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New directions in environmental justice studies: examining the state and violence

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ABSTRACT

The field of environmental justice studies has blossomed into a multidisciplinary body of scholarship in the last few decades with contributions across the social sciences, humanities, law, and the sciences. Our framing of environmental justice scholarship centers on the necessity of examining the role of state and institutional violence in producing environmental injustice through interlocking systems of racial capitalism, settler colonialism, and enslavement. We link themes of violence and the role of the state in the expansion of environmental justice studies to the major topics of land and resource conflicts, prisons and incarceration, and emotions. We draw on this scholarship to explore how theories and politics of environmental justice are inflected by the constraints and leverage points within racial capitalism, settler colonialism, and the afterlives of enslavement. This paper offers an assessment of theoretical advances, and charts a course for next possible stages of the literature's development and EJ activism.

KEYWORDS Environmental justice; settler colonialism; racial capitalism; enslavement; emotions; violence; the state

Introduction

In early 2016, the construction of the Dakota Access Pipeline (DAPL) began, which will run more than 1,100 miles, carrying crude oil from the Bakken oil field in North Dakota to a refinery in Illinois. The project was initially slated to pass near the majority white town of Bismarck, North Dakota, but was rerouted into Indian country and now threatens sacred Indigenous sites and water quality in the Missouri and Cannonball rivers, both drinking water sources for the Standing Rock Sioux reservation. This project sparked a struggle against environmental racism as thousands of people mobilized with the Standing Rock Sioux Tribe in a herculean effort to halt the pipeline. The #NoDAPL mobilization led by activists calling themselves 'water protectors' adopted the slogan 'Mni Wiconi' or 'Water is Life' to draw linkages among Indigenous sovereignty, environmental justice, and climate change

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(Estes 2019). The violence of the pipeline and fossil fuel extraction was then amplified by the direct assaults on the bodies of the water protectors by police and private security forces. Yet the movement challenged the violence and death associated with settler colonialism and environmental racism while working to create alternative socio-ecological relations that protect human and nonhuman life.

In 2014 and 2020, white police officers murdered Eric Garner and George Floyd, both of whom were African American men and among the numerous and ever-growing list of Black people harmed by police violence in the U.S. During their final moments under the crushing force of a police baton and a police knee, both Garner and Floyd cried out with the words, 'I can't breathe.' Those words became a powerful slogan in the Black Lives Matter movement that responded to both their murders by pulling millions of people into the streets across the U.S. and the world, protesting anti-Black police violence, overpolicing, and white supremacy. The phrase 'I can't breathe' symbolizes the literal and figurative chokehold that White America has on Black communities, through police brutality in particular, and through environmental racism more generally (Pellow 2017, Sze 2020). Both Garner and Floyd were also from majority African American communities that suffer from elevated rates of asthma and other health problems associated with disproportionately high levels of pollution (Mohai *et al.* 2009).

The #NoDAPL movement and the movement for Black Lives both reflect the myriad ways in which state and corporate violence against Indigenous peoples and communities of color manifest themselves in multiple, intersecting forms. This violence includes police brutality, militarization, and other forms of repression, but it also includes the violence of environmental injustice. Polluting the air, land, and water is an assault on the lives and bodies of humans and their more than human relations. These movements also show how people are mobilizing against forms of fast and slow environmental violence engrained in settler colonialism and racial capitalism to protect the socio-ecological relations necessary for life to flourish.

We argue that environmental racism and environmental injustice are not just reflective of data revealing unequal treatment and acts of discrimination; they are forms of state and institutional *violence* that perpetrate direct, immediate, and long-term physical, emotional, and spiritual harms that lead to suffering and premature death for the denizens of affected communities. We contend that EJ scholarship should continue to develop by recasting environmental injustice as a form of violence, by delving deeper into histories of oppression and systems of racial capitalism, settler colonialism, and enslavement, by linking environmental injustice to the problem of environmental/racial privilege, and by challenging the view that state policy making is the most hopeful solution to the scourge of environmental injustice. We highlight these themes of state power and violence in recent EJ

scholarship on prisons, emotions, and land and resource conflicts in North America that expand the topical and geographic focus of the field while illuminating how environmental injustice is produced and resisted. Accordingly, we contend that environmental justice movements may be more effective if they respond to environmental injustices not only as forms of discrimination but as forms of violence because that reframing facilitates a deeper engagement with histories and ongoing practices of domination that devalue life and lead to premature death for marginalized peoples and nonhuman species.

Origins of environmental justice studies

The field of environmental justice (EJ) studies emerged in large part because traditional environmental movements had focused exclusively on preserving, conserving, and defending nonhuman natures to the neglect of human communities that are also significantly (and unevenly) impacted by environmental threats. The study of environmentalism and environmental harms also neglected the ways in which social inequality, discrimination, and oppression have shaped the human experience with environmental risk, a signal that the academic approach failed to fully grasp the extent of our environmental crises (Bullard 2000, Mohai *et al.* 2009, Taylor 2016). In contrast, the field of EJ studies drew from environmental movements led by communities of color and placed the intersections of social inequality and environmental quality at the center of an expanding scholarly agenda that has grown by leaps and bounds since its beginnings in the 1970s. Early EJ studies scholarship was largely focused on documenting environmental inequalities in communities of color, often debating whether racism or classism was the primary driving force behind these patterns (Bullard 2000, Taylor 2016). This research is important because it demonstrated the interconnections of social inequality and environmental harm. More recent work builds on that foundation through broader theoretical engagements across the social sciences and humanities to better understand the causes and consequences of environmental injustice, and strategies for pursuing remedies to this problem (Whyte 2011, 2017, 2018, Ray 2013, Pulido *et al.* 2016, Pulido 2017, Pellow 2017). This recent scholarship offers more expansive ways of thinking about the various systems of domination that intersect to produce environmental injustices that impact people along intersecting axes of class, race, gender, sexuality, ability, indigeneity, and citizenship, among others.

Given the remarkable breadth of the field and that a number of excellent literature reviews have been published in recent years (see Mohai *et al.* 2009, Agyeman *et al.* 2016, Roberts *et al.* 2018), this paper will focus on several key new directions in environmental justice studies that resonate with our argument that environmental injustice is a form of violence created through

systems of racial capitalism, settler colonialism, and enslavement that are sustained by the state.

New directions: violence and the state

EJ studies continues to evolve in response to changes in the political, environmental, and cultural landscape facing marginalized communities, and in response to challenges from scholars seeking to advance the field. A number of scholars have suggested that a focus on the distributional consequences associated with environmental injustice is important but fails to adequately address the deeper, underlying driving forces behind this phenomenon (Pulido 1996, 2017, Sze and London 2008, Kurtz 2009, Schlosberg 2013, Pellow 2017). We argue that analyses of the processes and ideologies of settler colonialism, racial capitalism, and enslavement are pushing the field in important new directions to more fundamentally understand the production of and resistance to environmental injustice, especially in the U.S. context. These frameworks reveal the extent to which environmental injustice is a violent process sustained by state power. The subjects of violence and the state emerge as important themes in contemporary EJ research and activism, namely on topics of resource extraction and land conflicts, carceral systems, and the study of emotions.

Framing environmental injustice as violence offers four useful analytical advances. *First*, it underscores that environmental injustices constitute direct assaults on entire communities (including bodies, identities, and ways of knowing) and ecosystems, resulting in massive harm and physical and emotional trauma to humans and more-than-human populations. The experience of climate disruption and water, air, and soil toxicity imperils the ability of people to lead healthy lives and ensure the future of their families. Ecological degradation leads to premature death through, for example, the fast violence of storms and sea level rise, and is often reinforced through the murders of environmental activists defending imperiled territories and ecosystems. Environmental harm also manifests through what Rob Nixon (2011) calls ‘slow violence’ – how toxins poison bodies and habitat destruction degrades the conditions necessary for survival, which often escapes the attention of spectacle-driven corporate media. The health-impairing impacts of environmental injustices also threaten the capacity of populations to sustain their traditions, lifeways, and cultures because it frequently results in access restrictions to sacred sites and recreational spaces. These changes generate emotional and cultural violence, and forms of trauma and grief that are not simply reparable through material solutions (Lennon 2020).

Second, framing environmental injustice as violence recognizes that contemporary environmental injustice is rooted in long histories of oppression

and dispossession of communities of color and Indigenous peoples produced through racial capitalism, settler colonialism, and chattel slavery. Environmental injustice is irreducible to a single act or offense against a community; these practices and policies must be placed against the centuries of assault against communities of color and Indigenous peoples, which are the foundations of present-day EJ conflicts and the ideologies that justified this oppression.

Third, framing environmental injustice as violence emphasizes that environmentally unjust state and corporate practices and policies are designed to maintain the health of highly valued populations – people and species who matter – at the expense of those whose lives matter less and are differentially valued by the state. While environmental injustice is typically examined through the lens of those who are suffering such indignities, it is equally important that one of the primary purposes of environmental injustice is to protect the unearned environmental privileges for dominant groups that are sustained by the violence of resource extraction and industrial pollution on other human and nonhuman bodies.

Fourth and finally, a focus on the state as a driver of the violence of environmental injustice affords an important challenge to the reformist and state-centered approaches to EJ advocacy that scholars and activists argue have had limited impacts over the past 30 years (Pulido 2017, Harrison 2019). A dominant narrative among EJ researchers and activists has been that although the state may be a perpetrator and enabler of environmental injustices, it is the primary vehicle through which we can imagine and enact pro-environmental justice changes. This orientation has clear limitations as it relies on the very social forces producing environmental injustices to somehow deliver environmental justice. A state-centered and reformist approach assumes that states are not inherently racist, authoritarian, and violent apparatuses, a claim that a number of scholars have rejected (see Scott 2010, Smith 2011, Pulido 2017).

Next, we discuss theories of racial capitalism, settler colonialism and enslavement in more detail, and then review EJ research on emotions, prisons and carceral systems, land and resource extraction. Each of these areas of scholarship reflects attention to state and institutional violence directed at vulnerable populations and ecosystems.

Racial capitalism and settler colonialism

EJ scholars have recently called for centering more radical, transformative theorizing and thinking into our analyses of the causes of and solutions to environmental injustice, with particular emphasis on racial capitalism and settler colonialism as systems that create ideologies and structures of difference and domination (Agyeman *et al.* 2016, Whyte 2018, Sze 2020). The state

plays a key role in producing both systems in that they rely on state-sanctioned categories of difference and violence to acquire land and resources, and control residents (Kurtz 2009, Pulido 2017). The maintenance of these violent systems by the state and corporations leads to premature death for human and nonhuman life.

Racial capitalism is a concept that begins with the proposition that one cannot separate race and racism from capitalism's origins, evolution, and current dynamics (Robinson 1983). Thus, racism has fueled capitalism from the beginning and has worked to give it form, strength, and resilience. Racism is a structuring logic of capitalism because that system requires and thrives off the generation of various categories of social difference (such as race) to enable and maintain inequalities fundamental to capitalist accumulation (Robinson 1983). Racism devalues land and bodies, providing an ideological apparatus for colonialism, enslavement, and dispossession, which cause and constitute environmental injustices (Pulido 2017). Racism also places a higher value on certain bodies, namely white, settler, heterosexual, cisgender, and male, and therefore fuels environmental privilege by designating certain populations as worthy of living in areas that enjoy relative protection from the ravages of environmental injustice. Racial capitalism challenges debates in earlier EJ scholarship over race or class as the primary axis of environmental injustice by arguing that racism and capitalism, and thus racial and class systems, are necessarily intertwined and inseparable (Pulido 1996, Sze and London 2008, Kurtz 2009).

We view racial capitalism as an overarching political, economic, and cultural framework intertwined with settler colonialism. Settler colonialism is an historical and ongoing structure of social and ecological domination associated with the European invasion of Indigenous lands and territories that was integral to the development of capitalism and industrialism, namely in North America, Australia, and New Zealand (Wolfe 2006). Indigenous Studies scholar Kyle Powys Whyte (2017, p. 158) defines settler colonialism as '... complex social processes in which at least one society seeks to move permanently onto the terrestrial, aquatic, and aerial places lived in by one or more other societies who already derive economic vitality, cultural flourishing, and political self-determination from the relationships they have established with the plants, animals, physical entities, and ecosystems of those places.' Or, put more simply, it is the occupation or control over land, water, aerial space and people by an external power that occurs through military violence, seizure of land, and forced assimilation. Ideologies of white supremacy and racism facilitate and legitimate settler colonial processes of dispossession and genocide by rendering Indigenous peoples invisible, less-than-human, and by claiming they improperly use nonhuman nature (Bacon 2019, Palmer 2020).

Whyte (2017, p. 165) argues that ‘settler colonialism is an environmental injustice . . . [because] the U.S. settlement process aims directly at undermining the ecological conditions required for indigenous peoples to exercise their cultures, economies, and political self-determination.’ Bacon (2019) uses the concept of ‘colonial ecological violence’ to demonstrate how colonial practices and knowledge systems harm the health and well-being of Indigenous people and threaten their connections to nonhuman nature and livelihood practices. This is a process that relies on state force and forms of institutionalized, cultural, and symbolic violence to take land and destroy Indigenous people’s livelihoods (Simpson 2017, Estes 2019). A result of these structures is the impoverishment of both Indigenous peoples and lands (and water), which is a particular form of environmental injustice because it reflects social hierarchies between nations rather than racial, ethnic, or other social groups (Whyte 2011, 2018, Estes 2019). Yet, much EJ research has failed to engage with settler colonial theory and examine the ways in which colonialism shapes contemporary political struggles and power (Bacon 2019, Norgaard 2019).

What might environmental justice look like in such contexts? As Gilio-Whitaker (2019, p. 25) argues, ‘EJ for Indigenous peoples . . . must be capable of a political scale beyond the homogenizing, assimilationist, capitalist State. It must conform to a model that can frame issues in terms of their colonial condition and can affirm decolonization.’ A decolonizing EJ must recognize the inherent sovereignty of Indigenous peoples, regardless of whether they are recognized by the State (Coulthard 2014). Yaqui descended legal theorist Rebecca Tsosie (2013, p. 243–244) writes: ‘The political sovereignty of Indigenous peoples under U.S. federal Indian law is grounded in a more ancient sovereignty, which is an “internal, culture-and-community-based model of sovereignty” that reflects the identity of Native peoples as the first Nations of this land.’

The larger lesson is that if we fail to pay attention to settler colonialism and racism in the production of global ecological threats, then we will also fail to incorporate that knowledge into how we attempt to address and resolve these problems. As Kari Norgaard and James Fenelon (forthcoming) argue, the supreme irony of ignoring the histories and contemporary practices of settler colonialism is that ‘Indigenous peoples hold real alternatives in the form of technologies, epistemologies, social structures, moral codes, and ecologies themselves that are critically needed to respond to ecological crises today.’

Enslavement

The systems of chattel enslavement in the United States provided the labor and financial support required to maintain racial capitalism and settler colonialism. The first major source of energy that powered settler colonialism in the U.S. was enslaved labor, which, combined with the conquest of

Indigenous lands, provided the financial foundation of the Industrial Revolution and the subsequent transition to a fossil fuel economy that resulted in global anthropogenic climate change (Lennon 2017). Slavery was thus an ecologically impactful institution because it was a massive ‘energy generation regime providing colonial societies with a mechanized infrastructure that enabled them to efficiently produce commodities and consolidate wealth,’ (Lennon 2017, p. 24). Enslaved labor also enabled the development of industrial agriculture and monocultures, which disrupted ecosystems, degraded soils, polluted water, and destroyed plants and animals (Johnson 2013). Thus, slavery was *the* engine of the settler colonial economy, which enabled massive soil depletion, deforestation, human displacement and other catastrophic socioecological harms (DuBois 1977 [1935], p. 15).

Enslavement is also an environmental injustice because it is a system of degradation that reflects the ways in which people of African descent and Indigenous peoples were (and are) forced into violent captivity that results in long term social and public health-related harms. In the case of Indigenous peoples, the large-scale, centuries long practice of enslavement further dislocated them from their lands and nonhuman relations (Reséndez 2016). As Lennon (2017) argues, the formal era of chattel slavery in the U.S. was a system of *non-human* degradation because whites, the state, and the market viewed Native and African Americans as subhuman. Chattel slavery also requires the simultaneous subjugation of nonhuman natures, such as land, water, and other species for the construction and maintenance of that system (Smith 2007, p. 18–19).

Today in the 21st century, across the globe, many of the most devastated ecosystems are the same places where human enslavement is rampant because numerous environmentally damaging industries rely on enslaved labor. As a result, we find marine ecosystems depleted from industrial overfishing, gold and coltan mines poisoning rivers and gouging out mountains, and ancient forests where industrial agriculture is depleting soils and felling trees. In each of these cases, much of the work is done by enslaved people (Bales 2016). In other words, human enslavement is still very much alive and well and it is killing people and critical habitats across the planet.

The systems of racial capitalism, settler colonialism, and human enslavement are intertwined and reinforce one another through the production of social categories of difference that enable the control of Indigenous peoples, people of color, and their ecosystems. These systems are therefore not just *examples* of environmental racism and injustice; they are *exemplars* of these forms of socioecological violence. They are centuries-old practices of uprooting, displacing, torturing, disappearing, killing, and conscripting both human populations and nonhuman relations and territories for the purposes of profit-making, empire building, and maintaining ideologies of cultural purity and superiority.

Emotional responses to violence

One way in which emergent EJ scholarship is addressing the impact of these interlocking systems of power is through research on the role of emotions in the creation and experience of environmental injustices and violence. This work builds on broader social science research exploring the collective dynamics of emotions and the role of feelings in politics (Goodwin and Jasper 2003, Hochschild 2016). While Robert Bullard's (2000) foundational book on environmental racism highlighted the psychological impacts of pollution, that question has not been taken up by EJ researchers until more recently (Norgaard and Reed 2017). Traditionally, research on environmental justice has deployed scientific measures of risk and effects of pollution on human and ecological health. However, that approach ignores the emotional and mental health impacts and traumas of living with toxic chemicals and the loss of land, plants, and animals to which people have meaningful relationships (Jacobson 2016, Lockie 2016, Willette *et al.* 2016, Norgaard and Reed 2017).

New scholarship examining emotions advances EJ studies beyond conceptualizing socio-ecological relations as strictly material to include the psychological, spiritual, and cultural impacts of ecological violence (Sultana 2011, Willette *et al.* 2016, Norgaard and Reed 2017). Linking environmental justice studies with scholarship on emotions facilitates a deeper reckoning with a more robust way of exploring the totality of environmental justice struggles. When people experience the violence of environmental injustice, the consequences extend far beyond the often-physical manifestations on the body; they almost invariably include the less visible but long lasting and often irreversible emotional and psychological reverberations. Psychological harm from living with pollution, even the fear of potential contamination, and the sense of community invisibility and othering associated with toxic exposure are forms of environmental injustice – above and beyond material and physical impacts (Jacobson 2016, Norgaard and Reed 2017). Damage to people's emotional sense of place—whether it's an urban neighborhood, forest, or farmland—creates individual and collective harms (Groves 2015, Agyeman *et al.* 2016, Kojola 2020).

Damaged emotions result from the environmental violence produced by settler colonialism and racial capitalism. Norgaard and Reed (2017) argue that emotions are a key aspect of power systems and call for more attention to the affective experiences of colonial ecological violence. Destruction of land, loss of species, and water pollution can create forms of trauma that Groves (2015) describes as the 'colonization of attachment.' This trauma is particularly acute for Indigenous communities when resource extraction or nature conservation disrupts their relationships to land and nonhuman nature, preventing spiritual, cultural, and livelihood practices, such as hunting, fishing, ceremony, and rituals. Vickery and Hunter (2016) argue that

traditional Western notions of environmental harms do not adequately capture how Indigenous communities are impacted by pollution and industrialization through different ontologies of health and the impacts on traditions and cultural practices. For example, Ojibwe people, whose ancestral homelands are in what is now the Upper Midwestern U.S. and south-central Canada, view wild rice (*manoomin*) as part of their creation story and as a relative with whom they have meaningful relationships (LaDuke and Carlson 2003, Raster and Hill 2017). Destruction of wild rice from mining pollution, housing development, and other land use changes is thus a social, emotional, economic, and spiritual harm.

Land and resource extraction conflicts

The field of EJ studies is expanding beyond its initial focus on urban and peri-urban areas in the U.S. (Pellow 2002, Mohai and Saha 2007, Sze 2007) to include a wider range of environmental issues and struggles, particularly those occurring in rural places of North America. We highlight growing research on conflicts over land use and resource extraction in the U.S., which exemplifies the analysis of settler colonialism and racial capitalism and how environmental injustices are often forms of violence that depend upon state power (Martinez-Alier 2001, Malin 2015, Vickery and Hunter 2016, Rodríguez-Labajos and Özkaynak 2017, Velicu and Kaika 2017, Kojola 2019).

Resource extraction creates environmental hazards in ‘sacrifice zones’ of peripheral regions of the global South as well as the global North where devalued lives and lands are frequently damaged or destroyed for capitalist accumulation. Mining is a form of ecological violence – literally tearing apart the earth – that creates environmental injustices as the often-working class, rural, and Indigenous residents and workers are exposed to toxic pollution and the instabilities of boom and bust resource economies (Martinez-Alier 2001, Eldridge 2015, Li 2015, Malin 2015, Engels and Dietz 2017). Large-scale industrial extraction fundamentally transforms landscapes and displaces other forms of land use, often to the detriment of nearby residents engaged in agriculture, harvesting, hunting, and recreation. Acquisition of land for resource extraction relies on state force and colonialism to dispossess and displace Indigenous people (Churchill 2002, Ali 2003, Hooks and Smith 2004, Hilson and Laing 2017). Development of new extractive projects often pollutes ecosystems and waterways that Indigenous people use for their livelihoods and that have spiritual, cultural, and emotional meanings (Clark 2002, Ali 2003, Schlosberg and Carruthers 2010, Spice 2018). These violent processes are also accelerating as corporations and aligned states are seeking out new frontiers and technologies for accessing minerals, oil, and gas, like hydraulic fracturing and tar sands extraction, which create new socio-ecological risks and depend on the often-violent dispossession of entire

communities to acquire new lands (Black *et al.* 2014, Klein 2014, Li 2015, Klinger 2017). All of the above practices tend to contribute to climate change, which, in turn, produces further ecological, cultural, and emotional harms to vulnerable populations; thus, we can think of anthropogenic climate disruption as a form of state violence as well.

Expanding resource extraction is driven by capitalist growth logic but also state interests and geopolitical/military imperatives, which are often legitimated through discourses of resource nationalism and energy independence (Emel *et al.* 2011). Empire building and war – especially U.S. and European incursions into the Middle East, Africa, and South America – are motivated by securing energy and other natural resources (Bunker 1985, Huber 2013, Mitchell 2013). The environmental violence of militarism is also felt domestically. In the U.S. Southwest, Native American Tribal members have high rates of cancer and other illnesses that contribute to premature death due in part to pollution from nearby radioactive waste storage and laboring in uranium mines (Malin 2015, Voyles 2015). Mining uranium for nuclear weapons and then testing nuclear bombs in supposedly ‘empty’ and ‘barren’ places in the U.S. West are now causing health problems that disproportionately impact Indigenous people. These outcomes reveal the direct connection between military and environmental violence (Hooks and Smith 2004, Voyles 2015).

Mining and extraction frontiers are also sites of gendered and sexual violence, and human trafficking. Researchers, journalists, and activists have documented a rise in interpersonal violence, gender violence, and sex trafficking near ‘man camps’ (where the majority of male extractive workers live) in numerous places, including the tar sands in Alberta Canada and the Bakken oil field in North Dakota (Jayasundara *et al.* 2018, K. Martin 2019, N. Martin 2019). Indigenous women are particular targets of gender violence and trafficking, and the expansion of these oil and gas frontiers has contributed to the crisis of missing and murdered Indigenous women in the U.S. and Canada (Edwards 2019).

Socio-ecological violence produced by resource extraction is also a target of growing global climate justice and decolonization movements (Li 2015, Velicu and Kaika 2017, Estes 2019). Indigenous communities and nations are the leading edge of these transnational movements and are resisting the theft of their lands and asserting sovereignty to heal human and nonhuman life and to advance decolonization efforts. In the U.S. and Canada, Native American tribes and First Nations have used treaty rights and their nation status to block, or at least impede, new extractive projects and infrastructure (Clark 2002, Raster and Hill 2017). However, these actions have also been met with violence and state and corporate repression. Scholars and advocacy groups have documented the murders and violent attacks by the state (or condoned by the state) on Indigenous land defenders and activists opposing

extraction development across the world (Global Witness 2018, Scheidel *et al.* 2020). Images of peaceful #NoDAPL protestors facing off with armed police and military-style vehicles and being attacked by dogs sent reverberations around the globe and attracted public concern (Whyte 2017, Estes 2019).

Prisons and carceral systems

Another exciting and emergent area of EJ studies scholarship focuses on the links among environmental justice concerns, prisons, and mass incarceration for which themes of state power and violence are central. Prisons in the U.S. are a key institution for the maintenance of white supremacy, and are also a form of extraction that follows similar logics of racial capitalism, settler colonialism, and enslavement. The 13th Amendment to the U.S. Constitution, convict leasing, Jim Crow laws, and racial segregation across society allowed for the constant surveillance and siphoning of Black persons from their communities into the prison system to provide coerced labor for the state and corporations, to maintain and intensify the color line between Black and White, and to facilitate the continuation of enslavement after the Emancipation Proclamation (Alexander 2012). The majority of people imprisoned in the U.S. today are people of color, which reflects how white supremacy functions to control the spatial mobility of others.

EJ research on carceral systems explores the myriad ways in which prisons and jails produce the logic of environmental injustice against prisoners and surrounding human communities and ecosystems (Pellow 2017, Perdue 2018). Prisons and detention centers in the U.S. are spaces of environmental injustice as many are sites of hazardous waste generation, sewage overflows, and air pollution, which impact the health of inmates and guards, residents of nearby towns, and the ecology of adjacent lands and waterways. Numerous prisons are also spaces in which the poor quality of food, high mold content in the ambient air and ventilation systems, and extreme heat and cold associated with climate change place the health and wellbeing of prisoners at risk. Furthermore, many prisons and jails are located near or on top of hazardous waste sites, garbage dumps, and other toxic land uses (Bernd *et al.* 2017). These risks reflect the ways in which racist and colonial ideologies devalue the lives of black, brown, and working-class bodies.

Immigrant communities are heavily impacted by the prison industrial complex and are facing harsh environmental injustices as well. For example, in immigrant prisons across the U.S.—such as the Northwest Detention Center and the Karnes County Civil Detention Center—inmates face polluted water, poor quality food, and psychological abuse. In their study of how absences in the National Environmental Policy Act (NEPA) process enable environmental injustices in immigrant detention prisons/concentration

camps in Texas, Edwards *et al.* (2019) find that undocumented persons face exposure to health hazards and forms of state violence due in part to the way the legal system produces and sustains ignorance of these injustices.

The EJ movement's reframing of the environment as those spaces where people 'live, work, play, learn, and pray' is particularly true in the prison system since, unlike 'free persons,' prisoners do all of those things in a single place. Thus, we might revise and expand that definition of the environment so that it reads, where we 'live, work, play, learn, pray ... *and do time.*' Cutting against the grain of much of EJ studies, we contend that *reforming* these systems—which are inherently founded on domination, violence, and socio-natural hierarchies—in the pursuit of environmental justice would constitute a misguided half measure. Accordingly, many scholars embrace an abolitionist perspective. Critical geographer Ruth Wilson Gilmore (2014, p. vii and viii) writes that abolition is a vision and aim '... to change how we interact with each other and the planet by putting people before profits, welfare before warfare, and life over death.' Anti-prison scholar-activist Angela Davis (2003) contends that prison abolition advocacy will be most effective when activists work to build healthy, just, and sustainable relationships and organizations throughout society – away from prisons – so as to render the need for prisons obsolete. In her writings on prison abolition, Davis builds on the work of W.E.B. DuBois, whose concept of 'abolition democracy' suggested that the most impactful pathway toward the abolition of human enslavement and a decisive confrontation with white supremacy would be to build and support an array of democratic institutions throughout society, which we suggest must include decision-making about the environment and socio-ecological relations.

Prisoners and their allies are fighting back against the myriad threats associated with the inherent violence of the prison system. Some of the many tactics that prisoners have undertaken to confront environmental injustices include: hunger strikes, labor strikes, and commissary strikes/boycotts; lawsuits demanding safe drinking water and healthy food, and health care; and petitions demanding educational programs. Prisoners are speaking out by writing articles for various media outlets, challenging prison authorities on a range of issues, including staging work stoppages to protest forced labor/enslavement. In other words, prisoners are an important and largely unrecognized cadre of leaders and rank and file activists in the movement for environmental justice. They are adopting tactics and strategies that explicitly seek to address the ecological violence of incarceration by refusing dangerous work and unhealthy food, and by demanding the most basic of human rights that are routinely denied them in this system of innate brutality. Since the 13th Amendment to the U.S. Constitution allows an exception for slavery in prisons, prisoners facing ecological risks is an example where enslavement and environmental racism intersect.

Accordingly, since prisoners are legally enslaved people, then the prison EJ movement can be seen as a form of resistance and rebellion against modern day enslavement.

Discussion and conclusion

We have argued that analysis of the state and violence are key themes across emerging topics in EJ studies that also reflect new strategies and targets of EJ movements challenging the racial and colonial state. We highlight how settler colonialism, racial capitalism, and enslavement produce environmental violence and rely on state power to be created and reproduced. Attention to these dynamics is an important theme in new areas of EJ research into emotions, land and resource conflicts, and carceral systems that expand what constitutes environmental injustice into the physical, cultural, and symbolic traumas of pollution, land degradation, and other socio-ecological disruptions. New theoretical engagements and empirical topics are advancing EJ studies toward a deeper analysis of the complex histories that produce environmental injustice in the U.S., which cannot be reduced to quantifiable measures and discrete acts of discrimination or attributed to capitalism, racism, or colonialism alone because these are interlocking material and ideological systems.

Much of the EJ literature centers on struggles that emanate from the socioecological violence of racial capitalism, settler colonialism, and enslavement, but until recently there has been little consideration of *alternatives* to that system. While the vast majority of the literature suggests that progress toward environmental justice can be achieved within existing social, political, and economic structures, more recent scholarship and activism is pushing beyond those limits and creating radical visions of change (Pulido *et al.* 2016, Pellow 2017). We highlight alternatives to these systems of violence and domination that are emerging from scholars and activists through transformative frameworks that move outside of the limits of existing political-economic arrangements and state-centered policy reforms. Julie Sze's (2020, p. 79) concept of 'restorative environmental justice,' for example, seeks to include 'humans as animals and imagining humans and nonhuman nature in nonextractive modes.' World systems scholar Jason W. Moore's concept of 'reparations ecologies' is not only explicitly anti-capitalist but opposed to forms of hierarchy and domination endemic to modernity itself (Patel and Moore 2018). He defines it as a kind of politics that seeks to question the very basis of capitalism by focusing on emancipatory ways of organizing life (Patel and Moore 2018). The push toward anti-capitalist, anti-statist approaches to EJ, along with efforts to embrace decolonization, restorative environmental justice, abolition, and reparations ecologies

constitutes a major step forward in EJ scholarship that no longer accepts the idea that we can reform our way out of inherently violent relationships.

EJ movements and activists are at the forefront of making these connections between the ways that white supremacy and racial capitalism devalue Black, Indigenous, and nonhuman life. They are mobilizing to defend life and resist the racist, authoritarian, and colonial state in ways that expand the bounds of traditional EJ advocacy. Movements are challenging reformist approaches centered around state policy as they seek to enact more radical notions of justice that confront the environmental violence that is endemic to U.S. society, often drawing on ideas from decolonization and abolition to think beyond the limits of current systems and envision ways of reorganizing socio-ecological relations in just and democratic ways (Pulido 2017, Sze 2020). Thus, researchers should also expand how sites of EJ struggle are conceptualized to encompass mass protests against police violence, organizing inside prisons, and fights to protect water in rural Native American reservations.

As an interdisciplinary, theoretically rich, and politically engaged body of scholarship, EJ studies knows few, if any, boundaries and should capitalize on that foundation by building bridges to these exciting fields and themes to continue producing intellectually rigorous and grounded work in the decades to come. Black critic and author Ta Nehisi Coates (2015, p. 99) argues that, for many African Americans, ‘the entire narrative of this country argues against the truth of who you are.’ In the spirit of the Movement for Black Lives and movements for Indigenous sovereignty, EJ studies might harness the most creative dimensions of these struggles to support the creation of communities and a society that, instead, *reflect* the truths of who we are.

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