The Double Force of Vulnerability

Ethnography and Environmental Justice

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ABSTRACT: This article reviews ethnographic literature of environmental justice (EJ). Both a social movement and scholarship, EJ is a crucial domain for examining the intersections of environment, well-being, and social power, and yet has largely been dominated by quantitative and legal analyses. A minority literature in comparison, ethnography attends to other valences of injustice and modes of inequality. Through this review, we argue that ethnographies of EJ forward our understanding of how environmental vulnerability is lived, as communities experience and confront toxic environments. Following a genealogy of EJ, we explore three prominent ethnographic thematics of EJ: the production of vulnerability through embodied toxicity; the ways that injustice becomes embedded in landscapes; and how processes like research collaborations and legal interventions become places of thinking and doing the work of justice. Finally, we identify emergent trends and challenges, suggesting future research directions for ethnographic consideration.

KEYWORDS: decoloniality, embodiment, environmental justice, ethnography, relationality, social movements, toxicity, vulnerability

A cinematic montage opens the documentary *AWAKE: A Dream from Standing Rock* (2017, Myron Dewey, Josh Fox, and James Spione): a water protector's face adorned with a gas mask; heavy equipment trucks and burning roads; and oil wells and flooded trailers offer an electrifying composite of environmental defense. Following this series of images, Standing Rock Lakota Nation member Floris White Bull narrates the stories of the stars to children at the cusp of sleep, then asks: "Was this a vision of the future? The present? The past?" This interrogation of harm's temporality, paired with scenes from the ceremonial protection of land and water at the Standing Rock / #NoDAPL camps in 2016–2017, demonstrate what we call the "double force of vulnerability." The double force of vulnerability is not only a story about sustained suffering. In some ways a counterpoint to double exposure (O'Brien and Leichenko 2000), the *double force of vulnerability* demonstrates how impacted communities experience vulnerability in ways that make life precarious *and* produce conditions for solidarity and collective action.

While vulnerability seems to contour contemporary environments worldwide, conditions of mortal risk are familiar for humans and our nonhuman relations living within the historically particular conditions of "late industrialism" (Fortun 2012). Populations marginalized by settler colonial, economic, and racial violence have firsthand knowledge of how hazardous landscapes get (re)produced. Beginning in the 1980s, a growing number of activists and scholars artic-

ulated this particular form of harm as environmental racism, spurring environmental justice movements in Black and Indigenous communities (Bullard 1990; Holifield 2001; LaDuke 1999; Lee 2021). Fields like public health epidemiology (Wing 2005) and law (Krakoff and Rosser 2012; Tsosie 2009) have provided significant scientific and legal evidence in support of activists' emerging arguments. Simultaneously, quantitative approaches have generated statistically significant, juridically relevant, and policy-oriented findings, yet have not developed a theory of cause or grounded sociocultural meanings of environmental vulnerability. Ethnographic research helps close that gap.

In this article, we review a specific vein of research on environmental justice (EJ) to argue that ethnography attends to the double force of vulnerability to conceptualize the causes of environmental injustices. We ground our review in the belief that ethnography is a sensibility (McGranahan 2018), rather than a toolkit method. In this sense, ethnographies of EJ represent a form of critical witnessing and interpretive action (Robertson 2005; Scheper-Hughes 1995; Taussig 2011; Thomas 2019). This approach draws upon what Darren Ranco (2006) calls a "hermeneutic for theorizing from within" for Native anthropologists and allies who place collaboration and decolonial relations at the center of the work. To be sure, ethnography as a research sensibility is not above the fray of the complexities of engaged research, but rather traffics in the messiness alongside other approaches like community-based participatory research (CBPR) and participatory action research (PAR), where scholars have to address the question: how can the knowledge produced be used, and by whom? Anthropological engagements with activism (see Kirsch 2018; and Willow and Yotebieng 2020)—and a deep concern for how to mobilize research in service of communities—shape an ethnographic sensibility toward the practices, identities, institutions, and social movements that constitute EJ. Such projects remind us that vulnerability can be a source of power even as it emerges through toxic exposure.

Our curatorial method for this review hinges upon two criteria: works that identify EJ as a scholarly approach *and/or* that emerge from self-identified EJ social movements. We acknowledge the vast and diverse EJ literature, from toxicology to art history, from legal studies to sociology.¹ However, we review a narrow subset of these works to examine how *ethnographic* research and writing explicates the double force of the sociopolitical production of vulnerability. Our review highlights the notion that EJ is a particular configuration of political alliances and theoretical motivations that owes its genealogy to civil and Indigenous rights movements in the United States that critique the operationalization and spatialization of race and territory. We suggest that EJ ethnographies provide two significant contributions to the wider EJ literature. First, these works bolster the argument that the uneven distribution of environmental risks and amenities is intentional, not coincidental. EJ ethnographies analyze what sociocultural processes produce vulnerability in communities and how exposure to environmental risks compounds accumulative experiences of inequality. Second, EJ ethnographies show how vulnerability is experienced and embodied as multiple forms of injustice—and how people respond to these lived conditions in often unpredictable ways.

In this article, we index environmental justice as an organizing principle to specific concerns around toxic waste, race, and socioeconomic class as well as careful alliances between activists and academics in the US South and Southwest. We then review three themes that ethnographers trace across multiple cultural and geographic contexts: (1) *bodies*, or the complexities of embodied toxicity and experiential knowledge; (2) *landscapes*, and in particular how justice comes to be embedded in different ontologies of place; and (3) *community processes*, such as the work of organizing, researching, and writing in legal actions. Finally, we reflect on how to expand the horizons of ethnographic possibilities for the study of EJ.

Epistemologies of (In)Justice

Scholars trace the historical emergence of EJ as being “from the ground up” (Cole and Foster 2000), noting its origins in civil rights, antitoxics, antinuclear, feminist, and Red Power movements of the 1960s–1980s. EJ movements critiqued structural violence to demonstrate the disproportionate siting of toxic waste industries in non-White and economically marginalized communities (Bullard 1990, 1993; Commission for Racial Justice 1987). By the mid-1980s, EJ scholars and public intellectuals shifted the national debate to questions of embodied harm and what Robert Nixon (2011) termed “slow violence”—a new temporality of the steady erosion of life. Disruption moments by activists, like *The Letter to the Group of Ten*,² redefined environmentalism in the United States away from conservationist and preservationist traditions focused on wilderness and endangered species (Di Chiro 1998). These efforts pushed for a concept of the environment that more closely aligns with the livelihoods of historically marginalized communities: the places “where we live, where we work, and where we play” (Sandler and Pezzullo 2007: 29, quoting Lois Gibbs). Scholars took note, and a new literature began to emerge alongside a growing network of political action.

Scholars partnered with movement activists around the United States, founding collaborations that pushed academic research into community-based methodologies. These collaborations advocated “a science for the people, applied research that addresses the issues of concern to communities experiencing environmental injustice” (Wing 2005: 61). As academics were increasingly attracted (and, in some cases, required) to align with impacted communities, scholars moved struggles into peer reviewed journals, conferences, and courtrooms. Grassroots activists responded with rejoinders on the uneven power relations implicit in university-based research (see AAEJAN 1997). This dynamic reflected a renewal of calls in anthropology, queer/feminist, and Indigenous studies, and related fields, to decolonize research (Harrison 1991; Smith 1999) and shift analysis away from colonized “subalterns” and toward systems of institutional power as well as systems of alternative thought. This kind of approach—an activist-informed research agenda of engagement beyond the text (Kirsch 2018)—constitutes in large part the sensibility adopted by ethnographers since,³ reflecting Luke Cole and Sheila Foster’s (2000) metaphor of academics as one “contributory stream” to a diverse EJ movement.

As it grew, EJ research in the United States generated a surge of work in the late 1990s and onward that focused on communities of color in cities (Roberts and Toffolon-Weiss 2001), their rural counterparts (Kosek 2006; Pulido 1996b), as well as American Indian territories. The latter investigated linkages among settler colonialism, tribal sovereignty, and environmental injustice, noting the peculiar “colonial entanglement” (Dennison 2012) facing Native Nations, especially those rich in natural resources (Curley 2018; Dhillon 2018; Estes 2019; Grinde and Johansen 1995; Grossman 2017; Kuletz 1998; LaDuke 1999; Powell 2018; Yazzie 2018). As these scholars show, sovereignty over territory often complicates the “justice” in EJ, when logics of settler colonialism link political power, citizenship, and self-determination to mineral extraction (Ishiyama and TallBear 2001). Furthermore, EJ for Native Nations is not necessarily achieved by appealing to and through the settler state. As the case of #NoDAPL shows, the double force of vulnerability creates conditions for EJ that expose state violence in Indigenous territories, and also the possibilities for engagement with the state’s apparatuses (e.g., nonviolent civil disobedience, lawsuits, and federal agency interventions).

During the first wave of EJ scholarship, anthropologists were largely absent for at least three reasons: the discipline was reinventing itself following its internal inquisition around the politics of representation; anthropologists had been rightly “kicked off” American Indian reservations, following cogent critiques by Vine Deloria, Jr. (1969), among others; and anthropology was

still, by and large, following the colonial, disciplinary division of labor that set its gaze on “non-Western” societies. Yet, by the first few years of the new millennium, pathbreaking ethnographic contributions began to demonstrate how long-term participant observation, attunement to everyday life, reflexivity, and a certain mode of descriptive and theoretical writing might transform the wider field of EJ.⁴ In the decades since, calls for EJ have circulated beyond their original sites of enunciation, taking shape across diverse geopolitical and cultural contexts and in a wide range of academic scholarship (Agyeman 2014; Anand 2004; Carruthers 2008; Martinez-Alier et al. 2016; Taylor 2011). However, an articulation of what ethnography—as a sensibility, mode of relationality, and textual practice—meant for EJ scholarship has remained underexplored.

Ethnographic Contributions and the Double Force: Three Thematics

In what follows, we interpret ethnography’s contributions to EJ by analyzing what we referred to above as the double force of vulnerability. The double force of vulnerability emerges from ethnographic attention to the discursive framings and lived realities of communities that experience environmental risk and fight for just environmental futures. Three thematics shape ethnographic EJ knowledge: (1) the production of vulnerability through *embodied toxicity*; (2) the embedded nature of injustice in certain *threatened landscapes*; and (3) processes like research collaborations and legal interventions *becoming sites of doing and knowing EJ*. A curatorial note: we focus on two exemplary ethnographies as a frame for the subsequent literature for each thematic in our review. We suggest that the highlighted works reveal how ethnography contributes to the wider field of EJ while also demonstrating the unique dynamics of the double force of vulnerability. In many ways, multidisciplinary engagement and coalition-building around exposure to toxic waste and pollution shape the core of EJ. As such, EJ ethnographies help advance the processes of meaning-making that communities employ as they confront the histories—and contemporary realities—of toxic exposure and pollution.

Our selections are a strategic hermeneutic for showing how EJ storytelling enhances the broader literature and activism. We recognize the limitations and the strengths of this approach. By foregrounding two major ethnographies for each section, we are able to trace ethnography’s contributions in a way that a standard review structure might not permit while also fleshing out the larger trends in the literature. Our ethnographic curation spans almost 20 years, demonstrating the dynamism from early concerns of toxicity and health to contemporary developments in critical EJ studies and ideas of self-determination and decoloniality. Moreover, our thematic areas overlap and inform one another: for instance, the ways that bodies absorb, experience, and endure toxicity and pollution is intimately related to how landscapes become sites of injustice. We offer these distinctions as a rough schema to enable us to theorize how an ethnographic sensibility contributes to the wider scholarship and activist practices of EJ movements.

We work with the concept of vulnerability with care and critique, following recent moves in environmental anthropology. Elizabeth Marino and A. J. Faas (2020) expose the epistemic violence of characterizing any particular population as intrinsically “vulnerable” to pushback against anthropology’s penchant to study (and often, objectify) at-risk groups. Building on Marino and Faas’s argument, we advance our concept of the “double force” to highlight the creative, community-driven *responses* to harm that decenter the category of “vulnerable population” as the object of inquiry. We position the double force of vulnerability as a sociocultural critique of “the forces that structure risk” (Marino and Faas 2020), rather than the people or populations at risk. Relatedly, Sarah Vaughn’s (2016) lexicological essay, “Vulnerability,” sets the broad stakes of these endeavors, offering the analytic for environmental anthropologists to

approach risk, harm, and justice in a manner that integrates human and more-than-human life of particular ecosystems. As Vaughn argues, vulnerability “cuts life short,” but also galvanizes new forms of social alliance, meaning, and “support infrastructures.” In short, we analyze the double force of vulnerability at two registers: one comes from the legacies of structural violence that shape BIPOC and other communities’ experience of their environments and the impositions of vulnerability framings onto these communities by the state, while the other is a process of self-determination and an acute sense of community that emerge from shared experiences of the resistance to and confrontation of the structural violence of both living with environmental risk and living with the category of “the vulnerability slot.”

Legacies of Embodied Toxicity

If vulnerability is embodied, it becomes legible scientifically. Harm can be lab-tested and quantified. Vulnerability can also show up in the meanings that communities attach to injury’s presence—or the threat of its presence. Ethnographic attention to toxicity-as-vulnerability reveals the political, cultural, and ecological force of toxicity that seeps into individuals but produces collective responses (Johnston 2007; Masco 2006; Onís and Pezzullo 2018). Toxicity operates in uneven timescales. In some cases, it is slow-moving (Nixon 2011), uncertain, and difficult to measure, as in Melissa Checker’s (2005) study of the “toxic donut” surrounding a Black neighborhood in Augusta, Georgia. Yet in other temporalities of disaster, toxicity can be spectacular, striking suddenly before morphing into an indeterminate period of exposure and risk. Kim Fortun’s (2001) ethnography of the Union Carbide explosion in Bhopal, India, was pathbreaking for the careful study of acute disaster. Checker and Fortun’s ethnographies help frame the range of ethnographic approaches to embodied toxicity.

Checker’s *Polluted Promises* (2005) was one of several critical ethnographic monographs to address the embodiment of toxicity as the impetus for collective action in Hyde Park, Georgia. Checker shows how certain bodies and landscapes become vulnerable through infrastructures of law, housing, and the market. In response, community members organized modes of collective action to address structures that generate embodied toxicity. Inasmuch as she is writing from a position that she terms “activist ethnography,” Checker’s ethical alliances and work as a volunteer within the community deliberately shape her research approach. The Hyde Park community was founded by former sharecroppers who bought swampland and eventually built a neighborhood, despite significant race and class barriers. However, histories of marginalization helped pave the way for polluting industries, leading Hyde Park residents to notice disquieting patterns in health outcomes. As leaders in the community articulated this observed harm in the language of environmental racism, they challenged scripts of what “the environment” entails. Galvanized by religious (Christian) commitments, alarming health problems, and rising local activism, residents brought lawsuits against polluting companies as well as a civil rights complaint against the Environmental Protection Agency.

Checker argues for the advantage of the deep dive into one very specific locale, showing how toxicity’s embodiments work at the level of political action and they inspire action in others. Through ethnography, EJ becomes an analytic of relations and care. Checker’s ethnographic approach to toxic exposure shows the ambiguities of the state as a mediator between bodies and capital, and the contingencies of state divestment from a locale at the margins of political power. Her methodological focus on the granular allows her to push social movement studies toward attending to relationships “that underpin and nurture collective action before, during, and in between events” (2005: 147) more than the well-trodden attention to marches and public actions.

In this manner, Checker's analysis of resistance to environmental injustice tacks between theories of social movements and theories of identity. Racialized identities forge a sense of shared experience and collective action among Black activists in Hyde Park. Much like the double force of vulnerability, race is both fluid *and* used strategically by activists as a central organizing force that ignites a sense of community. The Hyde Park community's experience with environmental injustice represents the critical, complex intersection of class and race that shapes what it means to be Black in a particular neighborhood in Georgia at a particular historical moment.

And yet, Checker does not write toward (re)distributive justice as the solution. She rejects a facile NIMBYism, where the "answer" would be to simply move the harmful industries elsewhere. Instead, Checker focuses on relations and the possibility that the economy and the environment might be (and in fact, *already are*) otherwise. One of her closest collaborators, a Mr. Arthur Smith, asked Checker to end the book "on a positive note" (2005: 181). Checker struggled with this mandate, as the victory of a recent Brownfields grant to Hyde Park residents seemed to do little to undo the systemic racism of the struggle. Mr. Smith, however, was challenging Checker (and the reader) to rethink the temporality of victory and note the potency of Black activism in the post-civil rights era, especially as it generated a newfound politics of the environment grounded in solidarity. Such temporal disruptions remind us of White Bull's inquiry into the past, present, and future of the "vision" at Standing Rock, with which we opened this article, as well as other temporal horizons for measuring both injury and recovery.

Fortun's *Advocacy after Bhopal* (2001) offers a different take on how ethnography can grapple with legacies of embodied toxicity. Fortun demonstrates how ethnographic attunement to disaster demands not only embeddedness in the afterlife of the crisis, but taking deep histories, complicated presents, and various possible futures into account—as people work through vulnerability in everyday life. The ethnography tracks the sudden death and the subsequent elongated afterlife of the explosion of a pesticide plant in Bhopal, India, vis-à-vis its interpretation by local elites, victims, and EJ activists from the United States. Yet, Fortun's transnational ethnography is deeply rooted in a specific event and place. Questioning the global distribution of technological risk, Fortun extends the core questions of the United Church of Christ's "Toxic Wastes and Race" report to consider the embodied impacts of industrial disasters as an expression of globalization. In Bhopal, this became what Fortun terms "the second disaster": the slow accretion of harm over time, requiring new bureaucratic technologies of paperwork to authenticate suffering and adjudicate compensation. Fortun's ethnography of advocacy peels back the veneer of assumptions in liberal politics that litigation and other forms of activism always offer a progressive pathway to the remediation of harm.

Fortun argues that ethnography operates as a "translation" (2001: 2), making human suffering legible in the (English) languages of law, science, and bureaucracy. For Fortun, the concurrent timing of the Bhopal disaster with EJ struggles in the United States articulated the growing movement with a broader critique of Green Revolution biotechnologies, the complicity of states in corporate maneuvers, and a sense of the globally uneven distribution of risk. As such, Fortun's ethnography of advocacy is also an ethnography of global EJ and the movements it promulgates. Bhopal resonated as a symbol for the failure of high-tech development as well as the failure of legal settlements to remedy ongoing suffering. An ethnographic sensibility permitted Fortun to analyze how the environment and environmentalism was not a given, but had to be forged through local idioms, identities, and struggles. Deeply grounded in India, but also informed by distant, discursively connected sites of practice, Fortun's ethnography shows how globalization gains traction in particular places with vastly different distributions of risk and reward. Like Checker, Fortun worked as a volunteer advocate for the impacted community. Intentional alignment with communities through volunteer work offers insight on EJ methodologies: col-

laboration around a matter of concern establishes the relationships that enable long-term ethnographic fieldwork and emergent critical knowledge. Fortun's and Checker's ethnographies remain touchstones for ethnographic approaches to environmental justice.

More broadly, EJ studies of embodied toxicity are most prevalent in activist-oriented toxicology and epidemiology, and other fields.⁵ In cultural and media studies, Max Liboiron's (2017) excellent bibliography of toxicity demonstrates how the emerging area of discard studies reaches across disciplines, organizing critical theoretical approaches to contamination and human life. EJ projects in cultural studies similarly employ an ethnographic sensibility, such as Phaedra Pezzullo's (2009) studies of toxic tourism and Rebecca Scott's (2010) analysis of gender, identity, and labor in the Appalachian coalfields. These works and others advance a core theme in EJ ethnographies: the links between colonialism and pollution (see Liboiron 2021). For EJ scholars, the idea of "nuclear colonialism" has been particularly salient in EJ ethnographies of embodied uranium contamination, especially Valerie Kuletz's (1998) *Tainted Desert*, an STS-oriented study of competing epistemologies and ontologies conjoining science, industry, and Indigenous communities in the US Southwest, along with Barbara Rose Johnston's (2007, 2011) ethnographic work on radioactivity in the Navajo Nation and the Marshall Islands.

Relatedly, ethnographers explore questions of toxic exposure and reproductive justice. Sarah Wiebe's (2016) ethnographic account of toxic exposure of Aamjiwnaang people in Canada's Chemical Valley extends questions of reproductive justice to understand the body itself as a conduit of social justice. Teresa Montoya's (2017, 2019) work on toxicity in the Navajo Nation provides further insights on "permeability" and jurisdiction. Montoya's research—from mining contamination and water resources to systemic racism in regulatory norms—reveals an acute and growing fusion of critical Indigenous studies with EJ scholarship and the anthropology of toxicity. Adriana Petryna's (2003) ethnography of the Chernobyl disaster offers another deeply place-based study of the meanings that accrue around nuclear contamination, and of the political experience of occupation, dispossession of territory, and nationalism. Beyond the nuclear, ethnographies of contamination are emergent in medical anthropology, such as Anna Lora-Wainwright's (2013) study of environmental health and cancer in rural China and Alex Nading's (2016) ethnographic work on chemical pollution and global health. Notably, however, scholars who pair an EJ framework with a critical analysis of embodied toxicity remain the less common.

Injustice in the Landscape

In many senses, ethnographies of EJ demonstrate how landscapes become constituted by more than just the land itself: they are the technologies being resisted; the institutions, people, and systems of belief that animate them; and the particular ecological dynamics of the present and how those are shaped by history. Perhaps most importantly, ethnographic analyses of unjust landscapes also hinge on a set of ontological politics and social resilience (e.g., Cadena 2015; Whyte 2018a, 2018b) that honor Indigenous ways of knowing and being in relation to the land that reconfigures otherwise settler-normative conceptions of the environment (see Hoover 2017; Powell 2018; and Willow 2012). Ethnography moves past the "eventfulness" of toxicity to analyze injustice as a process and to show that landscapes of (in)justice are ones that emerge over a longer *durée* that become known and experienced in crystallized moments of toxicity. The two ethnographies presented below each represent a different side of the double force of vulnerability: *Flammable* (Auyero and Swistun 2009) explores moments of crisis and dread that

come from “not knowing” the extent of environmental and health risks imposed by hazardous industry, while *Landscapes of Power* (Powell 2018) accentuates how communities strategically advance their understanding of sacred and “vulnerable landscapes” to design different socio-ecological futures.

Flammable: Environmental Suffering in an Argentine Shantytown (2009), by Javier Auyero and Débora Alejandra Swistun, is a collaborative account that links the profound, embodied impacts of industrial development to the pollution of the shantytown Villa Inflamable on the fringes of Buenos Aires, Argentina. *Flammable* uses environmental suffering as an empirical analogue to understand EJ. The authors introduce the reader to the Martinez family and their experience with a certain double exposure: the family suffers high degrees of lead poisoning from living near and working for the petrol plant and spend a large portion of their income to survive related health issues. The story of *Flammable* is almost a textbook example of uneven development and environmental injustice located in the shadow of a large petrochemical compound and surrounded by a polluted river full of toxic waste, a hazardous waste incinerator, and an unmonitored landfill. At the center of the ethnography, the authors pose the questions “how do people who are routinely exposed to toxic hazards, whose lives are in constant danger, think and feel about their surroundings? What set of practices accompany these feelings and cognitions?” (2009: 8) to capture an uncanny subjectivity of waiting and uncertainty that the residents of this shantytown experience. Through an ethnographic focus on experience, the authors center the field of everyday life to highlight how moments of confusion, uncertainty, and inaction manifest as toxicity. In so doing, their analysis positions the everyday as a landscape in itself: not one of a crystallized articulation of resistance politics, but something that is fragmented and partial. This is a landscape that has been transformed from a place of dwelling to a site of industry. In-between the lines, we might almost read the refrains from EJ activists: this environment is no longer a place where people live, work, *and* play.

Whereas *Flammable* presents a story of a ruinous landscape that generates uncertainty and inaction, Dana Powell’s *Landscapes of Power: Politics of Energy in the Navajo Nation* (2018) offers an ethnographic examination of grassroots EJ activism. A central focus of Powell’s research is the Desert Rock Energy Project and how debates over the proposed yet failed coal-fired power plant illuminated Diné (Navajo) relationships to land, sovereignty, and environmental politics. Desert Rock’s namesake comes from settler prospecting imaginaries, yet the same place is known as “Place of Large Spreading Cottonwood Trees” within Diné cosmology, revealing a certain ontological politics of territory. Where settlers see desert and resource-rich terrain, Diné communities see not only physical geographies, but distinct possibilities for other assemblages of life. To analyze these divergent landscapes, Powell asks: “What do energy justice and climate justice look like for historically marginalized communities, situated in ecologies rich in energy minerals?” (2018: 8). Powell explores new orientations of Diné landscapes rich in energy minerals and potential for energy export yet shot-through with hardships for Diné communities seeking to power their own homes. *Landscapes of Power* makes the important claim that there cannot be an analysis of environmental justice without an analysis of (settler) colonialism and tribal sovereignty. This is a central contribution to the EJ literature more broadly, as it extends analyses of race to the inter-mixings of capitalism, colonialism, and contemporary political struggles over climate politics. Through rich ethnographic data paired with historical and archival analysis, Powell demonstrates how “landscapes of power as a concept offers a framework for thinking about places and populations as sites of action, creativity, and possibility—not only as landscapes of waste, toxicity, and ruin” (2018: 17). For Diné communities, questions of sovereignty and environmental justice are not so easily reconciled. Yet questions of self-determination always remain at the center.

Both Auyero and Swistun's and Powell's contributions accentuate strengths that occur in other works in the ethnographic EJ literature on injustice and place. For example, Anna Willow's (2012) ethnography of timber industry activism at Grassy Narrows First Nation shows how tribal sovereignty is made vulnerable by environmental risk and difficult internal dynamics of anti-clearcutting activism. As Willow and others show, the field of the everyday is an ethnographic strength that helps ethnographers expand conceptions of landscapes to understand struggles for EJ. In another account, Lisa Park and David Pellow (2011) examine how immigration reform in the name of environmental protection becomes bound up in racial logics that ultimately lead to environmental degradation in the American West. This focus on regulation brings into sharp relief another ethnographic landscape, where ethnographers expand more traditional EJ focuses on policy and process to consider questions of the "everyday state" (Sze and London 2008), like the regulatory landscape of water contamination (Ranganathan and Balazs 2015) or questions of food sovereignty, water justice, and collective action (Partridge 2016).

Ethnographers are critical in contributing situated yet expansive analyses of power as it shapes EJ. For example, ethnographies shift analysis from thinking about formal government to techniques of governance to analyze EJ within larger shifting political economies, like emerging "green" urban development paradigms (Carter 2014). Much like Jean Dennison's (2012), Powell's (2018), or Wiebe's (2016) ethnographic critiques of the entanglement of struggles within prevailing logics of coloniality, ethnographers track Indigenous fights for sovereignty and self-determination against invasive infrastructures (Spice 2018) and the ways that these processes become legible within an EJ discourse (Frost 2019). Ethnographers also analyze the sedimentation of injustice in the landscape as wrought by varying and intersecting modes of power (Becerra-Almendarez et al. 2016). Such intersections of power are shown elsewhere in ethnographies of the legacies of apartheid and their influences on community-based natural resource management (Schnegg and Kiaka 2018); the neoliberal restructuring in water policy and practice in Ontario that impacts Chippewa First Nations (Mascarenhas 2007); the history of racial capitalism and the enduring influences of the transatlantic slave trade in Puerto Rico (Lloréns and Stanchich 2019); and, in New York City, the cooptation of EJ activism by gentrification vis-à-vis sustainability discourse (Checker 2011), or the intersection of Black Lives Matter with community-based energy justice (Lennon 2017).

At the same time, scholarly attention to unjust landscapes is receiving renewed attention in ways that do not map so neatly onto the literature of EJ ethnography. Still, we find these contributions important to academic and indeed ethnographic understandings of EJ. For example, Clint Carroll's (2015) book *Roots of our Renewal* documents the practices of Cherokee Nation Medicine Keepers to understand how they make sense of their new home due to settler dispossession through the reservation system. This research has resulted in a community study that demonstrates high levels of arsenic exposure in American Indian elders (Carroll et al. 2017). Similarly, the Black Ecologies project (Roane and Hosbey 2019) documents historical and contemporary narratives of Southern Black communities to reveal particular spatializations and networks of insurgent knowledge against dominant forms of power that seek to erase Black ways of knowing and being in the world (Bonacich and Alimahomed-Wilson 2011). This kind of insurgence against erasure is reflected in Julie Maldonado's (2019) ethnographic work, where she shows the layered risks threatening Indigenous communities of coastal Louisiana and the Biloxi Chitamacha Choctaw's collective desire to relocate to the mainland. Lastly, a recent work by Michael Méndez (2020) analyzes moments of insurgence, conflicts, and collaboration within the landscape of city streets. Méndez's ethnography presents reconfigured spaces of local knowledge, cultural politics, and grassroots mobilizations that resulted in EJ demands being incorporated into policy.

Patterns, Processes, and the Politics of Engaged Research

Ethnographies of EJ have contributed to building a more critical environmental justice studies (Pellow 2016, 2018), specifically by engaging with ways that *processes* like research collaborations, activist strategy-building, and state-based interventions become places of “thinking and doing” justice. For instance, researchers have explored how concepts of justice are employed and to what ends (Mascarenhas 2016; Pulido 1996b) and how identity-formation processes among organizers reveal how different “figured worlds” of environmentalists’ experiences come into conflict (Allen et al. 2007). In engaging with processes, EJ ethnographies illustrate both the complexity of vulnerability as a lived experience within toxic landscapes and the heterogeneous ways that communities respond to crises. Ethnographies of EJ frequently grapple with the politics of engagement in research contexts, especially in marginalized communities. In short, the attention to process by EJ ethnographies provides finer analyses of power relations, including dimensions that can be missed by other approaches.

As an example of a work focused on processes, Karen Brodtkin’s *Power Politics* (2009) details the complex, sometimes unexpected struggles between community members involved in an EJ “win.” Her ethnography is also one that challenges readers to consider possible preconceptions regarding what makes an environmental (justice) activist. To find these knotty realities, Brodtkin’s ethnography interrogates aspects of campaigns from different community groups, including the various strategies, visions, goals, and discourses they employ as they address the possibility of a new power plant in South Los Angeles. Brodtkin’s work also reflects on methods while connecting to recent EJ contributions on the limits of certain framings, terminology, and approaches (see Alkon 2011; Harvey 2015; and Pulido 1996a). For Brodtkin, the merit of an ethnographic approach is that it allows an understanding of how “different strands of working-class environmentalism and the complex ways that race, racism, and xenophobia exert an unpredicted but significant impact” (2011: 10–11) on groups that would seem to be natural allies. Thus, the methodological reflection in *Power Politics* serves as a reminder of how ethnography can help researchers find explanatory and interpretive frameworks for understanding ideologically informed frictions. Additionally, Brodtkin’s ethnography shows the limit of focusing on distributive justice alone, as other ethnographies have (see Checker 2005). Framing justice this way for policy and action, Brodtkin and others argue, can ignore a suite of complexities and implications for different and overlapping harms.

Another work that underscores processes, Elizabeth Hoover’s *The River Is in Us* (2017), focuses more explicitly on concerns of procedural justice—in particular within Akwesasne Mohawk communities of upstate New York. Hoover draws on previous scholarship, like that from EJ scholar David Schlosberg (2007, 2013), to argue for a critical examination of environmental decision-making and knowledge production in health research. Hoover is among the scholars using ethnography in the field of critical Native American and Indigenous studies who have documented the legacies of research extractivism, from anthropology to public health. Hoover brings to the fore a potent reminder for EJ researchers: communities with exposure to toxins have often also been affected by institutional neglect, academic extractivism, and/or research abuse. Consequently, communities have been pushing back against patterns of research that undermine sovereignty, autonomy, and justice. The Indigenous voices in Hoover’s book explain that being researched “on” can be exhausting, time-intensive, and even retraumatizing for communities. Hoover’s cautionary reminders are among those in EJ scholarship that raise important considerations for a critically reflexive, anticolonial ethnography.

EJ scholarship has a history of being sympathetic to movement aims, and many EJ researchers consider themselves activist-researchers and/or do community-based, participatory action

research (CBPR/PAR). Therefore, the rising pushback against some forms of case studies should interest and concern those in EJ studies, particularly ethnographers. Given previous negative experiences with extractivist methods, communities facing vulnerabilities increasingly want methodological orientations like CBPR. As more communities have asked for improved ethics from researchers, those conducting EJ research need to weigh these critiques about the process of knowledge production. Fortunately, more in-depth qualitative works from the field of EJ studies provide directions forward, especially ethnographies that consider the politics of research processes. CBPR and related methods, Hoover maintains, can help community groups be more in control of research designs and outcomes and prevent future research abuses. Hoover's work on CBPR resonates with projects like Alison Alkon's (2011). These projects aim to pair community-based approaches with reflexive ones to push researchers further than simply including community members in the processes of research and within the production of knowledge. This latter effort, Hoover argues, is done through the researcher's self-reflection on their possible complicity in oppression. In working against reproducing violence, researchers like Hoover, Alkon, and others (Perry 2013; Sandler and Pezzullo 2007; Vasudevan 2012) strive to use storytelling and reflexive, engaged research endeavors to deepen the co-production and decolonization of knowledge.

EJ ethnographers focused on processes generate fresh inquiries into what justice itself looks like for particular communities. Ethnographic EJ studies have long worked to explore the ways in which community groups are excluded from environmental decision-making, data collection, planning, and enforcement (Allen et al. 2007; Harvey 2015; Little 2009), and works in critical EJ studies have taken these documentations further to explore ways that research methods can help make voices from the toxic landscapes defy erasure (Bell 2015; Saxton 2015). These authors are frequently focused on the possibilities for, and constraints on, democratic and participatory decision-making (Urkidi and Walker 2011). Put otherwise, EJ ethnographies frequently work to connect, across difference, the experience of environmental violence to the processes of democratic exclusion and the work of solidarity (Powell and Draper 2020). As anthropologist Devon Peña (2011) points out, being excluded from environmental planning and decision-making is both traumatic and deadly. Peña writes: "Systemic denial and insufficiency of sustenance" is representative of the structural violence that those who have faced environmental justice suffer, and these forms of violence continue to impact mortality rates" (2011: 207). Ideas of grief, loss, trauma, resilience, resourcefulness, and well-being are more abundant in today's critical EJ literature. For instance, scholars analyze how contemporary EJ organizing reclaims belonging, grapples with loss, and centers well-being and mental health in the environmental equity agenda (Anguelovski 2013; Ranco et al. 2011). Moving from reflexivity to responsiveness is an important invitation to examine methodological approaches that build upon critical insights of the wider body of EJ ethnography.

Provocations and Emergent Horizons

Where, then, does ethnographic attention to vulnerability lead EJ movements and scholarship? And where can EJ movements cultivating resilience, care, and resistance lead EJ scholarship? Can ethnographic approaches to EJ generate new ways of articulating politics alongside, and led by, impacted communities? What can these approaches do, for example, that epidemiology cannot? And still, what blind spots mire ethnography in its own fantasies of representation, colonial hauntings, and literary aspirations that may occlude an emancipatory politics? These questions, and others, are shaping a critical (e.g., Pellow 2018), decolonial EJ that engages the double force

of vulnerability in relation to the consolidation of state power and other institutional forms of violence (Hosbey 2018; Kojola and Pellow 2020; Lennon 2017; Pulido and De Lara 2018; Whyte 2017a, 2017b, 2018a). These works productively provoke EJ toward new horizons of responsibility, theory, and collaboration. With the critical reflexivity that ethnography demands, we must wonder about the ways that ethnography might inadvertently enact modes of epistemic violence (Vermeulen 2019) and trauma on communities long living with the harsh realities of environmental injustice.

Yet, EJ ethnographers also share a deep concern for how the insights that arise from their research show up in the worlds of their interlocutors and research communities—in both generative and damaging ways—for communities and, potentially, for researchers as well. With invitations into moments of conflict and the intimate worlds of their research communities, ethnographers have a double responsibility about which stories they tell and how they tell them so as to avoid replicating “hunting stories” (Ranco 2006). For example, some ethnographers meet opportunities to employ their research insights as an expert witness or engage in legal proceedings. As Stuart Kirsch (2018) notes, scholarly engagement with communities along stark political lines (i.e., “taking sides”) in some instances enhances expert testimony and authority rather than compromise the scholar’s position. EJ ethnographers also contribute knowledge that is not always legible within legal processes. The anecdotal, the constrained “sample size,” and the nature of qualitative “data” sometimes weaken the ethnographer’s knowledge in certain public domains (e.g., courts of law, National Environmental Policy Act public testimonies). This kind of theoretical-political provocation from EJ ethnography enlivens the broader landscape of injustices that EJ practitioners navigate, and reveal potentially different tactics and resonances for social movement organizers and scholars alike.

One of the most poignant provocations to EJ emerges from explicit articulations of an Indigenous EJ. As Kyle Whyte makes clear, anthropogenic climate change and its related injustices are entangled with the long-standing violence of settler colonialism. This is a temporal reframing and political theory that places the apocalypse (settler conquest of the Americas) in the past, opening up other possibilities for Native futures. In Whyte’s (2018a and 2018b) provocative formulation, settler colonialism enacts environmental injustice, creating “vicious sedimentation” and “insidious loops” profoundly disrupting Indigenous relationships with the environment. Through collaborative work with a wide range of Native and First Nations communities, Whyte (2017b) shows how “collective continuance” is being built in order to repair these ruptures and what is required to restore relations and create resilience and self-determination. This is a paradigm shift from the distributive/procedural justice debates that have dominated EJ thinking for several decades. Dina Gilio-Whitaker (2019) extends this framework to the political specificity of EJ in Native Nations. Whyte and Gilio-Whitaker recenter settler colonialism as the core problematic in environmental harm to argue for an EJ that is historically particular to the experience of genocide, relocation, and the settler state.

In a related yet slightly different tact, a flourish of multispecies ethnography has proliferated in critical social science research in the last decade or so (Kirksey and Helmreich 2010; Ogden et al. 2013). We see potential for a multispecies justice (see Celermajer et al. 2021; and Fernando 2020) as an expansion of EJ to decenter the human and to honor different cosmological and ontological possibilities that extend discussions in ontological politics. There is rich potential here in thinking with a healthy dose of phenomenology about the contingency of human and more-than-human worlds, and how this is a certain kind of vulnerability. This direction might deepen and expand the frames and worldviews that define what counts as “justice.” As an example, work in critical EJ studies (see Pellow 2018) insists on the “indispensability” of humans and more-than-human relations. Such studies maintain that injustice operates across multiple

intersecting categories of social difference, one of which is “species.” We also note that this kind of multispecies work can take flights of fancy that might elide the political histories of EJ we discuss above, including its more recent decolonial challenges, or might come into tension with certain strands of EJ movement politics.

As should be evident, race and racialization have played a central role in EJ scholarship since its inception and continue to gain new traction (Jarrat-Snyder and Nielsen 2020; Wald et al. 2019). To a lesser but still important degree, so do analyses of labor and socioeconomic class (Girdner and Smith 2002). One place of ethnographic possibility would be picking up earlier work that locates the environment at the intersections of rural communities, class, and Whiteness (Ogden 2011; Satterfield 2002). Developing this ethnographic potential feels especially urgent given the calls for “just transitions” emerging from EJ movements and contemporary ethnographic works on fracking in predominantly White communities (Gullion 2015; Pearson 2017; Simonelli 2014) alongside the rise of White supremacy movements worldwide. We make this argument to encourage ethnographers to engage with communities that experience environmental injustice that often become elided by discourses for just transitions (see Hochschild 2016). An ethnographic sensibility that analyzes Whiteness and its constructions outside of White supremacy (see Pulido 2015) amid energy transitions and ecological improvement initiatives would be theoretically compelling and politically salient.

This is, of course, is not the first political crossroads that EJ has faced (Pulido 2015; Sze and London 2008). We similarly reflect on Sze (2020) and Whyte (2018a) to note that EJ is experiencing both a renaissance as well as something of a radical reinvention through ideas of relationality and decoloniality. Moreover, as noted above, EJ has reached global audiences, yet ethnographic engagement with global or international EJ movements is scant. Following Anna Tsing (2005), we ask: what are the kinds of global connections that EJ engenders? Other recent provocations include the possibilities of interdisciplinary co-learning to broaden ideas around health and well-being (Edwards et al. 2016) in similar ways that early EJ scholarship did for the idea of the “environment.” The resurgence of the BLM (Black Lives Matter) movement in summer 2020 invites critical ethnographic exploration on the relationship between environmental violence and police violence that links EJ to criminal justice and abolition politics (Bradshaw 2018; Pellow 2018; Perdue 2018). In a related orbit, new work in environmental humanities, queer theory, and disability studies angles EJ toward fresh considerations of how toxicity generates and remakes the disabled body (Jaffee and John 2018; Johnson 2017; Ray and Sibara 2017). For example, critical disability studies expand conceptions of health and wellness to show how chronic maladies like black lung are both a disability and an EJ concern (Long 2019).

Conclusion

Emerging movement-based projects confirm that EJ remains salient, even as it adapts to address the overlapping crises of colonialism, climate change, a global pandemic, and anti-Black violence. Indeed, this quartet of harm exposes the entrenchment of layered sociopolitically produced vulnerabilities in communities around the world. Moreover, the increasing institutionalization of EJ gives us and many activists both critical pause and potential for hope. For example, Bill Clinton’s Executive Order 12898 codifies EJ within federal agencies and national advisory councils, placing it perhaps precariously at the interface of state power and grassroots critique. This may be a good tension, generating a space for refreshed, critical examination of how structural inequities can be addressed within sites of power. However, a more sustained examination of the sites and actors of institutional EJ, nationally and transnationally, is ripe for

ethnographic consideration. As ethnographers, we know that the stories we tell—and how they are told—are important in shaping environmental futures (see Estes 2019). Over the course of writing this article, the world has succumbed to a pandemic and the United States has witnessed a resurgence of the BLM movement that has spurred renewed conversations on antiracism. EJ movements have always witnessed dynamic times, full of the possibilities for victory and the real potentials of loss. Yet in July 2020, the Dakota Access Pipeline faced a court order to empty and shut down, and the Atlantic Coast Pipeline was canceled by Dominion and Duke Energy. These successes—partial or temporary as they might yet prove to be—follow on years of sustained EJ activism and related scholarship and continue to provoke fresh collaborations. Alongside these emerging collaborations, ethnography as witness to the double force of vulnerability will continue to note its many forces continuously at play.

■ ACKNOWLEDGMENTS

We acknowledge all the movement leaders, organizers, collaborators, and communities whose life dedications to environmental justice shape and inspire our own scholarship. We would like to give a heartfelt thank you to the special editors of this issue—as well as our two generous reviewers—whose engagement helped to clarify and improve our thinking. Grant would like to thank members of the Ethnography Lab at Dartmouth College for the generative and supportive intellectual environment they have provided him. Dana's contributions to this article were conducted under a permit for ethnographic research from the Navajo Nation Historic Preservation Department.

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NOTES

1. Similarly, there are other adjacent fields, like political ecology (Peet and Watts 1996; Peluso and Watts 2001), that share interests in the structural and historically constituted ways that inequality and oppression manifest in peoples' access to and experience of their many environments. Additionally, much of the ethnographic work in environmental anthropology is EJ-adjacent. We could summon many ethnographies with themes that appear like EJ—for example, *Territories of Difference* (Escobar 2008), *Conservation Is Our Government Now* (West 2006), or *A Town Called Asbestos* (Van Horssen 2016), come to mind.
2. Southwest Organizing Project. 1990. Letter to the Group of Ten. <https://www.ejnet.org/ej/swop.pdf>.
3. There has been an increasing trend in environmental anthropology over the last 20 years or so—which articulates with the history of EJ scholarship—toward more activist and engaged research approaches and applications. More recently, these approaches and voices have started to gain a central role in shaping the contemporary research programs of the discipline (see Kirsch 2018).
4. We also recognize the proliferation of ethnographies in global contexts that engage themes important to EJ, such as challenges to anti-Blackness and settler colonialism (Thomas 2019), the politics of expert knowledge and urban ecological change (Rademacher 2011), extractive enterprises and toxicity (Li 2015), and the ontological politics of nature and justice (Cadena 2015), which suggest a politics of nature that shows the state to be an arbiter of environmental harm.
5. Nading (2020) offers the most comprehensive review, to date, of the anthropology of toxicity.

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