

This is a pre-publication version of the following article: Tosh, J. & Gislason, M. (In press). **Fracking is a feminist issue: An intersectional ecofeminist commentary on natural resource extraction and rape.** *Psychology of Women Section Review*.

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While it has been acknowledged that the language used to describe natural resource extraction is highly gendered (Russell, 2013), the relationship between gender and natural resource extraction is under-researched, ‘undiscussed and silenced’ (Laplonge, 2013, p. 2). Similarly, there are increasing reports that the introduction of extraction industries results in an increase in sexualized violence in workers camps and host communities proximal to intensive industrial activity (Hotaling, 2013; James & Smith, 2014; Minor, 2014). In this brief commentary, we reflect on the relationship between gender, the environment, and violence, in particular in relation to psychological, social and ecological impacts of intensive natural resource extraction. We draw on examples from around the globe to highlight the importance of including ecofeminist approaches to psychological theorizing of sexual violence.

Ecofeminism

In attempts to move away from narrow and individualized analyses of complex issues, such as violence against women, critical and feminist psychologists often draw attention to the social aspects of psychological distress. However, how the environment impacts these issues is often neglected. This is despite the importance

and relevance of environmental issues and the many intersections between gender, social, and environmental justice. While ecofeminism (i.e. the intersection of feminism and environmentalism) has a long and diverse history, it has been marginalized within feminism more generally, following a backlash toward the more essentialist perspectives within it. More recently, there have been renewed calls for an ‘intersectional ecological-feminist approach’ (Gaard, 2011). These calls highlight the need to incorporate the material and environmental into intersectional feminist analyses, particularly those from poststructuralist and social constructionist perspectives (Gaard, 2011; Mies & Shiva, 2014). A nuanced understanding of social-ecological dynamics is particularly important when addressing the impacts of ‘game changers’ such as climate change and natural resource extraction, which have been shown to exacerbate both gender inequality and violence towards oppressed groups.

Natural Resource Extraction

Natural resource extraction industries use a range of techniques to access and extract naturally occurring resources - such as oil, coal, trees, fish and natural gas. Often framed as industries drawing from renewable resources, these intensive industries can be framed as sustainable. For example, natural gas is touted as a ‘greener’ alternative to coal and oil, yet the methods used to extract natural gas are not without controversy. One example is hydraulic fracturing, or ‘fracking’, which involves inserting a high-pressure mixture of chemicals and water into the ground that releases the gas stored deep below the surface. Its impact on the environment is increasingly well documented, such as ground water contamination and induced seismic activity (Brasier et al. 2011; European Parliament, 2011; McCubbin & Sovacool, 2013;

Smith-Korfmacher et al. 2013). These impacts challenge the validity of marketing claims that it is a 'greener' or 'cleaner' energy alternative. Fracking's impact on the physical health of those living in surrounding areas is also attracting public health, research and activist attention (European Parliament, 2011; Kassotis et al. 2013; Goldenberg et al., 2010; Moss, Coram & Blashki, 2013; Northern Health, 2012; Shandro et al., 2011).

In the context of increasing demand and economic opportunities for natural resource industries, such as the Transatlantic Trade and Investment Partnership (TTIP) that has the potential to open up global sales and distribution of natural gas (Smedley, 2015), many governments are keen to exploit this natural resource. The UK government aims to 'fast track' applications and reduce the barriers put in place by local councils (Settle, 2015). This focus on business and financial profit, however, overlooks the environmental consequences of such an enterprise, as well as its potential impact on the physical, social and psychological well-being of individuals and communities. For example, the 'boom and bust' cycle describes communities as experiencing a range of stresses and distresses related to drastic changes to their home area, as well as disappointment when the promises of jobs and wealth fail to live up to expectations (Shandro, et al. 2011). Increasing jobs, infrastructure, and business tend to most often benefit newcomers, and those who lived in the area long before the 'fracking' began can be priced out of their homes and may not secure employment. Increases in homelessness and greater disparity between the 'haves' and 'have nots' are some of the possible consequences of introducing natural resource extraction into a community (Brasier, et al. 2011). Increases in violent crime is another.

Sexual violence

Globally, those who have access to increasingly scarce natural resources control the means for negotiation, price, and ultimately the survival of the planet. In the international arena, global inequities play out between nation states while intranationally these power differentials impact the lives of local communities. Climate change plays a key role in reducing the availability of natural resources (such as food) in areas most affected by increasing temperatures and more frequent weather extremes (e.g. drought) (Shackleton & Shackleton, 2012). In contexts of social instability and poverty, this can lead to the increased sexual exploitation of women and children. Transactional or “survival sex” (Regional Network on HIV/AIDS, Rural Livelihoods and Food Security, 2008) is increasing internationally, with one example being the “sex for fish” trade in Kenya and Tanzania (Hunter, Reid-Hresko & Dickinson, 2011) where women exchange sexual activity for food.

In their study of natural resource extraction and crime, James and Smith (2014) have also found a significant increase in violent crime following the introduction of natural resource extraction industries in multiple ‘boom towns’¹ across the US. The trend for upsurges in violence was considered to be so predictable that they advised those introducing natural resource industrial activity to their towns to prepare for such increases (i.e. through additional police recruitment). They attributed this phenomenon to several factors, one being that resource extraction appears to attract

¹ A term used to describe towns where natural resource extraction industries operate, resulting in massive changes to the area and its economy.

those most likely to commit violent crime: young men. This, they argue, is due to the jobs being physically demanding. James and Smith (2014) show that men are responsible for around 90% of (reported) violent crime, particularly young men. They also consider that those with a criminal history are more likely to work in the industry due to difficulties in gaining employment with a criminal record.

High wages (ranging from \$100,000 - \$200,000 per year), loneliness due to being located in unfamiliar, rural, and remote areas, in addition to boredom² and a lack of familiar recreational activities have been found to result in increases in substance abuse in these areas (Goldenberg et al. 2010; James & Smith, 2014). Workers have been described as living in ‘man camps’ – which are often mobile units located on the outskirts of rural communities. Within these ‘camps’ and the workplace, men talk about a ‘rigger culture’ that is based on sexism, hypermasculinity, and a disconnection from the local community (Goldenberg et al. 2008). This creates a context where violence can thrive: (1) an influx of young men arrive as strangers, (2) they work within a culture that promotes sexism, physical dominance, and hypermasculinity, (3) are disconnected from that community, and (4) engage in substance (ab)use and destructive behavior in order to deal with the psychosocial impacts of their job (Dembicki, 2010).

This is supported by the work of Berger and Beckmann (2010), who found that towns with natural resource industries, like ‘fracking’, include a higher rate of sex offenders. Reports from Aboriginal law enforcement further support the claim that there is a

² For example, men can work for 14 days followed by 7 days off (James & Smith, 2014).

high prevalence of sex offenders in these industries. Former Rosebud Sioux Tribe Police Chief Grace Her Many Horses described her experience of policing the ‘man camps’ near her reserve as follows: “We found thirteen sex offenders in one man camp and that man camp is found directly behind the tribal casino. Our supervisors would tell us ‘Watch your kids. Don’t let them run through there’” (para. 14). She goes on to describe children and teenagers being assaulted, raped, and forced into sexual slavery. This is in addition to increasing sex work where vans of young women are driven to the man camps on their payday (Buckley, 2014). However, men working in the industry are not solely perpetrators. Chief Grace Her Many Horses stated that sexual assaults of men increased by 75% in these areas, resulting in a figure that dwarfs reports of male prison rape³. The similarities go beyond high prevalence rates, however, as some workers compare their experience of living and working in these camps with being in prison (Dembicki, 2010).

What is talked about less often is how intensive resource extraction activities impact on Aboriginal communities and people, in particular on Aboriginal women – people currently working to overcome a history of colonial and racist oppression. For example, in 2006 Amnesty International found that Aboriginal women were more likely to be sexually assaulted by non-Aboriginal men. As natural resource extraction activities do occur on Aboriginal land, which can result in further displacement and resettlement of Aboriginal peoples, the known risk of increased sexual violence puts Aboriginal women at a disproportionately higher chance of being attacked and

³ These range from 1 to 21% depending on data collection techniques and definitions of sexual violence used in the research (see Jones & Pratt, 2008).

harmed. This coincides with recent reports of homicide in Canada, which show that Aboriginal women are the most at risk of violence, including sexual violence, but the authors admitted they were at a loss to explain why (Statistics Canada, 2015)⁴. The introduction and expansion of natural resource extraction industries in the global north, then, offers one of many illustrations of the important role of intersectional analyses in understanding the complexity and interconnectedness of colonialism, racism, sexism, violence and environmental degradation.

Conclusions

The intersections between gender, violence, and natural resource extraction go beyond these few examples. There are many other areas of equal concern, such as increases in domestic abuse, child neglect, and a lack of support for women trying to leave violent relationships (Shandro et. al., 2011). More cases of violence toward women are being reported, such as the rape and murder of a women in North Dakota by men working in the town to earn money from the shale gas industry (Hotaling, 2013). There are also more statements being made regarding the increase in sexual assault in ‘boom’ towns linked to oil and gas extraction industries (as much as 300% increases in some areas, ‘North Dakota City Police See Increase in Crimes’, 2011). This growing visibility has exposed the need for discussion of the social and psychological implications of environmental issues on women and other oppressed groups, and should be viewed by feminists around the world as a call to action.

⁴ An issue that is well known to those from Aboriginal communities, which have responded with calls for an inquiry into missing and murdered Aboriginal women in Canada (Culhane, 2003; Gilchrist, 2010; Koerner Yeo, 2015), as well as increasing activism in the form of movements such as Idle No More (Wotherspoon & Hansen, 2013).

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