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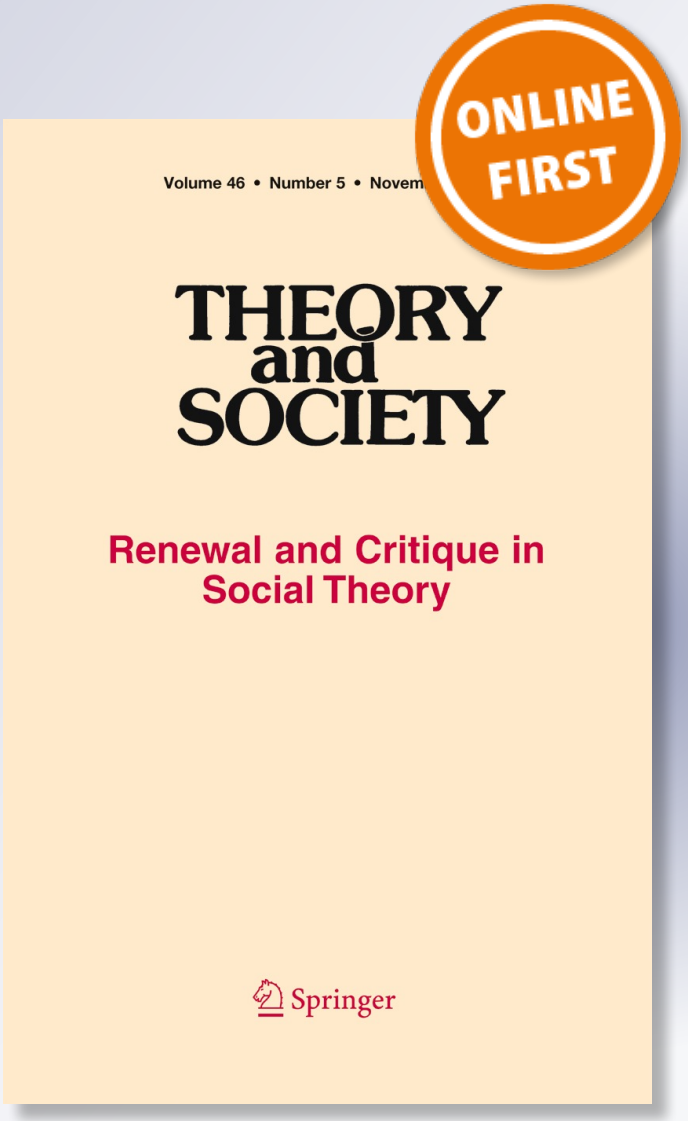

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Emotional impacts of environmental decline: What can Native cosmologies teach sociology about emotions and environmental justice?

Kari Marie Norgaard[1] · **Ron Reed**[2]

Abstract This article extends analyses of environmental influences on social action by examining the emotions experienced by Karuk Tribal members in the face of environmental decline. Using interviews, public testimonies, and survey data we make two claims, one specific, the other general. We find that, for Karuk people, the natural environment is part of the stage of social interactions and a central influence on emotional experiences, including individuals' internalization of identity, social roles, and power structures, and their resistance to racism and ongoing colonialism. We describe a unique approach to understanding the production of inequality through disruptions to relationships among nature, emotions, and society. Grief, anger, shame, and hopelessness associated with environmental decline serve as signal functions confirming structures of power. The moral battery of fear and hope underpins environmental activism and resistance. More generally, we expand this concern to argue that neglecting the natural world as a causal force for "generic" social processes has limited not only work on Native Americans, but also work sociology of emotions and theories of race and ethnicity, and has masked the theoretical significance of environmental

Reed and **Norgaard** have been working closely together since 2003, conducting policy-relevant research on tribal health and social impacts of environmental decline. Their 2004 report *The Effects of Altered Diet on the Karuk Tribe* was submitted to the Federal Energy Regulatory Commission as part of the opposition to the relicensing of the Klamath River dams. This action represented the first time a tribe had claimed that a dam had given their people artificially high rates of diabetes and other diet-related diseases. Since that time Ron and Kari have continued to work on policy-driven research projects including work that established Tribal Cultural and Tribal Subsistence beneficial uses in the TMDL water quality process in California for the first time. Together they have co-supervised over a dozen undergraduate and Masters theses and have several co-authored publications. They continue to work actively together on new projects.

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justice. Taking seriously the experiences of Native people and the importance of the natural environment offers an opportunity to extend sociological analyses of power and to move sociology toward a more decolonized discipline.

Keywords Colonialism · Emotions · Environmental justice · Inequality · Natural environment · Native American

> *There are spirits in every living thing, and the rocks and the soil and the river. So (salmon) you know, it's not like it's just a piece of food and its not a big deal. It's definitely something that has that value, that it is a living spirit, like the spirit of a person, really.*[1]

Today widespread environmental decline in forms as diverse as decreasing timber harvest levels to ocean acidification has an impact on social phenomenon from gender constructions to political movements and processes of racial formation. Yet sociology as a discipline has barely begun to theorize the role of the natural environment on the social. Environmental sociology has made important headway, but primarily for macro phenomenon such as the contribution of environmental decline to the instability of capitalism or dynamics of globalization (Jorgenson and Clark 2012; Foster 1999; Foster and Holleman 2012). Beyond the subfield of environmental sociology, few scholars engage, much less theorize, the role of the natural environment in social outcomes. How does the natural environment influence significant meso- or micro-level processes such as identity formation, the strength or composition of social networks, or the role of emotions in the internalization of racism and colonialism? Dunlap (2002, 2010) and others have argued that a disciplinary bias towards "social facts" at the exclusion of the material world has limited the scope of sociological work and contributed to a marginalization of environmental sociology. Certainly potentially important concepts such as the ecological-symbolic perspective (Kroll-Smith et al. 1991) have not been taken up by the wider discipline.

This article extends analyses of environmental influences on social action through an analysis of the emotions experienced by Karuk Tribal members in the face of declining salmon on the Klamath River. We make two claims, one specific, the other general. We find that for Karuk people, emotional distress serves as a signal function confirming structures of power in relation to identity, social interactions, and ongoing colonialism. More generally, we expand this concern to argue that neglecting the natural world as a causal force for "generic" social processes (Prus 1987; Schwalbe et al. 2000) has limited not only work on Native Americans, but also work sociology of emotions and theories of race and ethnicity, and it has masked the theoretical significance of environmental justice. Taking seriously the experiences of Native people and the importance of the natural environment offers an opportunity to extend sociological analyses of power and to move sociology toward a more decolonized discipline.

Emotions lie at the heart of social organization. Emotions animate meaning systems and structure power relations. Shared emotional experience are part of the production of

[1] The ideas presented here emerge from the information and perspectives shared by many people in the Karuk community via interviews, surveys, and public testimony. We have learned from listening to each of you and are deeply grateful for the time and insights without which this article could never have been written. In keeping with sociological tradition, names have been omitted from interview quotes.

group realities, the construction of social meanings, and key to Collins's work (2004) on the construction of social order. Some emotional experiences do harm, as when soldiers experience PTSD, or a child grows up stigmatized or shamed as a consequence of racism (Brown 2003; Thoits 2010). Despite profound environmental decline worldwide, the strength of many Native peoples ties to land and species and to the central importance of Native traditional management for culture and daily life in many communities today. Little existing research examines this emotional dimension of ecological destruction for Native communities.

Many Native Americans maintain highly specific relationships with the natural environment. Interactions with salmon, forest foods, rivers, and rocks organize social activities, individual and group identities, and gender constructions. Members of the Karuk Tribe have been intimately dependent on salmon and other riverine foods from the Klamath since "time immemorial." Traditional foods and the species of cultural importance flourished in conjunction with sophisticated Karuk land management practices, including the regulation of the fisheries through ceremony and the management of the forest through fire (Anderson 2005; Lake 2013). Particular places such as fishing sites, gathering sites, and ceremonial grounds hold profound and unique importance. Karuk tribal members have responsibilities to tend and to care for the food and cultural-use species they consider as their relations.

By 2014 the Klamath River has highly impaired water quality. Dams block spawning access, and the few remaining salmon runs are on the verge of collapse. Because the United States Forest Service is the official manager of most of their ancestral lands, Karuk people are also denied access to traditional forest foods, including deer, acorns, and mushrooms, and to participating in many important cross-species relationships of tending and harvesting that they consider their responsibility to uphold. Both environmental decline and non-Native regulations that prohibit burning and re-organize fishing and hunting around non-Native values and economic structures are threatening the integrity of relationships Karuk people hold with the natural world.

> The Creator has given me a responsibility. He instructed us how we were to do this from the beginning, and that we were given the promise that the Karuk people would endure forever if you did your part, and if you continue to do what you are instructed to do.

> Now we are being stripped of a lot of our duties as a Karuk person, as a traditional male, and that's just because of regulations … the new regulations they have, rules and regulations, keep us actually from living our traditional way of life … our ceremonies have been, you know, stripping down because of regulations … now we're only allowed to do certain things in our ceremonies, not allowed to do our traditional burns or nothing no more….

Participation in fishing, burning, gathering, and other aspects of traditional management hold immense personal and spiritual significance for many Karuk people and are central to their identity, as a traditional fisherman in his mid-thirties describes:

> Salmon is like … one of our greatest gifts that Creator has given us, and it's something we focus our ceremonies around—our timing, our traditions, our cultural practices…a lot of them really revolve around the Salmon runs.… Yea,

> you know, you got people, elders up there on the top of the mountain waiting for you to fish, and it's a really really awesome feeling being able to hand your elders fish, you know that puts warmth in your heart, and it's like definitely culturally and religious, you know, it's fulfilling spiritually.

As co-author Ron Reed describes, participation in these management activities is at the heart of "being Indian:"

> You can give me all the acorns in the world, you can get me all the fish in the world, you can get me everything for me to be an Indian, but it will not be the same unless I'm going out and processing, going out and harvesting, gathering myself. I think that really needs to be put out in mainstream society, that it's not just a matter of what you eat. It's about the intricate values that are involved in harvesting these resources, how we manage for these resources and when.

Brave Heart and DeBruyn (1998, p. 62) note that, "For American Indians, land, plants, and animal are considered sacred relatives, far beyond a concept of property. Their loss becomes a source of grief." This grief, as well as other emotions in response to the declining health of the river, and the anger and shame that stem from the inability to carry out cultural management in the forest are vividly described by people in the community:

> It sort of gives you a sense of slowly dying. You know, I mean, you see all these things, and it hurts….

Taking the importance of Karuk relationships with the natural environment as a starting point we ask: What emotions does the degradation of the Klamath River animate for Karuk people? What role do these emotions play in the embodiment of power, oppression, and resistance?[2] In what sense are these emotions part of the experience of ongoing colonialism? In what sense do they constitute an occurrence of environmental injustice?

Theoretical background

Three areas of scholarship offer building blocks for our analysis. Native American and Indigenous studies scholars highlight the material and cultural centrality of land for Native people, and they describe the unique mental health challenges Indian people experience in the United States as a result of unacknowledged genocide involving environmental degradation and dispossession of land. Environmental justice research describes disproportionate impacts of environmental degradation for the poor, women,

[2] Following literature from sociology of the body (e.g., Sutton 2010; De Casanova 2013; Eisenstein 2001) we use the term "embodiment" to denote both a metaphoric and literal expression of power. The term is metaphoric in the sense that emotional experiences are understood as representations of power structures. But because emotions literally have a physical dimension in the body, we can also understand their occurrence as a direct manifestation of power, see Sutton's (2010) discussion of how neoliberal economic policies are manifested in women's bodies in Argentina, De Casanova (2013) on embodied inequalities of domestic workers, and Eisenstein (2001) discussion of breast cancer and bodies as sites of power.

and people of color. Finally, scholarship from the sociology of emotions describes the importance of emotions as embodied expressions of knowledge and social power, and it describes how emotions animate cultural meaning systems that social actors in turn may use for inscribing or resisting social power. While these literatures provide crucial foundations for our analysis, we intend for our empirical work and the theoretical insights that emerge from our data to move each field forward in useful ways.

Native political and cultural experience

The most important justice struggles in Indian Country concern the fight to maintain and assert political sovereignty, to resist and overcome forced assimilation, and to preserve reservations and reserved treaty rights (Simpson 2014; Steinman 2012; Tsosie 2003; Whyte 2011; Wilkinson 2005; Wood 1994). Many Indigenous Studies scholars describe their struggles for justice as efforts to maintain relationships with land, traditional foods, and cultural use species. While often the word "emotion" is not used specifically to describe the value of these relationships, the word is very much in line with how these scholars use terms such as spirituality, wellness, mental health, cultural integrity, reciprocal responsibilities, and many more, to describe why these relationships matter. Sociologists are in the minority of social scientists paying attention to Native experiences, but a significant interdisciplinary literature in and touching on Indigenous Studies highlights the unique mental health challenges Indian people experience in the face of unacknowledged ongoing colonialism, forced assimilation, and everyday racism (Brave Heart and DeBruyn 1998; Whitbeck et al. 2004 [Durie 1985; Durie 1999; Walters and Simoni 2002]), the particular relevance of land and non-human species to Native culture and lived experience (Anderson 2005; Berkes 2008; LaDuke 1999 [(McGregor 2009; Hoover et al. 2012; Hoover 2013; Whyte 2016a, b, c, d]), and the emotional responses some Indigenous peoples have to climate change (Willox et al. 2011; Willox 2012) and the need for social scientists to apply a decolonized framework for understanding Native experiences (Smith 2012; Steinman 2012; Tuck 2009), as often Indigenous peoples seek to use their own terms to describe their wellbeing—including emotional well-being.

As with other non-white groups, Native Americans experience racism. Racism for Native people however is best understood as a mechanism of the even more problematic state projects of genocide and colonialism that have in turn been advanced via assimilation. Therefore, while many racial/ethnic groups have sought "equal" integration into society and formal state process, attaining sovereignty, resisting assimilation, and "decolonization" are generally considered the route to rectifying oppression within Native communities (Coulthard 2014; Tuck 2009; Whyte 2015). Here the notion of "settler colonialism" is particularly key. In his articulation of the concept as a unique form of colonialism, Wolfe (2006) underscores that because in Australia, the United States, and Canada settlers came to stay, legitimation of their claims to land required the elimination of indigenous people (rather than "merely" their enslavement or other means of exploiting their labor). Also due to the permanent nature of settler presence, this form of colonialism is structured around the acquisition of land for settlement in contrast to mere resource extraction. Third, the permanent

aspect of settlement, leads Wolfe and others to emphasize that colonialism becomes an ongoing *structure of the society* rather than a *single or series of past events* as it is generally considered:

> When invasion is recognized as a structure rather than an event, its history does not stop . . . when it moves on from the era of frontier homicide. Rather, narrating that history involves charting . . . [how] a logic that initially informed frontier killing transmutes into different modalities, discourses and institutional formations as it undergirds the historical development and complexification of settler society (Wolfe 2006, p. 402).

The most recent theories of structures of settler colonial oppression are becoming increasingly specific about the idea that settler colonial erasure physically alters environments cultivated by Indigenous peoples to support Indigenous cultures, mental health and well-being, and political and economic sovereignty (including food sovereignty). For example, mental and emotional health are harmed through structures of domination that invent national and state borders and distinctions (e.g., urban versus reservation) on Indigenous landscapes (Goeman 2009; Tamez 2016), create false forms of Tribal or First Nations governance or multi-culturalism (Simpson 2001; Simpson 2004; Lomawaima and McCarty 2006; Richardson 2011), dissociate people from having place-based identities (Lawrence 2003; TallBear 2013; Whyte 2016a, b, c, d), disrupt Indigenous systems of responsibilities (McGregor 2009; Bang et al. 2014) (Whyte 2013 [(Coombes et al. 2012]) or adaptive capacities coupled with ecological systems (Whyte 2015; Whyte 2016a, b, c, d) that underwrite the possibility for having a positive emotional attitude toward the possibility of their being a future (Tuck and Gaztambide-Fernández 2013; Whyte 2016a, b, c, d) or of having a sense of place (Hoover 2013; Johnson and Larsen 2013; Watts 2013). Hence theories of anti-colonialism or decolonization—both in traditional lands but also reclaimed urban spaces—are not just about land reclamation but about generation of the moral and community relationships interwoven with nonhumans and ecosystems that advance individual and community mental health and wellness (Bang et al. 2010; Tuck and Yang 2012; Million 2013; Coulthard 2014; Miner 2014; Simpson and Coulthard 2014; Todd 2014; Whyte 2017). Again, while emotion is not invoked as a specific term, these theories are very much about emotions using other terminology. Hence it can be argued that they connect emotional life to the destruction of ecological relationships through structures of settler colonial oppression.

Surprisingly little sociological scholarship has examined the dynamics of colonialism as ongoing processes in "modern" societies although this has recently begun to change (see, e.g., Smith 2012; Omi and Winant 2014; Glenn 2015; Steinmetz 2014; Norgaard et al. 2017). Evelyn Nakano Glenn (2015) explicitly suggests settler-colonialism as a valuable framework for sociology to engage in explaining not only Native American experience, but also the racial and gender formation of whites, African Americans, Mexican Americans, and Chines Americans. Discussion of settler colonialism is also included in Omi and Winant (2014) third edition of *Racial Formation in the United States.*

Native Studies scholars also point to the central importance of land and nature for indigenous meaning systems and economies and in the process of colonization.

Colonization has involved the generation of wealth for colonizers through the material separation and alienation of indigenous communities from their lands. At the same time, the Western discursive negation of the natural world has been both a building block of modernity and central to the legitimization of North American colonialism. On the Klamath, land management policies that criminalize traditional Karuk activities such as burning the forest and fishing, or gathering and hunting in traditional manners, operate as powerful mechanisms of colonization through forced assimilation and negative impacts to tribal sovereignty (Norgaard 2014). Thus, as is evident in our data, colonialism is ongoing through state actions of land management agencies, as well as through environmental degradation.

Literature in Native studies also engages important terminology around "genocide." While some may balk at the labeling of current state actions as genocide (after all there is no longer an actual price on people's heads as there was in the 1800s), Wolfe (2006) writes that terms such as cultural genocide or ethnocide fail to capture the ways that the elimination of indigenous people is structurally ongoing even after the end of "frontier homicide." Wolfe proposes the term "structural genocide" because it enables us to appreciate "the concrete empirical relationships between spatial removal, mass killings and bicultural assimilation" (p. 403) (e.g., in the form of boarding schools).[3] This continuum is evident in our data. We use the term "genocide" here to refer to physical acts of killing that occurred in the past, and use the phrases "structural genocide" and "ongoing colonialism" interchangeably to refer to events in the present.

Environmental justice

While environmental justice work has focused on physical health impacts of environmental decline (e.g., Brulle and Pellow 2006), mental health impacts are sparsely covered within the environmental justice framework.[4] The field of disaster studies does however describe mental health consequences of environmental degradation including their unequal distribution along the lines of race, class, and gender (Bevc et al. 2007; Gill and Picou 1998; Picou et al. 1997; Markstrom and Charley 2003). At the forefront is Michael Edelstein's (1988, 2004) landmark study *Contaminated Communities: The Social and Psychological Effects of Residential Toxic Exposure,* in which he describes how residential toxic exposure has a negative impact on individual psychological experience, as well as on family, social, and community relations. Disaster research details multiple meso- and micro-level impacts of environmental disasters including impacts on occupational infrastructure, the decline of civic process, community relations (Gill et al. 2012), trust in government (Nicholls and Picou 2013), and social capital (Ritchie and Gill 2007). Literature on mental health and environmental decline has grown with recent studies on the psychological consequences of Hurricane Katrina

[3] Wolfe (2006) writes that "the question of genocide is never far from discussions of settler-colonialism" (p. 387) and yet terms such as cultural genocide or ethnocide fail to capture the ways that the elimination of indigenous people is structurally ongoing even after the end of "frontier homicide." See also discussions of this term by Woolford and Thomas (2011), Ellinghaus (2009), Hitchcock and Totten (2011) and Kingston (2015).

[4] E.g., the issue of mental health has yet to be included in the many anthologies, college courses, and journal review articles devoted to the field of environmental justice. See, e.g., Mohai et al. 2009. Note however that Robert Bullard's (1990) landmark text *Dumping in Dixie did* include mention of psychological impacts of toxic exposure.

and the Deepwater Horizon Gulf Oil spill. For example, Picou and Hudson (2010) describe PTSD as an outcome for survivors of Hurricane Katrina, and detail how race, gender, and class intersect in this experience. Disasters represent very specific social circumstances however, and the role of the natural environment has yet to be integrated into generic theory on social processes.

Furthermore, while extremely important, existing studies on the impacts of disaster events and contamination emphasize emotions related to personal contamination or economic losses, rather than the grief or other emotions related to damaged relationships with land or connections to impacted species. The work of Picou et al. (1997) on the Exxon Valdez oil spill and Native Alaskan communities is a key exception. These authors describe how, in addition to economic and subsistence impacts, the spill "shook the cultural foundation of Native life." Their work places the psychological impacts of the spill front and center, noting the prevalence of chronic levels of psychological stress, instances of PTSD, and depression. Still, there are key differences between disaster events and protracted environmental decline, and even bigger differences between the diagnostic and positivist assumptions within the mental health literature and the interpretive theorizing of how emotional experiences reproduce social structure within sociology of emotions. Most importantly, there is no interrogation of the concept of emotional harm, or the relationships among emotions, environmental change, other features of social structure, and the process of inequality formation. In contrast, Auyero and Swistun's (2009) work on "environmental suffering" builds on Bourdieu's (1999) concept of social suffering to articulate how long-term environmental decline interacts with cultural practices and state and corporate power in an Argentine shantytown. Similarly, Shriver and Webb (2009) use the "ecological-symbolic" perspective (Kroll-Smith et al. 1991) to describe how Ponca tribal members interpret and develop diagnostic frames concerning air contamination. These studies move closer to engaging the complexity of how the social meanings of emotional experiences can be part of the operation of power.

Sociology of emotions

Whereas many social scientists regard emotions as personal or "private" experiences, sociologists of emotion describe them as deeply embedded in both social structure and culture (Collins 2004; Hochschild 1983; Schwalbe et al. 2000). One area of this literature important for our work describes emotions as the link between micro-level social interactions and the macro-level reproduction of social structure (Scheff 1994; Schwalbe et al. 2000). Our data provide evidence for this link, especially as emotional distress confirms structures of power. As the link between individuals and power structure, emotions matter in part for their role in cognition. As Arlie Hochschild (1983) notes, emotions serve a "signal function." They are part of how people make sense of their place in the world. For Collins (2004), cognition and emotion are linked to social structure as people engage in "interaction ritual chains." Here shared emotional experiences are part of the production of group reality and meaning and the construction of social order. Taken together this literature illustrates how emotions are fundamentally related to both the cognitive processes of interpretation and meaning construction that undergird important social processes such as framing, identity formation, the maintenance of ideology, and social order, as well as "cognitive liberation" (Jasper 2011).

Emotions literature also conceptualizes emotional harm and points to relationships between emotions and mental health (Scheff 2014). Racism and other forms of oppression are understood to manifest as negative mental health outcomes (Brown 2003; Thoits 2010). There is a significant gap however between, on the one hand, literature that considers emotions as socially constructed embodiments of power linking micro-level agency to macro-level social structure, and, on the other hand, clinical scholarship on emotions and mental health as mentioned above, or work on how emotions function to reproduce colonialism or racism (see Thoits 2012). If negative emotional states can embody oppression, what exactly is the "harm" of these experiences? What might we understand about the production of inequality by examining disruptions to relationships among nature, emotions, and society?

Symbolic interaction details how people attach symbolic meaning to objects, behaviors, themselves, and other people, and then develop and transmit these meanings through interaction. Emotions are central to this process. Emotions link micro-level interactions that connect both identity and emotions to the larger reproduction of social structure, in part by taking social context into account. In her work on "ecology of interaction" Lynn Smith-Lovin (2007) describes social settings influencing interpersonal encounters. Between their signal function in cognition and their link with social settings and individuals, emotional experiences may thus represent a three-dimensional "embodiment" of power relations, or terrain of resistance (Jasper 2011).

We concur with Smith-Lovin and other symbolic interactionists that the social context of emotions matters. Yet we argue that *environmental* contexts also links sense of self, emotional experience, social interactions, and social structure. The mechanisms of how the natural environment structures emotions have yet to be theorized. In his review of the subfield of emotions, Jasper (2011) laments the conceptual limitations that emerge from dualisms between emotion-reason and body-mind. We agree as to the limitation of these dualisms and aim here to bring attention to a third: the nature-society dualism. The limitation of these dualisms is not unique to sociology of emotions, indeed it goes beyond even sociology. Feminist philosophers have long argued that the modern Western worldview is ideologically legitimized through a set of dualisms including a split between nature and culture, between reason and emotion, and between body and mind (see, e.g., Plumwood 2002; Warren 1987). Sociology came of age in the mid-1800s at the height of classical modernity and the idea that humans had "risen above" nature. Some argue that the assumption that humans were no longer dependent upon nature was central to the very concept of "the social" and the appropriate scope for what would be studied by the new discipline of sociology (Dunlap 2002, 2010; Witz 2000). Certainly, the discipline's rigid commitment to "society" as its own discrete domain of study has only been compounded by its complicated historical relationship to the natural sciences and evolutionary theories. Yet "nature" in the form of non-human plant and animal species, rocks, rivers, and places are central organizing features of Native cosmologies, culture, economies, and social life (Deloria 2003; LaDuke 1999). Sociology has followed in this modernist framework, which presumes both that the genocide and colonization of North America occurred in the past and that nature and society are separate, e.g., that we can ignore the natural world and still provide meaningful analyses of the social. Yet the negation of the natural world in much sociological theory obscures colonial power relations and the ever-associated environmental degradation that continue to be highly salient for Native peoples by making their experiences invisible and irrelevant within sociological discourse.

Within this context we make two claims. First the natural environment should be understood as influencing emotions. Colonial and modernist disciplinary trappings have limited the scope of sociological understanding, resulting in fundamental inaccuracies in the nature of social action for society at large. The natural environment is often part of the stage of social interactions, may be a central influence on the emotional experiences of many people, including their internalization of identity, social roles, and, probably in many cases, power structures such as racism.[5] Second, for Karuk people (and likely other indigenous groups) theorizing the natural world is necessary to understand the operation of ongoing colonial violence in the form of environmental degradation today. Here environmental change is central to the process whereby emotional distress confirms structures of power (Scheff 1994; Schwalbe et al. 2000).

Background

With over 7400 members and descendants, the Karuk are the second largest Tribe in California. Their ancestral territory is along the Klamath River in the northern part of the state. The Klamath was once the third largest salmon-producing river in the Western United States. So abundant were salmon, sturgeon, steelhead, lamprey, and forest food resources that the Karuk were amongst the wealthiest peoples in the region that would become known as California. Unfortunately, Karuk culture and lifeways have been under attack—especially since the Gold Rush of the 1850s. This assault occurred explicitly first through an un-ratified treaty, lack of recognition of Karuk land title, and state policies of genocide and overt forced assimilation, and then implicitly through natural resource policies designed to benefit non-Native actors and through ecological destruction.[6]

Since their inception the Federal government and State of California have implemented land management policies reflecting non-Native values, economic systems, cultural practices, and cosmologies. Actions by the state including the failure to recognize Karuk fishing rights, land tenure, and traditional management practices operate as "racial projects" that move wealth from Native to non-Native social actors (Omi and Winant 2014; Park and Pellow 2004; Norgaard et al. 2011). Forced assimilation continues today as the above actions of the state degrade the environment and deny Karuk people access to the food resources needed to sustain culture. Since the 1960s dams have blocked access to 90% of the spawning habitat for Spring Chinook—historically the most important salmon run. Reduced flows, high water temperatures, and algal build up have drastically reduced the number of salmon and other traditional riverine foods. Forced assimilation happens even more overtly when game wardens arrest people for fishing according to tribal custom rather than state regulation.

Although Karuk people have experienced genocide and the massive reorganization of economic, political, and social systems, they have continuity fought back, and often

[5] Note that for our respondents the natural environment is more than just a stage for action; it is an animate actor itself.

[6] The US government negotiated a treaty with the Karuk in 1851 but it was never ratified. Meanwhile, in 1851 and 1852, California spent $1 million per year to exterminate native peoples. Following direct genocide, Karuk children were separated from families and taken to Bureau of Indian Affairs boarding schools for the specific purpose of assimilation. People were prevented from speaking their native language and practicing their customs, and they were forced to eat a diet of "Western" foods.

with profound success (Allen 2010; Alkon and Norgaard 2009). While the struggles are real, it would be misleading to imply that the community is merely defeated. Many Karuk ceremonial practices are intact, the Karuk Tribe Department of Natural Resources engages in cutting-edge biological research, and the region is home to the largest number of native language speakers and traditional basketweavers in California.

Data and methods

This project emerged from collaboration between the authors in the context of the proposed re-licensing of the Klamath River hydroelectric project. Karuk Cultural Biologist and traditional dipnet fisherman Ron Reed and non-Native sociologist Kari Norgaard worked together on all aspects of the project from study design to research process. The purpose of the original research was to assess impacts of the dams on the health, culture, and economy of the Karuk Tribe. As an "insider" Mr. Reed used his knowledge of the situation to frame relevant research questions, identify existing data sources, and "gain access" to participants via social networks. Information presented here is compiled from three sources: in-depth interviews with Karuk tribal members ($N = 44$), responses to open ended questions on the Karuk Health and Fish Consumption Survey ($N = 90$), and archived testimonies from Federal Energy Regulatory Commission (FERC) dam relicensing hearings. Data were collected in two phases. The original research was conducted over a two-year period from 2003 to 2005 (see Norgaard 2005). In the first phase, eighteen open-ended, in-depth interviews provided detailed information from tribal members regarding health, diet, food access and consumption, and economic conditions. Interviewees were selected based on purposive sampling to reflect individuals' knowledge of situation and a range of ages, types of experiences with environmental conditions (e.g., traditional fishermen, hunters, harvesters, and weavers), and location throughout the watershed. Because contact with the river was centrally important and fishing is a male activity in Karuk culture, our interview sample contains more men than women. Interviews were recorded, transcribed, and coded.

In addition, the Karuk Health and Fish Consumption Survey was distributed to all adult tribal members over 18 living in ancestral territory. In order to achieve the highest possible response rate the survey was distributed face-to-face by known individuals within the Karuk Tribe who explained that the purpose of the survey was to evaluate current and historical fishing practices and consumption levels, assisted with completion if necessary, and returned surveys to the tribal office. Responses were kept confidential. The survey contained sixty-one open- and closed-ended questions evaluating economic, health, and cultural impacts on tribal members resulting from Klamath River decline. The survey had a 38% response rate (N = 90). Whereas the survey was confidential, interviewees' names remained associated with text, but have been removed here. While confidentiality and anonymity are the norm throughout sociological research, best research practices in Native communities identify speakers, especially where traditional knowledge is shared to give credit for intellectual property (Smith 1999). Voices are presented here without names because these passages articulate potentially stigmatizing experiences and do not contain traditional knowledge. Note that names are listed when statements are quoted from public testimony.

Many of the original interviews, responses to the open-ended survey questions, and the public testimonies were highly emotionally charged and specifically stressed what participants described in their own words as "mental health" impacts of the river's decline. Some people explicitly pressed us to include a "mental health" dimension to the project. We felt that more attention should be paid to the emotional dimension of environmental change. This issue precipitated the second project phase that took place from 2007 to 2008. This led to a second set of research questions about the emotions that people experienced and the meaning of the changes in the river. As a sociologist, Kari Norgaard wondered in what sense we should understand these emotions as part of environmental injustice. We also noted that the emotions were very charged, and we wondered why it was so important to the community that we expand the study in this direction. While sociology of emotions have emphasized social context, here natural environment appears important. How does the natural environment influence emotions? In what sense do emotions connected to environmental decline operate as mechanisms of social structure? Original interviews, FERC archival materials, and survey data were re-analyzed through the lens of emotions, and twenty-six additional interviews[7] were conducted with specific questions concerning mental health impacts. Initially this material was coded and organized according to what Jasper (2011) calls the "natural-language labels" of emotions that participants explicitly identified or appeared to express (e.g., anger, shame, etc.). Then following Jasper (2011) and Goodwin et al. (2004) we built on these "natural-language labels" by considering analytic distinctions such as whether emotions appeared to be direct or indirect responses to the environment or environmental change and how they appeared to operate in social context. We noted where in Jasper's (2011) and Goodwin et al. (2004) categorization emotions were found (e.g., reflex emotions, affective bonds, moods, and moral emotions). We observed that many emotions held salience in terms of personal identity and in relation to social interactions, and noted that nearly all the emotions people emphasized signaled relationships with power structures. Finally, in keeping with the environmental justice theme, emotions were analyzed in terms of how they appeared to operate in the reproduction of or resistance to colonialism and structural genocide.

Results and discussion

Identity, social interactions, and social structure: emotions and environment as mechanisms of racism and colonial oppression

Karuk Tribal members vividly expressed emotions of *joy* from being out in nature and *grief, anger, hopelessness, and shame* with the decline of the Klamath River. These emotions were not discrete but related to each other in the lives of the individuals with whom we spoke. For a better understanding of the significance of the emotions associated with environmental decline, it is useful first to describe emotions people experience interacting with the intact river and landscape. In our interviews, people

[7] Eight of the individuals in the first round were re-interviewed with the new focus on emotions, e.g., these individuals were "duplicated."

emphasized the central connections among daily life, their identity as Karuk people, and the Klamath River. In the words of one man now in his fifties, "When I was a young child, my first conscious memory is being at the Falls. That's, you know, to say that's where I've always been. That's where my life source comes from. That's who I am, that's what identifies me as a person, as a Karuk person. Being on the river." Others emphasized how the river is a central orienting point for life: "Everything within our culture surrounds the river. The river is the center of our way of life. You're up the river, down the river, up big hill, on this side. Everything comes back down to the center, which is the river. The river is our life course. When that river is no longer healthy, we're no longer healthy." People spoke of intimate connections with the river, with important sites and species, especially salmon but also eel, trout, sturgeon, and steelhead. Here two fisherman offer vivid descriptions of a sense of oneness and joy while being on the river,

> I come out here … come out to these places, you know, and get that connection back. Just that silence and the liveliness of everything surrounding us … everything is alive when you're out here and you can feel it. It's a bliss that you can feel—it's indescribable….

> You know, my first time I went down to the falls, it was almost like being in heaven … that's our ceremonial fishing grounds and it's right at the base of our mountain that we pray to … and it's medicine … and to be at both those places, you know, to be there and the falls right there is just magical. To hear the raw power of the river … it's like you're on earth but you are in a different place at the same time….

The influence of the environment on emotions can be understood as both direct and indirect. Direct influences of environment on emotions range from joy while fishing at the sacred fishery to a sense of kinship with other life forms and identification with the river as described above. Indirect experiences result from the relationship between environmental degradation and colonialism (e.g., they are in response to environmental conditions, but these conditions are in turn caused by human activity). Next, we consider indirect emotions, first using examples of grief on behalf of the fate of other species.

Grief: "*Just like tearing my heart out*"

The most frequently expressed emotion in the face of the degraded water quality and diminished quantity of fish in the river was grief. Nearly everyone we spoke with conveyed this emotion with intensity. One father and traditional fisherman in his early thirties told us, "It gets pretty emotional for me, you know when I see salmon *dying* because of the algae or the river is too low." He went on to elaborate how;

> It saddens me … to see all the algae and all the toxic, it just saddens me that they continue to allow this to happen. They know the long term effects it's going to have … it's going to be devastation … you know for everything in that river, not only the salmon, for everything in that river ….

Of course many non-Native people experience similar emotions connected to the natural world as well, a point we return to in discussing the broader significance of this case in the conclusion.

In addition to grief in the form of direct pain on behalf of others, for many people, experiences of grief were bound up with three other important social experiences: 1) disruptions to identity, 2) disruptions to social interactions, and 3) the association of environmental degradation with both cultural and physical genocide (see Table 1). While we next identify these emotions in relation to these seemingly distinct causal outcomes, in people's lived experience there is no clear line between the experience of grief on behalf of dead salmon, grief on behalf of one's son who cannot go fishing, or grief that the Karuk people may come to an end. This interconnection is evident in the interview passages as speakers move from one aspect of the emotion to another. Indeed these aspects are not only interconnected, they are *compounded* by one another.

Continuing with our example of grief, the inability to catch and share fish is a deeply painful experience for individuals who carry this responsibility and for the community as a whole. One younger fisherman relates the intense grief of not being able to provide fish to Elders: "*if I couldn't be able to dip for my Elders, it would just break my heart, you know, if I couldn't go down there and gather up some eels for them, it would just be like tearing my heart out*…." Another fisherman from the same community describes how the inability to "make things right" both for the fish and human community weighs heavily on those who carry this responsibility:

> And, I think I see this with my own family, people in the community, they feel responsible in part for what's happened with the fish. Not that they did it, that caused the degradation, but more of that loss of. … <crying> But what else can you do? You can only do so much. You know, you can make your prayers, you can rally, you can go down there and pray at the Falls, you can go to the ceremonies, but at some point you know, it's just beyond your ability to do something and when you reach that point where you can only do so much, and you can't do anymore, that's when it's lost. <crying> You know? And, when you see your role as a young man or as a person who's supposed to get fish and go feed these people so they can have that ceremony so they can fix the Earth, fix the world, or the salmon are just—you go down and you look below the bridge or you look at the falls and there's more dead, you know. <crying> You can't be the one who makes the water ten degrees cooler like it needs.

Here grief serves a signal function indicating both awareness of the degraded environment and one's location in a system of power. In her revision of Sheldon Styker's classic work on structure within symbolic interaction, Smith-Lovin (2007) argues for more emphasis on social settings in the construction of identity. Given the

Table 1 Grief in relation to identity, social interactions, and social structure

Identity	Social interactions	Social structure
Like tearing my heart out	Sadness because "quiet down at the Falls"	Sadness that Karuk people may disappear

necessity of fish in the river for Karuk to perform the activities that uphold positive identity and recreate culture and meaning systems, we note in addition that not only social environments constrain behavior, but also that the condition of the natural world profoundly shapes the "menu of opportunities" (ibid., p. 108) available to individuals. Many of our respondents describe how threats to social roles affect fishermen in particular.[8] In this Karuk man's words,

> Just the whole sense of being able to be a provider…you know, a fisherman that's able to catch fish and provide for his family is just as good as anybody else in the professional world, you know…so if this is your way of living…if it revolves around the fish, you know providing for your family…now the fish are gone then now you can't provide

While by custom Karuk people do not sell salmon for money, there is a stress in losing the social capital that comes from participation in the informal barter economy that operates around traditional foods:

> Sometimes, when there's low economy and there's no other jobs to do it's just tough—you drink it away because, well, you know, what the hell, there's nothing that you can really do that's going to be good anyways. So you pass the day by numbing the senses. You know when things aren't good with the fish people take it out because they're stressed, right? Normally, that salmon would be that role of building that capital when you don't have that capital, it's not a reservoir of, either monetary or even, kind of like, 'I owe you one,' type of thing to draw from. Just like people in a contemporary sense would get stressed for not having financial security, when you don't have salmon security, it adds all those other dimensions of stress to it.

As the speaker notes, we can understand parallels between the inability of people to carry out cultural responsibilities and provide subsistence foods, and the effects of unemployment on identity, gender roles, or drug use (Segal 1990; Sherman 2009). Again, parallels to non-Native communities are also evident. In Newfoundland the collapse of the cod fishery in the 1980s resulted in complex changes in identities, health outcomes, household practices, and gender arrangements (Ommer 2007).

Furthermore, the grief that people experience is on behalf of others and on behalf of the many social interactions that would not occur when there was no salmon. Important social interactions traditionally happen as people gathered to watch the fishermen at the Falls. Grief over the decline of the health of the river is inseparable from the sense of loss of social relationships that occur with the harvesting of food. Ron Reed describes how things have changed at the Falls,

> It's not only just a fishery. It's a social area. So people come from all over the place still today. They go to Ishi Pishi Falls, to mingle, to get their fish, to share their wisdom, their knowledge about when they were kids. People come down to the Falls because they know there's something to come down to. And this year

[8] Note that we elaborate on elsewhere on this important theme of masculinity (see Norgaard et al. 2017).

> was awful quiet at the Falls because they knew there wasn't anything to come down to. It was very quiet down there this year, and it was very sad.

People were sad that their children could not have the same experiences eating salmon they had had as children. Here is one anonymous survey response:

> I think it's remarkably sad that in my teenage years I ate a tremendous amount of salmon or deer meat, and now its hardly ever eaten . . . There is just a TERRIBLE shortage in salmon now that when my little Indian daughters eat it they think it's a treat … it saddens me to have my children not enjoy the same simple happy memories of eating salmon with all the old Indians and hearing stories of catching them, dipping them, and packing them out.

Smith-Lovin (2007) writes that "the person we become depends profoundly on the networks in which we are embedded" and "the actions we take and the emotions we experience depend on these networks. These networks are, in turn, shaped powerfully by the social settings that we occupy" (p. 106). But for theory in sociology of emotion, all of this activity is conceived as taking place in a vacuum. Here changes in the natural environment alter the quality of social relationships. A parallel argument to the above can be made in terms of the missing ingredient of the natural world in the interplay of emotions, interaction, and identity. When salmon are present a host of family and community interactions associated with catching and distribution of the fish will occur (Willette et al. 2016). People gather to fish, to watch others fish, to see friends and family, and to distribute food. These interactions have profound meaning for individuals, families, and to the Karuk community. When salmon are absent, these interactions do not occur, and a very different set of emotional and social experiences are set into motion. As one man in his mid-thirties put it, "*You got to have fish to teach them how to fish. You got to have fish to teach them about fish …. with the numbers dropping like they do, it'd be hard, you know to tell your son how to dip when there's nothing in there to dip.*"

Grief from the association of the degraded river with genocide forms a final category of how emotions from the environment shape social action. Witnessing the degradation of the river is associated with genocide in two ways. On the one hand, because the absence of fish makes impossible the social and cultural practices described earlier, the decline of the river literally becomes the vector of forced assimilation and structural genocide. Leaf Hillman, Director of the Karuk Department of Natural Resources and a prominent cultural practitioner explains,

> How do you perform the Spring Salmon Ceremony, how do you perform the First Salmon Ceremony, when the physical act of going out and harvesting that first fish won't happen? You could be out there for a very long time to try to find that first fish and maybe you won't at all and then of course in the process you'd end up going to jail too if anybody caught you. So, will that ceremony ever come back? Well, I don't know. But, once again, it's a link that's broken. And restoring that link is vital.
>
> You know, I guess, one of the biggest issues is it's a dying art, you know. I mean from being a fish people a couple of generations ago, our fishery's at risk, our

> fishing identity is at risk. There's maybe a handful of fishermen left, so therefore there's a handful of families that are associated with that fishery….

On the other hand, experiences of a degraded river are also associated with a long-felt awareness of Karuk culture and life under attack, and with a longstanding sense of their imminent destruction.

> American Indian people are faced with daily reminders of loss: reservation living, encroachment of Europeans on even their reservation lands, loss of language, loss and confusion regarding traditional religious practices, loss of traditional family systems, and loss of traditional healing practices. We believe that these daily reminders of ethnic cleansing coupled with persistent discrimination are the keys to understanding historical trauma among American Indian people (Whitbeck et al. 2004).

From the early 1800s to 1880 the Karuk population went from about 2700 people to about 800 people largely due to state sponsored genocide (McEvoy 1986, p. 53). Many Karuk families carry specific stories of these events. Emotional responses to the destruction of the environment reanimate these histories of physical genocide. That Karuk life and culture could come to an end is the grim background cadence of people's everyday sensibilities. In the course of our interviews, many people shared stories such as the following:

> The Karuk people actually believe that if the Salmon quit running, the world will quit spinning, you know. Maybe the human race as we know it may be nonexistent…. If the river quits flowing, it's over. If Salmon quit running, it's like the sign of the end.

> My Grandma she said the deer would probably go first, according to what the medicine people talked about when she was real small. She said from what she could understand the animals were going to let us know when the end is here. Because they'll disappear.

The fear and dread interwoven in these stories form a foreboding backdrop to the many layers of struggle associated with the degraded river as changing environmental conditions become the leading edge of genocide.

Anger: "*I get pissed off*"

Although grief was the emotion people most frequently conveyed, many also expressed anger over the degradation of the Klamath River. Like grief or sadness, Jasper and others consider anger a reflex emotion. Yet like grief, here anger also serves a signal function and operates in complex ways in relation to cognition identity and moral understandings (see Table 2).

One man in his early fifties notes, "You might be pissed off. You might be really super angry. You'd be super angry like I was and not really know what the hell you was angry about." Another man from the same community added, "When you don't have

Table 2 Anger in relation to identity, social interactions, and social structure

Identity	Social interactions	Social structure
Anger that cannot fulfill expected roles	Anger that children don't have same opportunities anymore	Anger at agencies who arrest people for fishing according to tribal custom

something that you feel like you have a right to have [fish, access to a healthy life] you're disenfranchised. You're angry." The anger voiced here is not just about what is happening to the river, but how both are intertwined with a sense of "denied access" to a variety of important activities and responsibilities that lie at the very heart of being Karuk.

> You know when I get pissed off, you know what I do? I go out and start drinking. But what if I had salmon? If I had a fucking, if I had a sweat lodge in the back of my house…or if I had a fishery that we had enough fish and if I could go give to my mother and my kids and the way we need to live … that's what we're looking for.

Here note that in alluding to his inability to provide for his family the speaker's identity as a fisherman has been disrupted and social relationships have been disrupted as well. Again, note how anger at the condition of the river serves a "signal function" locating the speaker in a system of racial inequality and ongoing colonialism at the hands of non-Native land management projects such as the dams. More specifically people expressed anger towards specific land management policies and the state actors who enforce them.

> We still do not have a "right to fish." We are fish people. That is another thing. Rocks, mushrooms, and áama [Karuk word for salmon]. You want a line around them? Hey, acorns, yeah. They can arrest me for that. You know. I've gone to jail for some stupid ass shit, so I don't mind going to jail for something I believe in. So before the White Man came here what part of this river do you think the Indian could fish?... Every single square inch that they could fish they fished because the fish were there, the fish were everything. You know. If you didn't get no fish you know, you didn't make it to the next year. You know they say this was a land of plenty. Well it was a land of plenty at one time, before they started catching all the fish out you know, 200 miles limit or wherever you know [referencing commercial offshore ocean fishing] . . . I mean just about any Indian around here has been in trouble with the law for killing deer.

Later in this same interview, the speaker's anger towards the agencies who arrest people for fishing and gathering according to tribal ways blends with anger at denied ability to perform traditional management (here the speaker refers to burning to keep brush down and provide forage), and for the degradation of the environment that has occurred from non-Native management. Each of these links between emotion and

cognition form visceral understandings of present conditions of environmental decline and colonial violence:

> Mushrooms is one area I draw the line in. I don't give a shit what anybody says about mushrooms you know. But the rest of the times, do I want to go out there and be hassled about it? Why? I go down to the damn store and buy that stuff a lot, you know, it is going to cost you more to go hunt, to go out into the woods and get it. It is not like it is readily available no more. It is not like you have a gathering spot like we used to have a gathering spot. You know, you used to have a gathering spot to gather something and you would go there and gather. Now you don't. Now you can't burn there. You can't burn there every year and every other year or however often you need to burn it in order to make your crop come up good. You can't do that. You can't burn. And you have to have a permit to get everything. Everything. You have to get a permit to get rocks off the god damn river bar out here. Did you know that?

Analogous to the way Smith-Lovin (2007) attends to the importance of interpersonal encounters as the "link between macro-level community structure and the micro-level experience of self-conception, identity, performance, and emotions" (p. 106), these passages describe how encounters with the natural world are a key link between micro-level experiences of identity and emotion, and macro-level power relations of racism, colonialism and structural genocide.

Shame "*that puts you in this little down feeling*"

Shame has been considered one of the most important emotions in the formation of social structure and stability (Scheff 1994, 2000). Here too shame operates to inscribe ongoing racism and colonialism across spheres of social action from relations with individual identity to social interactions and structure. According to Scheff (2000), "shame arises when subjects fail to achieve social ideals, or diverge from certain social standards." But Scheff and other important scholars writing about shame such as Helen Lewis (1976) also define shame more fundamentally—in terms of seeing oneself lacking as other(s) real or imagined, see you. People described shame in relation to personal identity in several ways. First was a sense of direct identification with the river as a contaminated entity:

> I think particularly for indigenous people social, cultural, and community wellness reflects the ecological quality of their environment. So when the river's degraded, and it's liquid poison in some ways, and you're supposed to draw all your sustenance and your identity as a river Indian or a river person, then of course that weighs on you. It's like, you want to be a proud person and if you draw your identity from the river and the river is degraded, that reflects on you.

Identity and shame are also at play in relation to people's inability to perform social and cultural responsibilities, as these speakers describe:

> If an elder is asking upon you to go fish for him, that's like an honor, and if you can't fulfill that honor, it's kind of degrading inside, you know, it's hard on the spirit.

> When you're not able to go upslope and manage, you're not able to go up and reap the harvest of that management. If you're not able to go produce for your children and give things for each other for the well-being of life, then all of a sudden, that puts you in this little down feeling. You're down casting yourself. I think that's where a lot of the people in Karuk tribe are because of our inability to get to these resources that have been given to us by the Creator. We understand very much that we're a proud people. We're here for a reason, but a lot of us struggle trying to figure out how do we integrate into modern society?

In the face of environmental decline two types of responsibilities were threatened, those to salmon and other species, and those to the human community (see Table 3). Director of the Karuk Department of Natural Resources Leaf Hillman describes Karuk responsibilities to tend and care for the natural world through traditional management:

> We believe that we were put here in the beginning of time, and we have an obligation, a responsibility, to take care of our relations, because hopefully, they'll take care of us. And it's an obligation so we have to fish. They say, "Well, there aren't that many fish this year, so I don't think you should be fishing." That is a violation of our law. Because it's failure on our part to uphold our end of the responsibility. If we don't fish, we don't catch fish, consume fish, if we don't do those things, then the salmon have no reason to return. They'll die of a broken heart. Because they're not fulfilling their obligation that they have to us.

Traditional management refers not only to care for the environment but also to specific social and cultural responsibilities people hold to their families, elders, and the Karuk community. A mother in her thirties describes:

> To be a fisherman … it's an important role in being a man in the tribe … you know … you fish for your family, you fish for the people … and there's fish days, and the ones who owned those fish days were responsible for feeding the community.…

Another woman working in the Department of Natural Resources notes how the struggle to find one's role and identity in the present context can have an impact on youth:

> You don't want young boys to think, "I've never been to the Falls to fish" you know, "so maybe I'm not quite the Indian that someone else is who goes to the Falls and fishes."

Table 3 Shame in relation to identity, social interactions, and social structure

Identity	Social interactions	Social structure
If you draw your identity as a river Indian but the river is contaminated, that reflects on you	Shame that can't provide for elders or family, cannot perform responsibilities to other species	Shame that cannot find way in "modern society"'

Conceptualizing the nature of physical harms from environmental decline due to cancer or lead positioning appears more straightforward, but what exactly is the nature of emotional harm? The ability to maintain a coherent meaning system is considered a vital component of mental health and psychological well-being (Mirowsky and Ross 1989; Thoits 2010). By contrast, people described a sense of shame and emptiness:

> When we don't have a way of life, you're left with emptiness … if you don't know the creation stories, if you know tribal philosophy—there is a big void in your life. I think there is a level of embarrassment with the lack of knowledge, with the lack of presence in the culture. With all that, you end up with a low self-esteem. You can't fish. You can't hunt. You don't know how to pray. People aren't really eager to talk about something that embarrasses them. And it must be an embarrassing moment not to be coming down to the Falls or going to the ceremonies."

As this man's words reveal, it is the emotions of shame related to one's inability to carry out valued social roles in the face of the degraded environment that inscribe racism and ongoing colonialism. The emotional "harm" is a function of their cognitive dimension in the inscription of social power.

"*The natural thing is to feel hopeless*"

Grief, anger, and shame were also mixed with feelings of powerlessness in the face of institutional forces working against the health of the Klamath River (see Table 4). Leaf Hillman describes:

> People say, "Do you really think they are going to take out the dams on the Klamath River? You'd be out of your mind to think that." Well I don't know. Do I really think there is justice in the world? No. That's an easy one. Do I ever think that they'll be justice? No. Do I think there is any hope? I don't know. People say, "How can you be even the slightest bit optimistic?" It's not easy to be optimistic about any of these things that I'm talking about. The easy, and I think the natural thing, is to feel hopeless.

People vividly described the experience of living with the degraded river as "enduring an assault on one's relations" yet being powerless to stop it fully:

> You know, that spiritual tie, kind of more like kinship or family type of relationship. That's where I think the grief comes in. It's like, a sense of powerlessness.

Table 4 Hopelessness operates across identity, social interactions, and social structure

Identity	Social interactions	Social structure
Feeling unable to fix problem, powerlessness	There are only a handful of fishing families left. . .	Maybe this is a sign of the "the end"

> You know, and yet what can you do? . . . You basically see this assault or this attack on your family, either directly as humans, but also the extension of your family relationship and the tribal perspective of seeing that with salmon, you see this attack. You see this, you know, and there is this constant, I guess the only word I can think of is assault on them. And there are certain things you can do within your capacity, and then some things are so broad outside of the influence, that it's hard to comprehend what's going on.

Another man in his fifties described an analogous loss of control in relation to cultural activities. As do others, he clearly associates the situation with genocide—both literal killing of people in the past and the ongoing structural genocide. "Our way of lives has been taken away from us. We can no longer gather the food that we gathered. We have pretty much lost the ability to gather those foods and to manage the land the way our ancestors managed the land."

In contrast to the experiences articulated here, decades of research from sociology and psychology indicate that vital components of psychological well-being include a positive sense of self-worth and self-efficacy, coherent meaning systems, and sense of personal and cultural identity (Mirowsky and Ross 1989; Thoits 2010). The experiences Karuk people articulate are similar to those Downey and Van Willigen (2005) found in their work on proximity to environmental contamination as generating personal powerlessness, and the work of Shriver and Webb (2009), who describe how an "endless battle to validate health and environmental concerns, along with the constant assault on Native American values, has fostered a sense of apathy and hopelessness among some tribal members" (p. 282).

The reduced ability of Karuk people to participate in traditional management negatively affects both individual mental health and generates chronic community stress. Chronic community stress occurs when long-lasting psychological stressors are present across a community (Gill and Picou 1998). Such community stress is more than the sum of individual parts because the simultaneous disruption of many people's lives affects social structure and the maintenance of day-to-day activities, creating an overall normlessness or anomie (Edelstein 2004; Gill and Picou 1998).

Disenfranchised Grief

The impact or "harm" of all these emotional experiences discussed so far is underscored by their invisibility and the corresponding lack of legitimacy within the dominant culture. Ken Doka's (1989) term "disenfranchised grief" refers to grief that is experienced, but cannot be openly acknowledged or publicly mourned. Because the dominant non-Native society does not recognize the deep emotional ties we describe between humans and the natural world, Karuk grief and other emotions we have described here over their loss is invisible. Brave Heart and DeBruyn (1998) describe how this 'disenfranchisement' of emotional experience produces 'unresolved grief' that itself becomes a significant "harm." They note that American Indians face particularly high rates of mental health challenges ranging from suicide, homicide, and accidental

deaths to domestic violence, child abuse, and alcoholism. They go on to argue that the lack of social recognition of this grief is key to explaining these challenges:

> These social ills are primarily the product of a legacy of chronic trauma and unresolved grief across generations. It is proposed that this phenomenon, which we label historical unresolved grief, contributes to the current social pathology, originating from the loss of lives, land, and vital aspects of Native culture promulgated by the European conquest of the Americas (p. 56).

Whitbeck et al. (2004) similarly link discrimination and historical loss to subsistence abuse in Native communities. From a sociological perspective, we can apply concepts of emotion norms and feeling rules to understand this situation. Theoretical work in sociology clearly states that emotion norms vary by social context including racial and ethnic contexts (Mirchandani 2003; Wingfield 2010) and describe a complex interplay between these racialized feeling rules and systems of oppression (Wilkins 2012). In this case, dominant culture (non-Native, white) emotions norms that situate Karuk experience of deep connection with the natural world as "abnormal" and even subject to categorization as "mental illness" form a mechanism of racism and assimilation. On the one end, stigma over "aberrant" emotional experiences is associated with potential substance abuse as described by Brave Heart and DeBruyn above. Multiple community members underscored the importance of this connection. One woman who works with youth puts it this way,

> I've talked to a lot of guys and their dream is to be able to fish and hunt and take care of their families and you know, be able to do that. They have all this guilt about not being the person you had wanted to be, so you avoid it. A lot of Karuk guys avoid feeling that, so I think that's why you have a lot of drug and alcohol. They feel really bad about not be able to participate or to provide in a manner that they felt they should, so they just do drugs to avoid having to deal with that feeling.

On the other end of the spectrum, this disjuncture in emotion norms becomes a mechanism of forced assimilation in that non-White expressions of grief can be sanctioned by force through the mental health system when people are institutionalized for inappropriate emotional presentations. Although there is not space to elaborate upon this here, Native Studies scholars have illustrated how attempts to assimilate Native cultural norms into hegemonic normative structure of emotions has been central to the mechanism of colonialism and racism.

Taken together emotions of grief, anger, shame, and hopelessness each work across multiple social categories to inscribe racism and ongoing colonialism. Environmental decline is understood and manifested via the emotional experiences that translate into threats to identity, disruptions to systems of social interaction, and structural outcome in the form of racism and ongoing colonialism. Emotions serve as a signal function in that it is the cognitions about these experiences that confirm structures of power. Thus, one unique offering of this article is thus to build an additional layer to Goodwin et al. (2004) and Jasper's (2011) typology of emotions by illustrating how features of the

natural environment cause negative emotions that in turn form a three part relation between cognition and identity work for individuals, social interaction and broader enactment of social structure.

Thus, while we draw upon Goodwin et al. (2004) and Jasper's (2011) framework we emphasize how emotions can simultaneously operate in different ways. While the authors categorize some emotions as affective emotions (these concern themselves with social bonds and loyalty) and others such as are considered central to advanced moral reasoning, all our emotions had moral dimensions. Taking for example anger—categorized as a reflex emotion—we find that anger operates in relation to identity when the person is unable to fulfill social roles, on behalf of other family members who cannot experience fishing and in relation to systems of oppression. Anger may well be a reflex emotion operating along different brain pathways, arising and receding quickly as the authors note, but in our data this does not necessarily preclude the ability of anger to signal simultaneously important social experiences in relation to loyalties, social ties, and moral reasoning. Similarly, hopelessness fits the categorization of a mood operating across multiple settings, but it too operates across categories of individual identity, social ties, and moral perception (see Table 5).

Emotions of Resistance

While the original research behind this project was intended to document social impacts from the Klamath river dams as part of legal and policy process to redress harms, research focusing solely on negative impacts and oppression in Native communities can itself be profoundly damaging (Tuck 2009). As much as emotional experiences of the degraded environment inscribe racism or form a mechanism of assimilation and colonialism, one would profoundly misunderstand what is happening in this setting without mentioning the wide variety of forms of resistance undertaken by Karuk tribal members on a daily basis. Resistance to colonialism and assimilation has been continuous, pervasive, and diverse in the range of forms that people employ. People resist by engaging in direct action at protest events and legal actions against Federal and State agencies, via natural resource policymaking, and testifying in public hearings, and participating in dances and ceremonies. People use personal prayer, continue to hunt

Table 5 Emotions of environmental decline confirm structures of power

	Identity	Social interactions	Social structure
Grief	Like tearing my heart out	Sadness because "quiet down at the Falls"	Sadness that Karuk people may disappear
Anger	Anger that cannot fulfill expected roles	Anger that children don't have same opportunities anymore	Anger at agencies who arrest people for fishing according to tribal custom
Shame	If you draw your identity as a river Indian but the river is contaminated that reflects on you	Shame that can't provide for elders or family, cannot perform responsibilities to other	Shame that cannot find way in "modern society" species
Hopelessness	Feeling unable to fix problem, powerlessness	There are only a handful of fishing families left. . .	Maybe this is a sign of the "the end"

and fish according to tribal law despite personal risks, learn and teach the Karuk language to their children, and develop educational curriculum. Here too the relationships among the various emotions and the environment are fundamental to any valid understanding of resistance. Anger is an emotion that is often associated with political agency, but the dynamics among fear and hope and other emotions associated with group solidarity are parts of resistance as well. One man alludes specifically to the dynamics between fear and hope as he moves from reflecting on things that are lost to referencing hope for the future as his motivation for traveling outside the area to engage in protest events, such as when the Tribe went to the shareholders' meetings of the companies that owned the dams, first in Edinburgh, Scotland and later in Omaha, Nebraska:

> But we never give up hope. That's why I went to Scotland. That's why I went to Omaha twice. Because we have hope to fix this river. Which is one step to getting the Karuk people back to where they once were.

Another man in his forties describes how work on the fisheries crew keeps him going and serves as an avenue to fulfill cultural responsibilities:

> My job, for one … bringing the salmon back and restoring the health of our river, if everybody reaches out and does their own little part … that's kind of how I'm feeling right now with my job, you know, I'm trying to restore the river, doing these fish surveys, and create a positive effect for the fish….

A mother in the community notes the importance of activism against the dams for the identity of young people:

> Now there is such a big push because we see an opportunity. I think in a lot of ways that this provided people with a role. These younger folks have a purpose, knowing that they can make a difference in the Klamath Campaign. I think that that makes a difference.

While the emotions implicit in these passages are more subtle, the natural environment clearly is a motivator for social action, and emotions in response to environmental change operate here in the form of what Jasper (2011) calls "moral batteries" whereby "fear, anxiety and other suffering in the present" is combined with "hope for future change" to motivate action.

Conclusion

We have argued that for the people we interviewed, emotions associated with environmental degradation shape social experiences, serve as a signal function inscribing colonial power relations, and function as a mechanism of assimilation and ongoing structural genocide. Our data point to the importance of acknowledging that the natural environment may be a part of the stage of social interactions and a central influence on emotional experiences, including people's internalization of identity, social roles, and

power structures such as racism and colonialism. If environmental context is part of what links self, social interactions, and social structure, theorizing the natural world is especially necessary to understand the operation of ongoing colonial violence in the form of widespread environmental degradation today. More generally, we situate these data as evidence for our larger claim that taking seriously indigenous cosmologies regarding the natural world offers a dual opportunity to extend sociological analyses of power, and to move sociology toward a more decolonized discipline.

We have further suggested that an examination of the emotions of environmental decline can enrich theorizing within Native Studies. Here we hope that the focused perspective on how emotions operate at the juncture of self and society to inscribe colonial power will be a useful addition to Native Studies scholarship that has long identified emotions of shame and stigma as mechanisms of oppression (Alfred 2009; Fanon 1963).

If taking seriously Native cosmologies with respect to the environment can expand frameworks within the sociology of emotions, can it also enrich theories of environmental justice or highlight the implications of environmental justice scholarship for sociological theory? Since it was first conceptualized in the 1970s, the environmental justice movement and its academic counterparts have successfully expanded the notion of "the environment" from an initial focus on a remote nature exemplified by so-called "wilderness areas" to "where people live, work, and play" (Novotny 2000), sites of spiritual relationships (LaDuke 2005), and human bodies (Alaimo 2010). Less has been done in expanding conceptions of what constitutes "harm" within environmental justice frames or the notion of what truly "just" or "ethical" relationships with the natural world might be possible beyond the objectified inanimate view of nature supplied by the logic of capitalism. While our work expands the notion of environmental justice "harms" from the physical bodies to include emotional harm, taking seriously Karuk and other indigenous understandings of the natural world as animate can also lead to a decolonizing of the environmental justice movement.

Early legal strategies and community conceptions of environmental justice reflected a civil rights discourse centered on racism. This discourse initially emphasized unequal burdens of environmental harm such as toxins and later expanded to include disproportionate access to environmental goods such as clean air and water (see, e.g., Schlosberg 2013). While these early self-identified environmental justice efforts included important indigenous activists, it has taken longer for the centuries-long fact of indigenous resistance to North American colonialism to be understood as environmental justice struggles, and it has taken longer still for indigenous values, worldviews, or goals to be reflected in broader conceptions of environmental justice. When nature in the form of salmon or acorn trees is more than an objectified "resource" to which one has "rights" to utilize, but is recognized as an animate and treasured relative, the goals and discourse of the movement change significantly. By contrast, the conversation regarding an animate nature has a long history in political ecology (e.g., see Escobar 1999).

Instead, much environmental justice literature and activism retains the mainstream discourse of rights to clean air or water, rather than the discourse of responsibilities that humans might have to the natural world that figure so centrally in indigenous cosmologies. At the same time many (nonetheless important) descriptive studies take environmental degradation as merely another dimension of inequality and racism, rather than pointing to what diverse human-environmental relationships might indicate

regarding the operation of power. Taking seriously Karuk and other indigenous conceptions of relationality, kinscentricty, responsibility, and the notion of nature as animate can move the environmental justice discourse from one about "equity" and "rights," to language about caretaking responsibilities that ultimately reflect more realistic and sophisticated ecological futures.

Lastly, we suggest that taking seriously indigenous cosmologies regarding the natural world benefits sociological theorists in general. While it may have been less explicitly implicated in colonial projects than anthropology (Asad 1975; Lewis 1973), sociology has co-emerged as a product of modern political thought, Western enlightenment, and capitalism. The discipline is commonly understood to have developed to analyze what were believed to be entirely new social forms that no longer relied upon the natural world. Such things as intimate ties to nature were emphatically not part of this new "modern" set of questions, methods, and theories.

Ours is not the first challenge to the nature-society dualism within sociology. Recognition of the importance of "green space" on human well-being (Strife and Downey 2009), work on how racialized environmental histories produce toxic exposure today (Park and Pellow 2004) and the very existence of the field of environmental sociology obviously represents a challenge to the nature-social dualism. The field of environmental justice makes a particularly significant intervention into the nature-society divide, although the wider disciplinary implications of these literatures have yet to be realized. Instead the term "environment" as used within sociology must be broadened to refer not only to the "social environment," but also the material, beyond-human environment that includes other species, rivers, and rocks with whom humans carry out multiple activities and interactions that give rise to personal and social identities, cultural meanings, and a range of emotional experiences.

Erich Steinman (2012) recently asserted that existing sociological theory has failed to conceptualize adequately the significant of Native people's experiences and political behavior because it remains within a "settler-colonial framework" and called for a "decolonized sociology" in order to account more appropriately for Native experiences. We second this appeal and further assert that overcoming the nature-society dualism within sociology is a necessary first step both because the natural world remains a central organizing principle for many aspects of Native life, and because theorizing the natural world is necessary to understand the ongoing operation of colonial violence in the form of environmental degradation today.

Persistence of the nature-society dualism within sociology is problematic for at least two reasons. First, just as feminists Jaggar (1989) and Tuana (1989) articulated how the presence of dualisms between mind-body, emotions-reason, and public-private work ideologically to subjugate women, the nature-society dualism serves to perpetuate racism against Indigenous people and to advance the process of colonialism. Just as the notion of manifest destiny legitimated the actions of white settlers as inevitable, just as the myth of the vanished Indian is a settler logic that makes invisible the ongoing presence of Native people in the United States, the discourse that the environment is not part of the social world legitimates an understanding of society in which the experiences and injustices described here are invisible because they are in fact beyond the scope of social theorizing. Neglecting the natural world as a component of social action within sociological tradition is a remnant of colonialism. Thus, overcoming the nature-society divide is essential for a decolonized sociology.

Perhaps most importantly however, the nature-society dualism provides sociology with an inadequate understanding of the social world. Both because Native people have been associated with nature as part of the nature-society dualism, and the people whose experiences animate this articcle clearly have particularly strong connections with the natural world, it may be easy to dismiss our claim that the natural environment matters for emotions in social action more generally. Yet many social phenomena, from the strength of social networks to the factors that influence gender constructions, may also be influenced by the natural environment, whether or not sociologists have analyzed them that way. In the same way that sociologists have recently worked to bring the body and emotions into social theorizing, we argue that many sociological analyses, on topics as diverse as the mechanisms of social movement mobilization, the collapse of labor markets, or the formation of physical health inequalities, are mis-specified if they do not include the natural environment. Indeed many of the themes in our data concerning emotions will have resonance for non-Native actors: the natural environment structures the identities and social interactions of young boy scouts; the state of Alaska uses discourses of frontier masculinity to promote natural resource policies (Anahita and Mix 2006); Albright (2007) coins the term solastalgia to describe a longing for lost landscapes and places. Each of these is an example of sociologically significant emotional relationships with the environment for non-Native peoples. Other sociological examples are scarce but nonetheless illuminating including work on how discourses of environmental contamination may affect gendered housecleaning regimes (Bryson et al. 2001). Lastly the field of environmental health points to multiple dimensions of environment for health outcomes, community dynamics, and political mobilization (Brown and Mikkelsen 1997).

Environmental justice work reveals that it is increasingly unrealistic for sociologists to theorize power adequately without including the "more than human" environment. Given the unfortunate facts of climate change and expanding environmental degradation, connections between environmental changes and social outcomes will become both more significant and more visible in the years to come. We hope the time has come for these ideas to move beyond what is known as "environmental" sociology to a disciplinary understanding of the potential environmental contributions to "generic" social action in which sociologists in areas from sociology of emotions to sociology of race account for how power operates through physical human bodies, environmental identities, emotional relationships to places, and struggles that communities wage over land management practices.

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