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More than Women and Men: A Framework for Gender and Intersectionality Research on Environmental Crisis and Conflict

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Abstract

Over the past two decades, the important role of gender in environmental and water-related crises and conflicts has been increasingly recognized. Environmental crises occur in social contexts imbued with gender and other power relations. Existing literature in this area has examined how gender shapes issues of water access, use, governance, and adaptation to environmental crises. Gender, however, has been variously construed and theorized in this work. From essentialist to poststructuralist perspectives, the theorization of gender is key to its application in the environmental sector. In this chapter I present an overview of several major theoretical conceptualizations of sex and gender, ranging from the biological essentialist to the poststructuralist. I identify how gender has been variously used in the literature on environmental crisis and conflict. Key debates about ontology (essentialism) and representation (universalization) are highlighted. Drawing upon (and drawing together) these earlier theoretical insights and debates, I ultimately suggest a conceptual framework for doing multi-level intersectional research on environmental crisis and conflict. The framework helps to address the current tension between highly context-specific analyses and overly structural treatment of gender. The framework aims to help “scale up” the insights of intersectionality while still appropriately attending to the ongoing relevance of gender across contexts.

1. Introduction

Environmental conflicts and crises are not gender-neutral, although they are often portrayed as such. Humans’ interactions with the environment reflect (and may even

reshape) existing social relations of power and privilege, of inclusion and exclusion. Gender—as a set of social relations, roles, and practices that change across time and space—has material, ideological, and discursive dimensions. Gender conditions our access to material resources, privileges, and responsibilities while also (re)producing particular “truths” that become naturalized in ideology and discourse. When an environmental conflict or crisis occurs, gender is an important social factor that determines who is affected and how.

Environmental crises and disasters, such as excesses or shortages of water, can lead to conflict. Although resource scarcity plays a role, scarcity may not always be the key causal factor in conflict (Allouche, 2011; Detraz, 2009). Rather, social inequalities determine access to environmental resources and determine how different groups are affected by shortages or disasters, thus playing a significant role in conflict (Allouche, 2011; Detraz, 2009). Without consideration of the social uses of a natural resource, “scarcity” loses its conceptual relevance (Fröhlich & Gioli, 2015).

Existing literature has shown how gender affects water access, use, governance, and adaptation to water-related crises. Several points about gender and water are commonly stated: globally, women and girls spend more time collecting water than men and boys, which may reduce their access to educational and economic opportunities (WWAP, 2015). Women are generally less likely to hold positions of power in water management (Kevany & Huisingh, 2013). Environmental crises or water shortages may increase violence, particularly against women and girls (Sommer, Ferron, Cavill, & House, 2015). Crises thus have gendered impacts, but crises also have the power to restructure gender and social relations in new ways (Alston, 2006b; UNEP, 2016).

Future climate change will bring increasingly frequent and severe environmental extremes and disasters (IPCC, 2015; Trenberth, 2012), increasing risk for everyone but particularly for disadvantaged groups. Gender analysis of climate disasters has shown that gendered roles and power relations shape both vulnerability and adaptation to disasters. While the vast majority of climate change research has not taken a gender lens, most of the explicitly gendered research has focused on women—primarily because of gendered inequalities that limit women’s access to resources and decision-making power in the face of disasters. In the global South, higher poverty levels and lack of institutional resources make the gendered effects of climate disasters readily identifiable and strongly felt by many (e.g., Dankelman, 2010; Milne, 2005). However, a growing literature has shown that even in the wealthy countries of the global North, social differences along the lines of gender, race, and class make for differential disaster experiences (Alston, 2006a; Dowsley, Gearheard, Johnson, & Inksetter, 2010; Enarson, 1999, 2001, 2014; Fletcher & Knuttila, 2016; Reed, Scott, Natcher, & Johnston, 2014; Vasseur, Thornbush, & Plante, 2015).

Despite the salience of gender in environmental conflict and crisis, Fröhlich and Gioli (2015: 137) observed that “this understanding...has yet to be translated into a comprehensive research framework that integrates gender as an analytical category into environmental and conflict research”. Informed by longstanding feminist debates about essentialism and universalization, other authors have argued that rather than serving as a useful analytical lens in environmental research, gender has been oversimplified as an ontologically stable binary upon which vulnerability can be neatly mapped – e.g., “men/less vulnerable, women/more vulnerable” (Arora-Jonsson, 2011; Thompson-Hall,

Carr, & Pascual, 2016, p. S375). Calls for intersectional research promote context-specific analyses of gender as it combines with other axes of social power and privilege (Djouidi et al., 2016; Kaijser and Kronsell, 2014). Yet, few empirical studies of environmental crisis to date have explicitly applied an intersectionality framework (Osborne, 2015; Thompson-Hall et al., 2016), perhaps because of the complexity of doing so. Indeed, O'Shaughnessy and Krogman (2011, p. 137) pointed out that the "development of *analytical* strategies which allow researchers to provisionally use gender 'categories' to explore divisions in society while simultaneously recognizing the fluidity and transience of what constitutes these categories, has been a...challenging endeavor".

The purpose of this chapter is to trace the theoretical origins of contemporary debates on gender and intersectionality while mapping a comprehensive framework for future research on environmental conflict and crisis. To be theoretically sound, the framework must draw on the strengths of existing feminist theories while responding to historical and recent debates. To be useful, the framework must also be readily applicable in empirical research on gender and environment. I begin, in Section 2, by tracing the development of gender as a category of analysis in feminist theory, identifying some key issues and debates that inform current and future research (and which inform the framework presented in Section 4). Section 2 necessarily involves some simplification and categorization of these theories in order to identify the different understandings of gender within each. In Section 3, I examine the various understandings and uses of gender in recent gender/environmental research. Throughout these two sections I highlight two interrelated issues that have been of much concern in feminist theory: (1) essentialism, an ontological issue, and (2) universalization, which is primarily related to representation. Essentialism was a major concern in the feminist ontological debates of the 1980s and 1990s while universalization has become a flashpoint in the literature on women and environment.

The issue of scale (or levels of analysis) underpins much feminist theory and also appears in the research on gender and environmental crisis. Although scale is often implicitly employed in feminist work, I aim to draw scale out in a more explicit and intentional way. I suggest that gender can best be conceptualized through: (1) an explicit engagement with multiple levels of analysis; (2) intersecting systems of power and privilege that shape experience, and (3) material, ideological, and discursive dimensions of power. Ultimately, I draw upon the strengths of each feminist perspective outlined here to suggest a conceptual framework for future research on gender in environmental crisis and conflict. Examples from the gender and environment literature are used to illustrate the framework's applicability.

2. Thinking About Gender and Sex

Ideas about gender and sex vary dramatically across culture and history. In Western thought, biological essentialism provided the "truth" about gender/sex until the 20th century, when feminists distinguished between sex (as physical, material bodies) and gender (as socially constructed behaviours and roles linked to, but not caused by, bodies). This distinction challenged the long-embedded notion that "biology is destiny". Although innovative in its day, the doubly dichotomous association of sex/physical, gender/social has since been thoroughly challenged by recent poststructuralist and queer thinking on gender. Similarly, the concept of intersectionality has pushed current feminist thought

even further to acknowledge significant differences within (and not just between) the categories “women” and “men”. In this section I trace several major theoretical developments about gender and sex, highlighting particularly the ontological assumptions underpinning each perspective—that is, the question of what (if anything) constitutes the “reality” of gender. Lessons learned from these approaches inform current thinking on gender in environmental crisis.

2.1. Biological Essentialism

In a biological essentialist approach, gender is seen as the natural expression of biophysical differences between male and female bodies. From this perspective both sex (bodies) and gender (behaviours, roles) are seen as primarily biological in origin—essentially, one and the same. Gender is believed to stem from neurological, hormonal, and/or genetic factors that differentiate male/masculine from female/feminine. The sex binary is therefore the primary determinant of the gender binary¹.

For centuries, assumptions about women’s nature (e.g., as inherently emotional, not rational, and inclined to nurturing) justified their exclusion from education, politics, and economics (Kimmel & Holler, 2011). Despite evidence that gendered behaviours and roles are strongly social in nature (Fine, 2010; Kimmel & Holler, 2011), essentialist discourse is often used to justify the status quo on gender and sex. Biological justifications hold popular appeal not only because of their concordance with “common sense” understandings about difference (here John Gray’s well-known *Men are From Mars, Women are From Venus* book series is an example) but also because of the strong legitimacy accorded to “objective” natural science and the sense of reality accorded to the body and the biophysical.

Biological essentialism has generally not served women well, but it has provoked important feminist theorizing about gender. Feminists responded to essentialism and androcentric science with cogent critiques of science and objectivity (Bartsch & Lederman, 2001). Feminists also posited the distinction between sex (as biological) and gender (as social) in an attempt to denaturalize gender. Although still somewhat limited and binaristic, this analytical distinction posed an important challenge to essentialism. It set the foundation for the later expansion of gender beyond a simplistic binary. Biology was no longer destiny.

2.2. Materialist Feminism

One of the major feminist approaches of the 1960s and 70s drew on the sex/gender distinction to analyze women’s inequality under capitalism. Recognizing the general lack of attention to gender and family relations in Marxist theory, materialist feminists brought a gender lens to Marxist class analysis. Early work drew attention to gender roles

¹ Although as Laqueur (1992) observed, the notion of sex as binary is relatively recent, at least in Western thought. Ancient Greek texts reveal a “one sex model” wherein male and female were seen as the same sex. The female, an inversion of the male with male genitalia internalized, was the problematic result of unfavourable heat conditions in utero. This understanding, while still biologically essentialist, denaturalizes the sex binary and unsettles the precedence of sex as the “cause” of gender. In pre-Enlightenment texts, “Sex, or the body, must be understood as the epiphenomenon, while *gender*, what we would take to be a cultural category, was primary or ‘real’” (Laqueur, 1992, p. 8). Laqueur’s analysis clearly illustrates the socially constructed and changing nature of ideas about gender and sex.

at the household level and their significance to the broader economy. A significant amount of debate occurred around whether women constituted an economic class and whether their unwaged domestic work could be considered “productive” labour in a capitalist economy (Armstrong & Armstrong, 2003; Seccombe, 1974). The concept of social reproduction helped explain the important but distinct role of domestic work in reproducing not only the commodity labour power, but also entire political and economic systems (Bakker, 2007; Bezanson & Luxton, 2006). This concept is still used in contemporary feminist political economy, albeit at scales far beyond the household (e.g., Rai & Waylen, 2014).

Materialist feminists suggested that that oppression occurs within and through relatively stable relations of power. Gender is not seen as biologically essential but rather is structured by material political-economic conditions, as sexed bodies become the basis for the division of labour (Armstrong & Armstrong, 2003). Experience is an important component of the materialist epistemology (Hartsock, 1983). Early materialist feminist work asserted a common experience (and even a common consciousness) amongst women based on their exploited position in the division of labour (Delphy, 1984). Today, feminist scholars examine how race, class, and geopolitical location create very different experiences between women, but gender remains an important structuring characteristic that is (re)produced in political and economic systems.

Social reproduction is a useful conceptual contribution that can be extended to gendered work and the environment. Social reproduction involves both the use of environmental resources but also the reproduction of environmental ideologies and knowledge systems. Reproductive activities are affected by environmental degradation but, perhaps somewhat optimistically, social reproduction could also be seen as a sphere where the intergenerational need for environmental protection is recognized (especially in contrast to productive systems premised on environmental degradation). Indeed, some definitions of social reproduction acknowledge the ecological framework in which all human activities exist (e.g., Bakker & Gill, 2008; Di Chiro, 2008).

Despite important contributions toward the recognition of women’s experiences of oppression, materialist feminisms are criticized for being overly structural in their focus. The emphasis on fairly stable systems of material power (gender, economies) may produce a universalizing discourse of women as victims of these systems. Extended to environmental conflict and crisis, gender issues may be reduced to a series of “stylized facts” about women as vulnerable victims (Arora-Jonsson, 2011; Cornwall, Harrison, & Whitehead, 2007), which may neglect agency as transformative potential. Further, as discussed below, poststructuralists emphasized the need to consider discourse as not merely reflective of material conditions but also *constitutive* of them.

2.3. Feminist Poststructuralisms

In contrast to materialist feminism, poststructuralist perspectives reject the search for origins of gender and gender-based inequality. Often characterized by a suspicion of grand narratives, postmodernism unsettles ideas of objectivity, truth, linearity, and a singular reality (Nicholson, 1990). One particular vein of postmodernist thought—poststructuralism—has become particularly profitable for feminist analysis. Feminist poststructuralists focus their attention on language and representation; they are particularly interested in the relationship between discourse, power, gender, and

subjectivity. Using deconstruction as a tool, feminist poststructuralists challenge essentialized meanings, stable histories, and neat binaries with the aim of exposing the power relations that shape representation and construct our very (gendered) subjectivity.

Feminist poststructuralists have critiqued the liberal-humanist conceptualization of the subject as an autonomous, free-thinking self. Because this subject is (like everything else) a product of power and discourse, the subject and its experiences cannot be seen as a valid, incontestable source of truth or knowledge (Butler, 1990; Scott, 1991; Weedon, 1997). Subjectivity merely gives the impression of autonomy while in fact reproducing the discursive systems that have constructed it (Weedon, 1997). Of concern for feminists, gendered discourses produce gendered subjectivities, and it is through the performance of these subjectivities that gender comes to appear real or natural (Butler, 1990).

Weedon (1997, p. 10) argued that for feminists, poststructuralism can offer a “useful and productive framework for understanding mechanisms of power.” Power is not a stable entity held in systems; rather, it is constituted both by and through multiple and fluctuating discourses. This allows us to explain power imbalances in a variety of contexts and situations, and particularly *within* identity categories like “women”. Judith Butler (1990) argued further that asserting a reality to the category “woman” problematically suggests a pre-discursive, identifiable female “subject” for feminism. Butler argued that if the subject of feminism is a product of power—i.e., of a gendered matrix that has produced it as “woman” or “female”—then the mobilization of this female subject (even for feminist aims) only reproduces the power relationships that made this particular subject culturally intelligible and “oppressable” in the first place. Or, as Denise Riley (1988, p. 17) succinctly put it: “the very collectivity which distinguishes you may also be wielded, even unintentionally, against you.”

Poststructuralist insights shook the very foundations of gender as a stable category of analysis for feminist research. In an era of global inequality between women and women, and between men and women, can we speak of “women” as a stable ontological category? Should we? With such questions, poststructuralism prompted productive critical engagement with existing feminist theory. Increased attention was paid to the power of discourse and representation. A critical eye was turned on singular experiences masquerading as unequivocal and all-encompassing truth. The category “women” was opened up to difference and diversity and its earlier exclusions exposed.

Although poststructuralist insights may encourage attention to the diverse experiences of women during environmental crisis, the emphasis on micro-level context and fluidity may prevent the broad structural analysis necessary to deal with widespread and macro-level environmental problems. Environmental crises are both localized/context-specific and widespread, as is gender. As climate change brings more disasters and crises (Field et al., 2012; IPCC, 2015; Trenberth, 2012), it will become increasingly necessary to analyse these issues at multiple levels (macro, meso, and micro). Furthermore, despite the on-going significance of gender in environmental crisis, some authors have already noted the disappearance of a gender focus in the environment sector (Elmhirst, 2011; Fletcher & Schonewille, 2015; Leach, 2007).

2.4. Intersectionality

Key insights from both materialist and poststructuralist perspectives converge in a third feminist approach that has shaped gender analysis in recent years. Intersectionality is “the critical insight that race, class, gender, sexuality, ethnicity, nation, ability, and age operate not as unitary, mutually exclusive entities, but as reciprocally constructing phenomena that in turn shape complex social inequalities” (Hill Collins, 2015, p. 2). The idea that multiple oppressions intersect to create different experiences of power and privilege was clearly articulated in critiques of white-centred feminism during the 1970s and 80s. For example, in their 1977 “Black Feminist Statement” the Combahee River Collective described the interlocking oppressions of race, gender, class, and sexuality using a materialist approach (Combahee River Collective, 2007). The concept of intersectionality was further articulated and developed by scholars like Kimberlé Crenshaw (1991) and Patricia Hill Collins (2015).

As a framework for analysis, intersectionality usefully combines materialist and poststructuralist understandings of power. Power is seen as fluctuating and changing depending on the context; however, it has become sufficiently stabilized in systems of privilege and oppression (e.g., gender, race, class) as to be identifiable in everyday life and experience. This conceptualization of power resembles Foucault’s (1988): power is a moving network that can become stabilized in particularly dominant discourses and institutions. Experience is afforded some legitimacy but is also seen as a product of the power relations that have constructed it. In the same way, intersectionality draws attention to differences within the category “women” while also asserting some stability to gender as one of several key axes of oppression and exclusion.

Intersectionality has begun to usefully inform feminist analysis of environmental conflict and crisis. Due to its focus on context, a major challenge will be to “scale up” the insights of intersectionality to examine macro-level environmental phenomena. In the next section, I discuss how different theoretical understandings of gender have been employed in the current literature on environmental crisis and conflict, paying particular attention to the water sector.

3. Gender in Environmental Crisis and Conflict

Recent literature on gender and environment reflects and responds to these earlier theoretical developments. The ecofeminist and Women, Environment, and Development (WED) literature, for example, has been a locus for debates over essentialism. Some authors (e.g., Leach 2007) argued that ecofeminist work problematically asserts a biological and/or spiritual connection between women and the environment. Others argued this critique is based on an overly simplistic caricature of ecofeminism (Moore, 2008; Plumwood, 2000)². Work in WED was similarly criticized for asserting rigid gender roles “as natural, universal, and rooted in reproductive and subsistence activities such as small-scale agriculture and food processing and water and fuel collection, rather than shaped by historical, social and economic forces and gender relations” (UNEP, 2016, p. 4).

² For example, some work in ecofeminism evokes a materialist analysis by critiquing the gendered and ecological implications of capitalism. Ecofeminism also expanded ideas about gendered oppression and domination to consider humans’ relationship with ecology and animals, perhaps setting a precedent for intersectional analysis of interlocking oppressions (Plumwood, 2000).

Over the past two decades, two identifiable approaches to gender and environment have become prominent. Both bring new insights and approaches while drawing from previous feminist theories. Feminist political ecology (FPE) brought a gendered lens to the study of how social, political, and economic systems interact with the environment. Drawing from materialism, FPE examines how material and ideological factors shape (gendered) environmental knowledge and access to resources (Elmhirst, 2011; Rocheleau, Thomas-Slayter, & Wangari, 1996). Perhaps in response to earlier critiques of materialism as overly structural, in their foundational FPE anthology Rocheleau et al. (1996) emphasized grassroots environmental activism and agency while also clearly articulating the importance of intersecting oppressions to this emerging field. However, as recently as 2013 Mollett and Faria argued that a fully intersectional framework has yet to be taken up and that “Fpe continues to have an ambivalent relationship with difference” (p. 119).

A second body of work on gender, disaster, and climate change adaptation emerged in parallel. This research examines the gendered impacts of climate disasters and how gender shapes adaptation in households, communities, and government policy. Much of this literature has focused on the global South. Across these two related bodies of literature, the dominant focus continues to be how gendered ideologies and work roles affect women’s knowledge, experience, and interaction with environmental events and resources.

With the advent of these two approaches, debates shifted from ontological concerns to representational ones. Arora-Jonsson (2011) observed that women are often simplistically represented as either virtuous environmental heroes or as vulnerable victims of environmental crisis and conflict. Similarly, MacGregor (2010) questioned discourses that position women as disproportionately responsible for environmental protection through their social reproduction roles. Although the discussion has largely moved away from essentialist notions of women’s biological connection to nature, the suggestion that women interact differently with the environment (albeit due to social factors and roles) may sometimes still have universalizing effects. Contemporary research on gender and environment therefore faces the ongoing “analytical difficulty of recognizing and addressing widespread gendered inequalities and distributions of power over time and space, without reifying these differences as somehow natural or inevitable” (O’Shaughnessy and Krogman 2011, p. 136).

In response, some authors have drawn on the insights of poststructuralism to emphasize context-specificity, subjectivity construction, and changing power relations (Arora-Jonsson, 2011; Leach, 2007; Nightingale, 2006, 2011). Others have emphasized grassroots activism and agency. Although few studies in gender and disaster have explicitly identified as intersectional, attention to the intersection of gender, race, and class is evident and crucial—as seen in the starkly racialized, classed and gendered consequences of Hurricane Katrina, for example (e.g., Elliott and Pais, 2006; Weber and Hilfinger Messias 2012). In a recent review, Kaijser and Kronsell (2014) suggested the powerful potential of an explicitly intersectional approach for future climate change research.

A truly intersectional approach acknowledges that men and gender-diverse individuals are also affected by environmental crisis and conflict. “Gender” does not equate to “women”, and although men may largely benefit from gender inequality, their

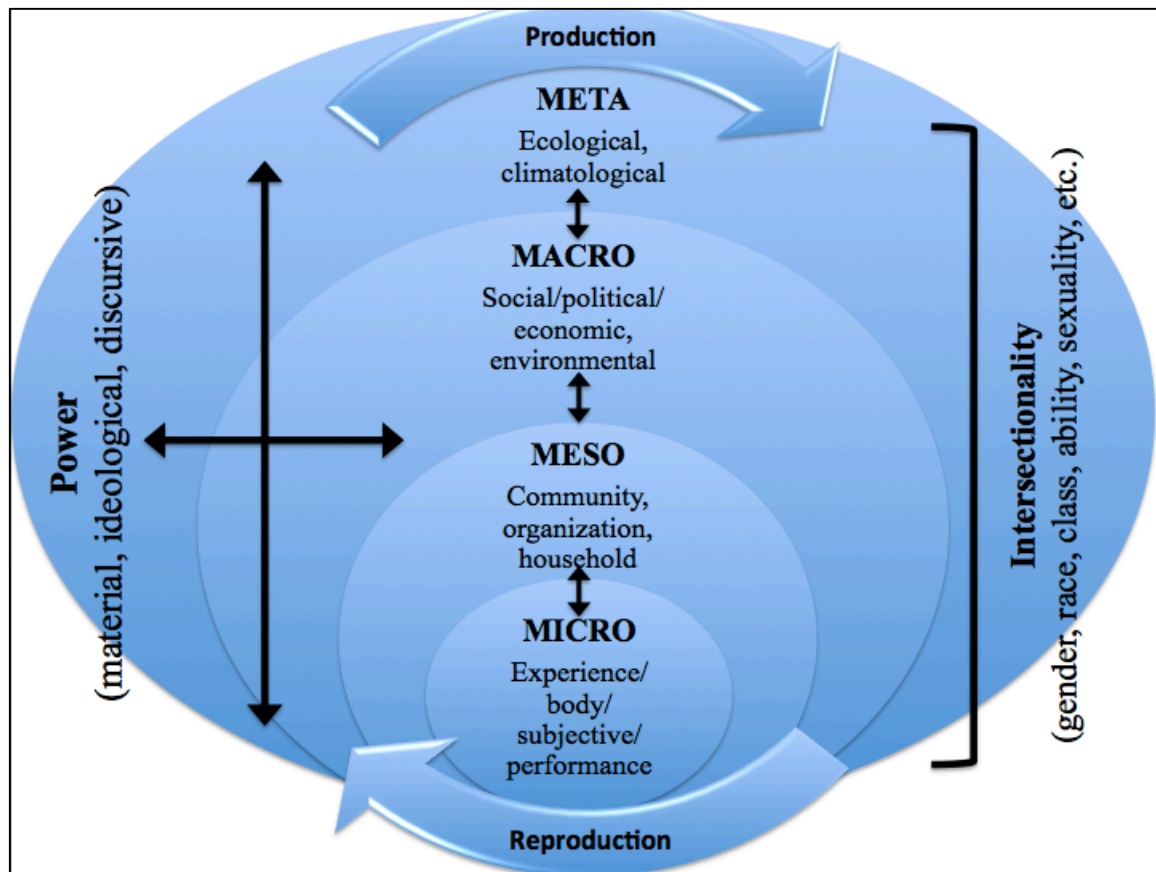
lives are still shaped in particular ways by gender, race, class, and other power systems. Attention to local contexts reveals that women and men in “risky environments” may actually have much more in common than “military, business interests, and administrative and political elites” whose interests drive environmental policy and disaster response (Enarson, 2014, p. 38). The focus on women (often as victims) has tended to ignore the ways in which men are both empowered and/or disempowered by gender relations in the environmental sector, resulting in men being portrayed in one-dimensional terms. Some research has identified the emotional and mental health implications of environmental disasters for men due largely to hegemonic masculinity (Alston, 2012; Alston & Kent, 2008; Fletcher & Knuttila, 2016). Enarson (2014, p. 37) pointed out that “dominant masculinity norms (including pressure to provide) rob too many men of identity, livelihood, and well-being, putting them at risk of self-harm.” Intersectionality’s attention to shifting power relations thus allows us to consider masculinities and their complex relationships with vulnerability, power, and/or privilege in the context of environmental crisis. Further, expanding conceptualizations of “gender” means paying attention to the experiences of gender and sexual minorities, whose needs are often excluded from even “gender sensitive” crisis responses focused solely on (heterosexual) women (Rumbach and Knight, 2014).

The key tension that emerges from all of this—and the challenge for future feminist work—is achieving a balance between context-specificity and the stubborn relevance of gender (albeit in different forms) across time and space. To be useful, a framework for gender research on environmental conflict and crisis will achieve this balance—allowing for dynamic shifts in scale, analysis of power in its multiple forms and at multiple levels, and intersectional analysis while not losing sight of the relatively stabilized material effects of gendered power and privilege. The framework should account for how environmental crises may reinforce or even destabilize gender relations, and should help identify possibilities for emancipation and positive change (Djouidi et al., 2016). In the next section, I suggest a conceptual framework or map for research that draws upon—and draws together—these insights from existing feminist theory and research.

4. Operationalizing Gender for Feminist Environmental Research

A comprehensive research framework for gender in environmental crisis and conflict must be built on previous insights while also responding to current debates and challenges. In this section I suggest a framework to operationalize gender in environmental research. It can be seen as a conceptual framework for research or simply as a map for asking questions about gender or plotting positionalities in the research. Conceptual boundaries are not always so clear-cut and levels of analysis do shift; therefore, the framework is intended not as a recipe or prescription for future research but rather as a tool or guide to recall our theoretical pasts and plan future research. Throughout this section I use examples from existing gender/environment literature to illustrate the framework’s applicability.

Fig. 1 A Research Framework for Gender in Environmental Crisis and Conflict



4.1. Scale and Nested Levels of Analysis

The issue of scale appears repeatedly, although often rather latently, in the gender/environment literature and in feminist theory generally. Shifting theoretical approaches to gender are underpinned by shifting scales of analysis. While biological essentialism emphasizes the very micro-level of biology as the origin of social relations, early materialist feminism tended to focus on socially constructed gender roles at the household level. Poststructuralisms brought a renewed emphasis on the micro level of the individual, this time as the site of gendered subjectivity construction. This is not to suggest that each scale of analysis is detached from other scales. Biological essentialists, for example, extend micro-level observations to the social level by arguing that biology is the origin of social behavior and relations. Materialist feminisms have situated household relations in the context of broader economic and political systems and poststructuralists link individual subject formation and performance to the broader operation of power and discourse.

In the environmental area, feminist political ecologists have articulated the importance of scale (Elmhirst 2011). Katz (2001a, p. 1229) crafted a topographical approach to understand the operation of “common political-economic and sociocultural processes”, such as globalization for example, through their discrete manifestations in diverse places. By consistently connecting situated experiences to broader structures—i.e., as manifestations of those structures that also feed back to reinforce or challenge them in particular ways—context-specific case studies can inform a larger interconnected picture of gender and environment. In their work on gender and natural resource

extraction, O'Shaughnessy and Krogman (2011) suggest that the complexity of gender can be understood by examining contradictions between the material and discursive at three levels: macro (e.g., broad political and economic trends), meso (e.g., communities and regions), and micro (e.g., subjectivity, identity). The examples cited by these authors cross the boundaries of macro, meso, and micro, suggesting the need for analysis within and across levels.

In the proposed framework (Figure 1), nested levels are a reminder that phenomena are contextualized within particular historical, social, political, economic, and ecological systems. Phenomena at different levels influence each other: macro-level phenomena shape meso- and micro-level phenomena while these smaller-scale phenomena can also return to challenge or reinforce the macro levels—for example, through collective agency or the poststructuralist idea of repeated performance.

Environmental conflicts and disasters may be localized or widespread. Due to local dynamics, a similar crisis may manifest very differently in different locations. In Canada for example, predominantly white communities (such as the northern oilfield city of Fort McMurray, which experienced a full-scale wildfire evacuation in 2016) may experience wildfire disaster differently than northern First Nations communities due to socioeconomic disparities, cultural and spiritual factors, racism in host communities, and histories of colonization (Scharbach and WalDRAM 2016). In their analysis of the 2011 evacuation of Hatcher Lake Denesuline First Nation in northern Saskatchewan (Canada), Scharbach and WalDRAM (2016) noted how “pre-existing cultural patterns, combined with historical experiences—especially those involving the colonizer’s state structures and services” affected the evacuation experience, especially when evacuation agencies failed to keep traditional family units together. The nested structure of the proposed framework (Figure 1) allows us to link these differential experiences to broader structures (e.g., histories of colonization) while also not reducing agency (e.g., Indigenous knowledges) to the realm of the “local” only (Cameron 2012). Further, the effects of a localized conflict or disaster may vary dramatically between households and between the individuals within them. At all levels, conflicts are imbued with power and shaped by intersecting forms of privilege and marginalization.

4.1.1. The Meta Level (Ecology, Climate)

Drawing from ecofeminism, the meta level shows that all other systems are necessarily situated within, and dependent upon, the ecological system. This reminder is particularly important in an era of neoliberal economics that fails to recognize environmental limits to production and treats environmental consequences as “externalities”; hence, in this framework production is situated inside the ecological system although affecting all levels (Fig. 1). Further, widespread ecological problems are not necessarily solvable by any single macro-level system. For example, climate change cannot be mitigated only by political or technological solutions; rather, it requires a combined approach involving all sectors, all of which are dependent for their existence on ecology. Ecological issues also extend beyond the realm of individual states at the macro-level.

Just as the ecological system affects human systems, human systems also affect the ecological system; for this reason, power runs in both directions. Drawing on an ecofeminist or materialist perspective, power is construed here as fairly stable (e.g., the power to affect ecology positively or negatively), while a more poststructuralist

approach—i.e., power that constructs and constitutes ecological spaces (Nightingale, 2011)—is discussed below at the macro level. In climate change research, the significance of the ecological level means examining gendered aspects of mitigation as well as adaptation. Humans’ relationship with the natural environment (e.g., management of disasters) reflects gendered practices and behaviours but, as discussed below, we also construct the environment around us in gendered terms (e.g., “Mother Nature”), which shapes our ideas about how we interact with and control that environment.

4.1.2. The Macro Level (Social, Environmental, Political, and Economic Systems)

The macro level is the realm of human systems: broad social, environmental, political, and economic systems. The ordering of these items is significant. Although all human systems depend on ecology, and although ecology exists outside human systems, placing the social as prior to the environment here illustrates that social discourses and value systems determine how “the environment” is constructed, taken up, and valued in the social body³. Placing the social first also emphasizes the fact that economies are social and political constructs. This reminder is important in an era of neoliberal discourse that anthropomorphizes economies and markets by falsely presenting them as beings with independent agency and even omnipotence (*viz.* many contemporary business newscasts, which repeatedly wonder “what the market is doing” or assert that “markets are responding”, as if markets existed independently of human activity). Events at the macro level move upward to affect ecology (e.g., economies built on resource extraction and their associated policies) while also determining the access of “downstream” communities, households, and individuals to necessary resources (e.g., water rights policies that determine who has access to water and when).

The focus on systems draws from materialist approaches such as feminist political economy and feminist political ecology. Macro level systems, such as environmental and climate change policy systems, are often seen as gender-neutral; therefore, scholars working from a materialist approach have worked to “gender” these macro systems. For example, although often presented as gender-neutral, international trade policies have gendered and environmental effects (Fletcher, 2015). These gendered effects can be identified at this level and at other levels.

The issue of universalization rears its head at this level. While gender analysis of macro-level crises and conflicts often relies on generalized facts about men and women and oversimplified binary understandings of sex/gender (UNEP, 2016), more sex-disaggregated data are still needed to fully understand the position of women, men, and people with non-binary gender identities in macro-level environmental politics and organizations (Seager, 2015). Basic data will facilitate deeper gender analysis. The macro level is also the realm of historical, political, economic, and ideological events that have shaped gendered race and class relations at all levels – for example, histories of colonialism and their ongoing effects (Mollett & Faria, 2013). As long as other contextual levels are considered in our analysis to avoid oversimplified universalization,

³ The distinction here between ecology (as nature and ecosystems that exist outside of human construction, but which humans affect) and environment (as humans’ constructed ideas about, and engagement with, ecology and the natural world) draws on critical realism and Carolan’s concept of three natures (Carolan & Stuart, 2016).

locating gender and environmental concerns within broader political-economic systems is crucial for debunking assumptions of gender-neutrality in these systems. Again the importance of nested and interconnected levels is evident.

4.1.3. The Meso Level (Community, Organization, or Household)

At the meso level, gender researchers can examine how communities, organizations, and households engage with environmental resources and cope with environmental crises. These interactions include recourse to formal and informal social capital, which is determined by social differences and inequalities. At this level researchers remain concerned about the absence of sex-disaggregated data, for example, to understand the representation of women (and men) in community water-management organizations or environmental groups, but analysis goes deeper to understand power relations in whose voices are heard and how spaces are structured. Other topics of interest here are environmental education and management programs or the overall feminization of labour in the environmental non-profit sector as organizations struggle for resources in times of government austerity.

Communities and households may sometimes be mistakenly viewed as cohesive units (for example, when policymakers collect input from “community stakeholders” but ultimately distil diverse voices into a single opinion). Resource conflicts can occur even within communities and households; therefore, we are reminded to “lift the roof off the household” to examine intra-household power relations and conflicts (Seager, 2014, p. 275). For example, depending on context, domestic and sexual violence may increase in the wake of environmental disasters (e.g., Clemens, Hietala, Rytter, Schmidt, & Reese, 1999; Sommer, Ferron, Cavill, & House, 2015). Intra-household conflicts over food or water allocation during shortages may cause some family members, such as women (e.g., widows, young women) or gender/sexual minorities within families, to go without (Balgos, Gaillard, and Sanz 2012; Juran & Trivedi, 2015). While attentive to these issues, meso-level research should also examine bonds of cohesion within households and communities, such as communities working together against environmental injustice (for example, members of the Standing Rock Sioux community of North Dakota, USA, who at the time of writing are resisting the placement of an oil pipeline on their lands). Researchers should also be attuned to situations where resource shortages or conflicts may actually cause renegotiation of gender roles (Wutich, 2009) or where water-related gender roles are relatively equal (Hawkins & Seager, 2010).

4.1.4. The Micro Level (Experience/Body/Subject/Performance)

Despite the shift from biological to social understandings of gender, the body remains an important site for analysis and intervention during and after an environmental crisis. At the biophysical level, reproductive and bodily differences produce different needs. In the wake of an environmental disaster, a one-sex-fits-all model is insufficient. Sex-specific hygiene and reproductive healthcare services (Enarson, 2014), facilities and services for trans* people (Balgos, Gaillard, and Sanz 2012), and resources for men (who may be less likely to access healthcare services due to ideologies of masculinity), become urgently necessary. Sexed bodies also determine access to physical resources and spaces. In some cultural contexts, menstruation taboos may affect women’s access to water or shelter (Nightingale, 2011); in other contexts, restrictions on women’s movement or

access to public spaces may prevent them from promptly evacuating during a disaster (Juran & Trivedi, 2015).

Gender ideology constructs the body in certain ways—in this way ideologies and discourses can be more “real” than the body itself. Viewing the micro level as nested within other structures prevents the essentialist reification of bodies as the sole cause and key site of gender inequality and difference. For example, reports from international organizations often show that lack of access to improved sanitation can put girls and women at risk of sexual harassment and assault as they seek places to defecate and urinate (Sommer et al., 2015); similarly, lack of access to appropriate sanitary facilities can prove dangerous for trans* people in a multitude of contexts. It is social conditions, not bodies themselves, that create and construct these situations—but nonetheless, these situations have serious physical effects at the bodily level and certainly justifies the need for appropriate sanitation services. However, considering the problem in its social context reveals deeper roots: (a) gendered ideologies and discourses that construct certain (public) spaces as unsafe for female, male, or trans* bodies and (b) intersecting oppressions of class, caste, and race that may cause some to have access to sanitation while others do not. Although it is important to acknowledge the biophysical needs of bodies, it is equally important to acknowledge the reality of gendered, racialized, and classed social relations and how they affect bodies and individual subjectivities.

From a poststructuralist perspective, the micro level is a site of gendered and racialized subjectivity construction, which is then reproduced through performance. Research at the micro level can identify the operation of gender performance and how these performances both reinforce and challenge gendered discourses. According to O’Shaughnessy and Krogman (2011), analysis at this level can reveal contradictions and challenges to dominant discourses. Micro-level analyses are useful for questioning “stylized facts” about gender and environment, examining instead how gender is reproduced or challenged in everyday activity, often in ways that are inseparable from race, class, and other identity categories. Indeed, Mollett and Faria (2013, p. 119) pointed out that not only gender, but also “race and racialization operate through everyday practices where struggles over rights and resources are spatialized in reference to and through presumed essence within racialized and gendered bodies”.

The deconstruction and denaturalization of gender/sex binaries creates space for diverse gender identities. Future research should include experiences of gender non-conforming individuals; for example, how does oppression based on gender identity affect people’s access to resources and supports during an environmental crisis? This question requires a multi-scale approach that examines resource allocation at other levels (e.g., economic capital, social capital). In a similar vein, the intersectionality framework draws attention to sexuality, where homophobia and transphobia may similarly affect one’s experience of an environmental crisis. New research has drawn attention to the experiences of LGBTI (lesbian, gay, bisexual, trans*, and intersex) individuals during crisis and also emphasizes the need for intersectionality within this group (Dominey-Howes, Gorman-Murray, & McKinnon, 2014; Gorman-Murray, Morris, Keppel, McKinnon, & Dominey-Howes, 2016; Leap, Lewin, and Wilson 2007). Although it is important to examine experiences of exclusion, such research should also consider the agency and contributions of LGBTI people during environmental crisis. Balgos, Gaillard,

and Sanz (2012), for example, highlight the participation of *warias* (who are biologically marked as male but adopt a feminine gender identity) in post-disaster efforts in Indonesia.

Research focused at the micro level is crucial for capturing the everyday experience of actors in the environment. Everyday experiences in this framework are often products of macro and meso level events and phenomena. For example, in their research with farmers during Australia's ongoing drought crisis, Alston and Whittenbury (2013) revealed how changes in gendered subjectivities caused by environmental crisis led to negative consequences for mental health and wellbeing, particularly (in this case) for farm men. Although Alston and Whittenbury do not identify specifically a scalar focus in their work, they examine the effects of large-scale structural constraints (i.e., drought, public policy) interacting with gendered roles at the household level, and how these further shape gendered identity at the micro-level.

From a materialist perspective, then, individuals' experiences provide a crucial window into the lived effects of broader systems in everyday life. However, poststructuralist insights remind us that these experiences are "situated" and never fully representative of truth or reality (Haraway, 1988). Although experience is not a neutral or objective reflection of the world, it can reveal the operation of power in certain contexts. Scaling these insights to other levels reveals what Foucault (1988, pp. 92–93) referred to as temporarily stabilizations in ever-fluctuating systems of power. Gender, race, class and other axes of oppression may be particularly enduring examples of such power stabilizations (or what materialists would see as stable systems) that interact to produce experiences.

4.2. Power

In the framework (Figure 1), power is conceptualized as fluctuating and operating both "top down" and "bottom up" across multiple levels; this prevents an overly structural approach to power that ignores agency. To do otherwise would be to engage a victimizing discourse by ignoring the agency (however limited it may be) that women and other marginalized groups have. Through intersectionality, we are reminded to explore the multiple contextual effects produced by intersecting axes of power and privilege; by asking how this issue affects not just "women" but for example, low-income versus high-income women, we avoid a universalizing and generalizing suggestion of a singular "women's experience". Relatedly, power also operates horizontally (as indicated by the horizontal line in Figure 1); for example, at the meso level social capital and mutuality within communities or groups is often crucial during an environmental crisis, but power relations within or between such groupings can also lead to exclusion based on difference—this has been called the "dark side" of social capital (Field, 2008).

Power here is seen as material (e.g., manifested in material access to, and control over, environmental resources), ideological (e.g., as naturalizing particular material and social relations of domination) and discursive (e.g., produced and reproduced through knowledge, representation, performance). Thus, the notion of power draws from both materialist and poststructuralist insights. However, the framework can account for multiple conceptualizations of power—for example, the resistant discourse of a grassroots community group (discursive) seeking to obtain environmental resources (material) (it is also important to note that power may be differentially allocated even within such groups as intersectionality comes into play at the meso level). Or, power can

be constitutive of gendered subjectivity at the micro level, shaping how individuals understand their own access to material resources and perform accordingly—these subjectivities may be simultaneously co-constituted by race, class, and other intersecting notions of identity. Although the poststructuralist approach tends to reject the notion of a free-thinking or agential subject, it does allow for (often unintentional) moments of challenge and contradiction (Butler, 1990).

4.3. Intersectionality

Intersectionality applies at every level in the framework. Researchers should always ask how gender combines with other systems of power and privilege to co-produce particular situations or experiences. This approach is responsive to feminist critiques of universalization, which suggest careful and contextual articulations of gender. At times it might be accurate to speak of women as distinct from men, while at other times it might simply feed into harmful notions of an essential women's experience that ignores other equally important facets of social oppression. For this reason, gender is not prioritized or set apart in the framework as any kind of constant; rather, it is always (re)produced together with other aspects of identity, such as race and class (Mollett & Faria, 2013).

The multi-level approach helps to scale up the intersectional analysis, avoiding the problem of a literature full of numerous detailed and descriptive but disconnected case studies. Intersectional analysis can occur at multiple levels. For example, a hypothetical study on gender and environmental conflict in Canadian mining communities might find that Indigenous and non-Indigenous women have very different experiences and understandings of their role as subjects within environmental spaces (micro level). Scaled up, these differential understandings may reveal how dominant Eurowestern understandings of nature and environment (e.g., as a resource to be controlled, dominated, and used) become embedded in political and economic systems (macro level), thus negatively affecting ecosystems (meta level) and disregarding Indigenous knowledge systems with different understandings of nature and gender (meso level).

4.4. Production and Social Reproduction

Production and social reproduction run through multiple levels of the framework and also (re)produce material and discursive relations of power. Examined at different levels, production and reproduction can be seen as social, gendered, and environmental issues as well as economic ones. Production (i.e., the realm of economic activities considered to add “surplus value” under capitalism) is intentionally placed near the top to illustrate that many of our current production systems are ecologically degrading. While social reproduction is most “visible” at the micro level of everyday life, its importance in reproducing systems means it is relevant at all levels. The circular arrows between production and reproduction indicate the interconnection of these two realms, which change together and influence each other (Di Chiro, 2008; Katz, 2001b).

Conflicts over water and other environmental resources may involve conflicts between productive and reproductive uses. Such conflicts are imbued with power; for example, the disproportionate valuing of (masculinized) “productive” activities over (feminized) reproductive ones. Class, caste, and other power dynamics may intersect here, providing some individuals with disproportionate access to resources for productive

purposes while others lack resources for basic daily survival (Crow & Sultana, 2002). For example, Ahlers and Zwarteveen (2009) argued that water rights systems are premised on neoliberal assumptions of individualism and private property that ultimately exclude certain individuals and groups. The devaluation of social reproduction may be a life-or-death issue for women during disasters, as women stay back to care for those who cannot evacuate or as women's lives are seen as less valuable (Juran & Trivedi, 2015). However, in a similar way, expectations of men's heroism (associated with often dominant conceptions of men's agency and notions of men as economic providers and protectors) may intensify men's vulnerability during environmental disasters (Enarson, 2014). Context again is crucial.

Di Chiro (2008, p. 285) argued that "*all environmental issues are reproductive issues...environmental issues are about fighting for and ensuring social reproduction*". Social reproduction uses material environmental resources but also depends on the sustainability of these resources at the meta level. It involves the sustainability of communities and households, which has implications for the meso level and environmental justice (Di Chiro, 2008). Relatedly, social reproduction involves the reproduction of environmental ideologies and knowledge systems. In this way, social reproduction is a site where understandings of "the environment" as a discursive construct are reproduced or changed along with gendered subjectivities at the micro level.

5. Conclusion

In this chapter I have suggested a conceptual framework for future research on gender in environmental conflict and crisis. The primary goal of this framework is to encourage balance between highly context-specific analyses versus overly structural treatment of gender in the literature. This need for balance is, in many ways, a product of earlier debates in feminist thinking about gender. Early feminist critiques of essentialism led productively to denaturalized understandings of gender—to the understanding that gender is not biologically determined but social in nature. More recently, critiques of universalization in gender and environment literature have prompted more contextualized, intersectional, and less binary analyses. Yet, gendered trends remain and must be acknowledged. Therefore a major challenge for future research will be to "scale up" the insights of intersectionality to examine macro-level phenomena and systems.

The multi-layered approach presented here stresses the interconnection of phenomena at the meta, macro, meso, and micro levels (Figure 1). Intersectional analysis of environmental, economic, political, and social issues is emphasized at each level while also situating these issues within ecological frameworks. Analysis of issues at all levels involves a consideration of power in its material, ideological, and discursive forms. Although it is unlikely that any singular study will address all components of the framework, situating future research within the framework will help to clearly identify ontological and epistemological assumptions, positionalities, and areas of focus. Such attention to the "situatedness" of our research may help avoid the problems of over-generalization while facilitating connection between highly contextualized studies.

The framework is based on the contributions of (and debates between) several major theoretical approaches to gender developed over the past half-century. Each approach built in some way on the previous ones. While early materialist feminists challenged biological essentialism by locating gender's origins in material (social)

conditions, current work in feminist political economy/ecology has brought gender analysis to the level of political, economic, and ecological systems to examine how these systems simultaneously shape, and are shaped by, gender. Poststructuralism questioned the focus on stable systems by drawing attention to the micro level, where gendered and racialized subjectivities are (re)produced through discourse and performance.

Intersectionality draws upon materialist notions of somewhat-stabilized power systems (e.g., race, class, gender, sexuality) and poststructuralist attention to difference, context, and fluidity to show how intersecting forms of power and privilege co-construct experience in given contexts. Epistemologically, intersectionality values experience as a window into the complex operation of power and privilege.

In this chapter I have drawn upon—and drawn together—contributions from these existing feminist theories to propose a research framework for gender and environmental crisis/conflict. Taking a multi-level intersectional approach that accounts for context-specificity while also recognizing ongoing oppression caused by rigid gender binaries, the proposed framework encourages environmental research to move beyond just “women” and “men”.

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