility, while their opponents deny or reassign the attributions' (Jamieson 2015, 36). 'In the accountability field, our choice of words also informs broader narratives about the reasons for accountability failures. These "causal stories" are relevant for guiding action because they point the finger at who is responsible for specific problems' (Fox 2022, 9 citing Stone 1989).

[8]The very notion of 'problem' is inherently an ethical issue (Gardiner 2011, 20–21).

health-care system that millions can't access, a public-health system that's been rotting for decades, and extreme inequities that leave large swaths of society susceptible to a new virus' (Young 2021). Causality cannot be separated from goals – in this case, improved health and wellbeing. It also cannot be separated from possibilities – the ability of people to manage the disease. What could have been or can be done becomes causes when neglected.

The word 'responsibility' is key – it links our response abilities (what we can do) to moral purpose – and shapes what we see as cause. Death, when protections are possible, is no longer due to a pathogen that we can protect against; it is now squarely due to negligence (failure to get vaccinated) or deprivation (inability to isolate or quarantine).[9] The causes of vulnerability are social and the analysis of causality can identify potential solutions by identifying treatable causes and by indicating responsible parties or structures. The potential solutions or preventative actions that *could* be, or *could* have been, create responsibility. The *ability* to protect ourselves and others (i.e. to *respond*) carries obligation where protection is a moral goal. This ability, combined with contract obligation (*contract* being a root of the word responsibility[10]), indicates blame and liability when obligation is unmet.

Could, in a moral world, is a pre-condition for *should*. It is only when one could get vaccinated that failure to vaccinate became a cause of disease (Calebresi 1975, 105). *Should*, a social or moral judgement that, when agreed upon or viewed as legitimate[11] (in law or less formally via custom or convention), generates a legal or social contract; it establishes some of the obligations we call responsibility. Moral principles of action – the 'shoulds' of our contracts – have many roots (from platinum or golden rules to shared vulnerability or shared humanity – a la Arendt 1963; Butler 2009; Hobbes in Ferrarese 2016, 5; Mill's harm principle as noted by Jamieson 2015, 26; Nyerere as represented in Shivji 2020; to Samafal, *a la* Carruth 2021). Along with such moral tenets, the analysis of the causes of vulnerability, and of the damages that vulnerabilities enable, is always a first step in establishing responsibility – in both senses: identifying the ability to respond, the 'could,' and the contract of 'should.'

Causality linked to human suffering or wellbeing is never normatively or morally neutral. First, suffering and wellbeing are *judged* to be relevant – this is a normative act. Second, how we frame the cause of a benefit or a damage also has implicit moral judgment, as different analytic frames include different causal variables. If we start with an outcome, a damage, and ask what caused it, a natural science frame will identify biophysical elements that impinge on that outcome – while normative in motivation, the analysis itself provides no indication of what could or should have been. Yet a social science approach, whose subject is 'the social' and cannot be separated from norms, will include a broader set of causes – beyond the biophysical. Causality involving social

---

[9]True for earthquakes too: ' … the case of people dying from earthquakes today would not warrant an analysis in terms of violence, but the day after tomorrow, when earthquakes may become avoidable, such deaths may be seen as the result of violence' (Galtung 1969, 168–169).

[10]Rooted in latin for a contract, pledge,or vow. https://etymologeek.com/eng/responsible. In this sense it is a fundamental element of social relations.

[11]Weber (1968) viewed 'legitimate' (although he used multiple definitions) as that which is not resisted. So, one may not agree with a law, but one submits to it – often for reasons that have to do with subordination and an inability to resist a monopoly on violence – as that held by the state.

actions is always contingent on normative *latent* elements of human interaction unaccounted for in, and unaccountable by, the natural sciences.

The latent is invisible and cannot be measured with calipers. Normative content, for instance, can be clearly discerned through events that did not occur. It is the moral context of expected action, i.e. the role of individual, social or political *expectations*, that make a non-action into a cause. Moral expectation, 'should,' distinguishes social from natural science causality – as a moral[12] judgment, the content of 'should,' can make the expectation that renders a non-event causal. What is not done can take on the label 'negligence' or 'turpitude' and can even be viewed as an act of 'malice' – due to moral expectation. For example, peasants judge failed reciprocities – that lead to hunger in times of drought – to be unacceptable, indeed, to be sufficient cause for rebellion (Scott 1976). Failure of the Army Corps of Engineers to maintain the levies of New Orleans' Lower 9th Ward can be judged as the cause of Katrina-related deaths (Hayes 2009) – behind which one might even place the malice of racism (Harden, Walker, and Akuno 2007; Bullard and Wright 2009, 38; Thomas and Haynes 2020). Thus, both what is and is not done can shape cause in the social world – yet, only what does happen is made visible by the calipers of natural sciences. In non-reductionist social analytics, these non-events can be causal – this is never the case in a strictly biophysical causal frame (Ennis 2012). In this sense, the choice of analytic frame applied to the causes of crisis is itself a moral judgment – as it will reveal different causes. For more on the choice of frames see Ribot (1995, 2014; Cottier et al. 2022).

The social sciences shine light on elements of cause in other ways that differ from the natural sciences. Lund (2014, 225) points out,

> The social sciences are the empirical science of historical reality. A discipline is essentially historical when its statements cannot be completely severed from the context from which data were drawn. It is the distinguishing feature of social sciences, which contrary to the natural science, cannot 'control for context.'

Social sciences are not inferior – as context, including histories, norms and values, is an empirical fact.[13] 'But,' as Lund (2014, 225) aptly states, social science 'is a *different* science' (italics in original). In short, social sciences make sense of causal chains within social context – which always includes the norms and values that establish expectations. It is worth recalling, that values are 'real' even if they are not measurable in biophysical terms (no calipers). Their reality is malleable and changes with time and context, but that does not make them un-real. These are the social and moral contracts – sometimes encrusted in law – that constitute society. These are the basis of the *shoulds* that link cause to responsibility.[14] These are also the basis of actions with real biophysical and social consequence.

---

[12]I include the 'legal' within moral judgment – as the legal is a codified form of mores. Actions are guided by law, custom and convention, or the 'contracts' of expectation established by one or more people – all of these create expectations.

[13]Indeed, 'There is no risk that can be described without reference to value' (Giddens 1999, 5). Further, 'Risk only exists when there are decisions to be taken … The idea of responsibility also presumes decisions. … someone takes a decision having discernable consequences' (Giddens 1999, 8). The normative is always implicit.

[14]I agree broadly with Jamieson (2015, 37) that '…moral responsibility encompasses "contributing to an outcome" or being "complicit in sustaining a state of affairs," even if these are not causal notions.' But, would still, on the grounds of social contract, consider these notions 'causal.'

Norms and values are causal social facts

> The contention that famine results from a kind of natural law has no basis in scientific knowledge. (de Castro 1952, 12)

> Science … cannot create ends and, even less, instill them in human beings; science, at most, can supply the means by which to attain certain ends. (Einstein 1949)

> … you cannot be rational without emotions. Without emotion, you would not know what to want, since like and not-like would be meaningless to you. When there is neither like or not-like, nor any judgment of the emotional reactions of others, you cannot make rational decisions. ("Why It Matters How We Frame the Environment," Lakoff 2010, 72)

As disasters, such as famines, can be avoided (or generated) by social and political action, they are social and political events – they are allowed to happen; while some are, indeed, made to happen (see Devereux 2000, 27 in Edkins 2002, 15). Alex de Waal views famines that are allowed to occur as 'famine crimes' – where, if, for example, there is a social contract between rulers and the people against allowing famine to happen, they become political scandals (de Waal 1997 in Edkins 2002, 15; also see Scott 1976). It is because of responsibility and related liabilities (individual, social or political) that vulnerability – and how we frame analysis of its causes – is contentious, and, itself, political. Vulnerability in the social sciences is defined as a predisposition to damage (Blaikie et al. 1994; IPCC 2019). As society has agency and history, attempting to identify vulnerability's causes always points to the social arrangements that make for this predisposition. In tort law, cause, traced to intention or negligence, must be established to demonstrate responsibility, liability or blame (Calebresi 1975; Hart and Honoré 1959).[15] Causality, thus, can imply guilt, whether in law, the humanities (as in history) or in science – as the 'could' that is demonstrated will be read socially and can thus locate obligation and negligence – or merely identify a social/political decision on the protections to establish or forego. In analyzing climate-related disasters, responsibility – which combines the ability to respond and the moral or legal obligation to do so – follows from an understanding of the causes of vulnerability.

It may seem logical and self-evident to natural scientists that a storm or drought ('natural' or anthropogenic) causes damages that follow, but it is equally obvious in the social sciences that the vulnerabilities, without which damage would not have happened, are the causes, just as well. Causal models differ – and so do the responsibilities they indicate. Causal models, and the choice of causal frames, related to damages are never neutral – as those choosing a causal frame have some interest – 'a goal' in Calebresi's (1975) words – in the kinds of outcomes their analysis will indicate. Clearly, the natural sciences' tendency to cordon off 'context' is shaped by such purposes and constitutes a manifest exclusion of relevant empirical (as norms and values are empirical social *facts*; Durkheim 1982 [1895]; Douglas 1992; Lund 2014) driving forces of climate-related risks. These facts cannot simply be bracketed out without distorting the picture. The choice to do so is normative, and thus political, rather than 'scientific.' All scientists – natural and social – live in a

---

[15]Believing that cause is rooted in instinct, rather than will, Nietzsche (2003, 64) would disagree with this thesis, stating:

> Everywhere accountability is sought, it is usually the instinct of punishing and judging which seeks it. One has deprived becoming of its innocence if being in this or that state is traced back to will, to intentions, to accountable acts: the doctrine of will has been invented essentially for the purpose of punishment, that is of finding guilty.

For Nietzsche (2003), 'free will' is the invention of theologians as a means attributing discipline and punishment. Cause of events, in turn, is sought to comfort people by reducing the uncertainties of the unknown.

social world, and their choices of research problem, framing, methods, and data all carry (and influence) normative content.

The weight of choice: polluter or exploiter pays?

… international environmental law has developed distinctive approaches to standard-setting, institutions, and compliance…. It promotes compliance through transparency and forward-looking, non-adversarial procedures, aimed at improving effectiveness, rather than through traditional international dispute settlement, which takes a backward-looking approach, focusing on the issue of state responsibility. (Bodansky 2020, 3)

The framings of risk lead scientists and decision makers to ask different questions, which inevitably lead to the implementation of different solutions. And those solutions have significant material impacts on people's lives. (Colette 2016, 44)

I am talking of millions of men who have been skillfully injected with fear, inferiority complexes, trepidation, servility, despair, abasement. (Aimé Césaire, *Discours sur le Colonialisme* in Fanon 1986, 9)

If the view from 'environmental law' cannot attend to causes, then it is inadequate to the crises at hand – a crisis of responsibility (Giddens 1999, 8). Of course, there is some looking back when attributing the cause of climate change and the ensuing hazards. Clearly, a choice to look back, or not, has multiple implications for policy and practice. So does the choice of frames for attributing causality if and when one does look back. A specific idea of responsibility for damages in climate change, for example, is built into the United Nations Framework Convention on Climate Change (UNFCCC) procedures via the *Polluter Pays Principle* (PPP). UNFCCC uses an analytic frame that places cause in the hazard itself, and, thus, traces responsibility for damages to the parties whose effluents intensified its force. In their model, damages are 'impacts' of climate events – and their reports repeat the words 'climate impact' and 'climate-change impact' over and over (IPCC 2014). Increased damages are attributed to, seen as 'impacts' of, the increase in the intensity of climate events. We call this a hazards model (or *Environmental-Drivers* model, see Cottier et al. 2022) in which the hazard is the cause of the damages that follow, perhaps mediated by some static social elements.

The very different frame used in vulnerability analysis (also characterized as a *social-causal* model, Cottier et al. 2022), however, identifies the sources of fragility in social and human-created arrangements that the hazard finds in place. The damages, and the way they scale with the force or duration of climate events, are due to social vulnerabilities in place. Hazard analysis, implicit in UNFCCC's frame, places causes of damage within the hazard (Bassett and Fogelman 2013).[16] Vulnerability analysis places causes of damage and responsibility in society – so, for example, history may show that patterns of labor exploitation, price fixing, or lack of representation have produced the fragilities in current infrastructures and social arrangements (Ribot 2014; Ribot, Faye, and Turner 2020). The vulnerability model examines the multiple causes (among which the hazard

---

[16]Bassett and Fogelman (2013) analyzed four IPCC reports and adaptation-focused articles in the scholarly journals *Global Environmental Change, Climatic Change, Climate and Development*, and *Mitigation and Adaptation Strategies for Global Change*. They state,

Our content analysis shows the dominance (70%) of ''adjustment adaptation'' approaches, which view climate impacts as the main source of vulnerability. A much smaller percentage (3%) of articles focus on the social roots of vulnerability and the necessity for political-economic change to achieve 'transformative adaptation.' A larger share (27%) locates risk in both society and the biophysical hazard.

may be one) of a single outcome (e.g. economic loss or dislocation) – rather than the multiple outcomes of a single presumed cause (the hazard).

Tracing the origins of vulnerabilities, thus, might lead to a different principle – such as the *Exploiter Pays Principle* (EPP – see Kashwan and Ribot 2021). PPP places cause and responsibility in the hazard and its distant cause in the generation of greenhouse gases, EPP places cause in the fragilities in place – and their historic social and political-economic antecedents. PPP poses a paradox. It attributes the increase in damages that follow a normal versus an intensified hazard (storm or drought) to the climate change – to the climate-change effects of the 'pollution.' Then, following UNFCCC's PPP, the damages are viewed as being commutatively 'caused' by that increment of hazard and are thus the responsibility of those who caused climate change (see Lahsen and Ribot 2021) – the industrial nations (of course, identification of who the polluters are is also very dicey business, see Agarwal and Narain 1991). The PPP idea is to pay reparations, or create protections, to bring those affected back to the state they would have been in had there been no climate change. This return to pre-climate change levels of security (or insecurity), however, is the wrong target. This is equivalent to saying, 'let's provide protections that maintain affected people in their original pre-climate-change state of vulnerability – that is, restore them to an already unacceptable state of precarity.

Not surprising, to many social scientists and historians, the precarious state of the adaptation-fund-eligible populations in 'developing countries' is also largely caused by the same metropoles that generate the climate change. Indeed, the very ability to industrialize, hog and burn carbon fuels was a product of colonial domination and exploitation that made these populations vulnerable (see Fanon 1986 [1952]; Wolf 1981; Mamdani 1996, 2020; Guldi and Armitage 2014; Patel and Moore 2017; Davis et al. 2019). Yet, this precarity is hidden by the hazards focus (which frames the hazard as cause). So, calling the climate increment the cause of observed suffering obscures the broader responsibility to insure people's overall wellbeing – and not just to restore the state of misery they were enjoying in the absence of climate change. PPP is clouding out EPP. People who are vulnerable in the face of ordinary climate events, and vulnerable along many other lines, should not merely be protected from the increased intensity of storms. They need to be compensated for a history of colonization, exploitation, extraction and marginalization. Climate proofing is simply not enough (Morrissey 2014; Brottem and Brooks 2018; Smucker et al. 2015, 40).

Of course, PPP and EPP are integrally interlinked. In law PPP and EPP can easily be combined to establish responsibility – in cases where the action ('pollution' or 'exploitation') or force (a climate event) is traceable to human agency or intentionality. In law, actions without which the observed damage would not have occurred are called 'but-for causes' (essential or *sine qua non* conditions). The link from damage to necessary conditions is considered legally adequate to establish responsibility. With multiple but-for causes, the law does not have a calculus to parse and apportion damages among intervening variables – but it does so through normative judgment; as there are no measurable or quantifiable proportionalities. Each (and every) but-for cause, without which there would be no damage, can, thus, be one-hundred percent causal.

Indeed, while hazard and vulnerability work together, a root-cause analysis cannot attribute a specific portion of damage to a hazard (Cottier et al. 2022). Such quantifiable attribution is often made by analysts, but only by controlling for context (varying the hazard and calculating different damages for a fixed set of conditions in place). This

attribution is specious, as context is a cause and has causes. So, this form of analysis is tantamount to controlling for (or taking as fixed) the very causes we are aiming to identify. Causality lies in the conditions that enable a hazard to trigger damages – and these must be accounted for. The relative weight of the causal contribution of each remains indeterminate – even though it is easy to see that hazards have causes and vulnerabilities have causes. Causes on each side of the hazard-vulnerability relation can be accounted for but not quantified for relative contribution.

Violent silences in the choice of frame

> The risks that we choose to see or not see for ourselves or for others are deeply embedded in the way our societies are organized and in the beliefs that sustain and perpetuate that organization. (Oliver-Smith 2013, 1)

> The scientists kept a pointed silence about the living conditions of the world's hungry masses; consciously or unconsciously, they became accomplices in the conspiracy. The social reality of hunger stayed outside their laboratory walls. (de Castro 1952, 8)

> The contention that famine results from a kind of natural law has no basis in scientific knowledge. (de Castro 1952, 12)

> News that is going to be accepted as true information has to wear a badge of loyalty to the particular political regime which the person supports; the rest is suspect, deliberately censored or unconsciously ignored. From this standpoint, the proper way to organize a programme of studying risk is to start with studying institutional design. (Douglas 1992, 19)

> Shifting frames and changing practice are not easy, and are very challenging to incumbent institutions, disciplines and professional practices. (Scoones 2019, 28)

> In understanding contemporary environmental crises, it is crucial to remain attuned to the ways in which 'destruction in the colonial era becomes visible in the postcolonial era'. (Davis et al. 2019, 3 citing Vergès 2017)

> We … need to examine … the erasure of historical memory and other forms of desocialization as enabling conditions of structures that are both 'sinful' and ostensibly 'nobody's fault.' (Farmer 2004, 307)

> Erasing history is perhaps the most common explanatory sleight-of-hand relied upon by the architects of structural violence. Erasure or distortion of history is part of the process of desocialization necessary for the emergence of hegemonic accounts of what happened and why. (Farmer 2004, 308)

A whole set of institutions support analytic approaches that locate the cause of crises in climate hazards. This is not surprising as it is good and necessary to convince the world that anthropogenic climate change is real and dangerous. So, because scientists and the media are under pressure to demonstrate the dangers of climate change, they seek to show how every environmental crisis has a climate change signature (Lahsen and Ribot 2021; Lahsen, de Azevedo Couto, and Lorenzoni 2019). Hulme (2011, 247) calls this attribution of crises to climate alone 'climate reductionism' – a reduction to a set of variables recognized by natural sciences. He explains that, 'In seeking to predict a climate-shaped future, proponents of this logic reduce the complexity of interactions between climate, environments and societies, and a new variant of climate determinism emerges.' He continues, 'Once isolated, climate is then elevated to the role of dominant predictor variable.' Yet, many other variables make climate-related damage possible.

When attributing causality of damages, however, whether to trace cause through the hazard or through histories of place is a *choice* (certainly embedded in institutional and social pressures) – it is the choice of what to hold constant; a common and highly problematic act in natural sciences.[17] Which variables to privilege and which to hold constant is, moreover, a moral choice, as it has implications for potential response and responsibility. Climate modelers resolve this by separating biophysical phenomena from the social conditions – they choose to 'control for context' – and then calculate changes in damages from a controlled social starting point (Cottier et al. 2022). Only then could modelers state that five percent of migrants are leaving Latin America due to climate change-induced drought (Lustgarten 2020). But this number is specious, as that five-percent increase in dislocation is caused by the many local conditions and histories (security or vulnerability) that converge with the drought. It is only caused by the hazard if one occludes the history and causes of the vulnerability that enabled calculating that five-percent effect. Clearly, even a quantitative climate model produces a normatively laden theoretically derived number. So, while an amount of damage would be followed by a specific increase in hazard in a given place and time, the increase is still due to the pre-existing vulnerabilities – and their causes – not to the hazard alone. It is due to histories behind the conditions that were taken as fixed.

Choice of theories and frames of analysis matter – as frames of analysis, like moral tenets, carry human values, as well as implications for action, and are thus always, at least implicitly, normative. Hazards models, attribute blame and responsibility to that event or through that event to the causes of climate change – as in PPP. In the event of blaming ordinary, or 'natural,' weather, the frame blames nobody. It is akin to calling a crisis an 'act of God' or an 'act of nature.' In the event of blaming anthropogenic climate change, the frame traces responsibility to the scads of scattered sources for carbon emissions or to the social and political-economic causes of those many sources. The chain of causality is from climate to carbon emissions back to social acts and structures. Yet, such blame, in the event of climate change, is relatively diffuse, even if social – rather than blaming someone, or specific economic structures, it often blames everyone (e.g. 'anthro-,' the human species) or whole countries or overly broad economic activities (Agarwal and Narain 1991; Castree 2014; Rudiak-Gould 2015; Schwartz 2019). Here, even if vague, the social component of blame articulates through the sky via the human agency transported by the transformed climate event. The focus on cause in and of the hazard, however, entirely misses, indeed occludes, the deep causes in place – the social and historical causes of vulnerability. Reflecting Watts's *Silent Violence* (1983), Kashwan and Ribot

---

[17]Others writing on the origins of crisis have argued a more general set of Western occlusion via the reductionist sciences. de Castro (1952, 12) argued that

[t]he tremendous impact of scientific progress produced a fragmentation of culture and pulverized it into little grains of learning. Each scientific specialist seized his granule and turned it over and over beneath the powerful lens of his microscope, striving to penetrate its microcosm, with marvelous indifference to and towering ignorance of everything around him.

In Europe and the US, he continues, universities have created a 'specialists' civilization,' 'directed by men whose scientific outlook is rigorous but who suffer from deplorable cultural and political myopia.' These are, following Ortega y Gasset (1940), quoted by de Castro, the 'new barbarians – men ever more and more learned, and less and less cultured.' Similarly, Margaret Somers (2008, 9), drawing on Foucault, speaks of social histories and causes of crisis as ' … subjugated knowledges,' meaning 'those ways of seeing and understanding the world which have been disqualified for their supposed lack of rigor or "scientificity," those knowledges that have been present but which are often made invisible.'

(2021) call this silencing of history a *violent silence* – as it does harm by hiding the factors that cause damage and thus hiding potential responses and responsibility.[18]

The nature of human-nature

> To say that humanity's physical and mental life is linked to nature simply means that nature is linked to itself, for humans are part of nature. (Marx 1894)

> … laissez-faire was not only 'planned,' as Karl Polanyi famously insisted; its imposition required an increase in repressive measures, as labourers, peasants, and smallholders were forced to bear the cost of *market regulation*. The assumption that markets are 'natural systems' operating outside of power and politics is itself an invention of the nineteenth century. (*Human Encumbrances*, Nally 2011, 8)

> There is an ecology of bad ideas, just as there is an ecology of weeds, and its characteristic of the system that basic error propagates itself. (*Pathologies of Epistemology*, Bateson 1971, 489)

> It is remarkable … how the (not so) dreaded comparison between human and animal slavery is brandished about in the field of animal studies and how black liberation struggles serve as both the positive and negative foil for making a case for the sentience and therefore emancipation of nonhuman beings. (*Habeas Viscus: Racializing Assemblages, Biopolitics, and Black Feminist Theories of the Human*, Weheliye 2014, 10)

> … the physical mixing of nature and society does not warrant the abandonment of their *analytical* distinction. (Malm and Hornborg 2014, 64)

It is not a new idea that frames matter for the study of climate-related crises. Almost half a century ago, O'Keefe, Westgate, and Wisner (1976) wrote 'Taking the Naturalness out of Natural Disasters.' Their impulse was practical and moral – directing analysts to locate cause, and thus responsibility and response, in society. Their argument does not imply that nature cannot wreak havoc. Rather, they argue that the social stage must be set – exposure and vulnerability established – for nature to take a toll; they assert that the causes of disaster *can*, and *should*, be framed as social. The frame of causal analysis we bring to disaster is a moral *choice* that shapes how and where we locate responsibility and identify possible response. In some frames – which I would not choose – nature is cause; in others it is not (de Castro 1952; Ribot 1995; Cottier et al. 2022). For any given event and damage, analysts can, if conscious, *choose* among different analytic frames, each of which can rigorously locate causality in totally different arenas. Taking naturalness out of disasters is a *decision* to place cause, and thus responsibility, squarely within society – enabling us to leverage social response. In this sense, the choice of analytic frame is a moral choice – as it shapes, based on the analyst's position or sensibilities, where we locate, via cause, responsibility. This choice of causal analytic shapes responsibility by identifying the culpable and by showing what is possible.

The late Smith (2006) wrongly asserted, however, that 'there's no such thing as a natural disaster.' His argument was based on the idea that the disaster was rooted in social precarities on the ground – he was not concerned with how natural or anthropogenic the hazard was. Yet, for those who take a hazards approach, there can be such

---

[18]Guldi and Armatage (2014, 83) point to many factors that militated a shallowing of history from the 1970s to 2000s. These factors pushed historians and other social scientists to stop writing for the policy makers as economists replaced them; science envy also steered social scientists toward modelling and ' … a focus on game theory and rational actors – … a retreat to individual and the abstract, not the collective and the concrete.'

thing (assuming that the hazard modeler believes the storm is, at least partly, 'natural'). But, the claim that nature, or even the anthropogenic storm, is the cause of a disaster is, even if true to the assumptions made, a dubious moral stance as it is a choice that can obscure social causes of the vulnerabilities in place. So, it is more accurate to state (for those who believe the storm named Katrina[19] was a natural event) that 'we *should* not attribute disaster to "natural" events.' We *should* choose social-causal frames. We *should* choose responsibility. Any crisis can be shown to have cause in social agency – even if the triggering hazard emerges from something we call nature, or even a seemingly random event – human-induced or not.

Understanding the nature of 'nature' is important for avoiding confusion in causal analysis. Everything, even our tools, machines and artefacts, derives from nature – as do we. Calling disaster an act of God or of nature has long been a way for governments and insurance companies to avoid responsibility (Wilkinson 2010) – as people accept crises as fate and God's will (Scoones 2019, 23). But, as soon as influenced by human action, nature is cultured,[20] it is transformed into something that carries human agency, human influence, or 'dead labor' (*a la* Marx 1894). Climate change cultures nature. And would seemingly place responsibility back with society – those specific actors and structures that generated it. This is not 'species thinking' implicit in terms like 'anthropocene,' which blames the whole human species, absolving the responsible specific social arrangements and sub-groups (Malm and Hornborg 2014; Guldi and Armitage 2014).

Climate change, however, brings in a second and different crisis of responsibility, as when in 2008 government agents or journalists in the State of Santa Catarina, Brazil avoid local responsibility by claiming that disasters following flooding are due to climate change. Climate scientists and other journalists, however, pointed out that the 110 deaths, 78,000 displaced people, 6000 destroyed properties, and 2.5 billion in damages were due to government policies and practices in the region. They cite deforestation of reserves and lack of respect for the Forest Code concerning hilltops, hillsides and riparian forests, poor land use and water management, that enabled erosion and silting, poorly enforced laws that allowed settlement in reserve areas, and policies that left poor people living in precarious areas prone to landslides and floods. One journal article suggested the need was to unclog drains and relocate those living on dangerous slopes and close to the waterline. In this case, however, politicians chose to attribute the disaster to climate change – despite that local people and even climate scientists knew this crisis was socially generated (Lahsen, de Azevedo Couto, and Lorenzoni 2019, 5–6). In this case, there is a disingenuous attempt to place blame somewhere up in the sky – in what may have been anthropogenic rains, but which fell on socially produced vulnerabilities.

While some want to blame pure nature (or God), it is questionable whether there is any pristine nature – environment that has not been shaped by human action – whether in a productive or destructive manner (Ribot 2014).[21] Levis et al. (2018) view even the Amazon

---

[19]Note this anthropomorphizing with human names like 'Katrina.' Perhaps this is part of directing blame to them – even before climate change – as if they were agential forces.

[20]From Latin *colere* 'tend, cultivate, inhabit' (Oxford Languages online dictionary).

[21]Giddens (1999, 3) places 'the end of nature' at the point when ' … we stopped worrying so much about what nature could do to us, and we started worrying more about what we have done to nature.' This is part of our entry into what Ulrich Beck called 'risk society.'

as a domesticated space – with a mix of species shaped by human action (also see Hecht 1990). All nature, since the advent of humans – as we act in the world and even our breathing transforms the atmosphere – has been influenced by humans. This is why Bauer and Ellis (2018) have argued that it is impossible to find a precise starting point for the 'anthropocene' (also see Malm and Hornborg 2014; Davis et al. 2019). Indeed, human action has always shaped the world. As poet Francis Thompson (1913) wrote, ' … thou canst not stir a flower without troubling of a star.' Clearly influenced by his contemporary Isaac Newton, Thompson saw that all things in the world – indeed, all things in the universe – are inter-dependent. Human action has, thus, shaped everything, intentionally or not. So, finding pure nature is not possible. And, it is also not necessary or relevant.

The link that matters is between human action and what humans judge to be good or bad; gains or losses, benefits or damages. These human actions are relevant to attaining human aims and desires. And, it is possible to trace a causal link from a given human-valued outcome, a gain or loss, benefit or disaster, to intentionality or negligence (*a la* Calabresi 1975; Hart and Honoré 1959). We are not concerned, like Thompson, with the effects of all human action, just the agency that causes benefits or damages and that we thus have reason to attended to, care about, encourage or prevent – and this includes the agency in reshaping the biophysical world. So, while human influence may be everywhere, agency,[22] which derives from consciousness and the ability to think and to judge our actions (*a la* Arendt 1963), is the element from which we derive morality and responsibility.

We humans are not separate from nature. We are nature. But, as Arendt (1961, 170–171) pointed out, the miracles of evolution are authored by probability, whereas we know the author of the even more frequent miracle of political change through women and men '… who because they have received the twofold gift of freedom and action can establish a reality of their own.' She recognizes our exceptional position in nature – and some argue it is language and thought that are unique elements of our – human – nature. These give us the freedoms and possibility for action that do not appear to be the nature of other creatures – these are unique to us (see Arendt 1963; Chomsky 2018). We are able to freely think, frame, plan and manage, while other entities and 'creatures' cannot. And, even if they are sentient or communicate or even have 'agency' in *some*, rather absurd, definitions (as Latour 2004 [1999]; Bennett 2010; Simard 2021 assert), the elephants, dolphins, whales, octopodes, scallops, trees, mushrooms, mosquitos, viruses, rivers or rocks are not going to intentionally manage human wellbeing or save us from ourselves. They will not steer us toward a just and sustainable future. As Malm and Hornborg (2014, 68) say, ' … they lack the capacity to scrutinize and stand up to human actions.' That said, if we consider that thought (along with abilities that free us to translate it into action) is our nature, then our actions on the world are also nature and so we can invert this whole argument by saying that everything is natural – even disasters. But, we can say it in a way that does not absolve us of responsibility.

The key responsibility issue, then, is not what is or is not 'natural.'[23] The key is why we, humans, care and are in a unique (exceptional) position to do something about our effect

---

[22]Latour's (2004) and Bennett's (2010) 'destributive agency' – a claim that all things and all acts are results of agency and that agency is thus everywhere – is a serious diversion from the quest for responsibility.

[23]In some sense, the search for pure nature is like the search for a Garden of Eden – that time before knowledge (and attendant responsibility) that the Judeo-Christian tradition viewed as pure (Ribot 2018). This kind of search for purity

on the each other and the world – for human purposes such as security, sustainability or wellbeing. Thought is our nature, and because of it we are responsible for what we do (*a la* Arendt 2003; Nietzsche 1882); with thought, and being capable, or able to do, we are unique. We have agency *and* can use it for what we value – what we judge to be good or bad. This responsibility is the essence of human exceptionalism. This makes us quite unique potential stewards of the earth and all nature – even our own. This *humanism* does not have to be patronizing. This can be practical and just. We must exercise our very-human agency – as diverse and politically complex as it is. If not us, then who (or what)? Of course, we do so with humility (see Russell 1924). Thought allows us to reflect on whether we can live with our own actions (Arendt 2003) – requiring of us a deep understanding of difference and a value of justice (*a la* Ghandi, in Kashwan et al. 2020).

Agency is not in every act or influence – human or otherwise (despite Latour's 2004 [1999]; Bennett's 2010 flat 'distributive' assertions). As storms or droughts may no longer be 'natural,' as they are profoundly influenced by humans, an element of what they transmit can be attributed to human agency – the element of human influence that can be traced to our ability to think and thus to our ability to be moral beings and to act accordingly. Attribution sciences (Trenberth, Fasullo, and Shepherd 2015), the science of identifying the element of climate events due to anthropogenic climate change, are estimating the climate increment or change in a given event that is due to human agency – the agency made explicit by our ability to know and reflect on our contribution of greenhouse gasses to changing climate. Through this attribution they are establishing particular lines of responsibility. They are establishing human action as the cause of this biophysical change. This change may also be stopped or reversed, via human intentionality. If that is not done, it is our own fault – belonging to no other being. Responsibility belongs to those with agency. Agency belongs to a moral thinking being with the ability to act and intervene. Agency is natural – a unique element of human nature.

Scoones (2019, 17) explains, stepping into slippery actor-network territory, that

> … interactions between human and non-human natures, bound up in extended actor networks, must necessarily become central to our understandings of how uncertainties are lived with (Law 1999; Latour 2005). In this view, multiple agencies and diverse practices link human–nature networks in ways that both generate and confront uncertainties as horizons of possibilities.

Perhaps this applies to uncertainties ahead, 'horizons,' but not to the past. On the contrary, if we intend to trace responsibility to human intention and agency, the 'actor-network' approach falls short; as it denies antecedents, and the distinctness of human agency (Latour 2004 [1999], 2005; Bennett 2010), it diffuses any notion of causality and human responsibility (*a la* Bryant 2011; *cf.* Hornborg 2017).[24] Rather, in a grounded approach, Borras et al. (2022, 5) observe,

---

too is an origin myth that has many dangerous (Nazi, Proud Boys …) implications we won't delve into here (see Huq and Mochida 2018; Kashwan 2020). Nobody tainted us with knowledge – no God or serpent anointed us with insight.

[24]Marx did not blur the distinction between humans and nature, but rather acknowledged interdependencies and embeddedness. These relations are material, as well as ideological, dialectics. They are not vague 'assemblages' or 'actor-networks,' but, rather causal recursive dialectical relations that we can observe and unpack. So, I do not understand how 'identifying multi-species realities, where nature-society separations are dissolved into hybrid assemblages, can offer deeper insights into the realities of the Anthropocene' (Borras et al. 2022, 3).

… work in critical agrarian studies needs to retain the focus on local material histories and power relations, while embedding both in long-term analysis of global environmental change and understandings of the way in which this new historical moment and the phenomenon of climate change are shaped by both material limits and the legacies of colonial and imperial inequality.

We must trace the present to human actions of the past.

Disjuncture – the commutative gap

Sometimes problems are not solved but dissolved in favour of another way of posing the problem. (Jessop 2014)

We have established that not all human influence is tied to agency or responsibility. We have not established whether the human agency that is responsible for changing the climate is also responsible for the subsequent damages that unfold on the ground. Paradoxically, establishing a human influence, an anthropogenic signature, on a climate event does not establish whether or how that anthropogenic change is related to any damages that follow (Lahsen and Ribot 2021). Responsibility for a change in climate does not directly translate into change in subsequent damages or responsibility for those damages.[25] These changes in damage are still caused by other factors – the social and political-economic dynamics and histories that shape precarity.

In the era when de Castro, Sen and Watts were first studying hunger and famine, climate events were viewed as natural backdrop.[26] They were not seen as anthropogenic (although they often were without us knowing – see Sahel discussion below). Here it was easy to state that the causes of crisis were in the vulnerabilities in place – as storms were seen as acts of nature and all possible social response was in action in the locale. People were protected or they were not. Responsibility was squarely on the ground within society (also see Douglas and Wildavsky 1982; Douglas 1992). There was no 'anthropogenic' climate-change increment that could be assessed and to which increased damages could be attributed. With the advent of this increment came calculations of 'additionality'[27] – anthropogenically augmented intensity seemed to imply a corresponding increase in damage.

As we have seen, however, the relation between climate increment and damages is not commutative (see Ribot 1995; Hulme 2011; Lahsen and Ribot 2021; Cottier et al. 2022). As weather events now have human agency (in addition to many other incidental human influences) built into their intensity and frequency, the increment in that intensity and frequency can arc to responsibility and can be a meaningful social cause of that change. So,

---

[25]Except in a 'but-for' sense.
[26]Giddens (1999) points out that

> … there doesn't seem in fact to be a notion of risk in any traditional culture. The reason for this is that dangers are experienced as given. Either they come from God, or they come simply from a world which one takes for granted.

He goes on, advent of the idea of 'risk' is ' … bound up with the aspiration to control and particularly with the idea of controlling the future.' Here hazard and danger are givens, risk is new – it is a preoccupation with the future. I would argue for a moral economy predicated on the realization that we generate our own dangers – and thus we are responsible for them; explaining the rise of insurance and the welfare state (Giddens 1999, 4). Giddens (1999, 8) calls this 'manufactured risk,' and argues 'The transition from external to manufactured risk is bringing about a crisis of responsibility … .'
[27]See Lemos and Boyd (2010) for an excellent discussion of 'additionality' politics.

responsibility for the cause of the changed climate event can be identified, yet this responsibility for climate change cannot be extended to responsibility for a precise damage increment – as the cause of damage remains, at least in part, in the vulnerability that the climate event finds in place. Nonetheless, climate events now link to human value as they carry human agency.[28] Made by human labors, anthropogenic climate, like objects of use or tools and machines, has embedded agency – the work that keeps on working. So, today, in what is being called the Anthropocene,[29] there is human agency in the sky, which can indicate responsibility. But responsibility for what? The climate event; not necessarily the damages that follow.

Full causal analysis

> The framing of climate events as sudden natural shocks can redirect the attentions away from long-term capacity building and social transformation towards short-term emergency planning … . (Huq and Mochida 2018, 36)

> The challenge today is to integrate agency and structure in examinations of the production of vulnerability, in specific places, whilst also acknowledging the importance of physical systems in generating hazard that can trigger disaster. (Pelling 2003, 47)

> Even brand-new forms of menace, without having been anticipated, can be labeled and slotted into existing categories of responsibility. (Douglas 1992, 54)

> … the new commonsense must avoid reductive 'ecologism.' Far from treating global warming as a trump card that overrides everything else, it must trace that threat to underlying societal dynamics that also drive other strands of the present crisis. (Fraser 2021, 96)

Sen (1981) revolutionized thinking on famine by debunking the simple food availability decline (FAD) theory of famines and provided a basis for a causal analysis of food deprivation rooted in proximate and some distal political factors (Sen 1981; Drèze and Sen 1989) – including capabilities and democracy. Fine (1997, 645), challenged this critique, bringing FAD back in as one causal element in need of explanation (in addition to entitlement failures), arguing that 'it is essential both that socioeconomic factors be analysed as causally prior and that famine be specifically tied to food rather than to a general theory of access to life's capabilities.' For Fine (1997), FAD cannot be dismissed in analyzing the causal structure of famines. Food is itself something that can fall short – supply can be disrupted or diminished. This itself can be a weapon or factor used by or generated within a larger political economy. So, the ability to shape the political economy that shapes food availability (Fine 1997, 645), in addition to the ability to shape the political economy that shapes entitlements (Watts 1991), is part of the causal structure of famines.

Without resolving the dilemma of how to weigh food decline versus entitlement failure, hazard versus vulnerability, a full social causal analysis of damage can be accomplished by separately analyzing both human causes of and responsibilities for climate change (*a la* Fraser 2021, 100; Borras et al. 2022, 8) and the human causes and responsibilities for vulnerabilities in place. For a given instance of crisis, such as the Sahelian

---

[28]I.e. Marx's (1894) dead labor at work in machines and infrastructures, or John Locke's (1960 [1689]), transformative labors by which we 'own' the sky – and owning it we are linked to its effects in the world. It is now ours. Being ours, we are also responsible for it, and all the externalities that are coming back to bite everyone.

[29]There are many reasons to avoid a term like 'Anthropocene' (see Bauer and Ellis 2018; Castree 2014; Malm and Hornborg 2014; Davis et al. 2019). Nonetheless, I will use it at times to evoke the era in which we are living under a changing climate.

droughts of the 1970s and 80s, this allows us to attribute responsibility for the hazard (the drought driven by aerosol forcing in Europe and the United States; see Biasutti and Alessandra 2006; Marvel, Biasutti, and Bonfils 2020) with the systematic colonial production of vulnerability (Franke and Chasin 1980; Watts 1983). Here, interestingly enough, we find that many causes of the climate increment and of vulnerability trace to the same Northern origins. They give us, in essence, a PPP-EPP analytic. Both polluter and exploiter pay – and in the case of 1970s and 80s droughts in West Africa, they indicate in aggregate (although not in the specifics of scale and timing) the same responsible parties. Thus, both the hazard and precarity had cause in Northern colonial and industrial activities. Effectively, we have two 'but-for' causes that point to the same responsible parties.

Of course, there are also many situated chains of causality that will show proximate and distal cause of place-based vulnerabilities – that indicate roles from the structure of gender inequalities in the household to local identity politics to structures of rights and representation shaped by local rules and regulations, infrastructures, the structure of markets, and to national and international politics and policies (Sen 1980; Watts 1983; Bassett and Fogelman 2013; Ribot 2014).[30]

Nonetheless, despite there being local, national and international causes of vulnerability, as well as a mix of causes contributing to climate change, focusing on vulnerability by holding hazard as the disaster trigger (rather than as cause), does not take polluters off the hook. It identifies the arena of intervention where, as in the Sahel case, the industrial world and colonial metropole are largely responsible for damages and, thus, reparations – the common cause in both hazard and vulnerability make responsibility unambiguous. This indicates a moral obligation to address the vulnerabilities and not merely those related to a climate increment – as the UNFCCC would have it (see Ribot 2014; Khan and Roberts 2013; Kashwan and Ribot 2021). The overall analysis of causes of vulnerability and of damage will always require a nuanced situated historical causal analysis – and can, likely often, show common root causes.

However, this dual analysis of causality – tracing out of the causes of changed frequency and intensity of climate events and the causes of vulnerabilities – cannot provide a quantitative weighting of the relative roles in damage production of the hazard versus the vulnerability. Neither element can cause damage by itself (Blaikie et al. 1994). Further, in a given place and time, for a different level of hazard there is a different level of damage, as for a different level of vulnerability damage will vary. So, were a climate event to strike a secure village, there may be no damage. Were the intensity of that event to be doubled and to strike this secure village, there still may be no damage. But were the village highly vulnerable, the damage might be quadrupled by a doubling of intensity.

The vulnerability transforms mere events, at least when on the scale of human experience, into hazards – without vulnerability they remain mere events (in this sense, vulnerability defines hazard).[31] While for a specified (controlled-for) vulnerability we can attribute an increment of damage to an increment of hazard, even a fixed vulnerability

---

[30]As de Sherbinin (2020) notes, 'Social vulnerability is a function of the population's sociodemographic characteristics such as age, sex, ethnicity, race, education, and major livelihoods, as well as its access to financial and other capitals and adaptive capacity.' And, each of these indicators and proximate causes, has a chain of causality behind it – what might be called the structural and political-economic root causes.
[31]When that hazard is on a human scale. But, even with extreme events, such as gigantic meteorites, one can simply say we are vulnerable in the face of meteorites as we do not have the protections.

has causes too, thus the causes of the damage cannot be located in the fixed conditions – they are located in the causes of these conditions. This follows from the observation by Lund (2014, 225), made above, that the social sciences do not control for or set context aside – as context always plays a causal role. In this case, context, both social and biophysical, shapes the entire possibility of crisis. There will never be a fixed or neutral quantified apportionment of cause or responsibility between the hazard and the vulnerability.[32] The question at hand becomes a moral one. Which causes lead us to places where we are *able* to *respond* – in a timely, long- and short-term, and meaningful manner – to reduce pain and suffering associated with climate events? This also evokes the question of who is able, or has the means, to respond – and thus who 'should' respond.

Toward a sociodicy of crisis

To remember history is not to lament it. Rather it is to purposefully take stock of the magnitude of damages wrought by various forms of discrimination and to devise interventions that redress the sources of that discrimination. … such an approach would push environmental scholarship to internalize 'the deep spatial historical logics' – the plantation, the colony, the reservation – that mark contemporary racialized environments. (Ranganathan 2017, 5)

To become counter-hegemonic … a new commonsense must transcend the 'merely environmental.' Addressing the full extent of our general crisis, it must connect its ecological diagnosis to other vital concerns – including livelihood insecurity and denial of labour rights; public disinvestment from social reproduction and chronic undervaluation of carework; ethno-racial imperial oppression and gender and sex domination; dispossession, expulsion and exclusion of migrants; militarization, political authoritarianism and police brutality. (Fraser 2021, 96)

More radical climate justice narratives highlight the historical injustices of unequal exchange and ecological debt, whereby climate challenges in the periphery are the direct consequences of long histories of exploitation and unequal relations of global power. (Borras et al. 2022, 13)

As climate scientists have investigated future climate scenarios – and potential social responses to environmental changes – they have become, *ipso facto*, social scientists. (Wainwright 2010, 983)

There are clearly alternative worlds of political critique, parallel to the dominant one, that need to be taken seriously if we are to restore the contingency of history and see the past anew as a site of possibility. (Nally 2011, xiii)

If we continue to frame adaptation in apolitical terms, our efforts may well end up being futile. Worse than that, in cases where new resources are made available to existing elites they may end up buttressing exclusion and therefore entrenching vulnerability. (Morrissey 2014)

… social processes and the risks they represent are all outcomes of human decision-making about how resources (including places) are used and by whom they are used. (Oliver-Smith 2013, 1)

Climate is changing. There are stronger storms, more droughts and rising seas. These forces have to be contended with as they *trigger* all kinds of damages. There are

---

[32]Of course, a total destruction of earth by a meteorite could make preparation irrelevant. But, the effects will still be stratified. Presidents of powerful nations will probably blast off into space. Yes, it will be a bummer to die alone in space and watch the earth vanish, but the vulnerability will still be stratified – by have rocket ships and have not rocketships. In short, any human-scale crisis is stratified by vulnerabilities.

dangerous biophysical forces out there. We are generating them and could stop them. This 'could' is part of the social force we are not using. A different set of conditions, vulnerabilities, *enable* those new forces to trigger damages. What would allow us to withstand and protect against them? This is also a set of social forces that we must work with. The first set of social forces is called mitigation. The second is spoken of as 'adaptation' – although I call them 'vulnerability reduction.'[33] Despite being interlinked they remain distinct. Both condition and are conditioned by the systems we create and live in.

Indeed, we live in a system with built-in contradictions, predicated on damaging growth. Fraser (2021, 96) makes it quite clear that our economic system[34] ' … represents the socio-historical driver of climate change, and the core institutionalized dynamic that must be dismantled in order to stop it.' Because of this system, Bourdieu (1997) has argued 'today precarity is everywhere.' The production of hazard and of vulnerabilities, while they could be treated through transition to another kind of economy, when and if that is possible, they are also in need of much less-sweeping social action, resistance and reform. There is a need to fight the production of greenhouse gasses on many fronts – to mitigate. We must also be fighting exploitation and enabling people to keep more of the wealth they generate – to 'adapt' or to reduce their vulnerabilities. It means not allowing people, no matter how wealthy, to live in oversized and over-cooled/heated houses. It means treating social causes, proximate and structural, violences direct and indirect.

Both mitigation and 'adaptation' are social acts – as are the conditions that cause climate change and vulnerability. In 2013, I was happy to see Connelly (2013) accuse social scientists of practicing 'sociodicy' – tracing all cause to the social. Connelly was comparing social science practice to Leibnitz's (1710) *Theodicy*, the justification of the goodness of God in the face of pain and suffering (see Wilkinson 2010; cf. Voltaire's 1759 [1931] lucid critique of theodicy). But Connelly's attempt to insult the social sciences is quite useful, as it accurately labels what we *should* do. For me it is a moral imperative to locate causality where there is a proactive or retroactive response ability, the ability to act – by individuals and society or the institutions that we have built. Thus, we need a sociodicy for the current era of climate change (Ribot 2014, 2019). One can make other analytic choices – to ignore or avert moral responsibility – but, I'd rather not.

God and nature, non-social causes, have always been convenient foils for responsibility. But, having killed God, Nietzsche (1882) indicates we must shoulder responsibility all by our little selves. Perhaps we, people, have killed nature – by transforming it, mixing our labor with it, culturing it, via various social acts (from cultivation to climate change). This view might seem to place us outside of nature – it is implicitly a stance of human exceptionalism. Were it not, then all our actions and the changes or things we make in the world (including machines) are also mere nature – elements of being. We humans are part of that whole – and perhaps we have put our smudge on all 'nature.' In this sense, while nature too is often a foil for responsibility, we have also foiled this foil – by humanizing it, thus pointing back to ourselves. We stand responsible again.

We are *also*, however, not part of that whole – we are, indeed, exceptional. Consciousness and thought mean that we know that we depend on nature (cultured or not), other

---

[33]See Ribot (2011) for a critique of 'adaptation.'
[34]In their fabulous book, Patel and Moore (2017, 3) wrote that 'taking capitalism seriously [means] understanding it not just as an economic system but as a way of organizing the relation between humans and the rest of nature.'

than ourselves, which we transform for our valued beings and doings. The separation of us from other nature is our own creation via consciousness. But, our own security and survival, of which we are conscious, depends on recognition of this separation – as we are uniquely able to manage that nature so as to sustain or destroy ourselves. Because of consciousness and value, we have intention. Because of ability to realize that intention, and to reflect upon and judge our potential acts, we have responsibility (Arendt 2003). If 'the greatness of this deed' is 'too great for us' we must indeed 'become gods simply to appear worthy of it' (Nietzsche 1882). We have a choice. We can manage or not. I choose to manage. I choose life. To manage is our exceptional role – call it patronizing or matronizing; it does not have to be. It is humanism and should be done inclusively with and for care (regardless of race, ethnicity, gender, caste, class, age, place of origin, orientation, etc.!). Not to manage is a shirking.

A sociodicy – a social-causal approach – is a conscious means of identifying the ability to respond and responsibility. It does not mean ignoring the biophysical causes of force and change or the human effects on the biophysical world. The social depends on the biophysical as *should* depends on *could*. We operate within the possible – a world where the resources at hand and the principles that shape what we can do with them and what they can, in turn, do for or to us are physical entities with their own limits and possibilities. $F = ma$; $E = mc^2$; $PV = nRT$. What matters is not whether the biophysical exists or has effects – it certainly does. What matters is what we do with and make of these realities.[35] These formulas and the biophysical world establish a realm of the biophysical possible. Society operates within and on that possible. The social still shapes their effects on us and our effects on the physical shape conditions that we respond to as well.[36] We read and act in the naked world with social categories and objectives.

The way forward is to practice a conscious sociodicy of climate-related pain and suffering – a problem-oriented approach to crisis that asks which causes of the beings and doings we care about are socially and political-economically generated and which are amenable to social and political-economic solutions. Vulnerability analysis is the entry point into the most immediate solutions to those elements of loss and damage that are with us today. We have methods of analysis of climate-related vulnerabilities (de Castro 1952; Sen 1981; Watts 1983; Blaikie et al. 1994; Wisner, Blaikie, and Cannon 2004; Nally 2011; Ribot 1995, 2014). All start with the problem – identifying something that affects people's ability to do and be (to function) with health and wellbeing. Then they trace chains of causality outward from that problem – from a moment of loss or damage. For such social-causal analyses related to diseases, such as Covid-19, see Farmer (2004), Dzingirai et al. (2017) and

---

[35]As Oliver-Smith (2013, 2) reminds us:

> There is no cultural equivalent of the law of gravity. There is no social physics. Even our most basic biological realities are culturally framed and structured. Thus, market logics and structural constraints are ultimately cultural products, the outcome of decisions and choices made by people.

[36]Another important nuance in the relation between hazard and vulnerability (the biophysical and social) is that crises triggered by hazards depend on vulnerabilities, but they also change vulnerabilities. Hazard, by triggering crisis, can change existing infrastructures and the availability of resources. Thus crises, still made possible by vulnerabilities, feed back into vulnerabilities in the face of subsequent events. See Turner et al. (2003a, 2003b), Turner 2010; Swift (1989) has called this a ratchetting down. Also see Horton et al. (2021, 1280) on how climate change can change the resource base. They aptly label these 'habitability changes.' In this sense, vulnerability can include the vulnerability to become more vulnerable – a kind of vulnerability trap. Yet the vulnerability to be made more vulnerable also has social causes. Also see Beymer-Farris, Bassett, and Bryceson 2012 on the recursive relation between social and biophysical factors.

Auerbach and Thachil (2021). On tracing causes of xenophobic violence see Achiume (2014). The choices of frame – one that focuses on social and political-economic causes – is made explicitly to identify what society can do in response, society's responsibility.

Li (2007, 267) brilliantly dissects the tensions between solution and problem orientations, stating 'Community forest management … begins … from a proposed solution rather than a unified specification of a problem.' By focusing on solutions, one asks 'how' to change and not 'why' the contentious or challenging situation arises. Interests align around goals, not around problems. This solution orientation is common in climate change circles – 'adaptation' is entirely a 'how' kind of beast (Ribot 2011, 2014). Bodansky (2020, 3) shows how ' … international environmental law … promotes compliance through transparency and forward-looking, non-adversarial procedures, aimed at improving effectiveness, rather than through traditional international dispute settlement, which takes a backward-looking approach, focusing on the issue of state responsibility.' This is precisely the 'non-confrontational' strategy that occludes causes (the 'why') and, thus, misses many potential solutions.

The solutions that causal analyses uncover may indicate blame and liability as well as reparations – something some parties will want to avoid. Nonetheless, they provide a full range of possible interventions as well. In some senses, by occluding some causes, then, the forward-oriented view is part of the causes of risk in the first place. By not attempting to reveal or address root causes it allows them to continue or deepen. It also side steps the real problem, which for forest users, in Li's (2007, 266) case, may be self-determination and not getting these people to 'do as they ought' – by governing their conduct of forest management. The 'will to improve,' is likely the will of one party – the foresters, those who govern – rather than the communities living in these forests (for an adaptation case illustration see Beymer-Farris, Bassett, and Bryceson (2012). A problem-oriented approach starts with the problem and traces back – it then asks what can be done to treat the full range of causes. It is a choice to see, and to address, the non-contentious and contentious social causes.

The framings we choose and caveats we insert shape our world. As Lund (2014, 226) observed, 'By not questioning the concepts and categories with which we read the "naked facts," it is easy to make a set of facts look speciously unequivocal and pervasive.' We also must state the caveats so that those observing our work know what we assume. So, there is nothing wrong with stating that a given increase in climate intensity in a given place and time may trigger specific additional damages, depending on the vulnerabilities in place. Still, a climate event, a more-intense storm, or its incremental intensity or frequency, triggers damages as a function of the vulnerabilities that it finds on the ground. So, we can show there is a role of the biophysical force – the climate event. Yet, coping with and failing to cope (via mitigation or so-called adaptation) remains a social act with social responsibility. We may fail to cope, but the whole situation – vulnerability with (and defining of) hazard (Blaikie et al. 1994; Wisner, Blaikie, and Cannon 2004) – is social.

In a responsible frame, the cause of the damages and of the intensification of those damages with a more-intense event remains a function of the vulnerabilities that enable the event to trigger damage. A responsible frame identifies where we (individuals, groups and societies) are able to respond. As it is also possible for the social world to now shape this trigger, the hazard must also be part of the risk equation and enters into response ability. In short, we are weighing, or rather we should pragmatically weigh,

the importance of cause against our ability to respond (see Jamieson 2015).[37] Accounting for all (biophysical and social) causes (at least all we have time and resources to account for) helps us to identify those that most matter – those we can plausibly reshape in order to reduce damages and increase wellbeing. In the world of rural political economy and agrarian studies, this approach to crisis is not entirely new (Polanyi 1944; de Castro 1952; Scott 1976; O'Keef et al. 1976; Wolf 1981; Sen 1981; Watts 1983; Blaikie 1985; Blaikie et al. 1994; Fine 1997; Davis 2001; Nally 2011; Turner 2016). Histories matter.

Acknowledgements

Disclosure statement

ORCID

Jesse Ribot 🆔 http://orcid.org/0000-0002-5164-9315

References

Achiume, E. Tendaye. 2014. "Beyond Prejudice: Structural Xenophobic Discrimination Against Refugees." *Georgetown Journal of International Law* 45 (3): 323–381.

Achiume, E. Tendaye, Thomas Gammeltoft-Hansen, and Thomas Spijkerboer. 2020. "Introduction to the Symposium on COVID-19, Global Mobility and International Law." *AJIL Unbound* 114: 312–316.

Agarwal, Anil, and Sunita Narain. 1991. *Global Warming in an Unequal World: A Case of Environmental Colonialism*. New Delhi: Centre for Science and Environment.

Arendt, Hannah. 1961. *Between Past and Future: Six Exercises in Political Thought*. London: Faber & Faber.

Arendt, Hannah. 1963. *Eichmann in Jerusalem: A Report on the Banality of Evil*. New York: Viking Press.

Arendt, Hannah. 2003. *Responsibility and Judgment*. New York: Schocken.

Arnold, David. 1988. *Famine: Social Crisis and Historical Change*. Oxford: Basil Blackwell.

Auerbach, Adam M., and Tariq Thachil. 2021. "How Does Covid-19 Affect Urban Slums? Evidence from Settlement Leaders in India." *World Development* 140: 1–11.

Badrinathan, Sumitra. 2021. "Educative Interventions to Combat Misinformation: Evidence From A Field Experiment in India." *American Political Science Review* 115 (4): 1325–1341.

Bassett, Thomas, and Charles Fogelman. 2013. "Déjà vu or Something New? The Adaptation Concept in the Climate Change Literature." *Geoforum* 48: 42–53.

Batha, E. 2008. "Cyclone Sidr Would Have Killed 100,000 Not Long Ago." *AlertNet*, November 16, 2007. Accessed 19 May 2022. http://alertnet.org/db/blogs/19216/2007/10/16-165438-1.htm.

Bateson, Gregory. 1971. *Steps to an Ecology of Mind*. Northvale, NJ: Jason Aronson. Inc.

---

[37]As Jamieson (2015, 23) pragmatically suggests,

> we should be pluralists about responsibility and shape whatever conceptions can help to explain, guide, and motivate our responses to climate change. His conceptions is forward looking and powerful. The sociodicy frame looks backward to understand causes so as to be able to identify them in the present and future. Histories matter and give us insight into the structures of vulnerability and the crises they enable.

Bauer, Andrew M, and Erle C. Ellis. 2018. "The Anthropocene Divide: Obscuring Understanding of Social-Environmental Change." *Current Anthropology* 59: 209–227.

Beck, Ulrich. 1992. *Risk Society: Toward a New Modernity*. London: Sage.

Bennett, Jane. 2010. *Vibrant Matter: A Political Ecology of Things*. Duke University Press. doi:10.2307/j.ctv111jh6w

Bern, C. 1993. "Risk Factors for Mortality in the Bangladesh Cyclone of 1991." *Bulletin of World Health Organization* 71 (1): 73–78.

Beymer-Farris, Betsey A., Thomas J. Bassett, and Ian Bryceson. 2012. "Promises and Pitfalls of Adaptive Management in Resilience Thinking: The Lens of Political Ecology." In *Resilience and the Cultural Landscape*, edited by T. Plieninger and C. Bieling, 283–299. Cambridge: Cambridge University Press.

Biasutti, Michela, and Giannini Alessandra. 2006. "Robust Sahel Drying in Response to Late 20th Century Forcings." *Geophysical Research Letters* 33: L11706. doi:10.1029/2006GL026067.

Blaikie, Piers. 1985. *The Political Economy of Soil Erosion in Developing Countries*. London: Longman Press.

Blaikie, Piers, Terry Cannon, Ian Davis, and Ben Wisner. 1994. *At Risk: Natural Hazards, People's Vulnerability, and Disasters*. London: Routledge.

Bodansky, Daniel. 2020. "Top 10 Developments in International Environmental Law: 1990–2020." In *Yearbook of International Environmental Law*. Oxford: Oxford University Press. doi:10.2139/ssrn.3644557.

Borras, Saturnino M., Ian Scoones, Amita Baviskar, Marc Edelman, Nancy Lee Peluso, and Wendy Wolford. 2022. "Climate Change and Agrarian Struggles: An Invitation to Contribute to a JPS Forum." *Journal of Peasant Studies* 49(1): 1–28.

Bourdieu, Pierre. 1997. La précarité est aujourd'hui partout: Intervention lors des Rencontres européennes contre la précarité. Grenoble. 12–13 décembre 1997. Contre-feux, Ed. Liber Raisons d'agir, Grenoble.

Brottem, Leif, and Bonnie Brooks. 2018. "Crops and Livestock Under the Sun: Obstacles to Rural Livelihood Adaptations to Hotter Twenty-First-Century Temperatures in Eastern Senegal." *Land Degradation & Development* 29 (1): 118–126.

Bryant, Levi R. 2011. *The Democracy of Objects*. London: Open Humanities Press.

Bullard, Robert D., and Beverly Wright, eds. 2009. *Race, Place, and Environmental Justice After Hurricane Katrina: Struggles to Reclaim, Rebuild, and Revitalize New Orleans and the Gulf Coast*. Boulder: Westview Press.

Butler, Judith. 2009. *Frames of War: When Is Life Grievable?* New York: Verso.

Calebresi, Guido. 1975. "Concerning Cause and the Law of Torts: An Essay for Harry Kalven, Jr." *The University of Chicago Law Review* 43: 69–108.

Carruth, Lauren. 2021. *Love and Liberation: Humanitarian Work in Ethiopia's Somali Region*. Ithaca: Cornell University Press.

Castree, Noel. 2014. "The Anthropocene and Geography I: The Back Story." *Geography Compass* 8 (7): 436–449.

CEDMHA (Center for Excellence in Disaster Management and Humanitarian Assistance). 2007. "Cyclone Sidr Update." November 15. http://www.coedmha.org/Bangladesh/Sidr11152007.htm.

Chomsky, Noam. 2018. *What Kind of Creatures Are We*. New York: Columbia University Press.

Colette, April L. 2016. "The Politics of Framing Risk: Minding the Vulnerability Gap in Climate Change Research." *World Development Perspecitves* 1: 43–48.

Connelly, William. 2013. *The Fragility of Things*. Durham: Duke University Press.

Cottier, Fabien, Marie-Laurence Flahaux, Jesse Ribot, Richard Seager, and Godfreyb Ssekajja. 2022. "Cause and Effect in Climate-related Migration," *World Development*. Article Number 106016. Accepted for publication 22 June 2022.

Cronon, William. 1992. "A Place for Stories: Nature, History, and Narrative." *The Journal of American History* 78 (4): 1347–1376.

Davis, Mike. 2001. *Late Victorian Holoausts: El Niño Famines and the Making of the Third World*. London: Verso.

Davis, Janae, Alex A. Moulton, Levi Van Sant, and Brian Williams. 2019. "Anthropocene, Capitalocene, Plantationocene?: A Manifesto for Ecological Justice in an Age of Global Crises." *Geography Compass* 13: e12438.

de Castro, Josué. 1952. *The Geography of Hunger*. Boston: Little, Brown and Company.

de Sherbinin, Alex. 2020. "Impacts of Climate Change as Drivers of Migration" *Migration Information Source* October 23 Issue.

de Waal, Alex. 1997. *Famine Crimes: Politics and the Disaster Relief Industry in Africa*. Oxford: African Rights and International African Institute/James Currey.

Devereux, Stephen. 2000. *Famine in the Twentieth Century*. IDS Working Paper 105. Brighton: Institute for Development Studies.

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

Douglas, Mary and Aaron Wildavsky. 1982. *Risk and Culture: An Essay on the Selection of Technological and Enviornmental Dangers*. Berkeley: University of California Press.

Drèze, Jean and Amartya Sen. 1989. *Hunger and Public Action*. Oxford: Clarendon Press.

Durkheim, Émile. 1982. [1st pub. 1895]. Lukes, Steven (ed.). *The Rules of Sociological Method and Selected Texts on Sociology and its Method*. W. D. Halls (trans.). New York: Free Press.

Dzingirai, Vupenyu, Lindiwe Mangwanya, Melissa Leach, Annie Wilkinson, and Sally Bukachi. 2017. "Structural Drivers of Vulnerability to Zoonotic Diseases in Africa." *Philosophical Transactions B* 372: 20160–20169.

Edkins, J. 2002. "Mass Starvations and the Limitations of Famine Theorising." *IDS Bulletin* 33 (4): 12–18.

Einstein, Albert. 1949. "Why Socialism?" *Monthly Review*. May. Viewed 5 Jan 2022 at https://www.update.uu.se/~fbendz/library/why_soc.htm.

Ennis, Robert H. 2012. "Analysis and Defense of Sole Singular Causal Claims." Unabridged Presentation Version for the PSA, University of Illinois, UC 13 November.

Fanon, Frantz. 1986 [1952]. *Black Skin, White Masks*. London: Pluto Press.

Farmer, Paul. 2004. "An Anthropology of Structural Violence." *Current Anthropology* 45 (3): 305–325.

Ferrarese, Estelle. 2016. *Vulnerability and Critical Theory*. Leiden: Brill.

Fine, Ben. 1997. "Entitlement Failure." *Development and Change* 28: 617–647.

Firth, Raymond, ed. 1959. *Man and Culture: An Evaluation of the Work of Brownislaw Malinowski*. London: Routledge and Kegan Paul.

Forsyth, Timothy. 2008. "Political Ecology and the Epistemology of Social Justice." *Geoforum* 39: 756–764.

Fox, Jonathan. 2022. *Accountability Keywords. Accountability Working Paper 11*. Washington, DC: Accountability Research Center.

Franke, Richard W., and Barbara H. Chasin. 1980. *Seeds of Famine: Ecological Destruction and the Development Dilemma in the West African Sahel*. Montclair, NJ: Allanheld, Osmun.

Fraser, Nancy. 2021. "Climates of Capital: For a Trans-Environmental Eco-Socialism." *New Left Review* 127: 94–127.

Galtung, Johan. 1969. "Violence, Peace, and Peace Research." *Journal of Peace Research* 6: 167–191.

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

Giddens, Anthony. 1999. "Risk and Responsibility." *The Modern Law Review* 62 (1): 1–10.

Government of Bangladesh. 2008 April. "Cyclone Sidr in Bangladesh: Damage, Loss, and Needs Assessment for Disaster Recovery and Reconstruction." *Prepared by the Government of Bangladesh Assisted by the International Development Community with Financial Support from the European Commission*.

Guldi, Jo, and David Armitage. 2014. *The History Manifesto*. Cambridge: Cambridge University Press.

Harden, M., N. Walker, and K. Akuno. 2007. *Hurricane Katrina: Racial Discrimination and Ethnic Cleansing in the United States in the Aftermath of Hurricane Katrina*. A Response to the 2007 Periodic Report of the United States of America.

Hart, H. L. A., and A. M. Honoré. 1959. *Causation in the Law*. Oxford: Oxford University Press.

Hayes, Ashley. 2009. Army Corps of Engineers Liable for Katrina Flooding. CNN. http://www.cnn.com/2009/US/11/18/louisiana.katrina.lawsuit/index.html.

Hecht, Susanna. 1990. *The Fate of the Forest Developers, Destroyers, and Defenders of the Amazon*. Chicago: University of Chicago Press.

Hornborg, Alf. 2017. "Dithering While the Planet Burns: Anthropologists' Approach to the Anthropocene." *Reviews in Anthropology* 46 (2-3): 61–77. doi:10.1080/00938157.2017.1343023.

Horton, Radley M., Alex de Sherbinin, David Wrathall, and Michael Oppenheimer. 2021. "Assessing Human Habitability and Migration: Integrate Global Top-Down and Local Bottom-Up Analyses." *Science* 372 (6548): 1279–1283.

Hulme, Michael. 2011. "Reducing the Future to Climate: A Story of Climate Determinism and Reductionism." *Osiris* 26: 245–266.

Huq, Efadul, and Henry Mochida. 2018. "The Rise of Environmental Fascism and the Securitization of Climate Change." *Projections* 30 March.

IPCC. 2014. *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects*. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Field, C. B., V. R. Barros, D. J. Dokken, K. J. Mach, M. D. Mastrandrea, T. E. Bilir, M. Chatterjee, K. L. Ebi, Y. O. Estrada, R. C. Genova, B. Girma, E. S. Kissel, A. N. Levy, S. MacCracken, P. R. Mastrandrea, and L. L.White (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

IPCC (Inter-governmental Panel on Climate Change). 2019. *Climate Change and Land: an IPCC Special Report on Climate Change, Desertification, Land Degradation, Sustainable Land Management, Food Security, and Greenhouse Gas Fluxes in Terrestrial Ecosystems* [P. R. Shukla, J. Skea, E. Calvo Buendia, V. Masson-Delmotte, H.-O. Pörtner, D. C. Roberts, P. Zhai, R. Slade, S. Connors, R. van Diemen, M. Ferrat, E. Haughey, S. Luz, S. Neogi, M. Pathak, J. Petzold, J. Portugal Pereira, P. Vyas, E. Huntley, K. Kissick, M. Belkacemi, J. Malley, (eds.)]. In press.

Jamieson, Dale. 2015. "Responsibility and Climate Change." *Global Justice: Theory Practice Rhetoric* 8/2: 23–42.

Jessop, Bob. 1982. *The Capitalist State: Marxist Theories and Methods*. By Bob Jessop. New York: New York University Press.

Jessop, Bob. 2014. "The Strategic-Relational Approach: An Interview with Bob Jessop." December 2. WordPress Interview. Accessed 15 December 2021. https://bobjessop.wordpress.com/2014/12/02/the-strategic-relational-approach-an-interview-with-bob-jessop/.

Jisheng, Yang. 2012. *Tombstone: The Great Chinese Famine 1959–1962*. New York: Farrar, Straus and Giroux.

Kashwan, Prakash. 2020. "American Environmentalism's Racist Roots have Shaped Global Thinking About Conservation." *The Conversation*, September 2. https://theconversation.com/american-environmentalisms-racist-roots-have-shaped-global-thinking-about-conservation-143783.

Kashwan, Prakash, Frank Biermann, Aarti Gupta, and Chukwumerije Okereke. 2020. "Planetary Justice: Prioritizing the Poor in Earth System Governance." *Earth System Governance* 6: 1–5.

Kashwan, Prakash, and Jesse Ribot. 2021. "Violent Silence: Erasing History and Justice in Global Climate Negotiations & Action." *Current History* 120 (829): 326–331.

Kelman, Illan, and Bayer Ahmed. 2020. "Bangladesh has Saved Thousands of Lives from a Devastating Cyclone – Here's How." *The Conversation* June issue. https://theconversation.com/bangladesh-has-saved-thousands-of-lives-from-a-devastating-cyclone-heres-how-139903.

Khan, M. R., and J. T. Roberts. 2013. "Adaptation and International Climate Policy." *WIRES Climate Change* 4 (3): 171–189.

Lahsen, Myanna, G. de Azevedo Couto, and I. Lorenzoni. 2019. "When Climate Change is Not Blamed: The Politics of Disaster Attribution in International Perspective." *Climatic Change* 158: 213–233.

Lahsen, Myanna, and Jesse Ribot. 2021. "Politics of Attributing Extreme Events and Disasters to Climate Change." *WIRES Climate Change* 13: 1–12.

Lakoff, George. 2010. "Why It Matters How We Frame the Environment." *Environmental Communication* 4 (1): 70–81.

Lappé, Francis Moore. 2013. "Beyond the Scarcity Scare: Reframing the Discourse of Hunger with an Eco-Mind." *Journal of Peasant Studies* 40 (1): 219–238. doi:10.1080/03066150.2012.708859.

Latour, Bruno. 2004 [1999]. *Politics of Nature. How to Bring the Sciences Into Democracy, Catherine Porter (Trans.)*. Cambridge, MA: Harvard University Press.

Latour, Bruno. 2005. *Reassembling the Social: An Introduction to Actor-Network-Theory*. Oxford: Oxford University Press.

Law, John. 1999. "After ANT: Complexity, Naming and Topology." *The Sociological Review* 47: 1–14.

Leibniz, Gottfried Wilhelm. 1710. *Théodicée [Theodicy]: Essays on the Goodness of God, the Freedom of Man and the Origin of Evil*.

Lemos, Maria Carmen, and Emily Boyd. 2010. "The Politics of Additionality Across Scales: The Implications of Additionality to Policy Choice and Development." In *The Politics of Climate Change: A Survey*, edited by Maxwell Boykoff, 96–110. London: Rutledge.

Levis, Carolina, Bernardo M. Flores, Priscila A. Moreira, Bruno G. Luize, Rubana P. Alves, Juliano Franco-Moralse, Juliana Lins, et al. 2018. "How People Domesticated Amazonian Forests." *Frontiers in Ecology and Evolution: Agroecology* 5 (171): 1–21.

Li, Tania Murray. 2007. "Practices of Assemblage and Community Forest Management." *Economy and Society* 36 (2): 263–293.

Locke, John. 1960 [1689]. *Second Treatise of Government*. Cambridge: Cambridge University Press.

Lund, Christian. 2014. "Of What is This a Case? Analytical Movements in Qualitative Social Science Research." *Human Organization* 73 (3): 224–234.

Lustgarten, Abraham. 2020. "The Great Climate Migration." Accessed 30 November 2020. https://www.nytimes.com/interactive/2020/07/23/magazine/climate-migration.html.

Majid, Nisar, and Stephen McDowell. 2012. "Hidden Dimensions of the Somalia Famine." *Global Food Security* 1 (1): 36–42. doi:10.1016/j.gfs.2012.07.003.

Malm, Andreas, and Alf Hornborg. 2014. "The Geology of Mankind? A Critique of the Anthropocene Narrative." *The Anthropocene Review* 1 (1): 62–69.

Mamdani, Mahmood. 1996. *Citizen and Subject: Contemporary Africa and the Legacy of Late Colonialism*. London: Routledge.

Mamdani, Mahmood. 2020. *Neither Settler nor Native: The Making and Unmaking of Permanent Minorities*. Cambridge: Harvard University Press.

Marvel, Kate, Michela Biasutti, and Céline Bonfils. 2020. "Fingerprints of External Forcings on Sahel Rainfall: Aerosols, Greenhouse Gases, and Model Observation Discrepancies." *Environmental Research Letters* 15: 084023.

Marx, Karl. 1894. *Capital Volume III: The Process of Capitalist Production as a Whole*. New York: International Publishers.

MFDMB (Ministry of Food and Disaster Management of Bangladesh). 2008. *Super Cyclone Sidr 2007: Impacts and Strategies for Interventions*. Dhaka: Bangladesh Secretariat. http://www.ecologyandsociety.org/vol15/iss3/art11/.

Morrissey, James. 2014. "Addressing the Political Deficit in Climate Adaptation." *Aljazeera*, 19 May. http://www.aljazeera.com/indepth/opinion/2014/05/climate-adaptation-africa-2014519103948475231.html.

Mostafanezhad, Mary. 2020. "Covid-19 is an Unnatural Disaster: Hope in Revelatory Moments of Crisis." *Tourism Geographies* 22 (3): 639–645.

Nally, David P. 2011. *Human Encumbrances: Political Violence and the Great Irish Famine*. Notre Dame: University of Notre Dame Press.

Nietzsche, Friedrich. 1882. *The Gay Science*, edited by Walter Kaufmann, 181–182. New York: Vintage.

Nietzsche, Friedrich. 2003. *Twilight of the Idols and The Anti-Christ*. New York: Penguin Books.

Nixon, Rob. 2011. *Slow Violence and the Environmentalism of the Poor*. Cambridge: Harvard University Press.

O'Keefe, Phil, Ken Westgate, and Ben Wisner. 1976. "Taking the Naturalness Out of Natural Disasters." *Nature* 260: 566–567.

Oliver-Smith, Anthony. 2013. "A Matter of Choice (Editorial)." *International Journal of Disaster Risk Reduction* 3: 1–3.

Ortega y Gasset, José. 1940. *El Libro de las Misiones*. Buenos Aires.

Patel, Raj, and Jason W. Moore. 2017. *A History of the World in Seven Cheap Things: A Guide to Capitalism, Nature and the Future of the Planet*. Berkeley: University of California Press.

Pelling, Mark. 2003. *The Vulnerability of Cities: Natural Disasters and Social Resilience*. London: Earthscan.

Polanyi, Karl. 1944. *The Great Transformation*. New York: Rinehart.

Pope Francis. 2015. *Encyclical Letter Laudato Si' of the Holy Father Francis on Care for our Common Home*. Rome: Vatican Press.

Ranganathan, Malini. 2017. *The Environment as Freedom: A Decolonial Reimagining*. Social Science Research Council. https://items.ssrc.org/just-environments/the-environment-as-freedom-a-decolonial-reimagining/.

Ribot, Jesse. 1995. "The Causal Structure of Vulnerability: Its Application to Climate Impact Analysis." *GeoJournal* 35 (2): 119–122.

Ribot, Jesse. 2011. "Vulnerability Before Adaptation: Toward Transformative Climate Action' From Affirmative to Transformative Climate Action." *Global Environmental Change* 21: 4.

Ribot, Jesse. 2014. "Cause and Response: Climate Vulnerability in the Anthropocene." *Journal of Peasant Studies* 4 (5): 667–705.

Ribot, Jesse. 2018. "Ontologies of Occlusion in the Anthropocene." *Current Anthropology* 59: 2. Comment on Andrew M. Bauer and Erle C. Ellis "The Anthropocene Divide: Obscuring Understanding of Social-Environmental Change."

Ribot, Jesse. 2019. "Social Causality of our Common Climate Crisis: Toward a Sociodicy for the Anthropocene." In *Commons in a Glocal World: Global Connections and Local Responses*, edited by Tobias Haller, Thomas Breu, Tine De Moor, Christian Rohr, and Heinzpeter Znoj, 34–53. London: Routledge.

Ribot, Jesse, Papa Faye, and Matthew Turner. 2020. "Climate of Anxiety in the Sahel: Emigration in Xenophobic Times." *Public Culture* 32 (1): 45–75.

Rudiak-Gould, Peter. 2015. "The Social Life of Blame in the Anthropocene." *Environment and Society* 6: 48–65.

Russell, Bertrand. 1924. *ICARUS or The Future of Science*. New York: E. P. Dutton & Company.

Sahlins, Marshall. 1972. *Stone Age Economics*. London: Routledge.

Schwartz, John. 2019. What Makes a Catastrophic Flood? And Is Climate Change Causing More of Them? *The New York Times*. https://www.nytimes.com/2019/03/22/climate/what-causes-floods.html.

Scoones, Ian. 2019. *What is Uncertainty and Why Does it Matter?* STEPS Center Working Paper 105, IDS Sussex.

Scott, James C. 1976. *The Moral Economy of the Peasant: Rebellion and Subsistence in Southeast Asia*. New Haven: Yale University Press.

Sen, Amartya K. 1980. "Famines." *World Development* 8 (9): 613–621.

Sen, Amartya K. 1981. *Poverty and Famines: An Essay on Entitlement and Deprivation*. Oxford: Oxford University Press.

Shivji, Issa G. 2020. "Trying Times." *Naked Punch*. Accessed 17 October 2021. http://nakedpunch.com/articles/338.

Simard, Suzanne. 2021. *Finding the Mother Tree: Uncovering the Wisdom and Intelligence of the Forest*. New York: Alfred Knopf.

Smith, Neil. 2006. "There is No Such Thing as a Natural Disaster." SSRC. http://understandingkatrina.ssrc.org/Smith/.

Smucker, Thomas A., Ben Wisner, Adolfo Mascarenhas, Pantaleo Munishi, Elizabeth Wangui, Sinha Guarav, Daniel Weiner, Charles Bwenge, and Eric Lovell. 2015. "Differentiated Livelihoods, Local Institutions, and the Adaptation Imperative: Assessing Climate Change Adaptation Policy in Tanzania." *Geoforum* 59: 39–50.

Soloway, Jacqueline S. 1994. "Drought as a 'Revelatory Crisis': An Exploration of Shifting Entitlements and Hierarchies in the Kalahari, Botswana." *Development and Change* 25: 471–495.

Somers, Margaret R. 2008. *Genealogies of Citizenship, Markets, Statelessness, and the Right to Have Rights*. Cambridge: Cambridge University Press.

Swift, Jeremy. 1989. "Why are Rural People Vulnerable to Famine?" *IDS Bulletin* 20 (2): 8–15.

Taddei, Renzo. 2008. "Blame: The Hidden (and Difficult) Side of the Climate Change Debate." *Anthropology News*, pp. 45–6.

Temudo, Marina Padrão, and Ana I. R. Cabral. 2021. "Climate Change as the Last Trigger in a Long-Lasting Conflict: The Production of Vulnerability in Northern Guinea-Bissau, West Africa." *Journal of Peasant Studies*. https://www.tandfonline.com/eprint/3ZVQ24AZRMFPSSER3IK4/full?target=10.1080/03066150.2021.1996355

Thomas, Adelle, and Rueanna Haynes. 2020. "Black Lives Matter: The Link Between Climate Change and Racial Justice." *The Climate Analytics Blog*. 22 June. https://climateanalytics.org/blog/2020/black-lives-matter-the-link-between-climate-change-and-racial-justice/.

Thompson, Francis. 1913. *The Mistress of Vision*. Accessed 16 October 2021. https://quotepark.com/quotes/1894388-francis-thompson-thou-canst-not-stir-a-flower-without-troubling-o/.

Trenberth, Kevin E., J. T. Fasullo, and T. G. Shepherd. 2015. "Attribution of Climate Extreme Events." *Nature Climate Change* 5: 725–730.

Turner, B. L. 2010. "Vulnerability and Resilience: Coalescing or Paralleling Approaches for Sustainability Science?" *Global Environmental Change* 20 (4): 570–576.

Turner, B. L., P. A. Matson, J. J. McCarthy, R. W. Corell, L. Christensen, N. Eckley, G. K. Hovelsrud-Broda, et al. 2003a. "A Framework for Vulnerability Analysis in Sustainability Science." *Proceedings of the National Academy of Sciences US* 100: 8074–8079.

Turner, B. L., P. A. Matson, J. J. McCarthy, R. W. Corell, L. Christensen, N. Eckley, G. K. Hovelsrud-Broda, et al. 2003b. "Illustrating the Coupled Human-Environment System for Vulnerability Analysis: Three Case Studies." *Proceedings of the National Academy of Sciences US* 100: 8080–8085.

Turner, Matthew D. 2016. "Climate Vulnerability as a Relational Concept." *Geoforum* 68: 29–38.

Voltaire. 1931. *[1759]. Candide: Ou, L'optimisme*. Paris: André Morize.

Wainwright, Joel. 2010. "Climate Change, Capitalism, and the Challenge of Transdisciplinarity." *Annals of the Association of American Geographers* 100 (4): 983–991.

Watts, Michael J. 1983. *Silent Voice: Food Famine and Peasantry in Northern Nigeria*. Berkeley: University of California Press.

Watts, Michael. 1991. "Entitlements or Empowerment? Famine and Starvation in Africa." *Review of African Political Economy* 51: 9–26.

Watts, Michael J., and Hans Bohle. 1993. "The Space of Vulnerability: The Causal Structure of Hunger and Famine." *Progress in Human Geography* 17 (1): 43–68.

Weber, Max. 1968. *Economy and Society: An Outline of Interpretive Sociology*. New York: Bedminster Press.

Weheliye, Alexander G. 2014. *Habeas Viscus: Racializing Assemblages, Biopolitics, and Black Feminist Theories of the Human*. Durham: Duke University Press.

White House. 2006. *The Federal Response to Hurricane Katrina*. Accessed on 5 December 2008. http://www.whitehouse.gov/reports/katrina-lessons-learned.pdf.

Wilkinson, Iain. 2010. *Vulnerability in Everyday Life*. London: Routledge.

Wisner, Ben, Piers M. Blaikie, and Terry Cannon. 2004. *At Risk: Natural Hazards, People's Vulnerability and Disasters*. London: Routledge.

Wolf, Eric. 1981. *Europe and the People Without History*. Los Angeles: University of California Press.

Young, Ed. 2021. "We're Already Barreling Toward the Next Pandemic." *The Atlantic* September Issue. Accessed 17 October 2021. https://www.theatlantic.com/health/archive/2021/09/america-prepared-next-pandemic/620238/.

Jesse Ribot studies local democracy, resource access and climate-related vulnerabilities in West Africa. He teaches environmental politics at American University; taught in Geography and Anthropology at University of Illinois; was a senior associate at the World Resources Institute; and taught in Urban Studies and Planning at MIT. He has held many fellowships and makes films, blows glass, pots and sculpts. See www.jesseribot.com.