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*The Sociology of Climate Change as
a Sociology of Loss*

Abstract

Climate change involves human societies in problems of loss: depletion, disappearance, and collapse. The climate changes and changes other things, in specifically destructive ways. What can and should sociology endeavour to know about this particular form of social change? This article outlines the sociology of loss as a project for sociological engagement with climate change, one that breaks out of environmental sociology as the conventional silo of research and bridges to other subfields. I address four interrelated dimensions of loss that climate change presents: the materiality of loss; the politics of loss; knowledge of loss; and practices of loss. Unlike “sustainability”—the more dominant framing in the social sciences of climate change—the sociology of loss examines what does, will, or must disappear rather than what can or should be sustained. Though the sociology of loss requires a confrontation with the melancholia of suffering people and places, it also speaks to new solidarities and positive transformations.

Keywords: Climate change; Loss; Sustainability; Social Theory.

Now we are in a new epoch, in the new century, the world looks different, and issues of resource depletion, contestation and collapse will haunt it—and, more parochially, sociology—in some potentially catastrophic decades to come. [John Urry, 2011]

POLICYMAKERS and the public do not look to sociologists for expertise on climate change. As is the case with many other pressing societal and global challenges, where social scientists *are* consulted in the production of climate science and policy, they are most often economists [Yearley 2009; Szerszynski and Urry 2010]. Many sociologists have observed and bemoaned this relative marginalization of sociological perspectives, despite the fact that we “have a lot to offer” [Bhatasara 2015: 217]. Sociologists do indeed produce empirical and theoretical work on climate change, and on the relations between society and environment more generally. More

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fundamentally, climate change is a problem of how we live, produce, and consume, and the science of society ought to be at the forefront of efforts to understand and address such a problem. Thus, much energy has gone into demonstrating the need for sociology, collating the available insights from this literature to make a persuasive case for sociology's (along with other social sciences') integration with climate science more generally [Dunlap and Brulle 2015; Zehr 2015; Castree, *et al.* 2014; Weaver, *et al.* 2014; Norgaard 2018]. Sociological analyses, it has been argued in review articles, task force publications, and books, ought to be incorporated into wider research programs.

I do not disagree with this mission. However, my agenda in this piece is somewhat different. The motivating question here is not "what can sociology contribute to climate change," but rather: "what can climate change contribute to sociology?" The former question is essential, but it has been competently and comprehensively addressed elsewhere. The latter question requires greater attention. Elizabeth Shove [2010: 280] has also advocated "turn[ing] the question around" in this way. For her, doing so prompted an exploration into how climate change has affected theoretical development across the social sciences. Climate change, she observes, has renewed and recast longstanding social theory debates around the nature-culture divide, capitalism, and the social construction of knowledge. Though this has been highly generative, "[s]ince there is only so much intellectual energy to go around, these points of concentration draw resources away from projects for which readers do not already exist" [285]. My objective here is to outline a new project that climate change pushes us to take on: the sociology of loss.

As the John Urry epigraph above suggests, if climate change indeed haunts sociology, it is perhaps particularly as a question of depletion, disappearance, and collapse. Rising seas swallow islands. In 2016, Australian researchers reported that five Pacific islands had already disappeared due to rising seas and erosion, and six others had large swaths of land washed away. Nuatambu Island, of the Solomon Islands, has lost half of its inhabitable area since 2011 [Albert, *et al.* 2016]. Sea levels around the world are projected to rise between one to four feet by the end of the century, depending on greenhouse gas emissions [Melillo, *et al.* 2014]. Already observed sea level increases have made storm surges higher, exacerbating the destruction of hurricanes in the US. Increasing temperatures and shifting winds, currents, and precipitation cripple the industries that depend on the productivity of land and sea. Farmers in places as different as

California and sub-Saharan Africa—already afflicted by longer and deeper droughts, diminished groundwater supply, and soil degradation—can expect increasingly negative impacts on most crops and livestock [Melillo, *et al.* 2014; Vidal 2013]. People—disproportionately the poor—die in floods, storms, and heat waves. The World Health Organization estimates that between 2030 and 2050, climate change will cause approximately 250,000 additional deaths per year, from malnutrition, malaria, diarrhoea and heat stress (World Health Organization 2018). The climate changes and changes other things, in specifically destructive ways. What can and should sociology endeavour to know about this particular form of social change?

Though I start with a different formulation of the relation between climate change and sociology, the result here is also to identify some ways in which sociology's insights can be extended productively to explain and interpret various facets of climate change. Much of the available sociological research on climate change *per se* has been produced by and discussed among environmental sociologists [Brechin 2008]. Starting with “what can sociology contribute to climate change” implies a first exercise of exegetical organizing *within* that silo. By approaching instead from the angle of what climate change can contribute to sociology, this article seeks to bring climate change out of that silo, productive as it has been. Climate change can and should provoke many and varied kinds of theorizations for sociologists, across subfields, which can in turn work to clarify the stakes and consequences of the threats societies and individuals face. I articulate climate change to research concerns and conclusions from other subfields through this thematic of loss, in conjunction with thematising loss as it appears in some of the sociological research on climate change *per se*. The hope is that doing so will respond in some way to the observed and lamented reticence of “mainstream” sociology to engage climate change [Lever-Tracy 2008; Grundmann and Stehr 2010; Szerszynski and Urry 2010], which in turn contributes to the marginalization of sociology in the wider world of climate change research.

Loss is also a provocative riposte to the dominant and more conventional concept that frames social scientific study of climate change: sustainability. It adjusts the analytical focus, asking about what does, will, or must disappear rather than about what can or should be sustained. Loss is a more ambivalent outcome—though, I will argue, it does not necessarily imply pessimism or catastrophism—where sustainability is often mobilized as an overtly normative project of harmony and holism, the identification of “win-wins,” the

reproduction of a certain kind of status quo, and the voluntarism of enlightened actors. These are framings with different moods: where sustainability is sunny, loss is melancholy. Though critiques of sustainability abound [Greenberg 2013; Swyngedouw 2010; Checker 2011; Isenhour, McDonogh and Checker 2015; among numerous others], deploying sociology and social science more generally on this terrain or in these terms occludes certain things from view. By drawing attention to loss, sociology can leverage or even celebrate its critical distance from climate change research and from the policymaking world it informs. It can highlight contradiction: what is lost so that other things can be sustained? And it can imagine more deeply transformative visions: what might take the place of what is lost?

Below, I begin with a discussion of loss generally and its emerging place within climate change policy and discourse. I then address four interrelated dimensions of loss that climate change presents, with each discussion anchored in different traditions of sociological research: the materiality of loss (urban and rural sociology); the politics of loss (political sociology); knowledge of loss (economic sociology and the sociology of knowledge); and practices of loss (the sociology of consumption). This is, of course, not an exhaustive list. The ambition of the intervention is to set out a sort of menu of possibilities, identifying new touch-points between the field and climate change, as well as re-reading ongoing conversations through the lens of loss. Within each dimension, I have biased my choice of empirical cases and examples toward those that are available to us in the present moment. We have always lived in and with a changing climate [Clark 2010; Hulme 2009], but now we are experiencing and observing losses from the destabilizing boost given to climatic conditions by human activities. Problems of loss cannot be analytically or ethically consigned to the future. While sociology ought to contemplate the future of human societies vis-à-vis climate change [Urry 2007, 2016], the thematic of loss highlights the fact that climate change already offers conditions ripe for the methodological and analytical tools of sociological study. Climate change is the present for sociology; to ignore it is to ignore the world we currently inhabit.

Loss and its relationship to climate change

For my purposes here, loss involves disappearance, destruction, dispossession, depletion—in brief, the transformation of presence to

absence. It is both object and process. Much of the (relatively limited) sociological interest in loss has examined it at the micro-level, situating loss theoretically in the sociology of emotion and the sociology of the self [e.g. Jakoby 2015; Lofland 1982; Charmaz 1983; Marris 1986]. Of particular interest in this literature are changes to intimate social relations, e.g. death or divorce, as well as changes to social position attendant on events like job loss. Such experiences typically involve some experience of grief and trauma; they are an “involuntary severance” [Lofland 1982: 219; Cochran and Claspell 1987; Jakoby 2012; Lofland 1985; Fowlkes 1990; Brand 2015]. Loss is an unmooring interior experience, one that disrupts the stable meanings that frame our lives and that root our senses of identity and belonging [Marris 1986]. Losses are also, in the context of any life, unavoidable. Loss is a multifaceted and “elementary human experience,” as diverse as human bonds themselves [Jakoby 2015: 110]. However, its reflection in problems of the self and of emotion is just one of the ways in which “loss and society are closely connected” [*ibid.*: 110]. In contrast to these treatments of loss, in this article I decentre the individual emotional experience of loss in order to address other ways in which losses are socially organized. While individual experience of loss, and attendant trauma and grief, cuts across the dimensions taken up in this article, here I examine how climate change directs attention within a sociology of loss to more collective social processes of human settlement, political mobilization, the production of knowledge, and practices of consumption.

Loss has a quantitative and qualitative character, both of which are implicated in climate change. There are *losses*: having less of something. There is less money at the household level when families have to spend more on disaster recovery. There is less money at the national level when the productivity of industries declines. There is less biodiversity, fewer species cohabiting the planet with us. These are the losses that preoccupy experts’ attempts to measure and model as a way of grasping what is or will be quantitatively different in a climate-changed world. Loss also encompasses the qualitatively distinct, the disappearance of ways of life, landscapes, places, and cultures, which can be memorialized but not recovered, recouped, or compensated [Barnett, *et al.* 2016; Adger, *et al.* 2011]. In either sense, grappling sociologically and politically with loss means anticipating and accepting a certain measure of failure, at the level of global action, to prevent or avoid some forms of destruction. It does not imply abandoning serious mitigation efforts—in the way that Jamieson

[2005] argues “slouching toward” an adaptation-only policy will—but it does require conceding and contending with the limitations of mitigation.

Climate policy actors are themselves moving in this direction. The United Nations Framework Convention on Climate Change (UNFCCC) enacted the Warsaw International Mechanism for Loss and Damage Associated with Climate Change Impacts at the 19th Conference of Parties in 2013. The “L&D” mechanism is a new policy paradigm meant to encompass both extreme and slow-onset events, with a focus on developing countries that are particularly vulnerable to the adverse effects of climate change. It concedes that there are limits to adaptation, defined by the intersection of climate change and the biophysical and socioeconomic constraints of local contexts [Tschakert, *et al.* 2017]. Countries that played the smallest role in causing climate change stand to be among the biggest losers. The mechanism thus provides a venue for policymakers to negotiate what actions must take place within the residual policy gap between climate change adaptation, disaster risk reduction, and available public and private risk transfer tools (e.g. insurance) [Wrathall, *et al.* 2015]. How should the rich world mobilize resources to address permanent losses of livelihoods and landscapes in poorer countries?

The establishment of the L&D mechanism quickly set off research oriented to solving conceptual and operational problems in the definition and attribution of loss [Tschakert, *et al.* 2017; Wrathall, *et al.* 2015], even yielding outlines for a “science of loss” [Barnett, *et al.* 2016]. Such epistemological and scientific projects are themselves ripe for sociological examination (taken up in more detail below). The sociology of loss, however, takes a broader view, untethered from (but potentially informative for) the specific objectives of international climate policy. As many of the examples chosen for discussion here will illustrate, the sociology of loss illuminates the social and political effects of high-carbon societies, even when such effects are not recognized as climate change-related by the actors involved. Climate change also constitutes empirical projects for sociology that capture and analyse loss in more affluent contexts. With its explicit emphasis on developing countries, the L&D mechanism emphasizes the hierarchical character of climate change, but a sociology of loss also attends to its democratic face. As Beck [2010] argues, climate change is both. It “exacerbates existing inequalities of poor and rich, centre and periphery—but simultaneously dissolves them. The greater the planetary threat, the less the possibility that

even the wealthiest and most powerful will avoid it” [175]. Though the distribution of and ability to cope with loss varies in predictable ways, we are all vulnerable to loss. The dimensions of a sociology of loss examined here also excavate the generative possibilities of loss. As a target of policymaking, L&D treats climate-related loss as something to be avoided or minimized. But climate change also pushes us to consider instances or situations of loss that are desired or designed, potentially in pursuit of transformations that are better for us, with or without climate change.

The materiality of loss

The US state of Louisiana is literally disappearing. According to a 2017 US Geological Service report, 58 square miles of land have vanished since 2010. Sea-level rise, “projected to increase at an exponential rate,” accelerates the rate of wetland loss, as do hurricanes, which may become stronger with further climate change [Couvillion, *et al.* 2017]. Coastal landscapes are dynamic under any circumstances, but Louisiana residents have watched the marshes disintegrate in their lifetimes. In the process, livelihoods and investments collapse, industries shift production, and neighbours leave. State agencies work feverishly to build land to offset losses, while at the same time policymakers debate unbuilding the coast and relocating residents to higher, drier ground. This is not a US Gulf Coast problem; as mentioned above, similar processes are unfolding for small Pacific island nations and coastal regions worldwide. This is a distinct kind of “loss of place,” one in which communities experience the disappearance of the land beneath their feet and, with it, the built and non-human environments that make social life possible and predictable. The materiality of loss here refers to disappearances wrought by shifting coastlines, denuded forests, storm-wrecked cities—in brief, the fundamentally altered ecologies of a place. Along this material dimension, the sociology of loss examines which people become stranded or displaced, how, and with what effects; how loss can be designed by social actors and institutions; and the contradictions that may arise from abandoning those parcels of land which can no longer be defended.

However, this kind of “loss of place” is not the most common sense in which sociology engages with the concept. Empirically, most

sociological research, much of it in urban and rural sociology, treats loss of place as the result of social processes of displacement that work to push people out of their homes, communities, and lands, at the behest of powerful authorities and/or privileged others, e.g. the gentrification of neighbourhoods [Atkinson 2015; Brown-Saracino 2009; Marcuse 1986], urban renewal [Gans 1962; Logan and Molotch 1987], national and global economic shifts [Savage, Bagnall, and Longhurst 2005], or colonial and development-forced resettlement [Li 2007]. Changes to the built/non-human environment may accompany or follow these processes, but they are not mechanisms as such [Norgaard and Reed 2017]. The sociology of loss can build from work that joins studies of the political economy of urban and rural (re) development to the critical social science of disaster, as Gotham and Greenberg [2014] do in their comparative study of New Orleans and New York City. In New Orleans after Hurricane Katrina (as in New York City after 9/11), post-crisis processes of uneven redevelopment reinforced pre-crisis inequalities, reshaping the built environment in the process. Not only did low-income, poor, and marginalized people suffer more from the destruction of homes, infrastructure, and landscapes than did the wealthy and well-connected, as many scholars of disaster have shown in other cases [e.g. Erikson 1976; Fothergill 2004; Klinenberg 2002; Freudenberg, Gramling, and Laska 2009], but also, in the aftermath, New Orleans city elites and developers used the crisis to clear wetland ecosystems for residential, commercial, and industrial redevelopment while leaving the needs of the most vulnerable largely unmet.

Gotham and Greenberg [2014] show how material losses (both from the catastrophic storm and the recovery) can be situated in the context of longer histories, as well as connected to the other socio-spatial processes connected with “loss of place”. Climate change brings new valence to such processes, and the sociology of loss also takes within view material changes that unfold more gradually, as slower-motion “disasters” than critical disaster studies conventionally examine. For instance, “climate gentrification” is now in the public lexicon. Urban planning and design researchers have recently begun to connect higher land elevations to long-term price appreciation of property in Miami-Dade County, an area vulnerable not only to hurricanes but increasingly to routine “nuisance flooding” that keeps land underwater on a more regular basis [Kennan, Hill, and Gumber 2018]. This, the study’s authors suggest, may work to drive rich residents and real estate investors into the higher-elevation areas that

have historically been the home of lower-income communities. The rich and powerful move to avoid loss and dispossess poorer people in the process. The encroachment of water, transformed into an assessment of property values and preferences, undoubtedly intersects with the social factors sociologists have connected to gentrification, such as historical racial segregation, income and wealth inequality, and the spatial distribution of economic activity, but in as yet underspecified ways. Similarly, sociologists can study loss of place as a result of the explosion of “resilience” planning in the urban governance of cities around the world. A new kind of urban renewal is taking place in New York City, for example, where privately owned flood-prone homes are being purchased by the city and state so that the lots can be either “returned to nature” [Koslov 2016] or redeveloped into more flood-resilient housing (with no right of return for former residents). Climate variability and environmental change can lead people to abandon places, in some cases forcing displacements that combine with the complex mix of political and economic factors we regularly associate with migration [Black, Kniveton, and Schmidt-Verkerk 2011; Tschakert and Tutu 2010].

Material losses necessarily intersect with a stratified world. As the L&D mechanism expressly acknowledges as the normative basis for its existence, the populations most vulnerable to desertification, forest degradation, sea level rise, salinization, and biodiversity loss are located in some of the world’s poorest countries. A focus on the materiality of loss addresses not only this geopolitical stratification, but takes a more analytically precise view to examine within-country political economies and inequalities, as the above examples also suggest. For instance, nearly one in three of the Maldives’ 185 inhabited islands may have to be abandoned, according to the country’s housing minister. But in the view of the current government, they need to be abandoned only by the ordinary Dhivehins who rely on fishing their local waters; the newly “deserted” islands may then be handed over to developers to build luxury resorts. Under such a plan, the gradual submerging of islands due to climate change will redistribute Dhivehin people across the Maldives’ islands, but with its poorest and least-served citizens losing place to tourists from richer countries (not to mention driving up the country’s carbon emissions in the process) [Vidal 2017].

This example also underscores that to take seriously the materiality of loss attendant on climate change is not to regard such losses as unmediated, or to consider what we observe ecologically to be

somehow really or analytically exogenous to what takes place socially. As many have noted, any nature–social divide in social theory has been unproductive at best, delusional at worst, belied dramatically by the very notion of an Anthropocene [Latour 2017; Hulme 2010b]. For a sociology of loss, this requires acknowledgement that, of course, material losses are engineered in the first place by the complex interaction of human activity and ecological change. But more specifically, the realm of sociologically interesting phenomena related to the materiality of loss is not defined only in terms of how individuals and groups respond when land is submerged, eroded, burned, or made barren, as the result of “natural” disasters and hazards associated with rising sea levels, shifting precipitation patterns, and extreme heat and cold. The sociology of loss also addresses how humans actively seek and achieve loss of place through planning carried out *in the name of* climate change [Beck 2010; Hulme 2009]. Projects of transformation undertaken to mitigate or adapt to climate change encourage or compel the abandonment of places and/or the movement of people away from them [de Sherbinin, *et al.* 2011; Farbotko 2010]. This enacts a particular temporality of loss in which the abandonment, sacrifice, or destruction of places, buildings, and livelihoods takes place today in order to pre-empt future losses framed as the result of inevitable, naturalized, catastrophic change. Kasia Paprocki [2018a] calls this “anticipatory ruination”: “a discursive and material process of social and ecological destruction in anticipation of real or perceived threats.” In her study, the district of Khulna in coastal Bangladesh, framed as a “zone of climate crisis” by local and global actors, becomes a site where shrimp aquaculture displaces rice cultivation as more “viable” in the context of ostensibly inevitable climate change, dispossessing farmers, salinating the soil, and killing other vegetation in the process. A sociology of loss also endeavours to know how waterfronts, landmasses, cities, and villages become active sites of destructive transformation, with potentially unintended, contradictory, and unequal consequences. Framed in terms of sociological preoccupations, the materiality of loss is thus analytically important in both realist and constructionist understandings of climate change, transcending a tension that has stymied sociological engagement [Antonio and Clark 2015; Bhatasara 2015; Demeritt 2001; Urry 2011]. In other words, the observed effects we call “climate change” physically transform our world [as in Willox, *et al.* 2013], as does climate change as “a resourceful idea and a versatile explanation,” a set of moral and causal narratives that mobilize and justify

certain kinds of physical changes for mitigation and/or adaptation [Hulme 2010a: 267]. Climate changes become real “only as they are integrated into the discursive formations rooted in power relations, competing knowledge systems, and a contentious distribution of wealth and resources” [Marino and Ribot 2012: 325].

Climate change’s connection to loss of place can also recast normative treatments of these transformations and their consequences. Our instinct is to understand loss as bad, a product not only of our emotional register for personal loss, as an individual experience, but also of the numerous studies we have of communities’ or particular social groups’ violent and unwanted dispossession, destruction, and displacement. In sociology, loss of place figures largely as a kind of trauma, a disruption that is unevenly experienced as it burdens the socially marginalized more frequently and intensely. “The loss of place,” Gieryn [2000] concludes, “must have devastating implications” [482]. Across sites and seemingly regardless of the underlying causes, researchers have found that the loss of place disrupts individual and collective identity, social networks, and emotional bonds. This is true too in the burgeoning environmental psychology literature on “place attachment” and climate change [see Devine-Wright 2013 for a summary]. The environmental philosopher Glenn Albrecht has coined the term “solastalgia” to describe the melancholy of seeing a beloved home environment undergo negative transformations: “the homesickness you have when you are still at home” [Albrecht 2012]. Loss may indeed always be a hard experience because change is hard, but in the context of climate change not every loss is traumatic and not every loss of place is met defensively. In Liz Koslov’s ethnography of “managed retreat” on Staten Island, New York in the wake of Hurricane Sandy, she shows that local residents organized for their own community’s dispersal. After repeated storms and flooding, these Staten Islanders mobilized to unbuild their neighbourhoods, pushing the governor of New York to implement and expand a buyout program that would purchase and demolish homes, with the promise that new structures would not be built in these hazardous areas. This flew in the face of the municipal government’s own plans to rebuild bigger and better in other parts of the city, aligned with a more typically American refusal to capitulate in the face of catastrophe [Dawson 2017; Steinberg 2006]. Though they faced loss, the Staten Island buyout groups made meaning out of the experience in which they were empowered and responsible. Though they were ambivalent about calling this “climate change adaptation,” retreating residents

felt they were the agents who would finally and prudently undo the “costly and destructive mistake” of building on the wetlands in the first place [Koslov 2016: 375]. They would be doing a greater service to their “forgotten borough” by taking on the challenges of relocating, as the restored wetlands would provide more natural protection from future floods for those residents who remained. The effects of climate change invite us to re-examine how place may be lost—or sacrificed—to protect or promote other cherished things and ideals. Keeping vulnerable people in vulnerable places seems like a cycle worth breaking. As livelihoods in certain places become less tenable, choices of what to preserve and what to let go, for whom and when, are less normatively straightforward and more ambivalent in their consequences, capable of making people feel both more and less secure [Elliott 2018; Tschakert, *et al.* 2017]. These choices are also, of course, fundamentally political, and it is to the politics of loss that we must turn next.

The politics of loss

The thematic of loss orients sociology to new sites for examining climate politics. The “climate politics” on which publics and scholars largely focus are self-consciously about climate change: the Paris Agreement, the policy paradigms emerging from the UNFCCC, projects of urban climate governance, divestment campaigns, climate marches, climate justice movements, and the like. But as Daniel Aldana Cohen [2017, 2018] argues, climate change stretches across many domains of political contestation, bound up with fights over inequality in particular. For instance, decarbonizing cities requires changes to the existing (carbon-intensive) arrangements of housing, transit, and land use that have worked to produce social exclusion and urban inequality. Struggles over the “right to the city” are, in Cohen’s rendering, struggles over the ecological fates of cities; housing politics *are* climate politics. The strategic implication is therefore “to find ways to combine the priorities of environmental and housing-oriented movements” [Cohen 2018: 3]. There is much to be gained, not only for populations that have experienced oppressive social and spatial marginalization, but for all of us who benefit from lower-emission, more sustainable cities.

Yet there is also a dimension of loss to these politics, a story about the loss of economic rents and returns on investment, the loss of perquisites and privileges that accrue not only to the elites and powerful industries that benefit from commodified housing, but also to the property-owning middle and working classes. I take Cohen's provocation to identify climate politics and climate publics in other arenas of social policymaking, but here sketch out how climate change intersects with sociological work on the more reactive and defensive politics associated with these kinds of losses, as a way to bridge with research traditions in political sociology. We can ask questions about the kinds of politics losses produce, for instance: what constituencies and coalitions, discourses and claims, are created when land disappears or property values in risky areas collapse? Whose losses are made to matter and how? How are social contracts tested and potentially reconfigured, through changes to public policy, in order to manage rising losses?

The domain of natural hazards risk and insurance provides an illustrative case for examining the politics of loss. In the US, millions of families living in flood- and hurricane-prone areas face losses on the most important asset they will ever own: their home. For some, this is connected to an actual catastrophe, to the winds and water that wreck their property. For many others, however, this loss takes the form of a threat to their property values, transmitted by the insurance arrangements that make homeownership possible and affordable [Flavelle 2018]. As hazards change and intensify, risk-reflexive insurance institutions reassess their underlying risks and work to "price in" that changing assessment into actuarially derived premiums. Yearly costs go up; the property values in these riskier areas go down; residents worry about the resale value of their homes and, therefore, their retirement and future economic security. Local officials worry about the viability of the tax base. In the US, this has set in motion a reactive politics around defending property investments, with coalitions of homeowners, real estate and construction interests, local officials, and chambers of commerce mobilizing to blunt the force of insurance-led devaluations of hazardous areas [Elliott 2017b; Weinkle and Pielke, Jr. 2017; Checker 2017; Ubert 2017]. Take the specific case of flood insurance, which is publicly provided through the National Flood Insurance Program (NFIP) and run by the Federal Emergency Management Agency (FEMA). When Congress authorized the NFIP to remove longstanding subsidies and discounts and increase the cost of flood insurance so that premiums would cover

expected losses—justified in part as a way of equipping the program to adapt to climate change—a national, grassroots network of homeowners called “Stop FEMA Now” led a backlash that ultimately pushed legislators to backtrack on these changes. This newly constituted political entity made politically potent claims about insurance effectively destroying the wealth they had worked hard to build, regulating their communities out of existence even if floodwaters never came. They claimed that the individual losses they faced, and the aggregate losses that had generated episodic, taxpayer-funded bailouts of the programme, were not their fault but rather the fault of decades of mismanagement of the NFIP itself. As climate impacts are economized by insurance, changing the costs and (financial, but also social and emotional) values associated with property, we can expect to see new iterations of battles familiar to political sociology, in the US and other national contexts: over the role of the state in protecting investments [Becher 2014], the limits of public versus private risk bearing [Moss 2004; Krieger and Demeritt 2015; Calhoun 2006], issues of solidarity and fairness in insurance [Lehtonen and Liukko 2015; Elliott 2017b; Mabbett 2014], and government protection from the market [Martin 2008]. And, as a result, the politics of loss may generate innovations in property, investment, and housing policy regimes.

The idea of a “climate public” has an almost naturalistic sensibility to it; climate change will create constituencies by imperilling people in locally specific ways. People will realize or anticipate loss and they will be activated to engage politically to address climate change as the cause of that loss. But Stop FEMA Now is a different kind of “climate public.” It is not self-consciously organized as such, and it does not make claims about mitigating or adapting to climate change. Instead, it is a kind of “accidental” climate public—not because, as in Cohen’s [2017] case of São Paulo housing activists, it pursues a low-carbon vision of change, but rather in the sense that it is a constituency created by the public policies and economic arrangements that transmit changing hazards into daily life and its governance. This is a politics of those who have something to lose due to climate change, and their activism is ecologically decisive for whether or how radically (carbon-intensive) arrangements of housing and property can change. Examples like Stop FEMA Now complicate expectations of what “climate publics” are and do, putting a different spin on the “enforced cosmopolitanism” of climate change described by Ulrich Beck. In Beck’s imagining, the global scope of climate change activates and

connects actors across borders, compelling “communication between those who do not want to have anything to do with one another” [2006: 339]. In its more provincial way, Stop FEMA Now did just that, connecting homeowners across political party, class, and region. However, this was not in pursuit of the coordinated climate politics implicit in Beck’s treatment. Stop FEMA Now did not make common cause with other populations whose economic security or “survival chances” could be compromised [Beck 2010: 175]. Instead, it made a more limited and reactive set of claims to contest the financial arrangements that price, manage, and compensate loss.

The constitution of new collectivities and constituencies around loss is one form of the path-dependent “policy feedbacks” that are relevant to how the politics of loss unfold [Weir, Orloff, and Skocpol 1988; Mettler and Soss 2004; Hacker and Pierson 2014]. The NFIP, like other examples of public policy, has significant political effects on social actors: “on who they are, on what they want, on how and with whom they organize” [Pierson 2006: 116]. Stop FEMA Now organized members not principally as *floodplain* homeowners, but rather as *flood zone* homeowners. Their claims were not focused on their vulnerability to flooding, a vulnerability that is expected to increase due to climate change. Instead, their claims were based on their designation as residents in official flood zones, areas identified and mapped for the purposes of public policy, areas which made them subject to certain kinds of requirements and regulations. They did not exist independently of the public policy for flood risk management; they needed the flood map with its high- and low-risk boundaries to recognize their shared exposure to loss. Insurance, along with infrastructure policy, housing policy, disaster relief, and other public policies, has participated in the construction of a landscape of property ownership in vulnerable areas, creating in the process a sort of incumbent resident interested in defending longstanding privileges, whose life and livelihood was shaped by particular “rules of the game” [*ibid.*: 116] in a political and cultural context that deems the market as the most rational way to allocate and manage housing. Though these rules are starting to appear to some stakeholders as inadequate for living in a time of climate change, they have produced a “legislative status quo” that resists change.

This is, of course, not only a US dilemma. Every polity will experience some version of this, a problem of “stable policy rules interact[ing] with an unstable world” [Hacker and Pierson 2014: 647]. Political sociology can explain how programmes are cut or

reconfigured, eligibility expanded or curtailed, benefits enhanced or diminished, in ways that directly shape how individuals and communities will fare in a climate-changed world. Who will lose what and when depends on the outcome of struggles in these terrains. Welfare state scholars have observed the problem of a growing “mismatch” between traditional social policies and the new social risks that citizens face, characterized by Esping-Andersen as a “disjuncture between the existing institutional configuration and exogenous change” [1999: 5]. Contemporary welfare states were constructed for “a society that no longer obtains” [Esping-Andersen 1999: 5; also Giddens 1999]. In this research, the focal changes are long-term transformations in the global economy that have increased economic insecurity, with welfare states failing to keep up and, in some policy areas, retrenching from broad social protection. The result has been an accelerating process of “risk privatization” in which social policies “come to cover a declining portion of the salient risks faced by citizens” [Hacker 2004: 244; also Hacker and O’Leary 2012; Hacker 2006]. Climate change too represents a source of new and changing risks facing citizens, reanimating these same questions about the viability of the social contract embedded in welfare states and about inequalities in how well-served people are by its policies. Economic losses represent a direct strain; natural disasters consume larger portions of national and subnational budgets, exceeding in many cases the terms and capacities of private risk transfer arrangements and siphoning resources from other areas of social provision. These losses, as well as policies to minimize or avoid them, have a distributional character in terms of risks and benefits, affecting different regions, economic sectors, and people differently [Gough and Meadowcroft 2011].

This is all to say that the category of “climate policy” is populated not only by emissions regulations, building codes and energy efficiency and transition policy, but also by the broader array of public policies that shape how people live and work. These policies, with the constituencies, preferences, and channels of influence they have created, will be key sites at which the politics of loss unfold and the social conditions of a climate-changed future are determined. Will governments come to the aid of farmers in regions where changing precipitation patterns compromise agricultural production? Will residents be compensated for the costs of adjusting settlements in vulnerable coastal areas? Will the state provide support to workers who lose jobs in industrial sectors that are declining as a result of climate policy? Which of these losses become areas of intervention and

which do not? Will collective risk-sharing arrangements continue to shrink such that individuals and families are left to bear more of these losses on their own?

The answers to these questions will be determined in part by the success or failure of claims of moral worthiness. As Dauber [2013] notes in the context of US disaster politics, the ability to represent a loss as blameless enhances claims on collective resources. With climate-related losses, designations of “deservingness” will shape whose losses warrant relief and whose requests are rejected, just as they have in the context of other social policy debates. But the global nature of the threat expands the reach of these moralized debates beyond national borders, exposing a tension in welfare states: “that in delivering entitlements to citizens they discriminate against non-citizens and ‘denizens’ and can become ‘fortress’ welfare systems” [Gough and Meadowcroft 2011: 493]. The “climate refugee” is the rhetorical figure mobilized by global environmental organizations, development institutions, military and security experts, and political elites to describe both current and future migrants fleeing already poor places made uninhabitable by drought, flood, and extreme weather. These are climate change’s “losers,” displaced from home and turning up at the borders of richer countries, where they run into the thorny politics of borders, race, national security, and welfare provision—politics that sociologists have long been studying. In December 2017, New Zealand created a special visa for Pacific Island residents forced to migrate because of rising sea levels. Politics in the US and Europe are trending in a far less inclusive and generous direction. Underpinning these claims and their outcomes are social processes of adjudicating what counts as a loss, what value we ascribe to loss, whether loss can be attributed to climate change specifically, and who, if anyone, can be held responsible—in brief, processes of assembling knowledge of loss.

Knowledge of loss

Loss participates in a more general problem of knowledge that undergirds much social action vis-à-vis climate change: the problem of attribution [Huggel, *et al.* 2013; Hulme 2014]. Climate change, both climate scientists and sociologists are aware, is a bundle of many alterations that are related to one another in complex and unevenly

understood ways. Forging a connection between “climate change” and observed changes (a few inches of sea level rise, a shift in average temperatures) or single events (a catastrophic flood, a hurricane of unprecedented strength) is a scientific and discursive achievement. There is an abundance of data about various features of our ecological and biophysical conditions, an “excess of objectivity,” which can be assembled in different, reasonable ways to “yield competing views of the ‘problem’ and of how society should respond” [Sarewitz 2004: 389; Webb 2011; Weinkle and Pielke 2017]. Interpretations of the relationship between climate change and different observed shifts, discrete catastrophes, and assessed risks inevitably vary and often conflict. In this context, whether, or how much of, a loss can be identified as the result of “climate change” is itself at stake, a matter that may appear more or less settled depending on prevailing conditions and one that is tied to the kinds of claims implicated actors can then make. This is a familiar kind of puzzle for sociologists of knowledge and science studies scholars, who can do much to clarify how losses are defined, measured, and attributed through the interaction of experts, technology, and legal and policy institutions, working in particular historical and cultural contexts. A focus on loss refocuses and advances the conversation on knowledge production and climate change. It shifts the question from one of the social production (and contestation) of authoritative facts about climate change’s very existence or anthropogenic character to one of knowing its effects. The challenge for science and other social institutions is not only one of revealing “invisible, elusive, fearful, yet wholly ‘real’ entities” [Jasanoff 2010: 235], like carbon emissions, but also of recognizing, characterizing, and attributing the observable.

Losses of land and livelihood are often revealed and become matters of concern in crisis, when ways of life are overwhelmed by catastrophic events, e.g. when a hurricane lays waste to a Caribbean island, or by the cumulative effects of more gradual changes, like desertification and sea level rise. In both cases, whatever extremes are introduced by climate change intersect with the historical production of particular landscapes of vulnerability, in which many different powerful actors and forces are implicated. To return to the example of Louisiana, for instance, the dissolution of the marshland may dramatize sea level rise, but it is also attributable to centuries of human engineering that have changed the way water moves through the ecosystem. Levee construction on the Mississippi River has long prevented silt deposits from spring floods, contributing to erosion.

The growth and development of the oil and gas industry in the state, in particular, has subjected the coastal plain to “a massive and still growing matrix of oil and gas canals, pipelines, spoil banks, and associated industrial development and social-ecological reorganization” [Gotham 2016: 212]. As early as the 1970s, the US Army Corps of Engineers had connected this extraction infrastructure to irretrievable marshland loss [Houck 2015]. All over the world, societies have been reengineering their “natural” landscapes, hardening shorelines and redirecting water in ways that have, in turn, made certain exposures to loss possible [Steinberg 2006, 2014]. The losses facing many poorer countries are a combined product of climate change and processes of colonisation and development [O’Brien and Leichenko 2000; Paprocki 2018b].

The task of sociology is not to adjudicate how much of a loss is “really” climate change, or whether people on the move are “really” *climate* refugees (as opposed to refugees from something else), but rather to investigate how social actors identify evidence of loss, and temporally and spatially delimit loss, in pursuit of different objectives and claims. This takes place in a variety of sites, including the media, policymaking arenas at multiple scales, and courts of law, and can work to either elevate or diminish the purported role of climate change. For example, in 2013, the South Louisiana Flood Protection and Levee Authority filed suit against 97 oil and gas companies for damages to the landscape below New Orleans and compensation for its restoration, igniting a heated conflict between the Authority and the pro-industry governor of the state. Attribution for loss was the central stake in this battle, in both the courts and in the public eye. Though the fossil fuel industry has played a central role in climate change and hence the ecological changes impacting the coast, writ large, the success of the Authority’s claim rested on the extent to which it could convince a judge that Louisiana’s *specific* losses were the result of the actions of those *specific* 97 companies (an earlier, more ambitious lawsuit blaming Katrina losses on the oil and gas industry had failed by not proving exactly whose canals were at fault) [Houck 2015]. The vice president of the Authority told the *Times-Picayune* newspaper: “We are looking to the industry to fix the part of the problem that they created... We’re not asking them to fix everything. We only want them to address the part of the problem that they created.” The industry representative responded: “The reasons for the loss are complex and involve both natural changes and many man-made activities” [quoted in Schleifstein 2013]. Establishing this

knowledge of loss would require adjudicating the work of field biologists to correlate canal density and land loss, of geologists to connect subsidence to hydrocarbon production, and of lawyers to determine who knew what and when they knew it. In this case, the Authority's strategy was to avoid attribution to "climate change" *per se*, as this would implicate too many actors to hold any one of them completely or largely responsible. But the pursuit of compensation for loss was made in part as a project of climate change adaptation; any awarded settlement would go to fund future storm surge protection. In other cases, by contrast, US cities and counties have sued oil and gas companies seeking compensation explicitly for climate change losses, arguing that these companies knew the science of global warming, predicted its consequences, and then funded massive campaigns of misinformation. These cases and their outcomes socially construct loss as a legal concept, with actors drawing conflicting connections and boundaries between specific losses, climate change, and other contributing factors.

These legal cases reveal that the stakes of attribution are high because the outcome specifies particular relations of responsibility. How losses are classified vis-à-vis climate change has significant implications for who is expected to do what about those losses. In the case of climate refugees, for instance, describing specific mass movements of people as driven by climate change implies the involvement of a globally dispersed set of actors in both causing and responding to those movements. The Syrian conflict, or the Arab Spring, transforms from a political conflict related to long simmering desperation and anger at existing regimes to social paroxysms unleashed by a series of droughts, land degradation, food insecurity, and water scarcity, with people ultimately fleeing as much the latter as the former [Selby, *et al.* 2017]. Recent "migrant crises" in Europe have provided the terrain to contemplate how worsening climate conditions might drive further waves of migration in the decades to come [Missirian and Schenkler 2017]. The World Bank and other international organizations talk about "climate refugees" to bolster calls for global commitment to addressing climate change: mitigate its worst effects and fewer people will be forced from their communities and into others. Outside actors may not have the diplomatic will or capability to intervene in domestic or regional political conflicts but, if such conflicts are fundamentally related to climate change, they can play a role in stemming that.

Knowledge of loss is also produced through processes of valuation taking place in venues like the UNFCCC, which are currently developing conceptual and operational tools for attributing and economizing climate-related losses, as introduced above. Some climate researchers note that though the UNFCCC loss and damage mechanism recognizes the relevance of “noneconomic” losses [Fankheuser, Dietz, and Gradwell 2014], its orientation toward addressing problems of cost means that it “risks commodifying incommensurable values, and ignoring those that cannot be costed, thereby undermining meaningful practices for recovery and renewal” [Tschakert, *et al.* 2017: 3]. There is a “hostile worlds” danger here [Zelizer 2005], where economic techniques of quantification that “may be appropriate for stocks and flows of commodities,” when applied to certain things, conflate price and value in ways that suppress, or even distort, their real importance in human relations [Wrathall, *et al.* 2015: 282]. Money payments cannot address, much less make good, certain losses; they are morally or ethically incompatible with market relations [O’Neill and Spash 2000]. For these observers, part of the problem with the L&D is thus that, if dominated by economic techniques, it will “normatively suggest that environmental, personal and cultural goods and services can be subsumed into a liberal conception of property rights, with rights of exclusivity and alienability” [Wrathall, *et al.* 2015: 282]. Nevertheless, as economic sociologists have examined across an array of empirical sites, we routinely commensurate the intangible and inalienable [Fourcade 2011; Healy 2006; Almeling 2007; Zelizer 1979, 2005; MacKenzie 2009]. In brief, “Treading carefully around the ethical qualms of the societies they serve, modern social institutions spend considerable time and effort measuring what seems unmeasurable and valuing what seems beyond valuation in the service of enhancing their own capacities for calculation, crafting new opportunities for profit, or expanding their jurisdictional authority” [Fourcade 2011: 1723]. Part of the agenda of a sociology of loss is therefore not to parse “incommensurable” goods, values, and states of affairs from the development and application of economic techniques, but rather to examine how moral and political commitments, along with other registers of worth and value, shape these very social processes.

Furthermore, even those valuation processes that *do* focus on assets and resources (the more conventional objects of commensuration and monetization), situated in the “safer domain of one-off economic impacts” [Wrathall, *et al.* 2015: 279], warrant sociological attention

[Demeritt and Rothman 1999]. For instance, the field focused most squarely on economically valuing loss—insurance—makes climate change a particular kind of matter of concern for other actors: “it objectifies and commodifies climate change as an uncertain phenomenon, yet presents it as manageable, at least to an extent” [Lehtonen 2017: 33]. The industry has developed catastrophe models to estimate “what-if” loss scenarios related to natural hazard events. Insurers, regulators, and policymakers view these estimations of loss as essential for pricing natural hazards insurance in an “actuarially fair” way, i.e. pricing premiums so that they reflect the “true” or “real” risk. But arriving at such estimations requires modellers to make a number of different choices—based on the values, judgments, and objectives of the decision-maker—regarding whether and how to use different kinds of data, how to delimit relevant time frames, and which assumptions to operationalize [Ericson and Doyle 2004; Wynne 1992]. As Weinkle and Pielke, Jr. [2017] show, in the case of Florida hurricane modelling and rate-making, “decision-making about hurricane risk is not straightforward and requires resting on beliefs about applicable theory, relevant data, what has happened in the past, and what the future will look like” [561]. And small adjustments at the level of the model can have huge implications if they manifest as higher insurance costs to policyholders, creating further political problems for local officials who then hear complaints from their constituents, as the example of Stop FEMA Now above demonstrates. When competing catastrophe-modelling companies presented their estimations of hurricane loss to Florida’s insurance regulators for use in the state’s Public Model, the standard-setting authority assessed the options in light of their political and economic implications. When it rejected methodologies that were not “scientifically sound,” it prompted one vendor to create a new, “improved” version—that had, unsurprisingly, reduced views of hurricane risk.

This is not a story about the fabrication of numbers and science to serve political ends, which sounds dangerously similar to the arguments made by fossil fuel lobbies and the climate sceptics they fund. Such moves have arguably discouraged sociologists and other critical social scientists, who advance arguments about the social construction of facts, from engaging more directly with climate change [Latour 2004; Grundmann, *et al.* 2012]. Rather, this is a story of competing characterizations of loss, each its own kind of truth based on credible assemblages of data, assumptions, and techniques. Weinkle and Pielke, Jr. [2017] indeed demonstrate that model output “reflects the noise of

politics as usual and researchers scrambling to explain an uncertain world,” but not in order to discredit the scientific enterprise as a way to assemble knowledge of loss altogether. Rather, they build from this demonstration a critique of the pride-of-place given to model outputs in decision-making. The models are treated as though they can advise precisely on day-to-day business decisions related to insurance rates or capital requirements, but they cannot offer that kind of precision. In a context in which we have to imagine, and feel compelled to somehow plan for and manage, the “blunt impacts of loss on society and the economy,” catastrophe models act as a “modern proxy for traditional human exchange about personal fears and social wants” [Weinkle and Pielke, Jr. 2017: 566] The challenge, Weinkle and Pielke, Jr. point out, is about “how best to manage a loss large enough to destabilize society” and models cannot settle upon a single true estimate of that risk. Robust decision-making in such a context may require a broader set of tools, that are more democratically distributed, than those provided by technocratic faith in risk experts [Jasanoff 2010; Wynne 2010].

A sociology of loss can trace the “feedback loop from monetary valuation to social representations and practices” [Fourcade 2011: 1728], which reshape the physical and social world in a time of climate change. Our ways of knowing and valuing extant and future losses shape decisions we take about what to protect and how, where investments in infrastructure are needed and their scale, and who can, should, or must take responsibility for compensating or avoiding losses. Whether or not it is “economically rational” to respond aggressively to climate change, for instance, depends on the discount rate, a matter of tremendous dispute among leaders in the field of climate change economics [see Jamieson 2014 for a summary]. Knowledge of loss constitutes our sense of what to do and how to do it—in other words, it informs practices of loss.

Practices of loss

As the previous sections have shown, loss is something that is both reacted to and actively produced, both materially real and socially constructed and mediated. It can also be both lamented and necessary, painful or awkward while at the same time unavoidable and even ultimately rewarding. This ambivalence of loss, and perhaps its most

radical implications, are evident when we consider practices of loss, which for my purposes pertain to how environmentally destructive ways of producing, living, and consuming are broken and dispensed with. The intensity of our resource use and the sheer magnitude of our waste—albeit unevenly generated and distributed—pose an existential threat. Consumer capitalism, with its growth imperative and attendant high carbon systems, has seemingly locked in certain trajectories of human behaviour that are hard to dismantle or reverse [Urry 2011]. Yet certain things must be surrendered rather than sustained, and a focus on the sociology of loss brings to the fore unanswered questions about processes of “defection”: how people reject or abandon certain practices, particularly those to which they are habituated [Shove 2010]. While we know a great deal more about habituation and the formation of tastes, practices of loss instead emphasize the “unmaking of unsustainability” [Shove 2010: 282], in which processes of recruitment and innovation co-exist, and do not necessarily unfold symmetrically, with processes of “disappearance, partial continuity and resurrection” [Shove 2012: 363].

Recent turns in the sociology of consumption provide analytical tools for undertaking new investigations of such defections. Though consumption is always an environmental act [Hawkins 2012], research on “sustainable consumption” often focuses more narrowly on the symbolic dimensions of conspicuously “green” products and services, emphasizing the connections between consumption and taste, status distinction, and identity formation and communication [Elliott 2013; Cairns, *et al.* 2014; Barendregt and Jaffe 2014]. But the areas of consumption that most directly affect carbon emissions are housing, transport, and food [Dietz, *et al.* 2009], which bear a more ambiguous relationship to the forms of display, deliberation, meaning, social signalling, and individual (though socially patterned) choice that have preoccupied much research [Warde 2015]. How we wash our bodies, clothes, and living spaces; how we stock our fridges, where our food travels from, and when we throw it away; how we heat and cool our homes and workplaces; how we get to and from place to place—these are all practices that must change, specifically in ways that mitigate their environmental effects [Shove 2003; Shove, Walker, and Brown 2014; Shove, Pantzar, and Watson 2012; Evans 2011; Southerton 2013]. As such, the sociology of consumption, particularly that which is informed by practice theory [Schatzki, Cetina, and von Savigny 2001], has begun to focus more squarely on the use of goods and resources rather than on their selection; on routine, mundane activities

rather than on projects of self-presentation; and on material elements rather than on image and meaning [Warde 2014, 2015; Elliott 2017a]. Many of the practices of consumption that need to be lost are ones we may not typically recognize as consumption in our daily lives. For instance, as I write, I sit in an office with a radiator that, despite my best efforts, I cannot control. When it continues to spew heat into my office even after the weather has warmed, I have to open a window if I want to keep the ambient temperature to below-sauna levels, knowing as I do so that I am haemorrhaging energy from this already old and leaky academic building. I can make a choice here, but it is strongly framed by the material elements of the building, making this a problem of both individual and collective consumption.

This reframing thus also confronts the voluntarist overtones of research and discourses of sustainable consumption, with their frequent emphasis on developing pro-environmental attitudes that presumably will lead “sovereign consumers” to make different choices [for summary and critique, see Southerton, Chappells, and Van Vliet 2004]. The practice approach in sociology, in the context of consumption, emphasizes instead the “socially conditioned actor, a social self, embedded in normative and institutional contexts and considered a bearer of practices” [Warde 2015: 129; Shove and Spurling 2013]. In an example from Shove [2003], the definition of showering daily as a “normal practice”—when the shower itself has been a relatively stable technology and the practice typically goes unobserved by others—expresses “converging conventions” of comfort, cleanliness, and convenience, which can escalate and standardize in ways that have significant environmental impacts [see also Urry 2010]. We engage in this routine out of an operative notion of an “appropriately showered” body that has emerged through historical processes of normalisation. It is these normative and institutional contexts that become potential activators of practices of loss, where defections from environmentally destructive practices come not at the behest of self-possessed and environmentally conscious individual agents, but rather from the changing availability and cultural significance of different conveniences and aspirations.

How we consume is related to how we work, another new terrain for practices of loss. Countries with longer working hours consume more resources and emit more carbon. More work means larger scales of production means higher emissions. More work also means more spending; we buy rather than make, and the things we buy, in the rich world, tend to be carbon-intensive goods and services. We acquire and

discard at an alarming pace. In the US, the most disproportionately high-energy producing and consuming country, per-capita spending grew 42% overall from 1990-2008, with a 300% increase in spending on furniture, an 80% increase on clothing, and a 15-20% increase on vehicles, housing, and food—despite nearly stagnant wages over the time period [Schor 2010]. But more generally, across the OECD, net of GDP, the more we work, the larger our ecological footprint [Knight, Rosa, and Schor 2013]. Growth (at least in rich countries) apparently fuels emissions, one logical implication therefore being that we ought to work less and move toward a steady-state economy [Jackson 2009; D’Alisa, Kallis, and Demaria 2014] or post-/non-capitalist society [Goldstein 2018; Sklair 2017], in order to lose the practices of working to earn and earning to consume (as well as to distribute working time more evenly across the population and to enable a better balance between paid and unpaid work like caregiving) [Gough and Meadowcroft 2010]. This will mean aspiring to have less—less money and less stuff—and the loss of culture-ideologies that tie ambition and success to material affluence.

Here, though, is a way in which loss makes way for something better, at least if the proponents of “degrowth” and “downshifting” have it right. In their view, this is not really a sacrifice, or at least not a sacrifice of anything worth holding onto. Consumption-centred lives, financed largely on credit and lived in busyness-glorifying cultures, have made most in the rich world unhappy: time-pressed, socially isolated, and stressed out [Schor 2010; Wajcman 2015]. Shorter work hours, spread more evenly, however, allow people the time to build and nurture social connections, maintain their health, and engage in creative activities [Malleon 2015; Schor 2010; Gunderson 2018]. Cohen [2014] offers a vision of “low-carbon leisure”: “socializing in public space, using our time to do interesting things in energetic ways. That includes sports, picnics, and lounging in parks, learning in schools and libraries.” The demise of resource-intensive practices can yield a new, different, and more equally accessible version of the good life.

Climate change demands some measure of imagination from sociological projects on practices of loss. Such projects envision alternative economic and cultural practices [which can sometimes be the recovery of previously lost practices, e.g. mass cycling over automobile commuting, Shove 2012]. The pursuit of “positive model[s] of a low-carbon future” [Giddens 2011: 24] requires a resolute orientation to the future directions of societies—an

orientation from which much of contemporary sociology has demurred [Lever-Tracy 2008]. Yet there are historical and emergent empirical avenues from which to launch such visions. For low-carbon leisure, Cohen [2014] looks to workers' mobilizations in interwar France, which elected a government that pursued "a massive program to democratize regional leisure for the masses," legislating paid vacation, providing train discounts, and funding theatres and popular productions in partnership with unions. Malleson [2015] cites the Dutch, who have legislated work-reduction and work flexibility, maintaining economic security through social programs that are delinked from employment. In an edited volume, Schor and Thompson [2014] collect case studies from around the world—Chicago, the Aude region of France, Lithuania—in which people are engaging in practices of "plenitude": working and spending less, connecting and creating more. Across these cases, groups of people organized in order to break the reproduction of certain work and consumption practices, with ecologically significant effects.

Conclusion

In this article, I have outlined the sociology of loss as a new project for theoretical and empirical engagement with climate change. The sociology of loss examines an essential dimension of what human societies have to cope with in a climate-changed world. Places are destroyed and disappear. Political and economic privileges attendant on a destabilized status quo are eroded. Losses are accounted for and managed. Environmentally destructive practices must end. Climate change does not drive loss in a deterministic fashion; as the examples above demonstrate, the work of individuals, groups, communities, powerful interests, and institutions shapes the course of loss, producing divergent outcomes in terms of who loses what, when, how much, and with what results, at multiple geographic scales. I have situated the dimensions of loss addressed here in different corners of the discipline, but they are of course empirically interrelated, often in ways that connect spatially dispersed actors in the context of particular episodes of loss. For example, the 2017 hurricane season devastated several Caribbean island nations, as well as Puerto Rico and other parts of the southeast US. Thousands died and many islands have been depopulated, abandoned by some portion of their

residents. Assessing the economic losses involved the work of re-insurers located in European capitals. At the United Nations General Assembly, governance actors made and discussed attribution claims that connected the disasters and their losses to climate change and to the practices of the rich world; in the view of the Prime Minister of Antigua and Barbuda: “Climate change is real. We are the victims of climate change because of the profligacy in the use of fossil fuels by the large industrialized nations” [quoted in Brown 2017]. Climate change losses unfold in a relational and often antagonistic space—indeed, the notion of “losers” implies one of “winners.” These are not terms in which sustainability discourse is comfortable speaking and, relative to that discourse, the sociology of loss provides an anti-whiggish way to examine the ongoing transformations we face. What a sociology of loss loses, perhaps, is an orientation to climate change that starts from the reassurance that things are or will be OK.

What does climate change bring to sociology? I am not suggesting here that climate change is “only” about loss, nor that more obvious empirical topics related to climate change—the Kyoto Protocol, the COP meetings, denialism, political economies of energy, climate movements—are somehow beside the point. Instead, the ambition of this piece was one of generative bridging and extension. I have outlined a number of ways in which sociology, across a variety of subfields, can gain purchase on major changes that are already being visited upon individuals, families, communities, cities, and countries. There is a fundamentally environmental character to such changes, but the theoretical resources we need to understand them come from areas of the field that are not always occupied with environmental topics or trained on the environment-society relation: urban, rural, political, and economic sociology, the sociology of knowledge and of consumption, and undoubtedly other subfields. As an analytical frame, the sociology of loss also has the advantage of allowing research to address climate change without having to theorize “climate change” as such. Theorizing climate change is a crucially important task in which some sociology is engaged, but it is not the only point of entry. Climate change is, after all, not one type of thing or effect, implying that an empirically and analytically rigorous approach can address itself to spatially and historically specific impacts. Loss is one way to address those impacts, to examine what climate change looks like when it hits the ground. In other words, it focuses more on what climate change does than on what climate change “is” (or isn’t). A focus on loss in some sense demystifies climate change, not only

bringing it out of the realm of “inaccessible upper atmospheres, ancient ice cores or deep oceans, where no social facts exist” [Lever-Tracy 2008: 454], but also providing a path to building sociological understanding of climate change in ways that can reflect on nature-culture, or on capitalism, without becoming mired in social theory’s ambivalence on these topics [Antonio and Clark 2015].

While loss provides leverage on the specificities of climate change, it also speaks to the general and universal, and the possibilities thereof. Here is where loss can shed its pessimism. Loss is an unavoidable human experience under any conditions. We are always vulnerable to loss. Climate change research, within and beyond sociology, has problematized vulnerability, focusing in particular on redress of its uneven distributions along lines of gender, race, class, and region. But as Nigel Clark [2010] observes, vulnerability is also constitutive of our humanness: “As fleshy, sensuous creatures, we have always been exposed to the energy and the inertia, the flow and the congealing, the mobilization and the halting of the earth” [13; also Hulme 2010b]. For Clark, this suggests an approach that “work[s] with and through our vulnerabilities, rather than trying to find a way around them” [2010: 13]. The planet will surprise us. Despite our best efforts to control it, even the “least” vulnerable face losses they cannot anticipate or avoid. Discourse and policy dedicated to finding a way to deal with climate change may stall on the stubborn interests of opposing actors, or competing imaginaries of an uncertain future, but we all know what it is to lose. Some do and will lose more frequently and profoundly than others, but the shared experience of loss is something that empathically connects humans—we often respond with sensitivity and generosity to the losses of others. For Clark, this is reason to be hopeful.

But there is a kind of faith that there already exists a vast reservoir of experience—inscribed in communities, bodies, landscapes, stories, objects—about how to make it across the inconstancies that belong to the earth itself. And an equally hopeful sense that there are, taking place at any moment, a great many acts of care and support for those who have been struck by forces beyond their tolerance. An intimation that, along with all the dispute and contestation so prized by critical thinkers, there are also deep, ordinary and extraordinary dispositions of generosity to others coursing through everyday social life [2010: 19].

A sociology of loss can attend not only to social difference as it intersects with loss, but also to social solidarities that do or could spring from the openness of people to others who turn to them in times of loss. These solidarities are not purely aspirational; they are

empirically emergent. In the wake of the devastation from Hurricane Maria, and the subsequent malign neglect of Puerto Rico by the Trump administration, collective actions took place in Oakland, California, Miami, Florida, and Washington DC. The Miami event was evocatively named “We are in the Same Boat.”

This openness—to others and to a volatile world—is also what makes humans adaptable. It makes us capable of living with the loss of things, places, people, and ways of life we treasure, and capable of losing in order to transform, to be “remade into something other than what we are” [Clark 2010: 18]. It makes us capable of living with “recreated climates,” of giving them “meaning, value, and utility” [Hulme 2010b: 120-121]. Simply avoiding loss so as to sustain what we have—“we” being those of us living privileged lives in privileged places—may miss more transformative opportunities. Societies can respond to the losses facing homeowners, for instance, with generous outlays of resources to help them rebuild “back to normal”. Or they can change the commodity form of land itself, interfering with the rights of private property in order to provide equitable access to housing that is safer and more secure from climate change’s impacts [Davis 2014]. If we cannot begin from the premise that things will be OK, we are pushed to these more radical places. We will lose but, as Goldstein [2018] urges, we can also “let go and learn to love other worlds” [170].

BIBLIOGRAPHY

- ADGER W. Neil, Jon BARNETT, F. S. CHAPIN, III and Heidi ELLEMOR, 2011. “This Must Be the Place: Underrepresentation of Identity and Meaning in Climate Change Decision-Making,” *Global Environmental Politics*, 11(2): 1-25.
- ALBERT Simon, Javier X. LEON, Alistair R. GRINHAM, John A. CHURCH, Badin R. GIBBES and Colin D. WOODROFFE, 2016. “Interactions between sea-level rise and wave exposure on reef island dynamics in the Solomon Islands,” *Environmental Research Letters*, 11(5).
- ALBRECHT Glenn, 2012. “The Age of Solastalgia,” *The Conversation*, August 7.
- ALMELING Rene, 2007. “Selling Genes, Selling Gender: Egg Agencies, Sperm Banks and the Medical Market in Genetic Material,” *American Sociological Review*, 72: 319-340.
- ANTONIO Robert J. and Brett CLARK, 2015. “The Climate Change Divide in Social Theory,” in R. E. Dunlap and R. J. Brulle, eds., *Climate Change and Society: Sociological Perspectives* (New York, Oxford University Press: 333-368).
- ATKINSON Rowland, 2015. “Losing One’s Place: Narratives of Neighbourhood Change, Market Injustice and Symbolic Displacement,” *Housing, Theory and Society*, 32(4): 373-388.
- BARENDREGT Bart and Rivke JAFFE, eds., 2014. *Green Consumption: The Global Rise of Eco-Chic* (London, Bloomsbury).
- BARNETT Jon, Petra TSCHAKERT, Lesley HEAD and W. Neil ADGER, 2016. “A Science of

- Loss," *Nature Climate Change*, 6: 976-978.
- BECHER Debbie, 2014. *Private Property and Public Power: Eminent Domain in Philadelphia* (New York, Oxford University Press).
- BECK Ulrich, 2006. "Living in the World Risk Society," *Economy and Society*, 35(3): 329-345.
- , 2010. "Remapping Social Inequalities in an Age of Climate Change: For a Cosmopolitan Renewal of Sociology," *Global Networks*, 10(2): 165-181.
- BHATASARA Sandra, 2015. "Debating Sociology and Climate Change," *Journal of Integrative Environmental Sciences*, 12(3): 217-233.
- BLACK Richard, Dominic KNIVETON and Kerstin SCHMIDT-VERKERK, 2011. "Migration and Climate Change: Towards an Integrated Assessment of Sensitivity," *Environment and Planning A*, 43(2): 431-450.
- BRAND Jennie E, 2015. "The Far-Reaching Impact of Job Loss and Unemployment," *Annual Review of Sociology*, 41: 359-375.
- BRECHIN Steven R, 2008. "Ostriches and Change: A Response to 'Global Warming and Sociology,'" *Current Sociology*, 56: 467-474.
- BROWN Desmond, 2017. "Latest Major Hurricane Leaves Dominica 'Devastated,'" *Inter Press Service*, Sept. 20.
- BROWN-SARACINO Japonica, 2009. *A Neighborhood That Never Changes: Gentrification, Social Preservation and the Search for Authenticity* (Chicago, University of Chicago Press).
- CAIRNS Kate, Kim de LAAT, Josée JOHNSTON and Shyon BAUMANN, 2014. "The Caring, Committed Eco-Mom: Consumption Ideals and Lived Realities of Toronto Mothers," in B. Barendregt and R. Jaffe, eds., *Green Consumption: The Global Rise of Eco-Chic* (London, Bloomsbury: 100-114).
- CALHOUN Craig, 2006. "The Privatization of Risk," *Public Culture*, 18(2): 257-263.
- CASTREE Noel, William M. ADAMS, John BARRY, Daniel BROCKINGTON, Bram BÜSCHER, Esteve CORBERA, David DEMERITT, Rosaleen DUFFY, Ulrike FELT, Katja NEVES, Peter NEWELL, Luigi PELLIZZONI, Kate RIGBY, Paul ROBBINS, Libby ROBIN, Deborah BIRD ROSE, Andrew ROSS, David SCHLOSBERG, Sverker SÖRLIN, Paige WEST, Mark WHITEHEAD and Bryan WYNNE, 2014. "Changing the Intellectual Climate," *Nature Climate Change*, 4: 763-768.
- CHARMAZ Kathy, 1983. "Loss of Self: A Fundamentally Form of Suffering in the Chronically Ill," *Sociology of Health & Illness*, 5(2): 168-195.
- CHECKER Melissa, 2011. "Wiped Out by the Greenwave: Environmental Gentrification and the Paradoxical Politics of Urban Sustainability," *City and Society*, 23(2): 210-229.
- , 2017. "Stop FEMA Now: Social Media, Activism and the Sacrificed Citizen," *Geoforum*, 79: 124-133.
- CLARK Nigel, 2010. *Inhuman Nature: Sociable Life on a Dynamic Planet* (London, SAGE Publications).
- COCHRAN Larry and Emily CLASPELL, 1987. *The Meaning of Grief. A Dramaturgical Approach to Understanding Emotion* (Westport, CT, Greenwood Press).
- COHEN Daniel Aldana, 2014. "Seize the Hamptons: We Should All Get the Chance to Escape the City and Enjoy Leisure—Without the Hefty Ecological Footprint," *Jacobin*, 15-16.
- , 2017. "The Other Low-Carbon Protagonists: Poor People's Movements and Climate Politics in Sao Paulo," in M. Greenberg and P. Lewis, eds., *The City is the Factory: New Solidarities and Spatial Strategies in an Urban Age* (Ithaca, New York, Cornell University Press: 140-157).
- , 2018. "Climate Justice and the Right to the City," Penn: Current Research on Sustainable Urban Development.
- COUVILLON Brady R., Holly BECK, Donald SCHOOLMASTER and Michelle FISCHER, 2017. *Land Area Change in Coastal Louisiana (1932-2016)* (Washington, D.C. United States Geological Survey).
- D'ALISA Giacomo, Giorgos KALLIS and Federico DEMARIA, 2014. *Degrowth: A Vocabulary for a New Era* (New York, Routledge).
- DAUBER Michele L., 2013. *The Sympathetic State: Disaster Relief and the Origins of the American Welfare State* (Chicago, University of Chicago Press).
- DAVIS Mike, 2014. "B-52 Bomber Radicalism," *Jacobin*, October 3.
- DAWSON Ashley, 2017. *Extreme Cities: The Peril and Promise of Urban Life in the Age of Climate Change* (New York, Verso).
- DEMERRIT David, 2001. "The Construction of Global Warming and the Politics of Science," *Annals of the Association of American Geographers*, 91(2): 307-337.

- DEMERRIT David and David ROTHMAN, 1999. "Figuring the Costs of Climate Change: An Assessment and Critique," *Environment and Planning A*, 31: 389-408.
- DEVINE-WRIGHT Patrick, 2013. "Think global, act local? The relevance of place attachments and place identities in a climate changed world," *Global Environmental Change*, 23: 61-69.
- DIETZ Thomas, Gerald T. GARDNER, Jonathan GILLIGAN, Paul C. STERN and Michael P. VANDENBERGH, 2009. "Household Actions Can Provide a Behavioral Wedge to Rapidly Reduce US Carbon Emissions," *Proceedings of the National Academy of Sciences USA*, 106(44): 18452-18456.
- DUNLAP Riley E. and Robert J. BRULLE, eds., 2015. *Climate Change and Society: Sociological Perspectives* (New York, Oxford University Press).
- ELLIOTT Rebecca, 2013. "The taste for green: The Possibilities and Dynamics of Status Differentiation Through 'Green' Consumption," *Poetics*, 41(3): 294-322.
- , 2017a. "Gender and Green Consumption: Relational, Practical, Material," *Journal of Consumer Ethics*, 1(2): 92-99.
- , 2017b. "Who Pays for the Next Wave? The American Welfare State and Responsibility for Flood Risk," *Politics & Society*, 45(3): 415-440.
- , 2018. "'Scariest than another storm': Values at risk in the mapping and insuring of U.S. floodplains," *British Journal of Sociology*.
- ERICSON Richard and Aaron DOYLE, 2004. *Uncertain Business: Risk, Insurance and the Limits of Knowledge* (Toronto: University of Toronto Press).
- ERIKSON Kai, 1976. *Everything In Its Path: Destruction of Community in the Buffalo Creek Flood* (New York, Simon and Schuster).
- ESPING-ANDERSEN Gøsta, 1999. *Social Foundations of Postindustrial Economies* (New York, Oxford University Press).
- EVANS David, 2011. "Thrifty, Green or Frugal: Reflections on Sustainable Consumption in a Changing Economic Climate," *Geoforum*, 42: 550-557.
- FANKHAUSER Sam, Simon DIETZ and Phillip GRADWELL, 2014. "Non-Economic Losses in the Context of the UNFCCC Work Programme on Loss and Damage," *Policy Paper*, Centre for Climate Change Economics and Policy Grantham Research Institute on Climate Change and the Environment.
- FARBOTKO Carol, 2010. "Wishful Sinking: Disappearing Islands, Climate Refugees, and Cosmopolitan Experimentation," *Asia Pacific Viewpoint*, 51(2): 47-60.
- FLAVELLE Christopher, 2018. "Climate Change Has Already Hit Home Prices, Led by Jersey Shore," *Bloomberg News*, August 23.
- FOTHERGILL Alice, 2004. *Heads Above Water: Gender, Class, and Family in the Grand Forks Flood* (Albany, State University of New York Press).
- FOURCADE Marion, 2011. "Cents and Sensibility: Economic Valuation and the Nature of 'Nature,'" *American Journal of Sociology*, 116(6): 1721-1777.
- FOWLKES Martha R., 1990. "The Social Regulation of Grief," *Sociological Forum*, 5(4): 635-652.
- FREUDENBERG William R., Robert B. GRAMLING and Shirley LASKA, 2009. *Catastrophe in the Making: The Engineering of Katrina and the Disasters of Tomorrow* (Washington, D.C., Island Press).
- GANS Herbert J., 1962. *Urban Villagers: Group and Class in the Life of Italian-Americans* (The Free Press).
- GIDDENS Anthony, 1999. "Risk and Responsibility," *The Modern Law Review*, 62(1): 1-10.
- , 2011 [2009]. *The Politics of Climate Change* (Cambridge, Polity).
- GIERYN Thomas F, 2000. "A Space for Place in Sociology," *Annual Review of Sociology*, 26: 463-496.
- GOLDSTEIN Jesse, 2018. *Planetary Improvement: Cleantech Entrepreneurship and the Contradictions of Green Capitalism* (Cambridge, MA, MIT Press).
- GOTHAM Kevin Fox, 2016. "Antinomies of Risk Reduction: Climate Change and the Contradictions of Coastal Restoration," *Environmental Sociology*, 2(2): 208-219.
- GOTHAM Kevin Fox and Miriam GREENBERG, 2014. *Crisis Cities: Disaster and Redevelopment in New York and New Orleans* (Oxford, UK, Oxford University Press).
- GOUGH Ian and James MEADOWCROFT, 2011. "Decarbonising the welfare state," in J. S. Dryzek, R. B. Norgaard and D. Schloerg, eds., *Oxford Handbook of Climate Change and Society* (Oxford, UK, Oxford University Press: 490-503).
- GREENBERG Miriam, 2013. "What on Earth is Sustainable? Toward Critical

- Sustainability Studies," *Boom: A Journal of California*, 3(4): 54-66.
- GRUNDMANN Reiner and Nico STEHR, 2010. "Climate Change: What Role for Sociology? A Response to Constance Lever-Tracy," *Current Sociology*, 58: 897-910.
- GRUNDMANN Reiner, Markus RHOMBERG and Nico STEHR, 2012. "Nature, Climate Change and the Culture of the Social Sciences," in P. Almlund, P. H. Jespersen, S. Riis, eds., *Rethinking Climate Change Research: Clean Technology, Culture and Communication* (Surrey, Ashgate Publishing: 133-142).
- GUNDERSON Ryan, 2018. "Work time reduction and economic democracy as climate change mitigation strategies: or why the climate needs a renewed labor movement," *Journal of Environmental Studies and Sciences*.
- HACKER Jacob S., 2004. "Privatizing Risk without Privatizing the Welfare State: The Hidden Politics of Social Policy Retrenchment in the United States," *American Political Science Review*, 98(2): 243-260.
- , 2006. *The Great Risk Shift: The Assault on American Jobs, Families, Health Care, and Retirement* (Oxford, UK, Oxford University Press).
- HACKER Jacob S. and Anne O'LEARY, 2012. *Shared Responsibility, Shared Risk: Government, Markets, and Social Policy in the Twenty-First Century* (Oxford, UK, Oxford University Press).
- HACKER Jacob S. and Paul PIERSON, 2014. "After the 'Master Theory': Downs, Schattschneider, and the Rebirth of Policy-Focused Analysis," *Perspectives on Politics*, 12(3): 643-662.
- HAWKINS Roberta, 2012. "Shopping to Save Lives: Gender and Environment Theories Meet Ethical Consumption," *Geoforum*, 43 (4): 750-759.
- HEALY Kieran, 2006. *Last Best Gifts: Altruism and the Market for Human Blood and Organs* (Princeton, NJ, Princeton University Press).
- HOUCK Oliver A., 2015. "The Reckoning: Oil and Gas Development in the Louisiana Coastal Zone," *Tulane Environmental Law Journal*, 28(2): 185-296.
- HUGGEL Christian, Dáithí STONE, Maximilian AUFFHAMMER and Gerrit HANSEN, 2013. "Loss and Damage Attribution," *Nature Climate Change*, 3(8): 694-696.
- HULME Mike, 2009. *Why We Disagree about Climate Change* (Cambridge, UK, Cambridge University Press).
- , 2010a. "Cosmopolitan Climates: Hybridity, Foresight and Meaning," *Theory, Culture & Society*, 27(2-3): 267-276.
- , 2010b. "Learning to Live with Recreated Climates," *Nature and Culture*, 5(2): 117-122.
- , 2014. "Attributing Weather Extremes to 'Climate Change': A Review," *Progress in Physical Geography: Earth and Environment*, 38(4): 499-511.
- ISENHOUR Cindy, Gary McDONOGH and Melissa CHECKER, eds., 2015. *Sustainability in the Global City: Myth and Practice* (Cambridge, Cambridge University Press).
- JACKSON Tim, 2009. *Prosperity without Growth: Economics for a Finite Planet* (London, Earthscan).
- JAKOBY Nina R., 2015. "The Self and Significant Others: Toward a Sociology of Loss," *Illness, Crisis & Loss*, 23(2): 110-128.
- , 2012. "Grief as a Social Emotion: Theoretical Perspectives," *Death Studies*, 36(8): 679-711.
- JAMIESON Dale, 2005. "Adaptation, Mitigation, and Justice," in W. S. Armstrong and R. B. Howarth, eds., *Perspectives on Climate Change: Science, Economics, Politics, Ethics* (Emerald Group Publishing Limited: 217-248).
- , 2014. *Reason in a Dark Time* (New York, Oxford University Press).
- JASANOFF Sheila, 2010. "A New Climate for Society," *Theory, Culture & Society*, 27(2-3): 233-253.
- KENNAN Jesse M., Thomas HILL and Anurag GUMBER, 2018. "Climate Gentrification: From Theory to Empiricism in Miami-Dade County, Florida," *Environmental Research Letters*, 13: 1-11.
- KLINENBERG Eric, 2002. *Heat Wave: A Social Autopsy of Disaster in Chicago* (Chicago, The University of Chicago Press).
- KNIGHT Kyle, Eugene ROSA and Juliet SCHOR, 2013. "Could Working Less Reduce Pressures on the Environment? A Cross-national Panel Analysis of OECD Countries, 1970-2007," *Global Environmental Change*, 23: 691-700.
- KOSLOV Liz, 2016. "The Case for Retreat," *Public Culture*, 28(2): 359-387.
- KRIEGER Kristian and David DEMERITT, 2015. "Limits of Insurance as Risk Governance: Market Failures and Disaster Politics in

- German and British Private Flood Insurance," *Working Paper: Centre for Analysis of Risk and Regulation*.
- LATOUR Bruno, 2004. "Why Has Critique Run out of Steam? From Matters of Fact to Matters of Concern," *Critical Inquiry*, 30: 225-248.
- , 2017. *Facing Gaia: Eight Lectures on the New Climatic Regime* (Cambridge, UK, Polity Press).
- LEHTONEN Turo-Kimmo, 2017. "Objectifying Climate Change: Weather-Related Catastrophes as Risks and Opportunities for Reinsurance," *Political Theory*, 45(1): 32-51.
- LEHTONEN Turo-Kimmo and Jyri LIUKKO, 2015. "Producing Solidarity, Inequality, and Exclusion Through Insurance," *Res Publica*: 1-15.
- LEVER-TRACY Constance, 2008. "Global Warming and Sociology," *Current Sociology*, 56(3): 445-466.
- LI Tania Murray, 2007. *The Will to Improve* (Durham, NC, Duke University Press).
- LOFLAND Lyn H., 1982. "Loss and Human Connection: An Exploration into the Nature of the Social Bond," in W. Ickes and E. S. Knowles, eds., *Personality, Roles, and Social Behavior* (New York, Springer: 219-242).
- , 1985. "The Social Shaping of Emotion: The Case of Grief," *Symbolic Interaction*, 8 (2): 171-190.
- LOGAN John and Harvey MOLOTCH, 1987. *Urban Fortunes: The Political Economy of Place* (Berkeley, CA, University of California Press).
- MABBETT Deborah, 2014. "Polanyi in Brussels or Luxembourg? Social rights and market regulation in European insurance," *Regulation & Governance*, 8(2): 186-202.
- MACKENZIE Donald, 2009. "Making Things the Same: Gases, Emission Rights and the Politics of Carbon Markets," *Accounting, Organizations and Society*, 34: 440-455.
- MALLESON Tom, 2015. "A Community-Based Good Life or Eco-Apartheid," *Radical Philosophy Review*.
- MARCUSE Peter, 1986. "Abandonment, Gentrification and Displacement: The Linkages in New York City," in N. Smith and P. Williams, eds., *Gentrification of the City* (London, Unwin Hyman: 153-177).
- MARINO Elizabeth and Jesse RIBOT, 2012. "Adding Insult to Injury: Climate Change and the Inequities of Climate Intervention," *Global Environmental Change*, 22: 323-328.
- MARRIS Peter, 1986. *Loss and Change* (London, Routledge).
- MARTIN Isaac, 2008. *The Permanent Tax Revolt: How the Property Tax Transformed American Politics* (Palo Alto, CA, Stanford University Press).
- MELILLO J. M., T. C. RICHMOND and G. W. YOHE, eds., 2014. *Climate Change Impacts in the United States: The Third National Climate Assessment*, US Global Change Research Program.
- METTLER Suzanne and Joel SOSS, 2004. "The Consequences of Public Policy for Democratic Citizenship: Bridging Policy Studies and Mass Politics," *Perspectives on Politics*, 2(1): 55-73.
- MISSIRIAN Anouch and Wolfram SCHENKLER, 2017. "Asylum applications respond to temperature fluctuations," *Science* 358 (6370): 1610-1614.
- MOSS David A, 2004. *When All Else Fails: Government as the Ultimate Risk Manager* (Cambridge, MA, Harvard University Press).
- NORGAARD Kari Marie, 2018. "The Sociological Imagination in a Time of Climate Change," *Global and Planetary Change*, 163: 171-176.
- NORGAARD Kari Marie and Ron REED, 2017. "Emotional Impacts of Environmental Decline: What Can Native Cosmologies Teach Sociology about Emotions and Environmental Justice?," *Theory and Society*, 46(6): 463-495.
- O'BRIEN Karen L. and Robin M. LEICHENKO, 2000. "Double exposure: assessing the impacts of climate change within the context of economic globalization," *Global Environmental Change*, 10(3): 221-232.
- O'NEILL John and Clive L. SPASH, 2000. "Conceptions of Value in Environmental Decision-Making," *Environmental Values*, 9(4): 521-536.
- PAPROCKI Kasia, 2018a. "All That Is Solid Melts into the Bay: Anticipatory Ruination and Climate Change Adaptation," *Antipode*.
- , 2018b. "Threatening Dystopias: Development and Adaptation Regimes in Bangladesh," *Annals of the American Association of Geographers*, 108(4): 955-973.
- PIERSON Paul, 2006. "Public Policies as Institutions," in I. Shapiro, S. Skowronek

- and D. Galvin, eds., *Rethinking Political Institutions: The Art of the State* (New York, New York University Press: 114-131).
- SAREWITZ Daniel, 2004. "How Science Makes Environmental Controversies Worse," *Environmental Science & Policy*, 7(5): 385-403.
- SAVAGE Mike, Gaynor BAGNALL and Brian J. LONGHURST, eds., 2005. *Globalization and Belonging* (London, SAGE).
- SCHATZKI Theodore, Karin KNORR CETINA and Eike VON SAVIGNY, 2001. *The Practice Turn in Contemporary Theory* (London, Routledge).
- SCHLEIFSTEIN Mark, 2013. "Historic Lawsuit Seeks Billions In Damages From Oil, Gas, Pipeline Industries For Wetlands Losses," *The Times-Picayune*, July 24.
- SCHOR Juliet, 2010. *Plentitude: The New Economics of True Wealth* (New York, Penguin Press).
- SCHOR Juliet and Craig THOMPSON, eds., 2014. *Sustainable Lifestyles and the Quest for Plentitude: Case Studies of the New Economy* (New Haven, CT, Yale University Press).
- SELBY Jan, Omar S. DAHI, Christiane FRÖHLICH and Mike HULME, 2017. "Climate Change and the Syrian Civil War Revisited," *Political Geography*, 60: 232-244.
- DE SHERBININ Alex, et al., 2011, "Preparing for Resettlement Associated with Climate Change," *Science*, 334 (2): 456-457.
- SHOVE Elizabeth, 2003. "Converging Conventions of Comfort, Cleanliness and Convenience," *Journal of Consumer Policy*, 26 (4): 395-418.
- , 2010. "Social Theory and Climate Change: Questions Often, Sometimes and Not Yet Asked," *Theory, Culture & Society*, 27(2-3): 277-288.
- , 2012. "The Shadowy Side of Innovation: Unmaking and Sustainability," *Technology Analysis & Strategic Management*, 24(4): 363-375.
- SHOVE Elizabeth, Mika PANTZAR and Matt WATSON, 2012. *The Dynamics of Social Practice: Everyday Life and How It Changes* (London, Sage).
- SHOVE Elizabeth and Nicola SPURLING, eds., 2013. *Sustainable Practices: Social Theory and Climate Change* (London: Routledge).
- SHOVE Elizabeth, Gordon WALKER and Sam BROWN, 2014. "Material Culture, Room Temperature and the Social Organization of Thermal Energy," *Journal of Material Culture*, 19(2): 113-124.
- SKLAIR Leslie, 2017. "The End of the World, the End of Capitalism and the Start of a New Radical Sociology," *Global Dialogue*, 7(4).
- SOUTHERTON Dale, 2013. "Habits, Routines and Temporalities of Consumption: From Individual Behaviours to the Reproduction of Everyday Practices," *Time & Society*, 22(3): 335-355.
- SOUTHERTON Dale, Heather CHAPPELLS and Bas VAN VLIET, eds., 2004. *Sustainable Consumption: The Implications of Changing Infrastructures of Provision* (Cheltenham, UK, Edward Elgar).
- STEINBERG Ted, 2006. *Acts of God: The Unnatural History of Natural Disaster in America* (Oxford, Oxford University Press).
- , 2014. *Gotham Unbound: The Ecological History of Greater New York* (New York, Simon & Schuster).
- SWYNGEDOW Erik, 2010. "Apocalypse Forever?," *Theory, Culture & Society*, 27(2-3): 213-232.
- SZERSZYNSKI Bronislaw and John URRY, 2010. "Changing Climates: Introduction," *Theory, Culture & Society*, 27(2-3): 1-8.
- TSCHAKERT Petra and Raymond TUTU, 2010. "Solastalgia: Environmentally Induced Distress and Migration Among Africa's Poor Due to Climate Change," in T. Afifi, J. Jäger, eds., *Environment, Forced Migration and Social Vulnerability* (Berlin, Springer: 57-69).
- TSCHAKERT Petra, Jon BARNETT, Neville ELLIS, Carmen LAWRENCE, Nancy TUANA, Mark NEW, Carmen ELRICK-BARR, Ram PANDIT and David PANNELL, 2017. "Climate change and Loss, As If People Mattered: Values, Places and Experiences," *WIREs Climate Change*, 8: 1-19.
- UBERT Emanuel, 2017. "Investigating the difference in policy responses to the 2004 and 2005 hurricane seasons and homeowner insurance crises in Florida and Louisiana," *Socio-Economic Review*, 15(4): 691-715.
- URRY John, 2016. *What is the Future?* (London, Wiley).
- , 2011. *Climate Change and Society* (Malden, MA, Polity).
- , 2007. *Mobilities* (Cambridge, Polity).
- VIDAL John, 2013. "Climate change: how a warming world is a threat to our food supplies," *The Guardian*, 13 April.

- , 2017. “‘We need development’: Maldives switches focus from climate change to mass tourism,” *The Guardian*, 3 March.
- WAJCMAN Judy, 2015. *Pressed for Time: The Acceleration of Life in Digital Capitalism* (Chicago, University of Chicago Press).
- WARDE Alan, 2014. “After Taste: Culture, Consumption and the Theory of Practice,” *Journal of Consumer Culture*, 14(3): 279-303.
- , 2015. “The Sociology of Consumption: Its Recent Development,” *Annual Review of Sociology*, 41: 117-134.
- WEAVER C. P., S. MOONEY, D. ALLEN, N. BELLER-SIMMS, T. FISH, A. E. GRAMBSCH, W. HOHENSTEIN, K. JACOBS, M. A. KENNEY, M. A. LANE, L. LANGNER, E. LARSON, D. L. MCGINNIS, R. H. MOSS, L. G. NICHOLS, C. NIERENBERG, E. A. SEYLLER, P. C. STERN and R. WINTHROP, 2014. “From Global Change Science to Action with Social Sciences,” *Nature Climate Change*, 4: 656-659.
- WEBB Janette, 2011. “Making Climate Change Governable: The Case of the UK Climate Change Risk Assessment and Adaptation Planning,” *Science and Public Policy*, 38(4): 279-292.
- WEINKLE Jessica and Roger PIELKE, Jr., 2017. “The Truthiness about Hurricane Catastrophe Models,” *Science, Technology, & Human Values*: 547-576.
- WEIR Margaret, Ann SHOLA ORLOFF and Theda SKOCPOL, eds., 1988. *The Politics of Social Policy in the United States* (Princeton, NJ, Princeton University Press).
- WILLOX Ashlee Cunsolo, Sherilee L. HARPER, Victoria L. Edge, Karen LANDMAN, Karen HOULE, James D. FORD, the Rigolet Inuit Community Government, 2013. “The Land Enriches the Soul: On Climatic and Environmental Change, Affect and Emotional Health and Well-Being in Rigolet, Nunatsiavut, Canada,” *Emotion, Space and Society*, 6: 14-24.
- World Health Organization, 2018. “Climate change and health,” available at: <http://www.who.int/news-room/fact-sheets/detail/climate-change-and-health>. Accessed 20 August 2018.
- WRATHALL David J., Anthony OLIVER-SMITH, Alexander FEKETE, Ebru GENCER, Marquiza LEPANA REYES, Patrick SAKDAPOLRAK, 2015. “Problematising Loss and Damage,” *International Journal of Global Warming*, 8(2): 274-294.
- WYNNE Brian, 1992. “Risk and Social Learning: Reification to Engagement,” in S. Krimsky and D. Golding, eds., *Social Theories of Risk* (London, Praeger: 275-297).
- , 2010. “Strange Weather, Again: Climate Science as Political Art,” *Theory, Culture & Society*, 27(2-3): 289-305.
- YEARLEY Steven, 2009. “Sociology and Climate Change after Kyoto: What Roles for Social Science in Understanding Climate Change?,” *Current Sociology*, 57(3): 389-405.
- ZEHR Stephen, 2015. “The Sociology of Climate Change,” *WIREs Climate Change*, 6: 129-150.
- ZELIZER Viviana, 1979. *Morals and Markets: The Development of Life Insurance in the United States* (New York, Columbia University Press).
- , 2005. *The Purchase of Intimacy* (Princeton, NJ, Princeton University Press).

Résumé

Le changement climatique confronte les sociétés humaines à de nombreux problèmes de perte : épuisement, disparition et effondrement. Le climat change et avec lui bien d'autres choses, de manière parfois destructive. Qu'est-ce que la sociologie peut et doit s'efforcer de savoir sur cette forme particulière de changement social? Cet article décrit la sociologie de la perte comme une forme d'engagement sociologique face au changement climatique, un projet issu de la sociologie de l'environnement, domaine de recherche classique qui ouvre des passerelles vers d'autres sous-domaines. Quatre dimensions interdépendantes de la perte occasionnée par le changement climatique sont abordées dans cet article : la matérialité de la perte ; la politique de la perte ; la connaissance de la perte ; et les pratiques de la perte. Contrairement à la « durabilité » – le cadre dominant du changement climatique dans les sciences sociales –, la sociologie de la perte étudie ce qui disparaît, va ou doit disparaître plutôt que ce qui peut ou devrait être conservé. Si la sociologie de la perte suppose de prendre en compte la mélancolie des personnes et des lieux qui souffrent, elle met également en évidence de nouvelles solidarités et des transformations positives.

Zusammenfassung

Durch den Klimawandel werden die menschlichen Gesellschaften mit zahlreichen Verlusten konfrontiert: Erschöpfung, Verschwinden und Zerfall. Das Klima verändert sich und mit ihm so manch andere Dinge, zum Teil auf zerstörerische Weise. Was kann und muss die Soziologie über diese besondere Form des sozialen Wandels wissen? Dieser Aufsatz beschreibt die Soziologie des Verlustes als eine Form soziologischen Engagements gegenüber dem Klimawandel, ein Projekt, das der Umweltsociologie entspringt, einem klassischen Forschungsgebiet mit Verbindungen zu anderen Unterthemen. Vier einander bedingende Dimensionen des durch Klimawandel hervorgerufenen Verlustes werden in diesem Aufsatz angesprochen: die Vergegenständlichung, die Politik, das Begreifen und die Ausdrucksformen des Verlustes. Im Gegensatz zur „Dauerhaftigkeit“ – dem vorherrschenden Rahmen des Klimawandels in den Sozialwissenschaften –, untersucht die Soziologie des Verlustes, was verschwindet, verschwinden wird oder muss, und nicht was bewahrt werden kann oder muss. Die Auseinandersetzung der Soziologie des Verlustes mit der Melancholie leidender Personen und Orte bringt neue Solidaritätsformen und positive Veränderungen ans Licht.