



The state comes home: Radiation and in-situ dispossession in Canada



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ABSTRACT

In 1975 it was discovered that the small Ontario community of Port Hope was widely contaminated with radioactive waste from the local uranium refinery, including hundreds of homes. Through close analysis of state archives, regulatory documents, media, and key informant interviews, I analyze how the radioactive contamination of the home constitutes an in-situ dispossession, a material, corporeal and psychosocial dislocation in everyday life. In so doing, I reveal discrepancies between internal state positions and those publically conveyed, while showing how the categories of normal and abnormal are malleable social constructs and geopolitical tools of state power. By investigating the contamination of Port Hope through the lens of everyday life, I aim to add to critical geographies of home while contributing to scholarship demonstrating the multi-scalar interconnectedness of body, home, and nation-state.

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1. Introduction

One of the most intimate scenes in the 1983 film *Silkwood* is also the most disturbing. Arriving in white hazard suits, identities concealed behind hoods, masks, and goggles, state personnel enter the home of Karen Silkwood, armed with radiation detection devices. *Silkwood* is not a fictitious film. Karen worked at Kerr McGee, the plutonium refinery in Oklahoma, where she lobbied for worker safety. Before her mysterious death, which fueled speculation of murder (Baer, 1990), nuclear experts invaded her home to sample for radiation. Finding radioactivity in the bathroom, they pry the sink off the wall, remove household fixtures, and confiscate leftover food from the refrigerator. In their wake, Karen's house is torn apart and, along with it, her sense of security in home. This scene conveys key characteristics of nuclear spaces. Radiation could be anywhere, yet appears nowhere: it resides in everyday spaces and on ordinary objects, yet is undetectable to lay persons. This intangible materiality evokes anxiety, uncertainty and fear in everyday life. Also evident in *Silkwood* is how radioactive spaces, including the home, are inextricable from the state, with vested geopolitical stakes in radioactive materials.

The above scene resembles events in Port Hope, a small town in Ontario, Canada, contaminated with radioactive waste from the town's largest employer, the Eldorado uranium refinery. In 1975, news broke that St. Mary's school had elevated radioactivity. Investigation revealed widespread contamination, including parks,

beaches, roads, businesses, and residential yards (MacLaren Lavalin, 1981; Sanger, 1981). Radiation also occupied hundreds of homes, inhabiting the air people breathed and emanating from everyday household objects. At the time, the Atomic Energy Control Board (AECB), the federal nuclear regulator, estimated 115,000 cubic metres of radioactive waste, undertaking to restore the town to "natural background" radiation or below remediation criteria (1977a). By 1981, the AECB termed the abandoned clean up a success: "we have had to leave a few odds and ends behind ... But we have clearly achieved our goal, which was to reduce the risk to people" (Munro, 1981). Over forty years later, as contamination continues to be found, approximately 1.7 million cubic metres of radioactive waste and other toxins (e.g. arsenic, lead, ammonia, nickel, selenium and vanadium) remain in the area, the most expensive contaminated site in Canada at a projected \$1.2 billion remediation cost (Auditor General, 2012; Natural Resources Canada, 2006; Port Hope Area Initiative, 2014). While assurance that this "historic" and "low-level" waste is not hazardous (see Canadian Nuclear Safety Commission, 2009) has helped to diffuse backlash against the refinery and nuclear regulators, the contamination has taken a heavy social toll.¹ For some, home has become a

¹ Government studies conclude "no adverse health effects have occurred or are likely to occur in Port Hope, as a result of the operations of the nuclear industry in the community" (Canadian Nuclear Safety Commission, 2009, p. 1). There are competing claims regarding the efficacy of the studies. Local groups Families Against Radiation Exposure and the Port Hope Community Health Concerns Committee advocate for independent, peer-reviewed health studies.

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space of in-situ dispossession, a place of anxiety, fear, and uncertainty.

Similar to the home of Karen Silkwood, the contamination rendered “everyday life strange” (Masco, 2006, p. 32), as radiation, followed by the state occupied and altered Port Hope homes. Both cases constitute an occupation of not just material space, but corporeal and psychosocial space – what Joseph Masco (2006, p. 28), terms, after Sigmund Freud, as the “nuclear uncanny,” a form of dislocation in everyday life. Living in a home and community contaminated with radiation is not just unsettling, it also manifests as myriad forms of in-situ dispossession. While ex-situ dispossession refers to forced relocation, or “a decisive removal of people from their homes, communities and livelihoods” (Feldman & Geisler, 2012, p. 971; also see; Brickell, Fernández Arrigoitia, & Vasudevan, 2017), “in-situ displacement” (Feldman et al, 2003, p. 9) describes incremental dispossessions, the losses in security and certainty in everyday life, while remaining in place. I use the term in-situ dispossession to encapsulate the conditions and experiences of everyday life amongst radioactive contamination, notably the daily insecurity inextricable from the possibility of corporeal and psychosocial harm and the loss of security in home.

Radiation, in its earliest iterations, was associated with light and radiance, a miracle substance that sparked nationalistic rhetoric (and practices) of atomic progress (Kirsch, 1997; Wells, 1914). Since World War II and the Cold War, however, whether in Japan, the American southwest, Ukraine, or elsewhere, radioactive waste has been likened to “a poison that will linger for all time, an everlasting blemish, permanent, indomitable pandemonium” (Zonabend, 1989, p. 198). These latter associations stem from known adverse health effects, including cancer (see, for example Del Tredici, 1987; Kuletz, 1998; Petryna, 2002), yet also reflect how radiation has an unparalleled temporal and spatial reach: it persists in timeframes beyond the “human scale” (Masco, 2006, p. 300) and can penetrate bodily cells, while spanning the globe.

With obvious roots in the phantasmagoria of the atomic bomb, the nuclear spectacle dominates popular understandings of nuclearity, partially obscuring how nuclear industries are firmly rooted in the everyday and commonplace (Hecht, 2012; Kirsch, 1997; Masco, 2006; Sontag, 1961). Most nuclear landscapes are what Blake Fitzpatrick (2001) terms “post-cloud,” those places where factories, refineries, test sites, and the like underpin nuclear industries, yet are elided, in part, by seeming banality. This is certainly the case in Port Hope, where signs of nuclearity stand anonymously, enshrouded by a combination of invisibility and “routine appearance” (Fitzpatrick, 1999, p. 3). Mounds of radioactive waste under black tarps dot the town, while fake birdhouses hide radiation monitors, lending an eerie familiarity to contamination, or at least its possibility. Despite its eclipse of the waterfront, the refinery also appears ordinary – a grey expanse of dull looking buildings surrounded by fences and guarded gates, now common signifiers of state-industrial securitization. All this backgrounds local beaches, parks, and homes, the other everyday spaces that radioactivity inhabits.

Geographers have made significant contributions to understanding the home as a space and scale of analysis. As Mona Domosh (1998, p. 276) writes, the home is a “landscape form” and “as the most everyday of landscape, is also the most profound.” Alison Blunt (2005, p. 506) describes the home as “a material and affective space, shaped by everyday practice, lived experiences, social relations, memories, and emotions.” The home “might at first glance appear to be familiar and mundane,” yet is a “space of belonging and alienation, intimacy and violence, desire and fear, the home is invested with meaning, emotions, experiences and relationships that lie at the heart of human life” (Blunt, 2005, p. 506; Blunt & Varley, 2004). ‘Critical geographies of home’ have

dislodged assumptions of the home as safe haven (Blunt & Dowling, 2006; see Brickell, 2012a for overview). Feminist geographers have further troubled distinctions between private and public space, analyzing how categorizations of home are inextricable from relations of power (see, for example Hyndman, 2000). All these works have helped to show how the home is enmeshed with political, economic, and cultural life. Indeed, “household geographies” are tied to “national and international geographies” (Blunt & Varley, 2004, p. 3), and home and *homefront* are inextricable from narratives and practices of state building (Brickell, 2012a, 2012b; Loyd, 2011). Geographers have further shown how the state is present in the home in numerous ways (Loyd, 2011; Painter, 2006), and how “everyday life is both politically and practically important as a site of research and progressive social change” (Mitchell, Marston, and Katz, 2003, p. 433).

Scholars have shown elsewhere how inadvertent releases of radioactive waste creates vast uncertainty, but not just for exposed bodies: it can also “produce a social and political unraveling” that threatens the legitimacy of the state itself (Davies, 2013; Petryna, 2002, p. 21; on legitimacy see Gramsci ([1928] 1971, p. 275). The stakes in recognizing adverse radioactivity are thus very high. In my broader research, I sought to understand how the Eldorado refinery – a federal Canadian Crown Corporation – increased its political and community support in the midst of the radioactive waste crisis.² I took the approach, after Joe Painter (2006, p. 752, 770), that while “spectacular expressions of state power are everywhere,” in order to understand state power geographers must attend to the “mundane but frequently hidden, everyday world” of state practices, processes, and institutions (also see Mountz, 2003). I found that several factors contributed to Eldorado withstanding the fallout, so to speak, including exerting powers and privileges as a state-corporation. Concerns over potential job loss and the implications for property values also shaped the community’s response to the waste discovery (Fried & Eyles, 2011; Pitkanen, 2017). It also became evident that the refinery reshaped everyday spaces and experiences of home.

“Stepping into the house not only opens new ways of interpreting landscape but also recasts economic analysis” (Domosh, 1998, pp. 281, 277). As a methodological approach, between 2012 and 2014, I ‘stepped’ inside the homes of Port Hope residents, several of which were revealed contaminated mid-interview. Conducting 18 in-depth, key informant interviews with residents knowledgeable about the refinery (supporters and detractors) lent insight into the socio-spatial implications of the contamination and corroborated data from other sources. Over a five-year period, I further analyzed regulatory documents and approximately 1200 media articles since 1972. My assessment draws heavily on close analysis and cross-referencing of forty years of state archives, notably the period marking the waste investigation (1975–1988). Primary records include archives of the Atomic Energy Control Board (AECB), the Ontario Ministry of Health (OMH), and the Eldorado Crown Corporation housed in municipal, provincial, and federal collections. These state agencies constitute what Gabrielle Hecht (1998, p. 15–16) defines as a techno-political regime (people, institutions, practices, and ideologies) “which act together” towards political objectives. Their archives include internal state correspondence, letters to residents, and a 1970s door-to-door radiological survey. I accessed these latter records through a Research Agreement to keep personal information anonymous, yet

² Federal Crown Corporations in Canada are state-owned corporations and agents of the Crown. Aside from scant Ministerial oversight and the Atomic Energy Control Board for regulatory matters, the Eldorado Crown Corporation operated with a high degree of independence.

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