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The *Journal of Transdisciplinary Peace Praxis* (JTTP) is a peer-reviewed, biannual, scholarly journal of contemplative cutting edge research and practice on subjects related to human social flourishing and peace.

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- o a holistic and collaborative approach to complex systems,
- o the transdisciplinary nature of solutions to wicked social problems, and
- o a shared sense of purpose in human transnational activism for positive change.

JTTP thus provides a dynamic forum for sharing information and experiences primarily catering to academics, and activists particularly in the disciplines of Peace and Conflict Studies, Political Science, International Relations, Human Rights, History, as well as professionals, policymakers, organisations, institutions and individuals who nurture a firm belief in peace and human rights.

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Editor's Welcome and Introduction

Welcome to the inaugural issue of the *Journal of Transdisciplinary Peace Praxis* (JTTP), a journal of cutting-edge research and practice on subjects related to human social flourishing and peace, published by Frontpage.

I promise that you will not be disappointed as you read this critically important first issue. What you have in front of you is revolutionary—it represents a new, innovative, and collaborative effort to better understand and intervene in real world problems that are often overlooked or disregarded by peace practitioners, the general public, and intellectuals alike.

By expanding the often limited circle of those concerned with peace praxis, our journal endeavours to give voice to wide range of researchers, thinkers, and activists concerned with the current state of our world. In challenging the despondency that we often feel when we reflect on the isolation and disarray of modern social life, the theory and practice outlined in this journal, and specifically this issue, seeks to inspire readers not by mere reference to the modern disintegration of social life, but through celebrating social integration through collaborative creativity and penetrating analysis.

This first issue's focus on the complex transdisciplinary intersections between intentional natural resource management and sustainable peace, presents critical and creative approaches to collaborative systems change. Sustainable natural resource management and global climate change are often narrated to be political hot potatoes. Not only do many not wish to address them head on, many see them as intractable or incommensurable problems to be avoided. This first issue of the JTTP aims to critically interrogate such deficit-based narration by exploring creative policies, practices, and theories that aim to holistically address environmental degradation in the 21st century.

Much more than simple activism for change, what we need is to reconsider the frames and socio-cultural constructions of peaceful environmentally friendly social change. Such an approach is appreciative and asset-based as opposed to depreciative and deficit-centred. Through praxis, considered in these pages as a deep integration of peace theory and practice, peaceful social change can be better understood and, thereby, realised. If there is one thing we know for sure about change, it is that at some point it will come to every system. The question then becomes how can we best position ourselves, as individuals within human society (a complex system), to accept and direct change in positive directions. Wendell Berry once wrote: "Our politics and science have never mastered the fact that people need more than to understand their obligation to one another and to the

earth; they need also the feeling of such obligation, and the feeling can come only within the patterns of familiarity” (Berry, 1989: 88). By helping to shift the narrative about environmental degradation, the articles in this issue of the JTPP, through a transdisciplinary lens, aspire to ignite not just knowledge, but feeling. This process requires critical interrogation of cultural fames, values, and normative orders that have become all-too-familiar patterns in our lives. Better understanding, and feeling, our obligations to future generations, the articles in this issue challenge us to rethink our agency in creating and sustaining positive social change.

JTPP is intentionally transdisciplinary as opposed to simply interdisciplinary in nature. Transdisciplinarity, a term that first appeared in the 1980s (Gehlert, Murry, Sohmer, McClintok, Conzen & Olopade, 2010), refers to an approach to social research and practice in which persons from a range of disciplines and fields attempt to work on shared projects from outside their own separate disciplinary spaces. Transdisciplinarity, like interdisciplinarity, is, by definition, holistic and collaborative, but it also implies an added sense of moving beyond boundaries. This approach is truly science in the service of action (see Kelman, 2015, among others); transdisciplinary, international, and ideal-oriented. Not simply bridging research and practice between traditional disciplines, transdisciplinary praxis implies a sense of moving beyond traditional disciplinary constraints, transcending artificial boundaries, and opening doors to new perceptions, voices, and dialogic practices involving human values. Transdisciplinary praxis is aimed at exploring and developing new approaches to wicked problems (Rittel & Webber, 1973; Matyók & Schmitz, 2014) by integrating an approach to human social science and disavowing any perceived separation between theory and practice. Praxis, in the words of Paulo Freire, is simply the “reflection and action directed at the structures to be transformed” (Freire, 1970: 126). Herbert Kelman called this work “interactive problem solving” (Kelman, 2015: 244) and still others have framed it as “interactive conflict resolution” (Fisher, 1997). In this issue, the structure to be transformed is our most important one—mother earth. Addressing environmental degradation requires collaborative joint-action that takes us beyond any sense of the traditional disciplines and socially constructed boundaries to challenge our deeply held cultural norms.

Hanna Arendt argues that the work of praxis is the highest ideal of human life, indeed it is what makes us human (Arendt, 1958). The realisation of nonviolent peaceful future requires collaborative transdisciplinary approaches to this high ideal of integrating theory and practice. What a future of positive peace also requires is creative and radical interrogation of the values of peaceful coexistence and how they relate to our natural environment. While such work represents a massive collective undertaking, in this initial issue of the JTPP we provide exemplars of this

critical and creative exploration of complex environmental change processes. Each piece in this inaugural issue challenges us to rethink our individual and collective relationship with the natural environment and thus our approaches to changing it for the better. Unmasking the underattended assumptions in the relationship between the natural environment and human conflict, each contribution to JTTP's first issue deserves a close critical reading. In the first piece *Environmental Degradation: Communities Forging a Path Forward*, Sloan and Schmitz foreground the many problems of climate change and environmental degradation while taking an international perspective on how communities in America and Africa have creatively responded. Comparing the different case of the Greenbelt movement in Kenya and the peace process in Somaliland with Standing Rock resistance and strip mining in Appalachian coal country, Sloan and Schmitz provide the outlines of a "transformational model" for building local "bottom-up" relationships for achieving environmental justice. Next, Hale and Pincetl, *Peering through Frames at Conflict and Change*, explore the development of the Los Angeles urban water system. Exposing the frame analysis and path dependency of the city's water infrastructure, Hale and Pincetl not only shift our focus to cities, where more than half the global population resides, but complicate the "nuanced meanings of key concepts" that leaders employ in "urban sociotechnical systems". These initial examples of local analysis and praxis are further muddled by the three pieces that follow, which span an internationally diverse array of cases.

In *Farmers Facing Climate Change in Southern Zambia*, Marcantonio and Bolten probe the local experiences of climate change among smallholder farmers to assess the "response pathways" available to them. The authors of this piece find that community conflict is nurtured by climate uncertainty and that such conflict "is the direct result of vulnerability". Whether the choices of small farmers in Zambia or those of policy makers in Los Angeles, many of the pieces in this inaugural issue articulate environmental vulnerability as not only a simple lack of access to tangible resources, but, rather, a lack of creative choice. Staying in Africa, Kanyako's piece entitled: *Gas Flaring, Environmental Degradation and Community Agitation in West Africa* follows on the themes of a need for human interaction, relationship, and community agency by describing the "failure of the region's gas industry to translate profits into human-centred development". Kanyako's analysis of 'upstream and downstream' implications of West African gas production provides a critical lens for developing a 'people-centred' approach to gas production. Not forgetting the big business interests in the negotiation over the environmental and economic realities of people's lives, Kardashevskaya's article re-opens the critical role for the indigenous women discussed earlier in Sloan and Schmitz's article. Kardashevskaya's *Why Radical Rightful Resistance?* outlines preliminary research in the province of North Sumatra, Indonesia. In arguing that "apart from the

ethics of care” women’s participation in local resistance to the paper production industry is influenced by “the gendered experiences as well as the cultural context” of life in Batak Toba, North Sumatra, this paper takes us full circle back to the complex realities of international environmental resistance to corporate power. The remainder of the papers in this first issue focuses primarily on North America, no unimportant player, as home to the largest consumer and polluter nation on earth.

Randall Amster, in his chapter entitled, *Killing Time: Environmental Crimes and the Restoration of the Future*, develops a strong argument for redefining environmental crimes as harms thereby underscoring the culpability of the zero-sum thinking of corporate polluters. Framing the collaboration as ecological in nature, Amster argues that we must “act to maximise the most precious resource of all time.” This piece, along with the one by Gwen Hunnicutt entitled *Neoliberal Bio-politics and the Animal Question*, provides sweeping indictments of our anthropomorphic perspective on what it means to create “justpeace” (Schirch, 2001) with our environment in mind. In arguing that “there is a strong link between human and nonhuman animal oppressions, so dismantling of one necessitates the dismantling on the other,” Hunnicutt provides a provocative and much needed reassessment of our abuse of animals in the neoliberal context. These two pieces, some of the strongest in this issue, not only nicely frame our core values and assumptions about dealing with environmental degradation, but also make prescient calls for environmental restoration and justice. They also set up nicely the discussion in the final paper by Sandra Engstrom entitled *Recognising the Role Eco-grief Plays in Responding to Environmental Degradation*. Engstrom argues that social workers, and other helping professions, need to “link the research, values and behaviour associated with eco-grief” in developing response to the environmental depletion of our natural world. Relying on E. O. Wilson’s (1993) concept of the biophilia—human’s innate need to connect with other living organisms—Engstrom argues cogently for the need to process ecological grief as a way to build resilience and advocate for “better sustainable and environmental policies and practices”. I chose to leave this piece at the end as a clarion call for all to realise that environmental degradation not only effects one directly through social disintegration and conflict, but psychologically as well through a collective sense of loss and grief.

I hope that you enjoy reading these important articles as much as I did as JTPP’s editor. I remain convinced that this journal represents a vital voice of creative collaboration and informed activism. As you turn the pages of this inaugural issue be reassured of the hope for change inherent in our daily choices. Resistance to the dominate narrative of environmental degradation requires consistent vigilance and attention. The narrative frames of neoliberal globalisation and unfettered consumption will not change quickly, but with mindful awareness and a critical transdisciplinary eye towards the “fusion of horizons” (Gadamer, 2011) change will

come nonetheless. I believe that the articles in this inaugural issue of the *Journal of Transdisciplinary Peace Praxis* (JTTP) provide that critical eye and I welcome your feedback and continued support for our shared work.

With metta (loving kindness and compassion),



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Environmental Degradation: Communities Forging a Path Forward

Lacey M. Sloan & Cathryne L. Schmitz

KEYWORDS

Social movements, environmental remediation, indigenous rights, community peacebuilding

ABSTRACT

Environmental degradation is well-known as a major cause of conflict as communities suffer from the effects of climate change, threat of toxins and depletion of natural resources (United Nations, 2009). The consequences are dire as environmental degradation impacts ecological and human health, leads to migration as people seek a safer habitat and gives rise to conflict precipitated by competition over increasingly limited resources (Sloan, Joyner, Stakeman & Schmitz, 2018). Although destructive conflict may result from environmental degradation, there are situations in which communities have come together to respond to environmental degradation with strategies that protect the environment and contribute to economic and political sustainability. This paper examines responses to ecological degradation through case studies. The Greenbelt Movement in Kenya, local peace building in Somaliland and two sites in the United States experiencing the destruction of their communities caused by the extraction of natural resources are compared and contrasted to identify models that support environmental remediation and the building of peace rather than escalating violent conflict.

INTRODUCTION

Environmental degradation is a major cause of violent conflict and human displacement (Stern, Young & Druckman, 1992). Community response to environmental degradation can range from denial and resignation to protests, violent conflict and forced migration. Environmental degradation is a global concern with local, state, national, regional and international responses required to protect ecosystems from political and economic forces anchored in patriarchal systems of greed and control. As powerful forces vie for short-term financial gains, marginalised communities suffer the consequences, frequently fighting for voice and

recognition as they face violent conflict (Sloan, Joyner, Stakeman & Schmitz, 2018). Here, we examine the context and consequences of environmental degradation, comparing strategies that result in peace, environmental protection and restoration of those that result in violence and further damage to the environment.

CLIMATE CHANGE AND ENVIRONMENTAL DEGRADATION

Climate change is having—and will have—devastating effects on a wide range of human rights, including rights to life, health, food, housing and water, as well as the right to a healthy environment.

— David Boyd, special rapporteur on human rights and the environment
(Transcend Media Services, 2018, para. 13)

The Intergovernmental Panel on Climate Change (IPCC) recently released its long-anticipated special report on global climate change (2018). United Nations Chief António Guterres stated that

This report by the world's leading climate scientists is an ear-splitting wake-up call to the world. It confirms that climate change is running faster than we are—and we are running out of time.

(Transcend Media Services, 2018, para. 5)

The IPCC scientists paint a dramatic picture of the results of global temperature rising.

Increasing temperature means more heat waves, rising sea levels as glacial ice melts, and increases in hurricane and cyclone intensity, heavy rainfall and acidification of the oceans (United States Global Change Research Program [USGCRP], 2017). These changes in the environment may lead to food and water insecurity, loss of livelihoods, health and mental health issues, migration, conflict and widespread disease (Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services [IPBES], 2018a). Professor Robert Scholes, one of the lead writers of the IPCC report, warns that environmental degradation “is pushing the planet towards a sixth mass species extinction” (IPBES, 2018b, n.p.).

The evidence of climate change is easily observed. In 2017 alone, the world witnessed massive flooding and wildfires in California, heat waves in Australia, a formerly icy Greenland raging with the country's largest wildfire, flooding in Asia impacting 41 million people, drought in Somalia causing famine impacting 6.2 million people and devastating hurricanes killing 150 people in the United States (Ivanovich, 2018). In the US, observable changes also

include water scarcity in the southwest and longer growing seasons around the country (IPCC, 2013; Raleigh & Urdal, 2007). Climate change has already resulted in widespread destruction of crop land, grazing land and forests; and, scarcity of freshwater that often leads to displacement, migration, and conflict (Raleigh & Urdal, 2007).

A majority of the earth's population lives in areas that can be drastically affected by torrential rainfall. Global sea levels have already risen by eight inches since 1880, but are rising faster in some areas (Union of Concerned Scientists, 2014a). As temperatures rise, heavy rainfall events have increased up to 67% in some parts of the world (Union of Concerned Scientists, 2014a). This results in increased coastal flooding and increased flooding during high tides (Union of Concerned Scientists, 2014a; USGCRP, 2017). The data indicate that approximately 50% the earth's population will be directly or indirectly influenced by monsoon systems (Carvalho & Jones, 2016). These threats are global, ignoring the borders of nation states.

On the other hand, a lack of water is one of the leading causes of disease and death (Denchak, 2016). Decreased rainfall may limit farmers to one crop planting per season, rather than two (Parenti, 2011) or result in drought. With increasing land degradation and climate change, drylands will continue to increase. Four billion people are expected to live in drylands by 2050 (IPBES, 2018b). Tens of millions of trees have already died as a result of reduced rainfall, which increases risks of wildfires, destructive insects and stress from heat and drought (Union of Concerned Scientists, 2014b). With less rainfall in arid regions, conflict has increased by 45% (IPBES, 2018b). The degradation of land expected to force 50 to 700 million people to migrate by 2050 (IPBES, 2018b). Another important consequence of global environmental change is escalating conflict (Stern et al., 1992). Resources such as food, water and energy have been the source of environmental conflict for centuries (Széll, 2005). The United Nations (2009) identifies five channels through which climate change could affect security:

- a) increasing human vulnerability,
- b) undermining development and the ability of the state to retain stability,
- c) escalating risk of domestic conflict,
- d) rising threats to statehood due to loss of territory, and
- e) growing international conflict as competition over resources increases.

A growing number of researchers investigating the connection between climate variability and conflict have found that hotter temperatures and reduced rainfall are connected to increases in conflict at all levels.

Peering through Frames at Conflict and Change: Transition in the Los Angeles Urban Water System

Marcia Hale & Stephanie Pincetl

KEYWORDS

Urban water, sociotechnical systems, transitions, global environmental change, sustainability

ABSTRACT

Since the end of the Cold War, fields concerned with peace and conflict have been increasingly focused on the environment and its relationship to human struggles. Environmental conflicts are essentially due to resources that are scarce, polluted and/or being leveraged by corrupt regimes. During the same period, urbanisation has increased exponentially and today, more than half of the global population resides in cities. There are profound implications for research and practice, as the ways that cities process, manage and use resources can serve to instigate, fuel, mediate or transform human conflict. Large sociotechnical systems are sites of particular interest, including water, energy and food infrastructures. Path dependencies in these systems render them slow to change, and so periods of transition are infrequent and should be harnessed to increase sustainability and build towards positive peace. The following research illustrates challenges of transition within the Los Angeles urban water system. Historical analysis serves to reveal values that underpin water management and show how changing narratives are still vulnerable to legacy. Frame analysis shows the importance of history and narrative in both conflict and change. In understanding nuanced frames of reference, planners and researchers are then able to identify ideological openings, direct research, and craft policy towards more sustainable systems. The mapping of sociotechnical transitions can be of assistance to practitioners, activists and scholars alike, especially those concerned with harnessing natural resources for conflict transformation.

INTRODUCTION

Over the past several decades, environmental conflict has been an increasing concern for fields that grapple with issues of peace and security. The end of the

Cold War saw the rise of the concept of environmental security, articulating relationships between human actions and environmental harms, which then contribute to conflict, from migration to warfare (John Barnett, Matthew & O'Brien, 2010; Jon Barnett, 2001; Levy & Vaillancourt, 2012). Specifically, studies have shown how the military industrial complex decimates ecosystems, in both war and peace time. Global environmental change, including human-caused alterations in climate, hydrologic, ocean and forest systems, has also been identified as a contributing factor in armed conflicts and human dislocation, as illustrated in studies of ongoing wars across the Middle East and Africa (Kelley, Mohtadi, Cane, Seager, & Kushnir, 2015; Randall, 2018).

During this same period of time, the world has become increasingly urbanised. More than half of the global population now resides in cities (WHO, 2014; World Bank, 2014). The percentage of resources used by cities has likewise grown, empowering urban centres with immense influence over planetary environmental conditions. The role that cities can play in preventing future and mitigating ongoing environmental conflicts is, therefore, a matter for intensified research (Hale, In Review).

Sociotechnical systems are of particular interest to this research agenda. These complex, coupled systems include material, technological and social components (Bos & Brown, 2012; Hodson, Marvin, Robinson, & Swilling, 2012). Such systems that process water, food and energy, often requiring long supply chains from distant hinterlands, are responsible for ensuring resources for urban inhabitants. However, the ways in which sociotechnical systems procure, process and provide resources also have up and downstream impacts on the regions from which materials are sourced from and moved through. In this way, urban sociotechnical systems can also be said to have great impact on current and future environmental conflicts.

This is perhaps especially true for modernist infrastructure, characterised in part by size and expansive reach (Kaika, 2005, 2006; Swyngedouw, 2009). In regard to water infrastructure, massive importation systems including dams and pipes facilitate water transfers across natural watersheds and political boundaries alike. Cities around the globe have been planned around such water transfer schemes (McDonald et al., 2014), often with dire implications for the regions from which water is sourced. And even in the case of political or cultural shifts that oppose such projects, existing sociotechnical systems are difficult to change, given the path-dependencies of large infrastructure including sunk costs of materials, labour and technology, complex institutional and governance arrangements and comingled legal systems (Hale, In Review). However, in order to continue providing adequate resources in the face of global environmental change and population growth, updates, adaptation and transformation are

needed in systems across the globe (Pahl-Wostl, 2006, 2015; Wong & Brown, 2009).

Today, many urban sociotechnical systems are experiencing pressure to transition, or to change their fundamental form. Often driven by ageing system components, population growth and extreme weather crises including changing temperatures, droughts, fires and floods, transition opens opportunity to both study system evolution and to guide change towards greater sustainability and positive peace. Here, sustainability is understood as “meeting the needs of society while sustaining the life support systems of the planet” (Turner et al., 2003: 8074). Positive peace, the “integration of human society” (Galtung, 1964: 2), seeks to transform conflicts that would deepen social brutalities into processes that restore relationships and increase justice. Transformation is evident when social structures and institutions that once prevented people from meeting their basic needs (Galtung, 1969) are translated into forms that improve quality of life and wellbeing while extending justice and equity across the system. Such ‘just sustainabilities’ further ensure these conditions for future generations by living within ecosystem limits (Agyeman, 2013; Agyeman, Bullard & Evans, 2002). Therein, the pursuit of sustainability itself can be a practice of conflict transformation towards positive peace (Fisher & Rucki, 2017).

Theorists and practitioners have long seen the city as a site of conflict resolution and social change (Cobb, 2013; Forester, 1980, 1988; Innes, 1995; Innes & Booher, 1999; Susskind, McKearnen & Thomas-Lamar, 1999; Susskind & Weinstein, 1980). Transitions in large sociotechnical systems further open possibilities for embedding conditions of positive peace regionally and with awareness of the mediating role, these systems can play in social and environmental conflicts. Transition opportunities should be harnessed, especially given deep path dependencies resistant to change. The Los Angeles case illustrates the importance of history and narrative in sociotechnical transitions and further exemplifies how the mapping of system evolution can be of assistance to practitioners, activists and scholars concerned with harnessing natural resources for conflict transformation. In the following sections, a system overview is followed by historical analysis. This map of system evolution undergirds frame of reference analysis, which reveals conflicting narratives and values. The final section explores how these conflicts can be harnessed to further sustainability and positive peace.

THE RESEARCH

In 2011, the worst drought on record struck parts of the Western United States. This crisis catalysed transition in the urban water system of Los Angeles, California. In 2014-2015, during the final years of the drought, we completed a study that

illustrates how the historic, social and cultural landscapes of the region inform both contemporary water crisis and system change. Our research highlights new approaches to water planning and management that emerged from the crisis. However, long-form interviews with primary actors within the system also reveal deep divergence in the definitions and meanings held in the frames of reference overtly and subtly informing transition. These findings illustrate how history and system evolution come together to solidify conflictual themes and relational dynamics into lock-ins and path dependencies. Lock-ins occur between temporal layers and parts of a system, such as user practices and culture, value chains, technologies, business and governance models, as well as organisational, institutional, regulatory and political structures (Haarstad & Oseland, 2017; Markard, Raven & Truffer, 2012: 955). These lock-ins consolidate into path dependencies that render systems difficult to change (Marshall & Alexandra, 2016). The narratives of stakeholders within the system reflect complexities of human knowledge, interpretation and experience that further inhibit sustainable system change.

Because “language builds—rather than mirrors—reality” (Fletcher, 2009: 802), frames of reference have been used in environmental policy and management research to both understand the attitudes and actions of decision makers, as well as to clarify the issues themselves (Swaffield, 1998). Frames are also used to promote critical discourse about issues (Rein, 1983). In using frame analysis to study climate change, Amy Fletcher writes: “Frame analysis is descended from discourse theory, which in turn is based upon a social-constructivist epistemology that rejects the notion of universal truths and is sceptical about such concepts as objectivity, proof and knowledge accumulation” (Fletcher, 2009: 800). Frame analysis then recognises subjectivity in meaning and understanding, and brings these differences into the dialogue in order to create a deeper discourse.

‘Self-reliance’ was the initial frame of interest in this study. However, ‘local’ soon emerged as a subtler frame central to the system, which also carries both significance and complexity. Our research explores these frames through interviews with key actors embedded in the water system including non-profit groups, water agencies, and public officials, as well as scientists and other topical experts. These accounts, supplemented by existing literature, helped us to construct a historical analysis of the system’s evolution. Interviews were conducted during late 2014 and early 2015, at the height of the drought. More than 30 hours of interviews were recorded and transcribed by the researchers. Transcriptions were imported into ATLAS.ti data analysis software for coding and analysis.

CASE STUDY: LOS ANGELES

Los Angeles sits on the edge of southwestern California, between...

Farmers Facing Climate Change in Southern Zambia

Richard 'Drew' Marcantonio & Catherine Bolten

KEYWORDS

Water, smallholder farmer, social navigation, climate change, conflict

ABSTRACT

How do local experiences of and responses to climate change inform an understanding of the relationship between climate change and conflict? In this article, we examine how smallholder farmers in Choma District in the Southern Province of Zambia navigate formal and informal institutions, services and social networks in response to shifts in local climate and ecological patterns that impact their access to water. Farmers contend with issues ranging from insufficient water for household consumption to inadequate rainfall for subsistence farming and assess the risks of taking certain actions over others to alleviate their difficulties. Choman smallholder farmers have many response pathways available to them to cope with the stress of environmental challenges but not all are equal: pathways that are easier to access are less rewarding; pathways that may be more rewarding often require significant time and investment efforts without guaranteed reward. We investigate which pathways farmers choose, their rationale, and the outcomes utilising materials collected through a range of methods including household level surveys (N = 224) and ethnography. We argue that farmers rigorously assess their risks of failing in their effort to secure water, but this risk assessment is not always successful, and is often fraught with varied scales of conflict from intrapersonal to community levels, which would highlight two interrelated theoretical threads. The first is Ulrich Beck's argument that more knowledge does not necessarily mitigate uncertainty, which reveals that the true local-level of climate change is its capacity to nurture community conflict. The second is that conflict is a direct result of vulnerability, which forces farmers to 'navigate' uncertain and ever-shifting terrain, rather than confidently making decisions to improve their positions.

INTRODUCTION

Climate change due to anthropogenic forces is a global phenomenon experienced and endured by all of Earth's inhabitant species (Edenhofer et al., 2014; Field

et al., 2014; Halofsky, Peterson & Marcinkowski, 2015; Pachauri et al., 2014; Smit & Wandel, 2006; Wetzell et al., 2012). There is significant debate about the intensity, duration, and persistence of climate change, and what actions to take in response, in academic and non-academic writing and discourse (Edenhofer et al., 2014; Gleditsch & Nordås, 2014; Gleick & Palaniappan, 2010; Nordhaus, 2007; Olmstead & Stavins 2012; Romeo et al., 2015; Stern, 2006). While there is no consensus on the exact trajectory of climate change, the existing evidence resonates with the supposition that it will significantly impact in negative more than half of the current human population in the immediate future and forward (Fung, Lopez & New, 2011; Mekonnen & Hoekstra, 2016; NIC, 2016; Pachauri et al., 2014; Stocker et al., 2013).

People who live in poverty or suffer from problems of food security are the most vulnerable to the effects of climate change because they lack the social and financial buffers to guard against its effects, which compound their existing vulnerabilities (Adger, 2006; Buhaug et al., 2015; Confalonieri et al., 2007; Francis, 2015; Funder et al., 2012; Tirado et al., 2010; ICA, 2015; Hadley & Wutich, 2009; Tschakert, 2007b; Reid & Vogel, 2006; Leichenko & O'Brien, 2002). Long-standing agricultural and social practices are being challenged by cumulative impacts of climate and other stressors (Adger, 2006; Chisenga & Hamazakaza, 2008), and when these agricultural practices are embedded in an already impoverished landscape with little possibility for economically-based innovations, conflict among stressed actors becomes more likely. In our example from Zambia, farmers must navigate the uncertainty created by this complex of environmental change only with their social connections and ecological acumen, making tactical decisions to achieve strategic interests. This navigation is, in Henrik Vigh's terminology, "motion squared", in that farmers make choices they imagine will move them towards a hoped-for resolution while the terrain on which those decisions are made, and on which the outcome occurs, shifts beneath their feet (Vigh, 2009). It is, as Vigh terms it, "the way [they] move in a moving environment" (ibid., 420). Farmers can calculate how risky their actions are versus the reward, but as the social and ecological terrain over which they move can shift at any moment, that knowledge, as Ulrich Beck argues, can often only produce greater uncertainty (Beck, 1999: 6), and thus greater potential for conflict.

Here, we construct an account of how rural smallholder farmers navigate uncertainty with respect to water availability, among myriad other intertwined factors, in Southern Province, Zambia. The data collected includes household level surveys (N=224) and unstructured interviews with people working in public health, water management, agricultural extension and other roles of interest within Choma town and in the surrounding rural areas (N=30). We argue that uncertainty stemming from water issues is significantly exacerbated by the

inverse relationship between the resources—social resources such as access to the camp officer and physical resources, namely water resources such as boreholes and wells—and smallholders need to adapt to water issues and their social and physical proximity to those resources. We argue that increasing Chomans' social and physical access to water together with social support is the only way to mitigate their risks and reduce future conflict. Chomans express a deep seated conviction that 'water is life and for all'; the fact that they do not have equal access breeds resentment. When there is not enough water to go around, according to several folks, "people begin to be stressed and it invades the household and community." The results of this stress can range from physical violence such as, "women queuing at the borehole argue and even fight, pulling each other's hair and hitting—usually the older women to younger women trying to skip the queue," to intrapersonal stress that "makes you feel just doomed... like without water there is no life." When a community becomes this fragmented and apathetic, their collective ability to creatively adapt to adversity is directly impacted (see Nordstrom, 1997; Panter-Brick, 2014).

THE STUDY AREA

The data analysed in this article were collected in the summer of 2015 in Choma town, a centrally located urban area in Southern Province, Zambia. It is the provincial capital of Southern Province and the district headquarter of Choma District, therefore, is home to myriad district and provincial-level government offices including the Provincial and District Agricultural Coordination Office (DACO, 2015). Surrounding and intertwined with the government complex is a large market of manufactured and raw goods, restaurants, social hideaways and other provisions—for purchase that gradually disappear as you travel to the rural exterior reaches (Chisanga & Hamazakaza, 2008). In addition to—and entangled with—the government network in Choma town is a plethora of international aid workers drawn to this area because of its combination of stable security and high concentration of poverty, water scarcity and HIV/AIDS-affected individuals (CSO, 2010; ZNAC, 2015; WaterAid, 2009; USAID, 2016).

In Choma town, piped water for household and other-use consumption is available; however, this service is not available to farmers living outside the urban centre. These individuals—primarily smallholder farmers—rely largely on surface water such as ponds, streams and dambos (open pit wells), apart from groundwater (borehole) for their household water needs, and on precipitation for their crops.

The combination of the limited market and access to government services and the tightly coupled nature of the smallholder livelihood with its surrounding ecosystem result in this agriculturalist population being extremely vulnerable

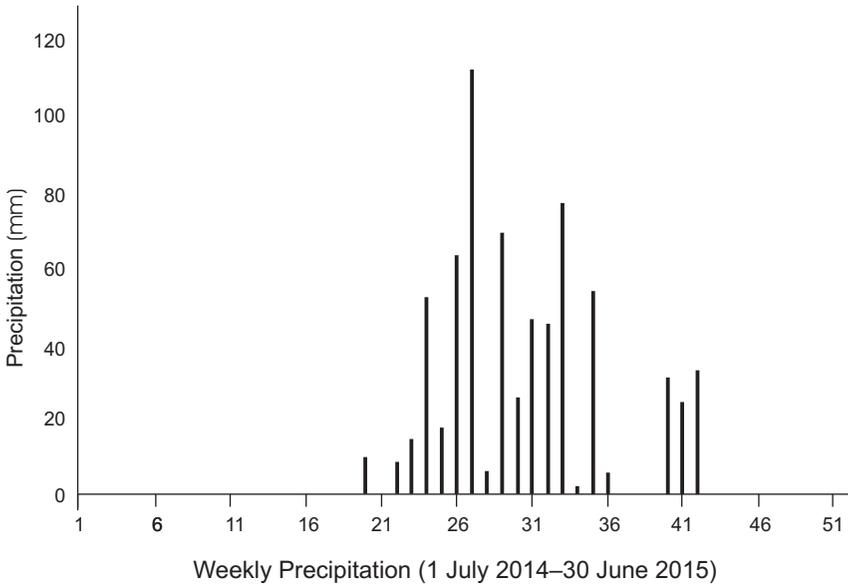
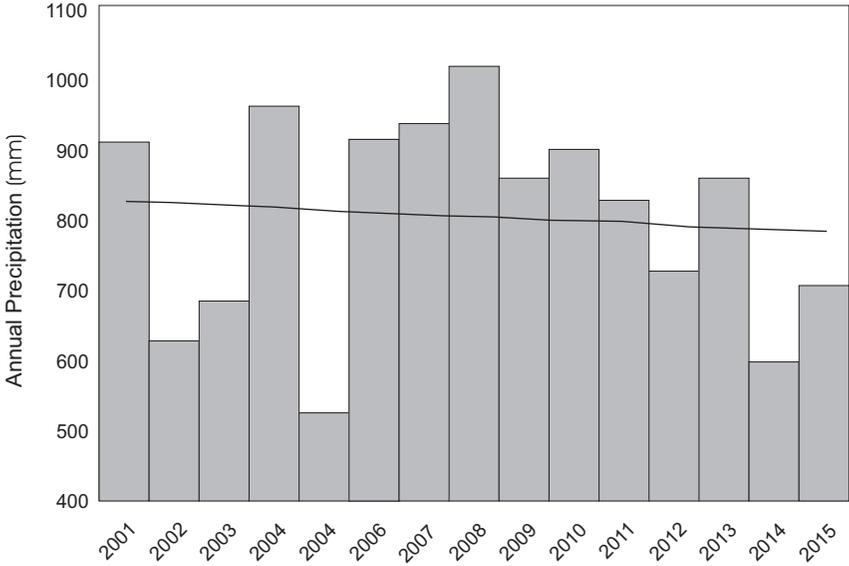


FIGURE 1. Inter-annual rainfall amounts (above) and inter-weekly rainfall amounts for the 2014-2015 farming cycle (below). These figures alone do not substantiate that inter- and intra-annual variation is increasing, but it does show variations that have been experienced recently by participants.

Gas Flaring, Environmental Degradation and Community Agitation in West Africa

Vandy Kanyako

KEYWORDS

West Africa, conflict resolution, environmental degradation, community agitation, gas flaring, multinational corporations

ABSTRACT

West Africa is in the midst of a gas boom. Offshore and onshore exploration and production are thriving with no fewer than 500 oil and gas companies from all over the world vigorously participating in the region's upstream and downstream activities. For a region saturated with weak states, fledging civic institutions and a history of protracted resource-based conflicts, the rapid and unchecked expansion of hydrocarbon-capitalism into its sizzling political economy is a cause for concern and a recipe for instability if not managed properly. Utilising data from fieldwork in West Africa, the study identifies the varied ways in which gas flaring impacts the host communities and the environment. The paper posits that the failure of the region's gas industry to translate profits into human-centred development that addresses the socio-economic aspirations of the host communities has major implications for the region's peace and stability.

INTRODUCTION

Gas in West Africa

West Africa is rich in natural gas, a fossil fuel liquid used primarily for cooking, heating and electricity generation. The region's coastal geological zone-stretching from the Senegal Basin in the northwest to the southwestern end of the Gulf of Guinea is endowed with an estimated 23.63 trillion cubic feet of natural gas and 721 million barrels of natural gas liquids (USGS, 2016). This is at best a conservative estimate. Due to advancement in technology, growing demand worldwide and the proliferation of new but highly profitable gas fields, the region's gas riches and its share of the global market are set to increase in the coming decades. Since 2010, economically viable discoveries are being made every year. In 2015, the sub-region recorded 26 new discoveries of commercial-scale natural

The failure of West Africa's gas industry to translate highly profitable proceeds into human-centred development that meets the socio-economic aspirations of the host communities, in particular, has the potential to undermine the region's shaky peace and stability.

gas fields, more than any other region of the world. For a region recovering from years of instability, gas represents an enormous economic lifeline capable of transforming its moribund economies.

But the upstream and downstream activities associated with converting West Africa's natural gas into sales gas for the consumer market has raised some serious concerns among environmentalists, civil society activists and community members about the environmental and social costs of extracting the resource. Due to a host of reasons (logistical, technological, weak legislation, etc.), a sizeable proportion of the region's excess or unwanted gas, estimated at more than 40 billion cubic metres per year (3.9 billion cubic feet per day) is released into the atmosphere, through a practice referred to in the oil and gas industry as 'flaring' or venting. The dangerous process, which emits CO₂ into the atmosphere, often takes place in or near communities and local sources of livelihoods (farmlands, fishing zones, etc.). The practice has irked environmentalists and agitated locals and has been implicated by the World Bank through its Global Gas Flaring Reduction (GGFR) initiative

as a serious environmental hazard for the host communities.

This article explores the impact of gas flaring on various communities in West Africa. It analyses the eclectic nature of community grievances and the wide array of actions adopted by affected groups in seeking redress for perceived injustices emanating from the region's emerging but enormously profitable gas wealth. The paper is divided into four main parts. The first section is a brief introduction to the region's two main geological gas zones: the Senegal Basin and the Gulf of Guinea, and the gas riches. Section two briefly analyses the nature of gas flaring and outlines the scope of the problem in West Africa. Section three deals with the effects of gas flaring and the varied forms of community responses. The final section outlines in specific terms the various mechanisms used to address the issue of flaring. The paper concludes that the failure of West Africa's gas industry to translate highly profitable proceeds into human-centred development that meets the socio-economic aspirations of the host communities, in particular, has the potential to undermine the region's shaky peace and stability.

Methodology and Scope of Research

The paper is drawn from a number of scholarly and practical experiences with civil society and the extractive industry in general and that of oil and gas in particular. It has been enriched by insights gained from extensive field-based engagements in the region over the last decade. In April 2015, I spent three weeks conducting fieldwork with various actors in the oil and gas industry in Nigeria and Ghana respectively. The research took me to Abuja and the Niger Delta in Nigeria. In the Niger Delta, I saw first-hand the devastating effects of unregulated oil and gas extraction on various communities. From there I headed to Accra and the Central and Western Regions of Ghana, where I spent several days with the fishing community learning about the various coping mechanisms in the face of oil and gas incursions into their community. In Ghana, I presented a paper at the 6th Annual Oil and Gas Summit on the role of Institutions of Higher Learning in ensuring resource-rich countries streamline their Local Content policies to maximise their share of the revenue for the common good. The event was held at the International Conference Center in Accra with participants drawn from all over the world. The following year, I spent three weeks on the border of Sierra Leone and Liberia where I held various civil society workshops on civic participation in the oil and gas industry. In 2017, I spent another two weeks in Equatorial Guinea, one of the region's biggest oil and gas producers. The insights gained from engaging with a broad spectrum of stakeholders including businesswomen, students, chiefs, and traditional elders, oil and gas workers, government functionaries and oil and gas executives have informed this piece and contributed immensely to broadening my horizon and interest on the subject matter.

The study utilises a regional approach, with emphasis on countries that are in the two main geological oil and gas zones: namely the Senegal Basin and the Gulf of Guinea. This is because a regional approach is useful for understanding patterns and trends across a wider geographical area with similar socio-economic and political features. Brown (2015) puts it best when they posited that “a regional approach will enable readers to more clearly understand and visualise both the interconnected nature of oil and gas fields straddling countries and the political imperative in many cases for future cross-border cooperation in jointly developing related resources and infrastructure.” For a critical resource that in many cases straddles borders and does not conform to political boundaries, a regional approach helps us understand the complex relationship between a strategic natural resource such as gas and its ‘conflict and peace properties’ in the context of West Africa.

Theoretical Framework

The linkages between natural resources and conflicts have received wide scholarly attention (Sachs & Warner, 1995; Klare, 2002; Kaldor, 2007). In what has been variously termed as ‘the resource curse’, ‘the paradox of plenty’ and its variant ‘Dutch disease’, the scholarly literature is replete with studies of the direct and indirect relationship between conflict and natural resources such as gas, oil, and diamonds. There is strong evidence, research shows, about the negative impacts of over-dependency on natural commodities. A 1995 study by Sachs and Warner was among the first to draw correlations between natural resources and stunted economic growth, especially in regard to developing economies. They convincingly argued that abundant natural resource negatively impacts the economic growth of a country. This is often due to overdependence on one source of income, bad economic policies, price fluctuations and ‘overconfidence’—the feeling that the resource wealth is infinite. Michael Ross, among countless others, has since built on this resource curse hypothesis. In his ground-breaking work titled ‘The Oil Curse: How Petroleum Wealth Shapes the Development of Nations’ (2012), he argued that while incidences of civil wars have declined over the last three decades, it has remained persistent and stubborn in oil-producing countries. The problem, he surmises, is that the more money a country receives from its natural resource, the less accountable to its people the political class becomes. As the resource wealth becomes concentrated in the hands of the few, it provides a recipe for conflict by an increasingly marginalised and agitated group. Collier and Hoeffler (2005) point out that in the context of Africa, the two most important sources of rents to states are those from natural resources and foreign aid. The availability of natural resources in weak states with no monopoly over violence and price fluctuations in the international market makes them vulnerable to conflict. In such ensuing conflicts, the rent from natural resources fuels rebellion and the establishment of a predatory political economy.

Equally important to understanding the themes in this article, especially as it pertains to community grievances, is the theory of basic human needs. Needs theory argues that certain needs are not only necessary but essential to living a fulfilled and dignified life. Those needs are not just tangible and physical, such as food, water or shelter; they also include non-physical needs such as safety/security, belongingness/love, self-esteem, personal fulfilment, identity, cultural security, freedom, distributive justice and participation (Marker, 2003; Burton, 1997; Burgess & Walsh, 2015). John Burton (1990), one of the first to apply the theory to the field of conflict resolution, argues that one of the primary causes of protracted or intractable conflict is people’s unyielding drive to meet their unmet needs on the individual, group, and societal level. Coercion and punishment can never prevent individuals or groups from seeking to fulfil these needs. ...

The Batak Toba Women: Why Radical Rightful Resistance?

Maria Kardashevskaya

KEYWORDS

Indigenous women, rightful resistance, *adat*, benzoin forest

ABSTRACT

The paper is based on the preliminary findings of the ongoing doctoral field research of the author in the province of North Sumatra in Indonesia. The indigenous communities' lands in this area are a part of the concession held by a pulp and rayon-producing company named Toba Pulp Lestari (TPL, formerly known as Inti Indorayon Utama [IIU]). This research contributes to greater knowledge about radical rightful resistance from the perspectives of women. I specifically focus on why women choose to participate, become leaders, or supporters of this resistance in their region. I draw on the ethnographic field data from the research conducted in a number of villages of North Sumatra with a major focus on women and their experiences protecting and reclaiming their land. However, this article is based on the stories of 11 of these women from the villages of Pandumaan and Sipituhuta, Humbang Hasundutan regency, North Sumatra province, Indonesia.

INTRODUCTION

Researchers have often focused on such forms of resistance as 'infrapolitics' or *everyday forms of resistance* in relation to farming and indigenous communities and not on the exploration of active nonviolent resistance (Schock, 2015a; Scott, 1985, 1990, and 2013). Nonviolent civil resistance has been used as a strategy globally in the past few decades since the start of land dispossession due to neoliberal globalisation (Borras, Saturnino, Edelman & Kay, 2008; Harvey, 2005; Sawyer & Gomez, 2008; Schock, 2015a; Schock, 2015b). In this regard, one needs to note the works of O'Brien and Li (2006), O'Brien (1996, 2013) about *rightful resistance* and Schock (2015a, 2015b) who conceptualised *radical rightful resistance*.

The focus on women in general within civil resistance literature is minimal. However, there have been some works on women's roles within civil resistance

(Agosin, 1996; Codur & King, 2015; McAllister, 1999; Principe, 2017; Richter-Devroe, 2012), women's participation within social movements (Cockburn, 2007; Faver, 2001; Ferree & Mueller, 2004; Naples, 2002; Taylor, 1999), women's everyday (cultural) resistance (Abu-Lughod, 1990), women's experiences of peace and conflict and leadership (Enloe, 2014; Flaherty, 2012; Snyder, 2011; Snyder & Stobbe, 2011; Tripp, 2016; Tursunova, 2014) as well as works by ecofeminists and feminist political ecologists (FPE) who have contributed about the relationship of women to natural resources mostly in the Global South with FPE complicating gendered space, access and management, and ecofeminism looking at the ideological underpinnings of the ecological crisis and women-led resistance (Agarwal, 1992; Colfer et al., 2017; Shiva, 1988; Mies & Shiva, 2014).

One needs to point out that within civil resistance literature, the rationales of agents for resisting have been largely unexplored despite agency being considered to be critical in understanding civil resistance (Schock, 2015b: 10). Civil resistance researchers have paid more attention to strategies, causes for success or failure, philosophy and the structural context.¹ At the individual level, they have discussed leaders and how they shape (or not) the resistance (see Bob & Nepstad, 2006, 2006); however, the majority of works do not focus on the rationale for nonviolent resistance because these may be assumed to be well-known grievances (such as authoritarianism, oppression, discrimination, etc.). Ethnography is also not a methodology of first choice for researchers of civil resistance, thus, current research is outside the conventional approach due to its methodology, access to the agents who deploy strategic nonviolence in their struggle,² and the space given to women to tell their stories.

The Batak Toba peoples of North Sumatra in Indonesia have a long history of resistance to a pulp and rayon-producing company PT Toba Pulp Lestari (previously known as PT Inti Indorayon Utama [IIU]) to which the government issued a permit encompassing around 200,000 hectares of land (Aditjondro, 2006; Manalu, 2009; Silaen, 2006). There have been several publications about this case; however, most of this research focused on the social movements in 1980s and early 2000s and the focus on women has been lacking despite the important role they played (Aditjondro, 2006). One exception was Simbolon's (1998) research in the area where she looked at the changes of land relations among the Batak Toba from a gendered perspective and looked at the roles of women in resisting land grabbing. However, women's experiences still remain generally unexplored.

This article is based on the preliminary analysis of the 11 semi-structured interviews with women from the villages of Pandumaan and Sipituhuta, Humbang Hasundutan regency, North Sumatra. In these interviews, I look at why women participate in radical rightful resistance to protect their ancestral territory and argue that apart from the ethics of care, which is often identified as one of the

major gendered reasons for women's grassroots activism, one also needs to consider other gendered and cultural reasons.

RADICAL RIGHTFUL RESISTANCE: CENTRING WOMEN'S STORIES

Social movements, civil resistance and peace building have an objective to make the world a better place. However, there are differences in terms of how they imagine this could be achieved. Social movements suggest a confrontation (Roy et al., 2010). Civil rights defenders argue that social change can be achieved through nonviolent means by revealing the unjust relations of power that exist in structural conflicts, converting the opponents and turning them into allies (Sharp, 2015). Peace builders focus on structural violence and ways of transforming this into something that can lead to strengthened relationships (Galtung, 1996; Lederach, 1997). Peace and conflict studies would view the concerns of researchers of civil resistance as aligned with their visions of a better world.

Most civil resistance literature focused on structural conflicts that aim to achieve self-determination or overthrow dictatorships (Schock, 2015a). Few focus on land-related conflicts. The exceptions are the works on *rightful resistance* and *radical rightful resistance*. O'Brien (1996; 2013), O'Brien and Li (2006) describe the way Chinese farmers fight for land rights within the context of an authoritarian regime using tactics and strategies that remind us of nonviolent civil resistance. They call it 'rightful resistance'. Rightful resistance on the continuum of resistance is a step ahead from the 'everyday forms of resistance' of Scott (1985, 1990, 2013) and is more organised; however, it is 'episodic', not 'sustained', 'within-system', not 'extrainsitutional', and 'local'/'regional', not 'national' or 'transnational' (p.4). Schock (2015a) using the same framework of rightful resistance looks comparatively at two major movements in India and Brazil, Ekta Parishad (Unity Forum) and Movimento dos Trabalhadores Rurais sem Terra, MST (the Landless Rural Workers Movement), and concludes that the organised resistance of these two organisations can be called 'radical rightful resistance' for it is 'sustained', 'counterhegemonic', uses 'transgressive nonviolent direct action', and claims 'democratic citizenship' (pp.494-495).

Kelompok Studi Pengembangan Prakarsa Masyarakat, KSPPM (the Study Group for the Development of People's Initiative), the organisation I have conducted my research with in North Sumatra, can be seen as being in-between *rightful resistance* and *radical rightful resistance* due to the fact that the campaigns and direct actions of this organisation are not national and international, rather local or regional. However, their movement is 'sustained', 'counterhegemonic',

uses ‘transgressive nonviolent direct action’ (for example, farming on the reclaimed land), and claims ‘democratic citizenship’.

Codur and King (2015) argue that women historically and in the modernity have played leading roles in nonviolent resistance and there is a need to tell these stories. They also touch upon the ‘underlying values’, which may be related to the why of nonviolent resistance at the individual level. They argue that women may be likely to participate in nonviolent resistance because they care as opposed to men who may be involved due to certain personal gains. In fact, the majority of research on women’s social activism focused on the ethics of care that Gilligan (2003) defines in juxtaposition to an ethic of justice, which she says is based on “the premise of equality—that everyone should be treated the same—an ethic of care rests on the premise of nonviolence—that no one should be hurt” (p.174). Research on women’s activism shows that women become actively involved in social movements because they want to ensure rights of individuals and groups, to fulfil responsibilities, and to restore relationships and build communities (Faver, 2001). Women’s activism also tends to reflect their socialisation as caretakers, which enables them to mobilise across differences (Cockburn, 2007; Faver, 2001; Hallum-Montes, 2012; Simbolon, 1998; Tripp, 2016). Women’s activism can be due to greater awareness of ecological sustainability owing to the roles that women play within their communities (Shiva, 1988; Simbolon, 1998). There have been others who have looked at the gendered political opportunities within the context of oppression attesting to the fact that women’s activism tends to be motivated by these gendered political opportunities, whereby states may see men as challengers (Agosin, 1996; Richter-Devroe, 2012; Senehi, 2009). Thus, the reasons for involvement in social activism for women can not only be due to the women’s socialisation as care-givers, which makes them invested in social justice, including ecological justice, but also due to the gendered nature of our political and social structures.

In my research, I take into consideration these findings but seek to look for other possible causes for indigenous women’s activism, especially those related to the specific gendered and cultural context. Shiva (1988) paid attention to the cultural context but has been criticised for making essentialising and universalising claims (Agarwal, 1992; Leach, 2007). Further, most of the existing research focuses on women who identify themselves as activists (Cockburn, 2007; Faver, 2001; Hallum-Montes, 2012). The women I am looking at do not identify themselves as activists, rather as indigenous women who are defending their right to land. They are a part of a radical rightful resistance led by *Kelompok Studi dan Pengembangan Prakarsa Masyarakat (KSPPM)* in the Toba area of North Sumatra.³

Killing Time: Environmental Crimes and the Restoration of the Future

Randall Amster

KEYWORDS

Climate, environment, green criminology, responsibility, restorative justice, future

ABSTRACT

From climate change and resource degradation to ocean acidification and loss of biodiversity, mounting environmental crises driven by patterns of militarism and consumerism have been steadily destabilising the life-sustaining capacities of the habitat. In the process, critical questions of environmental justice have risen to the fore, as the inequitable distribution of ecological burdens and benefits increasingly stratifies along lines of race, class, gender, and other factors. This article fosters an expanded view of “environmental crime” to include a broader array of contemporary actors and actions, with an eye towards cultivating restorative and sustainable alternatives. The aim is not to widen the net of punitive responses, but rather to suggest that complicity with forces of environmental destruction can also yield potent forms of empowerment if consciously cultivated.

INTRODUCTION: SPHERES OF INQUIRY AND SCALES OF JUSTICE

From climate change and resource degradation to ocean acidification and loss of biodiversity, mounting environmental crises driven by patterns of militarism and consumerism have been steadily destabilising the life-sustaining capacities of the habitat. In the process, critical questions of environmental justice have risen to the fore, as the inequitable distribution of ecological burdens and benefits increasingly stratifies along lines of race, class, gender and other factors. At best, responsibility for such rampant degradation and injustice may be attributed to particular corporate or governmental actors in isolated locales, oftentimes with tepid results and an insufficient impetus towards change. In so doing, familiar constructions of criminality as individual pathology work to the exclusion of structural analyses focusing on root causes and viable solutions. In reality, such crimes are widespread, with culpability for (and complicity with) them being endemic yet almost wholly unaddressed. This becomes particularly evident when questions of intergenerational

In order to have a vigorous peace, we need to comprehend the drivers of war, and thus the path to a sustainable and just world likewise requires a deeper accounting of what we have wrought.

justice are considered, with perhaps the greatest impacts of present ecological incursions being visited upon generations yet to come. This article propounds an expanded view of environmental crime to include a broader array of contemporary actors and actions by shifting the emphasis to harms rather than crimes, and with an impetus towards cultivating restorative and sustainable alternatives. The aim is not to widen the net of punitive responses, but rather

to suggest that complicity with forces of environmental destruction can also yield potent forms of empowerment if consciously cultivated.

Wherever we look from the local and regional scales to the global frame, intractable environmental challenges and acute crises are coming to light across a range of spheres of inquiry. Interventions around food and water justice issues—epitomised by the reckless contamination of water sources in Flint, Michigan, to take one prominent example—have sparked community outcries and national debates. Globally, climate change and associated patterns of droughts, floods, fires and super-storms are increasingly recognised as drivers of dislocation and even conflict. The frequency and impact of these events yield a state of perpetual reaction to each episodic crisis, yet often absent from the dialogue is a more proactive sense of the underlying drivers of environmental harm, who is responsible for it, and how we might cultivate opportunities for restoration and the structural transformations necessary to address the mounting cataclysms in our midst. Drawing upon environmental justice and peacebuilding paradigms, the aim is to build upon Martin Luther King Jr.'s famous exhortation to embrace the “fierce urgency of now” by applying it in an ecological context. Indeed, many great peacemakers such as King were either explicitly or implicitly concerned about environmental issues (cf. Dellinger, 2014), but in a contemporary context our engagement must be direct, unequivocal, urgent and deeply rooted. To accomplish this requires thinking and acting transformatively at all scales of engagement.

Yet before we consider any transformative potential in this moment, it is incumbent upon us to amplify the fuller dimensions of the crises—not to deepen the well of despair, but so that whatever nascent responses or solutions we propose are grounded directly in the problems and equally robust in their scope and scale. Analogously, in order to have a vigorous peace, we need to comprehend the drivers of war, and thus the path to a sustainable and just world likewise requires a deeper accounting of what we have wrought. To wit, we are living in a time when baseline ecological thresholds are being breached in regard to factors including biological diversity, soil nutrients, ocean acidification, climate stability

and other benchmarks of habitability. As a diverse working group of scientists (Steffen et al., 2015) summarised the moment:

There is an urgent need for a new paradigm that integrates the continued development of human societies and the maintenance of the Earth system (ES) in a resilient and accommodating state. The planetary boundary (PB) framework contributes to such a paradigm by providing a science-based analysis of the risk that human perturbations will destabilise the ES at the planetary scale... There is increasing evidence that human activities are affecting ES functioning to a degree that threatens the resilience of the ES—its ability to persist in a Holocene-like state in the face of increasing human pressures and shocks.

In other words, we need to make immediate changes if we want to continue living here on this planet.

This plaintive call for change may be more widely perceived than it often appears, as the magnitude and frequency of dire warnings increase. The recent report of the Intergovernmental Panel on Climate Change (IPCC, 2018), for instance, indicates a window of about a decade for humankind to make major changes in carbon emissions to avoid the worst calamities of global warming. Still, while the litany of looming ecological catastrophes may be increasingly understood (at least among some sectors), the connections between this realisation and everyday activities generally remain obscured or attenuated at best. People may lament wastes and pollution, yet still participate in myriad behaviours that perpetuate their accrual. This compartmentalisation is not only myopic and self-defeating, but can even be considered an act of violence if assessed in its full dimensions, as Rees and Westra (2003: 116) opine: “Once we raise to collective consciousness the link between consumption/pollution and eco-violence, society has an obligation to view such violence in the appropriate light. Not acting to reduce or prevent eco-injustice would convert erstwhile blameless consumer choices into acts of aggression.” Rob Nixon (2011: 2) refers to this pattern as a form of “slow violence”, which is taken as behaviour “that is neither spectacular nor instantaneous, but rather incremental or accretive” both spatially and temporally; Nixon cites as examples a host of “slowly unfolding environmental catastrophes” including climate change, deforestation, ocean acidification, and more. Likewise, Kevin O’Brien (2017: 2) construes climate change as “a problem of structural violence” that is largely driven by “generations of decisions from privileged people who seek to make themselves safe and comfortable.” As O’Brien concludes (2017: 3), “I am part of, complicit in, and dependent upon the systems that cause climate change”—and thus complicit in spreading violence.

Environmental benefits and burdens are stratified along factors including race, class and gender, among others, and that this stratification manifests in myriad ways—from the siting of waste facilities and factories, to the appearance of ‘food deserts’ and clusters of medical ailments such as asthma.

The point of this introductory allocution is neither to lament nor inculcate, but rather to generate awareness and suggest pathways for action. If it is the case that attributions of environmental violence may be widespread, then so too may be the power and capacity to do something about it; in this view, every point of implication becomes a potential locus of empowerment. The critical factors are to cultivate a sense of responsibility that yields engagement rather than apathy, and to couple that awareness with a set of viable tools that can be utilised to take action and effect change—exemplified, for instance, by the spontaneous formation of pro-social networks that often arise in the aftermath of a disaster (see Ride & Bretherton, eds., 2011). We can find sources of support for such a shift in the annals of green criminology, environmental crime and environmental justice, as well as in emerging manifestations of climate activism and the call for intergenerational justice. All of these spheres, and more, are scalable from the locus of personal and interpersonal actions, to how they impact local and regional settings, and ultimately to how they connect with global crises. In addition to the spatial scaling, this inquiry further indicates the need for temporal considerations as to how action in the present impacts the future, and to highlight the responsibilities inherent in that realisation.

Ultimately, the aim is to foster the development of restorative and peacebuilding mechanisms to address these issues not only cosmetically but structurally. Justice demands more than simply ‘going green’ as an isolated set of choices—it entails connecting these actions to strategies of resistance and change.

LESSONS OF ENVIRONMENTAL JUSTICE

One of the most promising interventions that connect ecological issues with the potential for mobilisation has been the paradigm of environmental justice. Arising out of research indicating strong geographical correlations between pollutants/toxins and race/class, the framework has developed a set of operative principles that inform a wide range of environmental challenges and crises. From its origins, the first critical point is that environmental benefits and burdens are stratified along factors including race, class and gender, among others, and that this stratification manifests in myriad ways—from the siting of waste facilities and

factories, to the appearance of ‘food deserts’ and clusters of medical ailments such as asthma. The recognition of concentrated toxicity and its coterminous mappings with poverty and segregation is a visible and direct form of injustice, deepening sense of vulnerability and despair among those impacted and further exacerbating extant structural inequalities. Such “toxic communities” (Taylor, 2014) are typified by the presence of industrial facilities, a lack of open and/or green spaces, substandard housing conditions and the presence of toxic building materials, pollutants and poisons such as lead contamination, lack of access to healthy food and clean water and higher incidences of disease and endemic ailments.

As with many environmental issues, the matter of direct causation can be difficult to ascertain; indeed, this is the insidious nature of “structural violence”, namely that it defies easy allocation of responsibility or a specific antagonist, instead manifesting through the regular and ongoing operations of a given society (Galtung, 1996). This sense of exposing ‘business as usual’ is precisely what the turn to environmental justice is intended to confront since, as Robert Bullard (2003: 2) observes, “for communities located on the front lines of the environmental assault, environmental protection is a life-and-death issue.” Likewise, Gordon Walker (2012: 1) views environmental justice as “an important way of bringing attention to previously neglected or overlooked patterns of inequality which can matter deeply to people’s health, well-being and quality of life.” As David Pellow and Robert Brulle (2005: 2) conclude, the “poor and powerless” often are constrained to occupy “environmental sacrifice zones” in both urban and rural contexts, from extractive policies on Native American reservations to cancer clusters in industrial corridors. The concentration of people in such spaces—reinforced through practices of active containment through policing and the application of criminal justice, as well as economic processes of redlining and gentrification—may give the appearance of compartmentalising environmental harms, but ultimately the full expression of these outcomes steadily finds its way into the global system itself.

Still, the inequities of maldistribution are evident, and lead to the second pillar of environmental justice, namely that those who contribute the least to environmental problems are often impacted the most by their effects.

The inequities of maldistribution are evident, and lead to the second pillar of environmental justice, namely that those who contribute the least to environmental problems are often impacted the most by their effects.

Neoliberal Bio-politics and the Animal Question

Gwen Hunnicutt

KEYWORDS

Animal emancipation, posthumanism, peace and conflict studies, ecological degradation, neoliberalism, speciesism

ABSTRACT

The environmental impact of the factory farming industry is staggering. Animal waste is dumped in water or land leading to polluted waterways. Livestock production is responsible for 14.5% of greenhouse gas (GHG) emissions worldwide. Expropriating land for the increasing consumption of animal foods can lead to water insecurity, food insecurity, soil degradation, and the destruction of rainforests and finite resources. As animal agriculture contributes to climate change, a warming planet aggravates violent conflict. There is a strong link between human and nonhuman animal oppressions, so the dismantling of one necessitates the dismantling of the other. A substantial amount of peace and conflict studies literature is focused on dismantling systems of human oppression, yet a full explanation of human precarity and ecological degradation requires understanding the exploitation of nonhuman animals as well. In this paper, I explore one of the most significant causes of ecological degradation: the exploitation of nonhuman animals in neoliberal context. I argue that peace and conflict scholars—with their focus on dismantling oppressive structures and ideologies—are uniquely positioned to take up this issue. I argue for the adoption of posthumanist ethics, which offers the analytical framework necessary to complicate the interspecies relationships which underpin ecological destruction.

INTRODUCTION

Critical animal studies have historically been peripheral to those academic disciplines that seek to expose the causes of human suffering (Gaard, 2012; Birke, 2002; Donovan, 1990). Peace and conflict scholars are invested in improving the human condition by dismantling systems of oppression. Critical animal studies literature has a similar aim, but there is rarely cross-fertilisation between these disciplines (Oliver, 2012; Reagan, 1983; Ryder, 1989; Singer, 1975). The insights generated by peace and conflict studies are helpful to understand nonhuman animal exploitation. In turn, a full explanation of human precarity

and ecological degradation requires illuminating the ways in which human fates are bound up with the fates of other animals (Clark, 2012). Since speciesism is a form of prejudice that is interconnected with, and reinforcing of, other oppressive ideologies and structures, peace and conflict scholars are ideally positioned to take up this subject. Due to power imbalances connected to gender, race and class, many peace and conflict scholars foreground those voices that have been marginalised (Lederach, 1995). The aspiration towards peace among these same scholars begs for inclusion of nonhuman creatures as well. Galtung (1996) defines peace as follows: “Peace is the absence/reduction of violence of all kinds,” and “Peace is nonviolent and creative conflict transformation” (p.8). The absence of “violence of all kinds” in Galtung’s (1996) definition is implicitly inclusive of nonhuman animals as well.

In this paper, I explore the wretched conditions experienced by nonhuman animals exploited as commodities and the animal agriculture industry’s devastating environmental effects. The speciesist exploitation of nonhuman animals involves acts of domination which are embedded in larger political and economic capitalist power structures driven by neoliberal market ideology. Thus, a move towards a critical posthuman ethic of animal emancipation must acknowledge the systemic oppression of neoliberal capitalism and the speciesist bias that supports it.

The aim of this paper is to encourage peace and conflict scholars to incorporate nonhuman animal oppression into their research and theory, but with two important caveats: that this issue is situated within a larger social and political field, specifically global capitalism and neoliberal market practices, and that the issue is approached with a posthumanist lens. Since the cruelty towards nonhuman animals is a practice largely to generate profit, and because most human experiences with these animals in the West exist almost exclusively in commodity form, we cannot fully address the ‘twin crises’ of ecological and animal oppressions without observing them within its neoliberal capitalist apparatus. Further, posthuman ethics moves us away from anthropocentrism and towards the meaningful consideration of populations codified as human, less-than human, and nonhuman.

I first document the well-known link between ecological degradation and nonhuman animal exploitation. I go on to detail the violence inflicted on nonhuman animals who are exploited as commodities. I follow this section by showing how the fates of human animals and nonhuman animals are bound together. I then go on to show how this exploitation is driven by neoliberal biopolitics, highlighting speciesism as the ideological glue that holds this structure in place. I conclude by exploring the adoption of a posthuman ethics as a way forward.

THE LINK BETWEEN ECOLOGICAL DEGRADATION AND NONHUMAN ANIMAL EXPLOITATION

On 8 October 2018, the Intergovernmental Panel on Climate Change (IPCC) released a report on climate change which indicated the urgency of limiting global warming to 1.5° Celsius, much lower than the previous goal of 2° Celsius as outlined in the Paris agreement. To avoid the disastrous effects of global warming, the IPCC calls for drastically and rapidly altering a number of structural and consumption habits. One of these urgent needs is that people substantially reduce consumption of animals. The IPCC reports that the livestock sector is a major contributor to climate change, and the leading cause of deforestation, biodiversity loss and air and water pollution (Summary for Policymakers of the IPCC Special Report on Global Warming of 1.5° Celsius approved by governments, 2018).

The environmental impact of the factory farming industry (and in turn its effect on human populations) is staggering. Animal waste is dumped in water or land leading to polluted waterways (Williams, 2010). Livestock production is responsible for 14.5% of greenhouse gas (GHG) emissions worldwide (Food and Agricultural Organization of the United States, 2015). Moreover, as the size of factory farms increases, so does rural poverty (Stull & Broadway, 2003), as well as crime rates and domestic violence among slaughterhouse workers (Eisnitz, 1997; Fitzgerald, 2007). As the work of sociologist David Nibert (2013, 2002) and others demonstrates the oppression and violence human and nonhuman animals are subjected to are historically, theoretically and materially inextricable from one another (Carey, 2011; Deckha, 2012). Colonialism and neoliberal global capitalism occurred and continue to occur on the backs of marginalised human and nonhuman animal Others (Gruen & Weil, 2012a; Nibert 2013, 2002).

The massive scale of animal processing results in potential food insecurity when land is used for raising grains for nonhuman animals, which limits available land for plant-based food for human input (input/output). Additionally, expropriating land for the increasing consumption of animal foods can lead to water insecurity, soil degradation and the destruction of finite resources (Nibert, 2012). Furthermore, the negative health impact of flesh foods (meat) and feminised protein on human health has been well-established (Levine, Suarez & Brandhorst, 2014). But factory farming poses other health risks, including food-borne illness and antibiotic resistance/superbugs (Ross, 2010).

That violent conflict is one result of progressive climate change is widely accepted and backed by robust evidence (Adger et al., 2014). The conflict in Darfur, which began in 2003 and led to the deaths of nearly a half a million people, was declared by the United Nations to be a climate related conflict (Faris, 2009). Global warming and desertification were the main causes of the violent

eruptions in Darfur. This event also inspired a new body of literature and growing interest in climate-conflict research (Levy, Sidel & Patz, 2017).

While the devastating civil war in Syria, which began in 2011, has complex causes, climate change is likely to have contributed to its development. The war has sparked a pressing humanitarian crisis, displacing more than 9 million Syrians and has caused nearly 400,000 deaths. Syria experienced a severe drought from 2006 through 2009, which transformed nearly 60% of the land into desert. Human-induced climate change contributed to this political unrest (Kelley, Mohtadi, Cane, Seager & Kushnir, 2015). Drought and warming temperatures are predicted to continue in the Eastern Mediterranean.

The effects of climate change exacerbate the worst aspects of poverty and inequality, particularly in regions with poor governance and unsustainable agricultural and environmental policies. Water shortages have been shown to increase conflict (Gleick, 2009). When basic needs of a population are not met, political violence is more likely. Indeed, there is a strong association between environmental shocks and unrest (Salehyan & Hendrix, 2012). Climate change will have its greatest deleterious impact in places already prone to collective violence and will render those who are already vulnerable even more so (Levy, Sidel & Patz, 2017).

THE EXPLOITATION OF NONHUMAN ANIMALS FOR FOOD

Every year in the United States there are 10 billion farm animals held captive and killed for eggs, milk and meat (Agricultural Statistics Board, 2009). Globally about 50 million nonhuman animals are killed for human food (Sayers, 2014). There are numerous levels of brutality that take place throughout the factory farming industry. Factory farms can be characterised as places of unending terror and gratuitous cruelty towards animals (Sanbonmatsu, 2011). Neoliberal business models have resulted in the consolidation of big business in the meat industry. Only four companies control half of the entire poultry market, 59% of the pork market, and 81% of the beef market (Stull & Broadway, 2003). A number of characteristics of neoliberalism pervade the North American farming industry: the number of farms in America has shrunk by five million since the 1930s (Dimitri, Effland & Conklin, 2005). Meanwhile, mega agricultural conglomerates consolidate farming into large-scale operations. Consequently, factory farmed animals are painfully subjected to the neoliberal goals of maximising commodity value (Carey, 2011). The growth of consolidated markets, the introduction of new technologies and 'efficient' management of nonhuman animal bodies have resulted in harsh conditions of continuous captivity and brutal treatment of animals in the industry (Nibert, 2002, 2013; Torres, 2007).

Recognising the Role Eco-grief Plays in Responding to Environmental Degradation

Sandra Engstrom

KEYWORDS

Climate change, eco-grief, social work, place attachment, biophilia

ABSTRACT

This article aims to highlight the importance of a growing need for social work to incorporate the natural environment within research, education and practice. It is becoming imperative that social workers have an understanding of how climate related events, such as environmental degradation and exploitation of natural resources, will impact on the people they work with. Communities worldwide are being affected by changing weather patterns and with constant news coverage available through technology, we are bearing witness to events taking place on a global level. Eco-grief is a term that has been used to describe feelings of helplessness, loss and frustration in an inability to make a difference within these changing times as related to the environment, as well as feelings that may emerge after going through one of these extreme events. This article will aim to link the research, values and behaviour associated with eco-grief with how we can respond to environmental depletion. Included will be a bringing awareness to the importance of social work having a more focused and intentional link to the natural environment in the light of the ever increasing evidence that we are in a period of climate change and the impact that has on communities and individuals. A discussion around encouraging and building positive relationships with the natural world, increasing the capacity to recognise the importance of sustainable livelihoods and ability to protect and care for the natural environment will also be present.

INTRODUCTION

Although I currently live in Scotland, I am from Western Canada; Calgary, Alberta to be exact. As the summer of 2018 progressed, the pictures I would see from that area of the world would consistently have a thick brown and orange haze engulfing the air. At the peak, there were more than 500 fires burning across British Columbia, 15% above the ten-year average (CWFIS, 2018). A state



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of emergency was declared and evacuation orders put in place, processes that are not unfamiliar to the residents of this part of the world as they have dealt with forest fires before, but what was a noticeable change in some of the discourse around the extremity of the situation this time, was grief.

A friend posted the simple phrase 'ecological grief' on social media and what followed was a fascinating discussion by a diverse group of individuals that understood exactly what she meant, they had only never heard of the term before. What became clear

from the discussion was that people were looking for a space to be able to acknowledge and process their feelings of grief and loss that were associated with the daily reminders of climate change. The influence that humans and nature have on each other are being researched in a variety of ways and there are many aspects to this relationship that we do not yet understand (Besthorn, 2000; Erickson, 2018; Narhi & Matthies, 2016; Cunsolo Willox et al., 2015; Dominelli, 2012; Crowther, 2018). This article will hopefully contribute to one small aspect of that relationship that could be having bigger consequences than we are fully aware of.

While there have been many advances in technology, medicine and social movements, there is still a long way to go to recognise and mend the relationship that people have with the Earth. Currently that relationship often centres on how to use the resources of the Earth in order to increase economic gain, as opposed to respecting the Earth and its vital role in our overall health and wellbeing. The social work profession is not a group that comes first to the mind when thinking about environmental stewardship and advocacy. However, due to the centrality of health, wellbeing, justice and equality of social work practice and research, it is becoming clearer as to how well situated the profession is in order to help mend and repair that relationship.

Erickson (2018) discusses the four waves or movements of environmentalism (see also Jones, 2008), with the first wave starting in the late 1800s with men such as Henry David Thoreau and John Muir. The second wave was during the mid-1900s with the third wave beginning in the 1970s with the emergence of ecofeminism and further awareness of mainstream environmental preservation organisations. Currently, we find ourselves in the fourth wave of environmentalism. This wave is defined as being centred on diving deeper in to our understanding of human identity, lived experiences and rights of access, all within the context of

our relationship to nature. Environmental justice and sustainability are becoming central to discussions and hence the development of ecological social work (Besthorn, 2000), green social work (Dominelli, 2012) and an acceptance that the relationship humans have with nature, and with that, linkages to our identity, needs to be recognised and analysed as part of the fight against environmental degradation.

People's relationship to space and place are also linked to the stories we tell about ourselves and the world around us. When those spaces and places are altered, either gradually or suddenly, our sense of self and our sense of our environment also changes. It is with this in mind that this article hopes to describe why a wider and more integrated conversation about eco-grief is necessary within the field of social work, as well as in the wider lexicon of our experiences of climate change. It will do this by laying out a foundation section on the growing presence of green social work, bringing insight into biophilia and place attachment as could be related to eco-grief, and finally, what the role of the social work profession is in relation to recognising eco-grief as playing a role in individuals and communities' ability to respond to environmental degradation.

GREEN/ECO SOCIAL WORK

There has been a growing interest in expanding the traditional 'person-in-environment' concept that social work uses to analyse the social environment of an individual, to also include the natural and built environment. Specifically, there has been an upsurge in research and writing with a focus on the natural environment and the impact or role that it plays in the lives of people (Dominelli, 2012; Erickson, 2018; Willox, 2012; Narhi & Matthies, 2016; Crowther, 2018). This awareness, that social work was previously neglecting the physical and natural environment, has most notably resulted in social work practitioners and academics paying attention to issues surrounding sustainability and climate change (Narhi & Matthies, 2016). There is recognition that how social workers support individuals and communities after not only their experience of a natural disaster, but the less extreme changes in their environment as well, will become relevant. With that there is a belief, and little doubt, that climate change will impact not only on the physical, economic, socio-political landscapes that social workers are engaged in, but also on the type of work that will be needed to be carried out (Gray et al., 2013).

Dominelli and Ku (2017) suggest that 'greening' the profession is key to responding to 21st century challenges such as environmental degradation, extreme weather events, climate change migrants and land use issues. By including environmental justice and a social justice perspective on environmental issues,

the social work profession will not only be in a better place to be a key player in responding to the sustainable development goals and the Global Agenda for Social Work and Social Development (Jones & Truell, 2012), but also be in a position to promote and prioritise holistic practices that enhance the wellbeing of not only the people they work with, but the planet as well.

Linking the natural environment to social work practice began steadily in the 1970s with the simultaneous creation of systems theory and the eco-critical approach (Narhi & Matthies, 2016). Systems theory was developed as more thought was given to the biological and social systems that impacted on the lives of people using social work services. A growing awareness of the interdependence and interactions of various components of those social systems emerged as a central theory within social work practice (Narhi & Matthies, 2016). Although criticisms of a systems theoretical approach have since been plentiful as it ignores the physical environment, nature and the interdependent relationships human beings have with those systems (Gray et al., 2013; Coates & Gray, 2012; Besthorn, 2012; Dominelli, 2012), it did bring awareness about the role holistic and systemic thinking play when promoting overall human wellbeing. The development of systems theory coincided with the emerging awareness of ecological crises and an increased sense that the relationship between the environment and humans is a political relationship as well. Narhi and Matthies (2001) labelled the growing ecological movements and criticisms of industrialised society in Western countries of the 1970s and 1980s, as an eco-critical approach.

The eco-critical approach, which is characterised by ensuring that the natural environment is included as a system, that humans are dependent on nature and yet situated within a crisis of industrialisation and the impact that has on Earth's resources, and promotes social change and political movements, was the beginning of various conceptualisations of how to incorporate the environment into social work practice. Ecosocial, ecological, green and environmental social work have all been used, interchangeably, in various social work contexts to explain the combination of social and ecological perspectives (Besthorn, 2003; Dominelli, 2012; Coates & Gray, 2012; Gray et al., 2013; Närhi & Matthies, 2001, 2014; Mary, 2008; Molyneux, 2010; Norton, 2012; Peeters, 2012). What can be agreed upon amongst all these perspectives is that there is a global discussion being conducted that involves a critical reflection on Western social work practice and the importance of integrating indigenous worldviews, environmental justice is being seen as a pressing issue, there is a redefining of what human wellbeing means, and a need to promote sustainability in multidimensional practice.

Overall then, as concepts such as ecological/environmental justice and sustainability enter the lexicon of social work practice, more and more social

work academics and practitioners are able to see the role they can play in responding to environmental degradation. As will be discussed in the remainder of this paper, as social work practice involves sitting at the intersection of promoting healthy relationships, whether they be between people, systems or in this case, the natural environment, there are some specific areas that I argue need to be recognised in order to support sustainable living.

As concepts such as ecological/environmental justice and sustainability enter the lexicon of social work practice, more and more social work academics and practitioners are able to see the role they can play in responding to environmental degradation.

WHY DO WE CARE?

First developed by E. O. Wilson (1993), biophilia is the recognition that there is a fundamental, genetically based human need to affiliate with life or “the innately emotional affiliation of human beings to other living organisms” (p.31). For as long as humans have been evolving, they have lived side by side, intimately connected with the environment. We cannot survive without food, water or sunlight, and we often adjust our schedules and activities in line with the seasonal changes. Biophilia is the response, usually positive, and attraction to certain aspects of nature which could aid our survival; it is the theory that asserts we have become physiologically and psychologically adapted, through evolution, to particular types of natural settings (Besthorn & Saleebey, 2003). Biophilia can also be linked towards more modern associations, such as why we are likely to be attracted to advertising that incorporates scenes of nature, possibly recognising that these scenes are linked towards our broader human fulfilment. The concept has been looked at from a variety of disciplines and therefore, provides numerous insights into human relationships and connections with nature (Frumkin, 2001; Kahn & Kellert, 2002; Kellert, 1997). The Biophilia theory provides evidence as to why people, although not guaranteed especially for those who have had a negative experience with or in nature, prefer natural environments to built environments, and also how nature can be linked to stress recovery and other aspects of emotions, behaviour, wellbeing and cognition (Williams, 2017; McGeeny, 2016; Kellert & Wilson, 1993; Ulrich, 1984; Buzzell & Chalquist, 2009; Crowther, 2018). All that being said, what is important to recognise and acknowledge, is the deep emotional and biological need of connecting to the natural environment that is present in order for humans to survive.

Kaleidoscope

Romantic film on climate change

Conflicts often make the stuff of film scripts, but climate seldom does. *Kakoli*, an Indian film made by Snehasis Das in the latter half of 2018 may be called ‘unusual’ in this respect. However, it stands out because of several other qualities too. It is not a documentary, short or experimental film which can ‘afford’ to take up such out-of-the-way subjects. This one is a full-length feature, with a romantic storyline at that. It has been made not in the major language of ‘Bollywood’ (as the Mumbai [rechristened from Bombay] film ‘industry’ is called), that is, Hindi, but in Oriya, the language of the eastern Indian state of Odisha.

One must mention that this is the second film set in the backdrop of climate change produced from Odisha within a span of less than two years. Nila Madhab Panda created a sensation with his *Kadvi Hawa* (Dark Wind) in 2017. It was based on real-life stories of Odisha as well as some other parts of India were being affected by global warming.

(Read more in <http://news.trust.org/item/20180925083353-1i6qn/>)

Climate change escalating violence

“The impacts of climate change are increasingly viewed as global security risks, which will have far-reaching implications for both human and renewable natural systems,” warns a new report brought out by the Stockholm International Peace Research Institute (SIPRI) in September 2018. The report rues that although South and South East Asia “have been greatly affected by both climate change and conflict, there have only been a small number of rigorous academic studies that focus on the climate–conflict relationship.”

- (a) it leads to deterioration in peoples’ livelihoods,
- (b) it influences the tactical considerations of armed groups,
- (c) elites use it to exploit social vulnerabilities and resources, and
- (d) it displaces people and increases levels of migration.

A noteworthy finding is that environmental degradation and disasters can lead to an intensification of exploitation by “local elites such as influential landowners or corporate entities”, as well as insurrectionary activities by armed opposition groups “such as rebel groups in the Philippines or the Naxalites in India”.

(Read more in <https://www.sipri.org/sites/default/files/2018-09/sipriinsight1804.pdf>)

Reporting conflict is risky business

Journalism in conflict areas is becoming increasingly hazardous. On the last day of 2018, the International Federation of Journalists (IFJ) released a roll-call of fellow media professionals who had lost their lives during the year while being engaged in this exercise. The toll added up to a staggering 94—including 84 journalists (last year the figure was 82) and ten support personnel.

According to the IFJ records, “the Asia Pacific had the highest killing tally with 32, followed by the Americas with 27 killings, and the Middle East and the Arab World recording 20 cases. Africa comes fourth with 11 killings before Europe with four.”

The report noted that “armed conflict and militant extremism account for most journalists” killings in countries like Afghanistan, Syria and Yemen, while there was a steep drop in violence against journalists in Iraq last year since armed groups lost ground in the country. “But there were other factors such as the increasing intolerance to independent reporting, populism, rampant corruption and crime as well as the breakdown of law and order afflicting countries in so-called peace time like India, Pakistan and the Philippines.”

(Read more in <https://www.ifj.org/media-centre/news/detail/category/campaign-against-impunity-2018/article/2018-reverses-downward-trend-in-killings-of-journalists-and-media-staff-with-94-victims-of-violence.html>)

Conflict fuels hunger in Africa

Conflict is an ‘important driver’ of the recent increases in food insecurity, says *The Global Risks Report 2019*, published by the World Economic Forum, Geneva. The impact of conflict on food security is felt most severely in African countries. “Conditions in South Sudan are still designated as ‘emergency’—one step below famine...” Similar conditions prevail in Ethiopia and Nigeria, along with Yemen in West Asia. Among the next most severe ‘crisis’ category are Democratic Republic of Congo, Somalia and parts of Southern Africa, apart from Afghanistan.

(Read more in http://www3.weforum.org/docs/WEF_Global_Risks_Report_2019.pdf)

Finding out through direct contact

The US-based solidarity group ‘Eyewitness Palestine’ is planning to send an ‘Environmental Justice and Olive Harvest Delegation’ to the besieged land of Palestine in Autumn 2019—‘a culturally rich and important time’.

The objective is to “hear from farmers and learn of the importance of agriculture to the economy and culture.” The participants are expected to learn about threats to the environment, the exploitation of natural resources and the

“struggle of Palestinian communities to maintain access to land and water.”

(Read more in <https://www.eyewitnesspalestine.org/>)

No stay on US youngsters' lawsuit on climate change

The US Supreme Court on 2 November 2018 dismissed a Trump administration attempt to block a lawsuit by 21 young Americans demanding that the federal government take action on climate change.

The suit, filed in 2015, is represented by ‘Our Children’s Trust’. The concrete actions that it seeks include the scaling down of government support for fossil fuel extraction and production and instead, supporting plans to reduce greenhouse gas emissions that contributed to global warming. The Obama administration was not favourable towards it either. After clearing the initial rounds at the lower courts, it was set to come before an Oregon federal judge on 29 October 2018 for trial, which was delayed because of the government plea for a stay.

The Supreme Court judgement noted that “The District Court denied the Government’s dispositive motions, stating that [t]his action is of a different order than the typical environmental case. It alleges that defendants’ actions and inactions—whether or not they violate any specific statutory duty—have so profoundly damaged our home planet that they threaten plaintiffs’ fundamental constitutional rights to life and liberty.”

Meanwhile, the ‘Climate Kids’ aged between 11 and 22 who are spearheading the legal battle have raised a slogan that begs our hearing: “Change the politics, not the climate.”

(Read more in <https://www.ourchildrenstrust.org/us/federal-lawsuit>)

Landmark ruling in Europe

The Hague Court of Appeal has flagged the right to live in a stable climate system as a fundamental human right. In a ruling on 9 October 2018, it ordered the Dutch government to fulfil its promise of bringing down greenhouse gas emissions sharply. The emissions should be reduced by at least 25% of the 1990 levels by 2020 rather than 17% which government was willing to reduce, the court said. Anything less than that, it observed, would be a breach of its promises made in the Paris Agreement of 2015. The judgement came in the wake of a petition filed by 886 Dutch citizens who had come together under the ‘Urgenda Foundation’ (Urgenda is short for Urgent Agenda).

(Read more in <https://e360.yale.edu/features/can-citizen-lawsuits-force-governments-to-act-on-climate-change>)

Climate crisis petition to United Nations

'The Citizens' Campaign on the Climate Crisis', India, is sponsoring a mass petition to the United Nations urging it to declare a Global Climate Emergency and draw up an emergency action plan.

(Read more in <http://www.frontierweekly.com/views/jan-19/11-1-19-Call%20it%20by%20its%20true%20name.html>)

War threatens environment

'The World Beyond War', a pacifist group based in the United States, has launched a new campaign linking war and environmental degradation. Its statement, issued during the year-end, reads:

War and preparations for war are not just the pit into which trillions of dollars that could be used to prevent environmental damage are dumped, but also a major direct cause of that environmental damage.

As the environmental crisis worsens, thinking of war as a tool with which to address it threatens us with the ultimate vicious cycle. Declaring that climate change causes war misses the reality that human beings cause war, and that unless we learn to address crises nonviolently we will only make them worse.

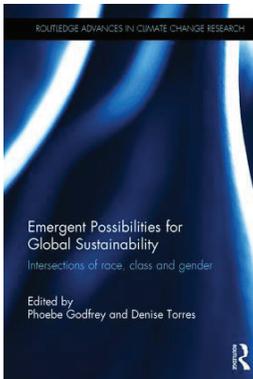
Along with many other anti-war and rights organisations, it has given a call to "Unwelcome NATO" to Washington DC, where the US-led military coalition is scheduled to meet in April. In a joint communiqué, the organisers declare:

War is a leading contributor to the growing global refugee and climate crises, the basis for the militarization of the police, a top cause of the erosion of civil liberties, and a catalyst for racism and bigotry. We're calling for the abolition of NATO, the promotion of peace, the redirection of resources to human and environmental needs, and the demilitarization of our cultures. Instead of celebrating NATO's 70th anniversary, we're celebrating peace on April 4, in commemoration of Martin Luther King Jr.'s speech against war on April 4, 1967, as well as his assassination on April 4, 1968.

(Read more in <https://worldbeyondwar.org/environment/>)

Book Review

*Emergent Possibilities for Global Sustainability:
Intersections of race, class and gender*



Edited by

PHOEBE GODFREY and DENISE TORRES

350 pp, New York, Routledge, 2016, £36.99 (PB)

Reviewed by

BANDANA PURKAYASTHA and KOYEL KHAN

Emergent Possibilities, a recent publication in the Climate Change series published by Routledge, is about intersectional practice and just sustainabilities. Combining the contributions of activists, artists, educators, farmers, journalists, naturopaths, and people who combine these and other work, from around the world, this book makes a significant contribution to our understanding of the links between climate change, just sustainabilities, and building peaceful, humane futures. The most notable contributions of this book are its theoretical framework on just sustainability, its expansion of intersectionality as an approach for studying axes of power and marginalisation, and above all in weaving together many trends of knowledge to indicate emerging possibilities for sustainability.

Rejecting the standard Western canon on development and sustainability, the editors delve deep into nonviolent, intersectional praxis. They indicate, at the outset, that their search for justice, and rights for the earth and its marginalised people, rests on an earth-driven, rather than market driven approach. They extend the concept of intersectionality by moving beyond Nature-blind intersectionality. They argue that any action for sustainability has to take both social and ecological justice into account. This approach is both old and new; it rests on older ideas of human-nature links that exist in many knowledge systems, but it interjects newness by explicitly talking about justice. The knowledge systems exist in the Global North and South, the editors weave indigenous systems with non-indigenous approaches that recognise power, processes of marginalisation and practices seeking to undo the injustices that result. As the editors argue, “The union of just sustainabilities and intersectionality theories creates a means to doing intersectionality and for

evaluating its ends... and to put into practice the long term goals of creating and sustaining a just and liveable planet for all beings.” (p.2)

In their discussion of intersectionality, the editors unpack the concept of the structures that are relevant to link sustainability to justice. They show how intersecting axes of power create gender, class, race hierarchies, but, importantly, their theoretical imagining includes elements such as air and water that are always present in bodies. They argue that modern industrial society is unsustainable and that sustainable coalitional consciousness lies at the heart of a resurgent resistance to capitalist industrial systems. The editors point out that practices that sustain the ideas of reverence, care, respect, reciprocity, beauty and love have never ceased to exist within the din of current practices. Respectful-reciprocal ways of knowing, evident in many corners of the earth, have resisted Western discourse and attempts to totally erase them. Thus, just sustainability requires thinking and practices that draw upon the core principles of such knowledge streams to ensure a better quality life for all while understanding and remaining in harmony with the limits of supporting ecosystems. And, they point out, that just sustainability cannot be imagined or practised without environmental justice.

The book begins with a “fighting” poem about the certitude of people who use blind faith, wrapped in religio-political ideology, to justify their firm belief in destructive action. Forty six chapters, organised under the themes of Air, Earth, Fire, Water, and Aether highlight a cornucopia of ideas about just sustainability. Though by no means an exhaustive list, the following chapters were particularly meaningful to us. The chapter on womanism and agro ecology discussed marginalised women’s nurturing knowledge and seed keeping as political warfare. The chapter on a specific Indian puja related the principles of the puja, its principles of justice and sustainability, along with the capitalist creep into the realm of spirituality and activism. The chapter on coming home to our bodies presents both a history of violence on bodies as well as healing practices to mend rifts between bodies and minds. The chapter on pathological and ineffective activism is a wakeup call to get beyond educated, middle-class smugosphere; it offers clear and practical strategies to be effective activists. The chapter on Ubuntu acknowledges our collective roots, existence, and consciousness of our responsibility to be truly human. Mni, a vision for solidarity among indigenous nations on water security, safety and sovereignty, eloquently appeals to us about water justice for all creations. These chapters represent our personal favourites. Readers will find many other poems and essays that meaningfully touch their hearts and expand the horizons of their thoughts and praxis.

This book is special and timely. It represents, in the words of one author, a pilgrimage of hope for our collective future.