Indigenous masculinities in a changing climate: vulnerability and resilience in the United States

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Gender shapes Indigenous vulnerability and resilience due to the coupled social and ecological challenges of climate change in Indigenous communities in the United States (Maynard, 1998; Grossman and Parker, 2012; Bennett et al., 2014; Maldonado et al., 2014; Whyte, 2014). Despite its relevance, little research has analyzed the ways in which gender shapes climate change experiences. Even less research has focused on the impacts of climate change on Indigenous masculinity. With this backdrop, we foreground Indigenous men and masculinities with respect to climate change vulnerability and resilience.

We open this chapter by briefly describing pre-contact Indigenous conceptions of gender in the US, followed by a discussion of how settlement has affected gender roles, relations and gendered traditional knowledge in Indigenous communities. We then describe some of the ways in which Indigeneity and masculinity are intersecting (or may intersect) with climate change in four key arenas: health, migration and displacement, economic and professional development, and culture. We follow this with a discussion of Indigenous men's roles in political resistance and climate change resilience. We conclude by summarizing the key implications for Indigenous climate change initiatives and for the ongoing reconstruction and reassertion of Indigenous gender identities. This discussion draws on peer-reviewed and grey literatures in English focusing on the United States and Canada, and builds on a 2015 literature synthesis by the authors in which we explored how gendered Indigeneity may influence climate change vulnerability and resilience in Indigenous communities in the United States (Vinyeta et al., 2015).

Colonialism and gender systems in Indigenous communities in the United States
Gender has historically played an important role in defining social structure and sociocultural responsibilities within Indigenous communities in North America (Kuhlmann, 1992; Jacobs et al.,1997; ; Roscoe, 1998; Anderson, 2005; McGregor, 2005). Traditionally, responsibilities to land, water, plants and animals were gendered. In some Indigenous communities, women were responsible for managing and harvesting plants and engaging in agricultural activities, whereas men were responsible for hunting and/or fishing activities (Kuhlmann,1992; Anderson, 2005; Scarry and Scarry, 2005; Colombi, 2012). This gender system positioned men and women differently as stewards of key environmental resources with gendered knowledge as well as gendered connections to the landscape.

Prior to the European colonization of North America, many Indigenous communities were characterized by egalitarian relationships between men and women, as well as by

women's leadership (Allen, 1992; Roscoe, 1998; Wagner, 2001; Kauanui, 2008; Weaver, 2009; Brave Heart et al., 2012). The institutionalized presence of more than two genders (Roscoe, 1998; LaFortune, 2010; Morgensen, 2011) and minimal gender violence (Deer, 2009; Weaver, 2009; Brave Heart et al., 2012) further distinguished gender systems before colonization.

The gendered responsibilities of gender-variant individuals (known today as Lesbian, Gay, Bisexual, Transgender, Two-Spirit or Queer [LGBTTQ] persons) varied by community. Tribes had their own linguistic terminology for gender that often denoted specific names and responsibilities. In some cases, gender-variant individuals preferred and were respected for excelling at traditional activities and responsibilities of a sex not their own (Roscoe, 1998). Yet gender-variant individuals did not necessarily abandon the traditional responsibilities ascribed to their biological sex; sometimes, they pursued both traditionally masculine and feminine activities and responsibilities (Farrer, 1997; Roscoe, 1998).

In the aftermath of a complex colonial history, and in its midst, Indigenous peoples strive to carry out, as well as reconstruct, traditional gender roles and responsibilities as part of their resurgence as self-determining cultures and nations (Allen, 1992; Calhoun et al., 2007; Green, 2007; Mayer, 2007; Kauanui, 2008; Tengan, 2008; Goeman and Denetdale, 2009; LaFortune, 2010; Rifkin, 2011). Indigenous leadership on issues ranging from sexual violence to climate change is often driven by gender-based activism and gender-based responsibilities (McGregor, 2005; Barker, 2008; Bruce and Harries, 2010; Kenny and Fraser, 2012; Whyte, 2014). As such, climate change initiatives are an important context for Indigenous reconstructions of meaningful and healthy gender roles and relations.

Indigenous men and masculinities in a changing climate
While far from monolithic, the norms and practices of some Indigenous masculinities may make men and boys particularly vulnerable to negative climate change impacts. These vulnerabilities are most likely when the responsibilities and roles of traditional Indigenous masculinities are already compromised by colonization, and when men are further compromised by the ways in which communities adapt to climate change. In a study from the University of Oregon on the impacts of environmental change on Karuk masculinity, Norgaard and her colleagues (forthcoming) write:

> While changing environmental conditions affect the gender performances of women and men in unique ways, they appear to be particularly damaging for men. ... Male identified activities of hunting and fishing have been more acutely impacted by environmental decline and state regulation.

Indigenous men must strive to disentangle their masculine identities from Western forms of patriarchy that oppress Indigenous women and LGBTTQ persons, while also acknowledging that in some cases traditional masculinities are associated with domination and privilege. Others suggest that claiming traditional powers through exercising traditional masculine roles and responsibilities may represent a form of

resurgence which, in Indigenous communities, is critical both to political sovereignty and to cultural and ecological preservation (Norgaard et al., forthcoming; Tengan, 2008).

These tensions bear directly on the gendered approaches to climate change that are profoundly affecting Indigenous communities in North America and beyond. As these issues are underexplored in current literature, we discuss below the climate change vulnerabilities and opportunities for resilience experienced by Indigenous men, and call for further study to better understand the issues facing Indigenous peoples of all genders.

What is at stake?
Many Indigenous livelihoods are dependent on the interrelationships between environment, economy and culture. Donatuto et al. (2014) describe six Indigenous community health indicators to examine community health and well-being in the context of climate change. These indicators, which provide a framework for understanding Indigenous livelihoods, are community connection, natural resource security, cultural use, education, self-determination and balance. We turn now to the impacts of climate change on health, economy and culture in order to elaborate on the many ways that livelihoods among indigenous men are impacted by climate change.

Health
Within American Indian communities, research suggests that men's health is particularly vulnerable. Brave Heart et al. (2012) report that death rates of American Indian males exceed those of females for every age group up to age 75, primarily due to such health disparities as cardiovascular disease, cancer and diabetes, as well as to disproportionately high rates of suicide, substance abuse and mental health disorders. In the broader literature on gender and disaster, a 2010 study (Krug et al., 1998) found that the suicide rate increased 21.8% for men as compared with 14.5% for women during the types of disasters and years for which the study researchers found significant post-disaster increases in suicide rates. Climate change may exacerbate these vulnerabilities if it contributes to the driving forces behind these health disparities.

Indigenous men may face risks in the event of severe weather or natural disasters, particularly if they associate their masculinity with heroic acts and risk-taking. Rhoades (2003) has described the prevalence of risk-taking behaviors among American Indian men, and points out that American Indian men are more likely to die from accidents than American Indian women. Explanations for this include loss of cultural identity, loss of traditional male roles, failure of primary socialization and unresolved grief from historical trauma (Evans-Campbell, 2008). Indigenous men are also less likely to utilize outpatient and inpatient services than Indigenous women (Rhoades, 2003), paralleling international trends indicating that men and boys are less likely to seek help for mental health issues (World Health Organization, 2011).

Men are also vulnerable to accidents if the environments in which they carry out their traditional activities (including hunting, whaling and fishing) become more hazardous as a result of climate change. This trend is manifest in the Arctic, where Alaska Natives

and other Indigenous groups face unusual risks due to the unpredictable nature and thinning of sea ice on which they traditionally hunt (Ford and Smit, 2004; McBeath and Shepro, 2007). Climate change also threatens to raise water temperatures, thereby negatively affecting cold-water fish such as salmon and trout. Tribes in the Pacific Northwest have already had to cope with reduced salmon availability as a result of hydroelectric dams, pollution and overharvesting (Norgaard, 2004; Hanna, 2007; Johnsen, 2009). Climate change may further challenge tribal access to these critical species, further compromising men's traditional roles, knowledge and activities.

For Indigenous men whose health disparities relative to other populations are notable, access to traditional foods that promote health is particularly important. Climate change may affect the availability and quality of traditional food sources, requiring adaptation strategies that will help Indigenous communities retain access to critical plant and animal species (Lynn et al., 2013). The stewardship, harvest, preparation and consumption of traditional foods involve gendered cultural responsibility and traditional knowledge, calling for consideration of gender in food sovereignty movements (Kuhlmann, 1992; Anderson, 2005; McGregor, 2005; Scarry and Scarry, 2005; Marshall, 2006; Bruce and Harries, 2010; Colombi, 2012).

International research indicates that men's mental health may be particularly vulnerable to environmental changes that affect the places and resources critical to masculine identities, especially those closely tied to livelihoods (Kukarenko, 2011; Norgaard et al., forthcoming; WHO, 2011). The stress, loss and cultural changes associated with colonization, combined with the introduction of alcohol, have led to unusually high rates of substance abuse, suicide and violence within Indigenous communities (Maracle, 1996; Ross, 1998; Mokuau, 2002; Strickland et al., 2006; Weaver, 2009). In her analysis of gendered climate change impacts on human health in the Arctic, Kukarenko (2011, "Arctic research," para 1) notes:

> The disruption of traditional roles for men has been identified in a number of studies as a reason for profound problems in male identity and loss of men's self-esteem, which, in turn, leads to a lot of psycho-social disorders among men, including higher suicide rates and alcoholism.

Indigenous men's mental health vulnerabilities can be particularly detrimental to Indigenous communities if they exacerbate, or fail to address, gender-based violence and oppression that harms Indigenous women and LGBTTQ persons. Indigenous masculinities inevitably interact with, and are shaped by, Western forms of patriarchy and patriarchal oppression that disempower those with feminine identities. Indigenous women experience some of the highest rates of violence of any women in the United States, most often at the hands of non-indigenous men (Amnesty International USA, 2007; Weaver, 2009), making them particularly vulnerable to the escalating rates of domestic and sexual violence that have been documented after natural disasters or weather-related crises (Nellemann et al., 2011; WHO, 2011; Alston, 2013). In addition, Sweet describes how warming of the circumpolar region has increased interest in resource extraction, and the corresponding economic growth has increased Indigenous

women's risk of being trafficked (2014). More research is needed assessing the impacts of climate change on Indigenous men and on the risk to boys of being trafficked into sex work or forced labor.

Migration and displacement
Lee (2003) has conducted research in Alaska suggesting that Indigenous men migrating or being displaced from their homelands to more urban settings may find it particularly difficult to maintain their traditional relationships and knowledge. The following description is revealing:

> Women can forage for berries near the roadsides outside Anchorage, or gather clams along the shoreline of the Kenai Peninsula, but when a man moves from the village to the city he forfeits access to, and specialized knowledge of, the hunting and fishing areas he has known all his life. (Lee, 2003, pp. 586–587)

Chávez (2011) describes the challenges faced by Southern Arizona migrants in the population she terms LGBTQ. LGBTQ patients are challenged in finding healthcare providers who can adequately meet cultural needs while simultaneously meeting unique health needs. Another obstacle included finding adequate housing in a new location that will not discriminate based on race, migrant status, gender or sexual orientation. Chávez noted that when searching for housing, LGBTQ migrants frequently rely on family and friends. This can be difficult when social networks are altered by displacement or migration. Further, homelessness is higher among LGBTQ youth as "somewhere between 20% and 40% of homeless youth are LGBTQ" (Ray, 2006, cited in Chávez, 2011, p. 204). While Indigenous LGBTTQ people's lived experiences may be different from those of LGBTQ migrants and other LGBTQ youth, these trends serve to identify some of the challenges that Indigenous LGBTTQ peoples may face when migrating or being displaced from their communities.

Economic and professional development
While international trends indicate lower rates of education and migration among women, some Indigenous communities in the US are experiencing the opposite. Indigenous men are affected by colonial trends that both collapsed traditional economies but also barred Indigenous persons from entering new colonial economies. Kleinfeld and Andrews state that "the gender gap favoring females in postsecondary education is both large and increasing among Alaska Natives." This trend has implications for Alaska Native men, who are experiencing more unemployment, more social challenges, lower rates of marriage, and lower rates of political participation (Kleinfeld and Andrews, 2006, p. 433).

The traditional male role among Alaska Natives emphasized skills and virtues for which schooling is irrelevant but which were vital to the community, making the difference between survival and starvation. These traditional skills remain important, partly in providing food from the land but also in providing a sense of cultural continuity and stability. At the same time that the transition to a mixed-wage and subsistence economy is making hunting skills less vital to sheer survival, the communication and quantitative

skills that schools provide are becoming more essential to the flourishing of Indigenous communities (Kleinfeld and Andrews, 2006).

Lee (2003) suggests that Alaska Native women are migrating to urban centers with more frequency and for economic reasons. Research is needed to determine how these trends are affecting Alaska Native men socioeconomically, and to gauge whether men's vulnerabilities will be exacerbated as climate change continues to alter the resources and conditions of traditionally masculine roles and livelihoods.

The economic impacts of climate change may be especially difficult for Indigenous LGBTTQ persons for whom gender- and race-based oppressions may intersect, doubly challenging their ability to find employment. As Sangganjanavanich (2009, p. 128) states, "Although there are laws to protect disadvantaged groups such as women, ethnic groups, and sexual minorities against employment discrimination, this discrimination is still present in various employment settings." For transgender individuals, retaining a job or seeking new employment can be a particularly challenging feat (Sangganjanavanich, 2009) and one more likely to be confronted as employment options are altered by the impacts of a changing climate.

Culture
Wildlife is vital to men's traditional cultural responsibilities in many Indigenous communities in the US (Marshall, 2006; Colombi, 2012). For the Nez Perce Tribe, for example, salmon fishing is a defining characteristic in the community at large but especially central to men's traditional cultural roles and relationships (Marshall, 2006). Writing on the importance of salmon fishing for Nez Perce men and boys, Marshall observes:

> Task groups devoted to fishing are composed primarily of males and are important for developing gender identity and demonstrating a man's ability to contribute to the community. Task groups are significant for teaching young men basic Nez Perce values and world views; socializing them into adult male roles; teaching them many practical arts; and educating them in family, community, and tribal history. (2006, p. 773)

For Indigenous men who are displaced or forced to migrate away from their tribal lands, exercising traditional cultural practices may be particularly difficult. This in turn may challenge the continued use, adaptation and transmittance of gendered traditional knowledge that comes with continued relationships with culturally vital species (Lee, 2003).

In preparation for climate change impacts, some tribes may choose to encourage tribal members, particularly within the younger generations, to step outside traditional gendered responsibilities and learn skills and knowledge that would have traditionally been the responsibility of other genders (Swinomish, 2010; Jacob, 2013). For example, the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) are working to

preserve cultural practices and skills surrounding traditional foods by encouraging men and women to share nontraditional gender responsibilities (Swinomish, 2010, p. 25):

> Historically, the men harvested and presented the salmon and the deer. The women collected and presented the roots and berries. Today, because climate change is already affecting the availability of foods, some Umatilla tribal members teach their sons and daughters to collect both foods.

Indigenous LGBTTQ persons who identify as masculine may exercise their gender identities in a variety of ways.

> In many cases the traditions of gender variance have been forgotten or repressed. Most of the data indicate that very few individuals who live in the role of the opposite sex and who other members of their community classify as belonging to an alternative gender still live on reservations. (Lang, 1997, p. 108)

Yet Indigenous LGBTTQ identities are being progressively reasserted and strengthened, as is illustrated by the rise of organizations such as the Bay Area American Indian Two-Spirits (BAAITS, 2015).

Political resistance and resilience to climate change: highlighting men's roles
The role of Indigenous masculinities is critical to consider in strengthening community resilience. In a study of the impacts of salmon decline in Northern California on Karuk masculinity (Norgaard et al., forthcoming), the authors explain that Karuk fishermen's ability to harvest fish for their families, their elders and the broader community is a "fundamental expression of the continuity of their culture" as well as of masculine identity. Karuk fishermen not only meet their responsibilities to their families, community and to the fish themselves; they are, in effect, resisting colonial ecological violence and asserting Karuk cultural presence in the river basin. Therefore, when the ability to fish is limited, not only is Karuk masculinity compromised, but the assertion of Karuk sovereignty and expression of resistance to colonialism is also compromised.

Tengan (2008) provides insight into how settler colonial forces have diminished masculine identities, in this case among Native Hawaiians, and analyzes the value of and circumstances leading to the growth of Hale Mua, a group formed by Native Hawaiian men for the purpose of reconstructing and reasserting Indigenous masculine identities. According to Tengan, Hale Mua not only serves to strengthen men's connection to the land, to each other, to their masculine identities and to their culture but also contributes to broader cultural revitalization efforts that strengthen Hawaiian nationalism. In this sense, the changes wrought through climate change affect traditional masculinities in ways that increase both vulnerability and resilience.

These instances illustrate Indigenous masculinities as a complex set of gender roles and responsibilities that have been (and continue to be) compromised by colonial forces, and still play a critical role in Indigenous resurgence and cultural sovereignty efforts. By protecting and promoting the exercise of masculine responsibilities while

simultaneously dismantling heteropatriarchal values that disempower Indigenous women and LGBTTQ peoples in climate change and other movements, Indigenous communities can foster health and well-being for their communities as a whole. For these reasons, some Indigenous scholars now call on political institutions to express deference to Indigenous women's collective actions in a climate change context.

Conclusion
This chapter illustrates some of the ways in which Indigenous masculinities may be both vulnerable and resilient in the face of climate change. The literature supports several tentative conclusions that may help motivate and structure future research. First, Indigenous masculinities that are interwoven with Western forms of patriarchy may exacerbate the vulnerability of Indigenous communities by contributing to, or at the very least failing to interfere with, gender-based violence and oppression. Second, the continuance and resurgence of valued traditional masculinities must take climate change into consideration as a way to ensure resilience. Third, masculinities associated with LGBTTQ persons and communities are deeply marginalized, which makes these populations particularly vulnerable in climate adaptation policy and actionable science because their voices are not heard. Lastly, climate change presents an opportunity for Indigenous peoples to reimagine Indigenous gender systems in a way that promotes resurgence in the face of Western patriarchy and enhances community-wide Indigenous resilience.

Positive pathways arise from applying a gender lens to the experiences of men and boys responding to the radically new social, cultural and environmental worlds that will shape their futures and that of their communities in Indigenous America. Many of the vulnerabilities discussed here are common to men and boys in other contexts. However, we should not confuse generalizability with sameness. Each Indigenous community faces unique forms of colonialism and has unique systems of roles, relationships and responsibilities, which shape climate change vulnerability and resilience. Indeed, the literature is only now emerging on gender, Indigenous peoples and climate change. As such, more culturally specific gender analysis is both needed and likely. This will add depth to masculinity studies and to positive strategies for climate adaptation in other marginalized communities.

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