

**Anatomy of Place:
Ecological Citizenship in Canada's Chemical Valley**

By

Sarah Wiebe
M.A., University of Victoria



Photograph by: Laurence Butet-Roch, December 2010

“Bathed in light, submerged in sound and rapt in feeling, the sentient body, at once both perceiver and producer, traces the paths of the world’s becoming in the very course of contributing to its ongoing renewal” – T. Ingold

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School of Political Studies
Faculty of Social Sciences
University of Ottawa

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Abstract

Citizens of the Aamjiwnaang First Nation fight for justice with their bodies at the frontlines of environmental catastrophe. This dissertation employs a biopolitical and interpretive analysis to examine these struggles in the polluted heart of Canada's 'Chemical Valley'. Drawing from a discursive analysis of situated concerns on the ground and a textual analysis of Canada's biopolitical 'policy ensemble' for Indigenous citizenship, this dissertation examines how citizens and public officials respond to environmental and reproductive injustices in Aamjiwnaang. Based upon in-depth interviews with residents and policy-makers, I first document citizens of the Aamjiwnaang First Nation's activities and practices on the ground as they cope with and navigate their health concerns and habitat. Second, I examine struggles over knowledge and the contestation over scientific expertise as the community seeks reproductive justice. Third, I contextualize citizen struggles over knowledge by discussing the power relations embedded within the 'policy ensemble' for Indigenous citizenship and Canadian jurisdiction for on-reserve environmental health. From an interpretive lens, inspired by Foucault's concepts of biopower and governmentality, the dissertation develops a framework of "ecological citizenship", which confronts biopolitics with a theoretical discussion of place to expand upon existing Canadian citizenship and environmental studies literature. I argue that reproductive justice in Aamjiwnaang cannot be separated from environmental justice, and that the concept of place is central to ongoing struggles. As such, I discuss "ecological citizenship's double-edge", to contend that citizens are at once bound up within disciplinary biopolitical power relations and also articulate a radical form of place-based belonging.

Dedication

To Tashmoo Avenue: a place of
friendship, inspiration, laughter and light.

Miigwetch.

Acknowledgments

Writing from Tsleil-Waututh territory, words fall flat as I reflect upon the places and people who inspired the journey of completing a doctoral dissertation. Many fueled the pages to follow: family, friends, my academic committee, the Aamjiwnaang Environment and Education Departments, Green Teens and Kijig Collective. Michael, Dayna and Martin: I could not have asked for a more engaging and academically rigorous committee. Michael, you are a wonderful and enthusiastic supervisor, thank-you for your openness, availability and sustained mentorship. Furthermore, I am especially grateful to archivists in Ottawa and Lambton County; Jason Bennett's assistance was exceptional.

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Prologue: Finding ‘Shelter-in-place’?



Photograph by: Laurence Butet-Roch, December 2010

A benzene leak at neighbouring industrial facility Novacor sparked a partial evacuation on the Aamjiwnaang First Nation reserve during the summer of 1992. The evacuation included Tashmoo Avenue, home to the reserve Band office, adjacent to the Chippewa Day Care centre. Police and firefighters remained on standby; local officials issued an advisory and rerouted a school bus full of children headed for home. Neither plant officials nor the Ministry of Environment (MOE) called the community day care. Novacor spokesman Frank Barber noted the “monitors located on the property line didn’t detect benzene vapors leaving the site” (Mathewson, 1992). In other words, there was “no offsite impact” beyond Novacor’s fenceline. Only after day care workers noticed heavy, stinking, steaming air spewing towards their community, were seventeen resting children whisked away to another location on the reserve. With financial support from industry, the day care since relocated; though, the Band office, resource centre and recreational facilities remain in place. Living with the potential for emergency always on the horizon becomes a permanent feature of this community’s daily landscape.

Citizens in Aamjiwnaang live in a perpetual state of alert. The following year, a Suncor toluene release caused communication breakdown between industry, citizens and government officials. At 4:00am, the local St. Clair high school became a safe haven for some evacuated residents; others were mistakenly sent home early, prior to an “all-clear” declaration (McCaffery, 1993). Chief Phil Maness demanded answers as Sarnia Mayor Bradley expressed concern about the apparent communication gap between the plants, emergency planners, radio, and Aamjiwnaang residents (McCaffery, 1993). In response, Police Chief Murray McMaster claimed “uncoordinated good intentions created confusion during the Suncor emergency evacuation” (Bowen, 1994). The police report called for better emergency management; this involved cooperation between various stakeholders in the Chemical Valley area. Sarnia Emergency Planning Coordinator Bruce Middleton acknowledged that a review of the delay in reaching the radio stations was a concern, likely due to overcommitted personnel (McCaffery, 1993). Such Code 6 incidents – when a release extends beyond plant boundaries – generated calls for better offsite planning.

Planning beyond the fenceline falls heavily on the shoulders of Aamjiwnang citizens. Police Chief McMaster argued that the Band must designate a point person to

direct the community when future incidents occur, as part of a Municipal primary control group (including police, fire and civic officials) whenever the reserve is affected by an emergency (Bowen, 1994). He recommended that residents must act responsibly to spread the word according to established protocols in the event of evacuation (Bowen, 1994). During Suncor's release, the siren system failed to alert residents due to a malfunction, a dead battery. Mayor Bradley responded to reiterate the importance of regular siren testing (Bowen, 1994). Now each Monday at 12:30pm sharp, sirens raid Chemical Valley airways as Aamjiwnaang citizens safeguard their land and life.

Fast-forward over a decade later. Children, staff and supporters of the Aamjiwnaang Binoojiinyag Kino Maagegwamgoons day care took to the streets on Wednesday January 16th 2013 to protest their right to a cleaner environment.¹ As an 'Idle No More'² demonstration, concerned citizens demanded better communication between industry officials and local residents. The previous Friday, a mercaptan leak from an adjacent Shell refinery caused a stink, resulting in road closures, the re-routing of school busses and a shelter-in-place warning. The alert sirens, which enframe the reserve, failed to sound. Reports of nausea, headaches, sore throats and swollen eyes surfaced over the weekend. On Wednesday, citizens marched from the day care towards the Band cemetery, along the St. Clair parkway at the reserve's northwestern perimeter. Whether or not this community "finds shelter" in this place is a matter of continued dispute.³

¹ Video footage of the children's protest can be seen on the Sarnia Observer's website for January 16 2013: <http://www.theobserver.ca/2013/01/16/protest-demonstrators-march-near-refinery>

² As I will return to in Chapter 7, #IdleNoMore is a term for the Indigenous social movement that began in November 2012 when several Indigenous lawyers protested the Conservative government's Omnibus legislation, Bills C-38 and C-45, which imposed amendments to navigable waterways and reserve lands without substantive consultation. The movement, which began through social media such as Twitter and Facebook, also birthed a national day of action, and a series of rallies, blockades and flashmobs.

³ This notion of 'Shelter-in-place' is discussed at length in: Jackson, D.D. (2010) "Shelter in place: a First Nation community in Canada's Chemical Valley", *Interdisciplinary Environmental Review*. Vol. 11(4): 249-262. Jackson discusses her own ethnographic experience as an anthropologist sheltering-in-place while residing in Sarnia, and presents an analysis of the deep-rooted attachment citizens of Aamjiwnaang have to the 'sacred geography' of this place (p. 255), which is "filled with memories" (p. 258). Jackson's text illuminates some of the ways in which Aamjiwnaang has been a place of shelter for past, present and future generations to come.

Chapter 1

**Skeletons in the Closet:
Introducing Wounded Citizens in Canada's Chemical Valley**



Photograph by: Laurence Butet-Roch, December 2010

Home becomes refuge and prison for citizens of Canada's 'Chemical Valley', where residents dwell in a threshold between a state of normalcy and emergency.⁴ On May 29 2011, the Ontario government issued a 'red alert' urging citizens of Lambton County to take shelter. Such alerts are issued in the case of a chemical spill, fire, explosion, nuclear emergency, extreme weather event, or transportation accident. In Canada's 'Chemical Valley', individuals are encouraged to prepare for hazardous incidents at any given time. As sirens wail, while some local residents scramble to find shelter-in-place, others barely flinch. This represents yet another cause for alarm within their neighbourhood, and a typical day in Canada's 'Chemical Valley'.

As warnings can be heard over loudspeakers, megaphones and sirens: this is an audible place. Each Monday at 12:30 p.m. sharp, the sirens are tested; these World War II-era relics remind citizens that their airways are raided by neighbouring chemical facilities. When sirens sound, bodies clench, and individuals jump towards their radios, phones and televisions to see if there is any imminent threat. For others, this is little more than the everyday scene, destroying the previous serenity this place once inhabited. In this post-apocalyptic environment, sounds mask silence; the aural history resounds. 'Chemical Valley' is not only heard, it is a stunning aesthetic masterpiece. Sirens, stacks and steeples frame the landscape here, dominating the air space and enframing the Aamjiwnaang First Nation territory.

Noise pollution bears heavily upon one particular part of this 'sacrifice zone' (Lerner, 2010). On June 8 2011, citizens of the Aamjiwnaang First Nation gathered and laid to rest another cancer-stricken loved one in their cemetery. The graveyard – whose perimeter is surrounded on all sides by a chain-link fence, smokestacks, junkyards, somewhat clandestine surveillance cameras and conciliatory cedar trees – is a territorial donut hole amidst the First Nation reserve. As is customary, during the ceremony, members gathered around to sing, dance and drum. That day, the neighbouring industrial vibrations accompanied the beat of the drum as the corpse lowered beneath the earth's

⁴ I opened with a quote by Ingold to highlight a poetics of *dwelling*: "Bathed in light, submerged in sound and rapt in feeling, the sentient body, at once both perceiver and producer, traces the paths of the world's becoming in the very course of contributing to its ongoing renewal" (2011: 12). I consider the 'sentient' – feeling, relational, affective – body to be in a state of *dwelling*: a condition of being that marks how humans make their way in the world as an ongoing, iterative process, to illuminate how citizens in Aamjiwnaang struggling for environmental and reproductive justice interpret and inhabit their home and land.

surface, drowning out the audibility of ceremonial song. While one might suspect that being laid to rest would be a peaceful procedure, here, it is anything but, as industrial flaring overbears ceremonial reverberations.

According to Anishinaabe beliefs, the world we live in is not ‘the real’ world. It is a mirror, reflecting what is to come in the spirit world. As bodies enter the spirit world in Aamjiwnaang, the earth perpetually vibrates in response to what is felt above and below the ground. Elders state that the spirits are trapped; they haunt this place, unable to reach the world they are destined for. The greatest ‘bone of contention’ here is that not only have Canada’s Indigenous peoples been squeezed out of our collective historical memory through the tragedies of colonization and the legacy of Residential Schools, now, their spirits remain captured in-between past and future, affecting their ability to survive and thrive in the present. Residential Schools were but one nail in the coffin marking what has been lost in this community. With colonization, came warfare, epidemics and the reduction of a vast population to the mere ‘sample size’ remaining today.⁵ The Aamjiwnaang First Nation graveyard is the ultimate symbol of Canadian entrapment, a living trace of our collective history and reflective of that which we would like to store away, beyond immediate vision and out of mind: our skeletons in the closet.

Questioning the administration of life and death relationships is one of the most compelling intellectual challenges in our late modern time. Following Paul Rabinow and Nikolas Rose, this must not be done by claiming there is some “deep hidden secret of modernity to be revealed”; rather, this requires meticulous attention to life’s gray matter, the details and practices of life and death that we construct, inhabit and contest (1994: 25). This task is simultaneously banal and profound. Examining contemporary power relations extends beyond sovereign spectacle and transcends into the tentacles of government, executed through practice, on the ground. A critical scholar thus addresses spaces where life, health and death become central to contemporary relations, to ourselves, to others.

⁵ ‘Sample size’ is a term commonly used in epidemiological studies. Sample size selection requires making observations about a small-scale population to generate broader, statistically-significant inferences at a wider scale. As Chapter 4 discusses, such a widening of scale is not exempt from power relations and with respect to reproductive health concerns in Aamjiwnaang, may disempower small-scale findings at the local, community level.

Corporeal politics resonate with Canada's colonial present. Citizens of a First Nations community reside on 'Crown' land set aside – a reserve – with their bodies at the fenceline of an industrial complex that produces the highest concentration of petrochemical manufacturing in the country. Contrary to visible practices of corporeal violence in the public domain, their bodies remain at the forefront of pollution exposures. The everyday, chronic nature of these exposures remains out of immediate sight, and out of mind for governments, neighbouring industries and most Canadians. The placement of their bodies in this precarious place continues below the radar of public consciousness; yet, they become disciplined through effective and efficient state mechanisms of biopolitical governance and control. As such, citizens face a dilemma – what I refer to as “ecological citizenship's double-edge”: at once those living here are bound up in disciplinary biopolitical power relations while also articulating a radical form of place-based belonging. Citizen practices, activities, actions and forms of resistance expose this dilemma, and draw attention to the deeply interconnected relationships between citizen bodies and this place they call their home.

Facing this dilemma, citizens of Aamjiwnaang refuse to be complacent. Following over a century of cultural distillation and a decade of aggressive activism, latent concerns propelled members of this community forward in a movement for environmental and reproductive justice. Aligned with environmental justice theorist David Schlosberg, this dissertation seeks to expand the sphere of environmental justice discourse beyond recognition of environmental injustice, and extends beyond a discussion of the inequitable distribution of risks and goods to include consideration of the non-human world as a condition for social justice (2013). I add to the sphere of this discourse by arguing that reproductive justice cannot be separated from environmental justice. As such, I draw from SisterSong (2012) and Hoover et al. in support of their claim that reproductive justice entails the right and ability to reproduce in culturally appropriate ways: “for many Indigenous communities to reproduce culturally informed citizens requires a clean environment” (2012: 15). In this dissertation, I theorize about social justice from the ground up, based upon empirical research and findings within the community's struggles and corresponding policy responses. An examination of experiential knowledge is crucial for this form of inductive theorizing.

Though reserve segregation fixed Indigenous peoples in Canada to piecemeal pockets of land, emergent forms of movement and agency occur, as citizens mobilize. Thus, my argument about these forms of mobilization is two-fold: first, that justice must account for place; as such, reproductive justice cannot be separated from environmental justice. Second, these ongoing struggles for justice reveal ecological citizenship's double-edge, wherein citizens are at once bound to disciplinary practices of biopower; yet, they contest this power through a deep-rooted attachment to place. On the ground forms of mobilization highlight this double-edge.

Beginning with citizen mobilization, this chapter intersects the wounded body with place, to locate articulations of harm in Aamjiwnaang. I next clarify the central contributions and concepts crucial to my analysis of ongoing struggles for environmental and reproductive justice. Subsequently, I discuss the ontological and epistemological groundwork for developing a framework of "ecological citizenship" and introduce the motivation behind taking up and challenging biopolitics. This chapter concludes by outlining the chapters to follow.

Introducing Wounded⁶ Citizens

On October 29th, 2010, Ecojustice launched Constitutional litigation against the Province of Ontario's Ministry of Environment (MOE) and Suncor Energy Products Inc. (Suncor), on behalf of two members of the Aamjiwnaang First Nation: Ron Plain, and Ada Lockridge. The case challenges the "deficient manner in which the Ministry of Environment regulates pollution in the area around Ada and Ron's community of Aamjiwnaang", in 'Chemical Valley', near Sarnia, Ontario (Duncan, field notes, Queen's Park, November 1 2010). Following close to a decade of local and global environmental activism in a battle against the province's environmental legislation, the litigants articulated frustration with the Ministry's continuance in approving permits to allow the advancement, expansion and encroachment of pollutants on their land, in their home and

⁶ The conception of 'wound' advanced in this dissertation follows Dayna Scott's analysis with reference to cultural anthropologist Sarah Jain and highlights some of the ways in which harms occur beyond a purely legalistic definition of 'injury' (Scott, 2008: 306). Scott develops the argument that while tort law governs accidental harms, chronic, low-dose exposures to toxic chemicals is a central and inherent consequence of production itself, inextricable to a process of continuous 'wounding'.

on their bodies: “I felt as if my family’s health and well-being was being sacrificed, at a cost” (Plain, field notes, Queen’s Park, November 1 2010). Fatigued by the lack of consideration for cumulative impacts and the consequential health effects, members of this First Nation are taking action, speaking out against the Provincial government and industry. A Ministry approval to allow Suncor, a petroleum and ethanol refinery, to expand its chemical refining production in an over-saturated industrial area within a few kilometers of their reserve was the *coup de grâce* for these individuals. They contend that the approval constitutes a violation of their basic human rights under the Canadian Charter of Rights and Freedoms, in particular, section 7 on the right to life, liberty, and security of the person, and section 15, the right to equality for all Canadians.

Individuals from this community face the continuous creep of contamination with their bodies on the frontlines: “I was taught growing up that it was a good thing when the flares are going, ‘cause it’s more dangerous down on the ground, and not to burn off, but I never thought about what was burning and how it can affect our health” (Lockridge, field notes, Queen’s Park, November 10 2010). Flaring – the act of burning off and disposing of gas that cannot be processed or sold into the atmosphere – is only meant to be an emergency practice for when gases build up; in Chemical Valley citizens live with this practice in a perpetual state of emergency. Despite Suncor’s history of continuous flaring, the Ministry of Environment (MOE) approved a request to expand its production and activities, quite literally, in Aamjiwnaang’s backyard, without any consideration for health effects. MOE’s permitting stops at the fenceline of each individual facility, without consideration for background air quality levels.

The MOE grants approval to facilities that seek to emit certain substances in the Province. Pursuant to the 1994 Ontario Environmental Bill of Rights (EBR), all approvals appear on a website, the Environmental Registry, which contains ‘public notices’ about environmental matters proposed for a 30-days period of public consultation.

The conventional section 9 certificate of approval (COA) process outlined in the *Environmental Protection Act* (EPA) depicts how industries must estimate maximum emissions to air, soil and water, under the criteria set by the *Environmental Protection Act Regulations*, which set standards for specific pollutants. These standards are stated in ‘O-Reg 419/05’, which are commonly referred to as ‘point of impingement’ (POI)

standards and establish a limit on the concentration of a pollutant that can be present at any POI; it is often the fenceline, or property-line of an industrial facility (Ecojustice, 2010: 7). Under the EPA, the Minister has the discretion to consider cumulative effects beyond the fenceline. In contrast to the COA procedure, under sections 18, 157, 196 of the EPA, the Ministry has the authority to permit companies to operate outside the POI (Ecojustice, 2010: 9). The Ministry allowed Suncor to enhance its production through amendment of one such control order, a discretionary, industry-government negotiated process that did not require public consultation.

This particular incident allowed a 25% increase in chemical production – up to 180 tonnes of sulphur a day – at the Sarnia refinery, a facility that produces transportation and heating fuels, liquefied petroleum gases, residential fuel oil, asphalt feedstock and petrochemicals (Ecojustice, 2010: 9, 13). Approximately 75 % of the crude oil at Suncor’s petroleum refinery in Sarnia is synthetic crude supplied from Suncor’s tarsands operations, which contain high levels of sulphur. In its productions, it emits sulphur dioxide (SO₂), hydrogen sulphide (H₂S), oxides of nitrogen (NO_x), carbon monoxide (CO), particulate matter (PM) and benzene (Ecojustice, 2010: 10). Each entails corollary adverse health effects; some chemicals, such as benzene, remain unregulated under the EPA rubric. Benzene is sweet and colourless; it evaporates quickly in air and dissolves slightly in water. It is highly flammable, can affect bone marrow and has been known to cause anemia and leukemia (MOE, 2004). Others, such as H₂S, are known neurotoxins and frequently released in the flaring process. Several adjacent neighbouring facilities produce similar chemicals, culminating in ‘cumulative impacts’; however, the cumulative effects of such a high conglomeration of facilities continue to be unregulated by the existing legislative framework. The applicants only became aware of the specifics of this amendment through a formal request under the *Freedom of Information and Protection of Privacy Act*, shifting the burden of responsibility from the government to this community to monitor Suncor’s production; this is but one facility, among sixty-two others, located nearby (Ecojustice, 2007; Scott, 2008).

Chemical Valley is an overwhelmingly stimulating olfactory place. The weight of Suncor is smelled and felt at every angle of the reserve’s perimeter. Just 1.4km away from Ada Lockridge’s house, it also frames the perimeter of the cemetery. Not only does

this facility encircle the traditional burial grounds, creating a donut hole; the stacks pierce the sky at such a height that they are visible from nearly every residential home on the Aamjiwnaang First Nation reserve. Noise and vibrations are some of the sensations felt as citizens of this community lay loved ones to rest; resting easy is no simple feat. Children play in their yards amidst a landscape bearing sounds akin to jets blasting for take-off. Residents and their children express fear of entering the streams and creeks, perceived to be a toxic stockpile. As cardiovascular and respiratory illness rates rise, with the backdrop of sirens, smells and soot, individuals look at their surroundings with distress.

Members of this community experience harms to physical and mental health. In addition to respiratory, cardiovascular, reproductive health and skin diseases, fear is an everyday concern (Ecojustice, 2007). Neither knowing what the contents spewing into the air, soil and water are, nor the impact on individual bodies, causes discomfort. Individuals become susceptible to these unknown substances; yet, bearing the burden of proof for bodily harm remains onerous. Over the years, Aamjiwnaang residents became frustrated with hearing that it was their ‘lifestyle choices’⁷ that were to blame for adverse health effects:

I’m tired of hearing that. Don’t tell me that nowhere else in the world people don’t smoke, don’t drink, they don’t use drugs, they don’t use make-up, they don’t have carpets in their house. I always thought, like many others have, that the government was taking care of us. But now I believe that’s not true (Lockridge, field notes, Queen’s Park, November 10 2010).

Many Aamjiwnaang citizens wish to live a healthy and productive life; however, they have lost some control for personal autonomy over health outcomes and bear a disproportionate burden of adverse health effects, as well as responsibility for proving exposure to these effects. Some residents have moved away and never turned back. This forced mobility follows a long history of cultural dislocation and socio-economic disadvantage for First Nations peoples within Canadian society at large, and Aamjiwnaang in particular.

Subsequent to nearly a decade of responsible neighbourly activities, i.e. documenting spills, odours, noises and vibrations, calling the Ministry’s ‘Spills Actions

⁷ Within public health discourse, the language of individual responsibility and lifestyle choice for health outcomes features prominently. For example, according to the Public Health Agency of Canada’s *Pan-Canadian Healthy Living Strategy*, first endorsed in 2005, and enhanced in 2010, individual behaviour – i.e. responsible eating and physical activity – appears as a core component of the strategy’s efforts to promote population wellness (see: <http://www.phac-aspc.gc.ca/hp-ps/hl-mvs/ipchls-spimmvs-eng.php>).

Centre’, conducting ‘bucket brigades’, bio-monitoring, body-mapping, shutting vents and windows and sheltering-in-place, this community became weary.⁸ When communities mobilize to gain expertise, the interactions between community members and the public policy-process is charged with political meaning and laden with asymmetrical power relations. Bullard discusses how communities facing environmental injustices bear a disproportionate burden of environmental risk and the costs associated with gaining expertise and knowledge (1993). Following Dayna Scott, the polluted become “powerless” when faced with pollution (2008: 335). As communities embark upon strategies, from bio-monitoring to bucket brigades, they seek to make inroads and change environmental monitoring and regulation. It is significant to note that while bucket brigade activities in Aamjiwnaang served as a precursor to getting an air monitor on the reserve, the burden of ‘proof’ and responsibility for environmental management continues to fall upon the citizens of Aamjiwnaang’s shoulders at a distance from governmental regulation. This transition from ‘victims’ to ‘agents of change’ (as discussed by Scott, 2008: 338) will be taken up further in Chapter 6 on ‘ecological citizenship’s double-edge’, where I argue that citizens are simultaneously co-opted and empowered by this kind of agency.

For Ron and Ada, litigation was a last resort, with the hope of changing the current regulatory environment for chemical facilities in their neighbourhood, Province and beyond. The crux of their charge centres upon the notion of synergistic and cumulative effects. As Ecojustice scientist Elaine MacDonald articulates, “the way the industry is regulated in Ontario, each individual facility is looked at without considering what else is being emitted by neighbouring facilities” (MacDonald, field notes, Queen’s Park, November 10 2010). When you have an industrial-intensive place like Chemical Valley, in South Sarnia, regulatory blindness to the cumulative impacts constitutes grounds for a violation of this community’s fundamental human rights and freedoms. ‘Chemical Valley’, responsible for approximately 40% of Canada’s Chemical

⁸ A ‘bucket brigade’ is a practice undertaken by the community to test air quality with individual buckets – affectionately referred to as ‘sniffers’ – in order to collect a sample in the event of a chemical spill. ‘Bio-monitoring’ refers to assessing the measurement of an individual’s ‘body burden’ and toxic chemical composition. ‘Body-mapping’ entails gathering data about health concerns and mapping these onto large body-size posters to create a visual representation of a community’s body burden. Chapters 3 and 4 document and discuss these practices in further detail. Chapter 6 theoretically assesses these practices drawing from biopolitical and ‘green governmentality’ scholarship.

manufacturing, with 62 plants on both sides of the Canada-U.S. Border, is Ontario's worst air pollution hotspot (Ecojustice, 2007; Scott, 2008). Chemicals from Aamjiwnaang's industrial neighbours such as benzene, hydrogen sulfide, and sulfur dioxide, are known carcinogens; yet, the province has limited health-based standards in place. This, according to Ron and Ada, constitutes an infringement of fundamental human rights, freedoms and justice.

A nexus between individuals and their environments comes to the fore in Chemical Valley. The Provincial *Environmental Protection Act* outlines the legislative and regulatory authority for managing the chemical manufacturing in the province and in Chemical Valley. Under section 11, the Ministry must consider its 'statement of environmental values' (SEV), which draws its mandate from the 1994 Ontario Environmental Bill of Rights (EBR) (MOE, 1994). The SEV notes that the EBR's preamble outlines that the people of Ontario recognize the inherent value of the natural environment; they have a right to a healthful environment and share the common goal of protection, conservation and restoration of the natural environment for the benefit of present and future generations. Further, the SEV pledges to apply an 'ecosystems approach' to environmental protection, consider cumulative impacts, protect human health and "provide opportunities for involvement of Aboriginal peoples whose interests may be affected by such decisions so that Aboriginal interests can be appropriately considered" (MOE, 1994). In practice, an ecosystems approach to public policy does not necessarily address substantive concerns facing situated communities, on the ground, beyond the fencelines.

Investigating Environmental and Reproductive Justice

This dissertation examines the ways in which citizens mobilizing in Aamjiwnaang employ experiential knowledge to make claims about environmental and reproductive health. To study 'politics' is to investigate how and where meanings are constructed, mediated and understood. Such an investigation entails a dialectical conversation between what is experienced and known. The interpretive approach presented here claims that all knowledge is political. Rather than embarking upon a positivist enterprise, which

holds to formalized, known, generalizable knowledge claims, forming categorizable facts or worldviews, I employ a post-positivist orientation to assess *how* knowledge claims are made.

Experiential knowledge informs struggles for ‘environmental justice’, as well as ‘reproductive justice’; I argue that we cannot discuss reproductive justice without consideration of ‘place’ and environmental justice. As defined by the U.S. Environmental Protection Agency (EPA), environmental justice: “is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations and policies” (EPA, 2011). With origins in the U.S. African-American and Hispanic and Indigenous communities, the environmental justice movement in the United States is well documented (Bryant, 1995; Bullard, 1993; Soja 2010, Soja 1996). Much of this movement draws from individual and community experiences in particular places as grounds for seeking environmental justice. While there have been some studies in Canada, the discourse of ‘environmental justice’, and substantive policy-making has been minimal, though some academics are actively engaged with environmental justice research (Agyeman, Cole, Haluza-DeLay & O’Riley, 2009; Scott, 2008).⁹ This dissertation follows suit to bring forward the concept of ‘place’ and environmental justice to Canadian politics and public policy, in order to problematize the relationships between citizens and policies as they struggle for recognition and knowledge about environmental health concerns.

Corporeal concerns in Canada’s Chemical Valley reveal struggles for environmental and reproductive justice: they take place, and are struggles in and of place. These struggles reveal power relations and manifest as citizens mobilizing with their embodied concerns confront, interact with or become ensconced by hierarchical, scientific knowledges. Counter to consideration of ‘nature’ as something we can

⁹ Reproductive justice is less prominent than environmental justice in research and practice, especially in the Canadian context. As discussed in Wiebe & Koonsmo (forthcoming), the term ‘reproductive justice’ originates with United States organizations to promote the rights of Indigenous women and women of colour to link ‘reproductive rights’ with ‘social justice’. Our discussion situates struggles for reproductive justice in Canada to make linkages between the reproductive body, justice and place. Chapter 4 discusses the highly charged political nature of these struggles for communities who seek redress through participatory policy processes at length.

categorize and manage as matter that is distinct from human experience and perception, a placed understanding of human existence and being, I contend, is felt, sensed and encountered through lived-experience. Such multifaceted encounters reveal a multiplicity of relationships between humans and the non-human world.

The dissertation examines contending worldviews by analyzing elite and ‘situated knowledges’ apparent in local, ‘on the ground’ struggles for environmental and reproductive justice (Haraway, 1991: 183). Predominant discursive framings about individual responsibility, environmental stewardship and management for the health and environment cast more than a descriptive picture about the state of human-nature relationships: they reveal contending views about the ontological stance of human existence. My interview findings within Aamjiwnaang exemplify this dilemma as a struggle over knowledge, science and expertise. On one hand, as the encroachment of Chemical Valley upon the community reveals, we see the environment or land considered as a commodity to be conquered, exploited and mastered through human volition. On the other, many citizens in Aamjiwnaang consider human/non-human relationship to be much more embedded and embodied. This aligns with Canadian anthropologist Wade Davis’s discussion of an alternative worldview where earth is considered to be animate, alive and requires reciprocal human obligations to lands that “cradle destinies and inspire dreams” (2011). In contrast to viewing land as a site for industrial encroachment, as something owned and violable, many Aamjiwnaang citizens consider this territory as something owned by future generations: thus at once a nursery, cemetery, neighbourhood, sanctuary and prison.

Counter to discursive framing that separates individuals from their environment, which divides bodies from place, aligned with Alfred & Corntassel’s argument that some expressions of Indigeneity offer a radically different kind of ‘being’, of place-based subjectivity, I situate bodies in place to document citizen struggles for environmental and reproductive justice and make the case for rethinking citizenship itself (2005: 597). To do so, this dissertation employs a biopolitical and interpretive analysis to examine citizen struggles for knowledge in a polluted political place: the Aamjiwnaang First Nation reserve, located in the polluted heart of Canada’s ‘Chemical Valley’. At the core of this dissertation is a concern with the individual, biopolitical subjectivity assumed by

discourse and policy.¹⁰ Drawing from both a textual analysis of Canadian public policies – what I refer to as a ‘policy ensemble’ – and a discursive analysis of concerns raised by citizens of the Aamjiwnaang First Nation, this dissertation asks: How do environmental and reproductive injustices impact Aamjiwnaang citizens and how do they respond? Moreover: what do citizen struggles in Chemical Valley tell us about the meaning and expression of citizenship in Canada and beyond? What are the implications for our understanding of ecological citizenship if we take seriously the practices and discourses of Aamjiwnaang citizens articulated in their own terms?

My answer first documents people’s corporeal concerns and practices; I conduct an empirical analysis of the Aamjiwnaang First Nation’s activities on the ground, as they cope with their health and habitat in order to make sense of how they respond to their perceived pollution problem. Second, based upon in-depth interviews with residents and policy-makers, I examine struggles over knowledge and the contestation over scientific expertise as the community seeks recognition for impacts to their reproductive health effects of these exposures. This focus on knowledge illuminates the contested nature of what constitutes data, science, expertise and ultimately ‘truth’. Third, I contextualize citizen struggles over knowledge by discussing the relationship between biopower and the policy ensemble for Indigenous citizenship, encompassing Canadian jurisdiction for on-reserve environmental health.

In addition to assessing experiential knowledge, this dissertation situates struggles within policy to explore the relationship between biopower and Canada’s ‘policy ensemble’ for on-reserve environmental health. I examine what appears to be a ‘policy void’ – space, or gap – for citizens struggling for environmental and reproductive justice. As Chapter 5 highlights, I follow Wendy Brown’s contention that this situation is not a matter of historical accident, as citizens live within a “state of injury”, due in large part to the institutional configurations of state rule (1995). These struggles appear after over a century of settlement, industrialization and cultural dislocation. Bodies are uniquely situated at the frontlines of these struggles, thus, warranting political inquiry and analysis.

¹⁰ Subjectivity refers to how modern forms of power tie a subject to a particular form of conscience, identity and self-knowledge. Following Foucault via Cruikshank, “the subject is one who is both under the authority of another and the author of his or his own actions” (1999: 21). Subjectivity, as a process of subject-making, pertains to how and under what conditions subjects come into being.

As political scientists are charged with examining the causes, expressions and effects of power relations, this dissertation examines the operation of governance beyond the strict parameters of institutional politics. It assesses the everyday processes of governance situated, experienced and embodied within Aamjiwnaang, surrounded by Canada's 'Chemical Valley'.

Theorizing about "ecological citizenship" is sedimented in the practices, voices, knowledges and experiences of those living with their bodies at the frontlines. "Ecological citizenship", as an analytical framework is not a deterritorialized mode of trans-national connections. Rather, it is an experiential mode of being that is rooted in the particularity of place. Struggles in and of place reveal the continuously evolving, dynamic nature of these relationships. As such, places are not merely structurally determined; they are dynamic; they are always becoming (Casey, 1998; Deleuze & Guattari, 1987). This exploration of structural and discursive dimensions of place seeks to bring place 'in' to how we think about politics, citizenship and the body – in Canada – and beyond. Inspired by Foucault's concepts of biopower and governmentality, the dissertation theoretically challenges biopolitics with "ecological citizenship"; I tether biopower to place with the aim of expanding upon existing Canadian politics, citizenship and environmental studies literature. I suggest that emergent practices in Aamjiwnaang challenge conventional notions of citizenship and prompt us to account for place in the making of ecological citizenship in Canada.

Biopolitics

Thinking about the body politically is not new; it has always been part of the art of politics. 'Bodies' formulate bounded systems; literally and figuratively, bodies construct boundaries between self, mind and the outside world. For Aristotle, participation in the civilized political community, the polis, requires *bios* – qualified life, distinct from bare apolitical existence: *zoe* (Aristotle, 1962). Superior to the bare, unqualified life of *zoe*, the cultivated life-form, *bios*, led to citizenship. This political depiction of the body was considered as a separate entity from the natural uncivilized body. Hence, notions of political community operated within an exclusive logic.

Contending with gendered systems of meaning draws attention to the body. As Doreen Massey highlights, this Western dualism “coded masculine” predominant ways of thinking, privileging a “disembodied, free-floating generalizing science” (1994: 4). Western thought has and continues to maintain primacy of mind over matter. Best known for a machinic view of the body, 17th century French philosopher Descartes’s *cogito ergo sum*: “I think, therefore I am”, holds traction in our current time. This conception of the body treated it as inferior to the mental faculties of the cultivated mind. The body functioned as a system of parts, as matter constructed of bones, nerves, muscles, veins, blood and skin; it only moved through an act of will. This Cartesian dualist depiction of the body created a mechanistic and determinist model that separated body as ‘matter’, associated with the physical, private and natural world, separate from the superior rational mind. Consequently, there has been an overemphasis in political thought and practice on the primacy of the rational individual, where body is considered to be an organism, distinct from the mind, separated from nature and place. This bodily ordering continues to bear upon the meaning of citizenship today.

Classical political thought treated the body as emotive, outside the reasonable public realm of political life. As feminist political theorist Iris Marion Young notes, women have been conventionally relegated to the private realm, as guardians of “need, desire and affectivity” (254) while the public arena remained filled with masculine “discourse framed in unemotional tones of dispassionate reason” (Young, 1989: 253). Citizenship, following a long line of liberal political thought, functions as an “expression of the universality of human life”, and a “realm of rationality”, distinct from need, interest and desire, as that which was feminine (Young, 1989: 253). This has considerable implications for the private ‘apolitical’ domain of existence – where classical political thought tended to dis/place femininity, the body and desire. Contending with this demarcation, I share Chantal Mouffe’s critique of such a ‘rationalist’ mode of political life to draw attention to the emotional, conflictual and affective dimensions of “the political” as such. Following Mouffe: “the theorists who want to eliminate passion from politics and argue that democratic politics should be understood only in terms of reason, moderation and consensus are showing their lack of understanding of the dynamics of the political” (Mouffe, 2005a: 28). By discussing embodied dimensions of politics, I align

with Young and Mouffe to problematize the superficial dividing lines between public/private, masculine/feminine, rational/corporeal realms of ‘the political’ and to carve out new space for thinking differently about citizenship, subjectivity and belonging.

Questions about biological subjugation are central to feminist political thought. Matter – bodies and the natural world – have conventionally been considered as something to control, to tame and to temper. Feminist analyses tackle the separation between mind and matter, seeking to bring the body ‘in’ to political analyses in material and discursive means (Brown, 1988; Butler, 1993). Early waves of feminist thought, concerned with suffrage, social and legal equality, are largely attributed with making the personal political. While respectful of these motivations, this dissertation is not about ‘making room’ for women in politics, or directly about critiquing gender-based assumptions about political behaviour and action; rather, this study seeks to adopt a discursive analysis of the body as a site of political analysis uniquely situated in Canada’s Chemical Valley. Following Brown, this methodology is about interrogating the gendered nature of political life itself (1988). Citizenship, as a defining feature of political life, is a gendered concept at its core. According to Gabrielson & Parady: “written into the very concept is a privileging of the epistemic that constructs political space through the reinforcing dualisms of mind/matter, nature/culture, reason/emotion, men/women, public/private and so on” (2010: 375). This dissertation therefore aligns with a critical feminist approach to citizenship to contest any notion of the disembodied citizen.

The most obvious manifestation of the gendered nature of political life is the persistence of Cartesian dualism, both in theory and practice. Elizabeth Grosz seeks to invert these dualisms. She builds upon ‘post-modern’ theorists including Nietzsche, Foucault and Deleuze and Guattari, to demonstrate that subjectivity can be thought otherwise (1994).¹¹ I too seek to challenge the liberal rejection of the body in political thought and practice. Thus, the body, and corporeality, is at the forefront of how I

¹¹ Grosz characterizes Nietzsche’s emphasis on the bodily ‘will to power’ in contrast to Foucault’s focus on docility and resistance, which is further to be distinguished from Deleuze and Guattari’s discussion of ‘becoming and transformation’. Despite these variances, each theorist seeks to undermine the ‘pretensions of consciousness’ and critique the liberal subject’s control *over* the body. Each emphasizes the productivity of the body as a generative force of social relations to counter mainstream Western philosophy’s conceptual blind spot that gives credence to a dichotomous and hierarchical ranking of the mind’s superiority. My cut into these debates is somewhere between Foucault and Deleuze and Guattari to examine the body as simultaneously bound up within power relations and also as a regenerative force.

examine, interpret and assess citizen agency in Canada's Chemical Valley. At the heart of this dissertation is thus a post-positivist, feminist attempt to dissect the body/mind separation that continues to dominate Western philosophy and science.

To decentre the primacy of a rational 'I'ndividual charged with mastering an unruly body, this dissertation offers a theory of "ecological citizenship", inspired by critical ecofeminism, about the interconnectivity between bodies, citizenship and place. As I have argued elsewhere, there are three central tenets of gendered approaches to citizenship: formal, substantive and discursive (Wiebe, 2010). While tenets of each are present in various stages of this dissertation's analysis, I primarily engage with the discursive, corporeal, felt dimensions to discuss emergent forms of citizenship. To deconstruct or displace the inadequacies of Western liberal thought that demarcate between body/mind, nature/culture, human/environment I contend that bodies are personal and they are political. In fact, the body is powerful and regenerative; it is a force to be reckoned with (Grosz, 1994: 120). Moreover, a body is no simple 'thing'. They are "the centers of perspective, insight, reflection, desire and agency" (Grosz, 1994: xi). Bodies give life; they are productive and they are placed. Bodies interact, produce, act and react. They generate what is "new, surprising and unpredictable" (Grosz, 1994: xi). Bodies challenge rigid demarcations between private and public life; merit political inquiry, and tell us about the constitution of political life itself.

This dissertation focuses on 'biopower' and the relationship between bodies and power. Biopower is not strictly coercive or repressive, it operates through productive, inductive means, including incentives and enticements. In the context of biopolitics, which pertains to the execution of biopower, health policies – from hospital design to the location of cemeteries – reveal how the management of life itself is at stake in modern politics. How we understand ourselves as living beings, including vitality, morbidity and mortality, is of political value. The values attached to these vital elements of society constitute the crux of biopower. As political creatures, concerned with our existence in this world, we are increasingly compelled to think in productive terms about our vitality, and thus, how "our politics has become a matter of life itself" (Rose, 2007: xii). To understand this, and how biopower differs from hierarchical modes of political power, I discuss the management of life itself for Indigenous peoples at the nexus of

knowledge/power relations in Canada, specifically with respect to struggles for environmental and reproductive justice.

Applying a biopolitical lens to citizenship confronts the politics involved in changing forms of management for one's existence. Along with 'modernity' came sovereign authority. During this time, bodily punishments were bloody and spectacular. It was the sovereign who ultimately decided between life and death. Following Foucault: "for millennia, man remained what he was for Aristotle, a living being with the additional capacity for political existence; modern man is an individual whose politics place his existence as a living being in question" (Foucault, 1999: 143). Life in our present time is simultaneously managed in terms of overall population well-being and individual responsibility. As our technologies of rule shifted, away from hierarchical sovereign authority, corporeal governance takes on novel modes; individuals – bodies – are incited to self-govern through liberty and freedom, carrying out the will of the state at a distance. A biopolitical lens thus locates power not only within the formal centralized state, but also as internalized by citizens as they appropriate disciplinary tactics in informal political spaces.

The term 'body politic' connotes a head of state, where citizens are governed through various hierarchical institutional arrangements. Citizens, as the body of politics, form a collective unit, governed by the authoritative rule of the head. Mind ruled over matter. We are living in a time that moves away from directly coercive, physical body politics. In Hobbes' account of the *Leviathan*, sovereign authority in the body politic was externally imposed; it required the hierarchical order of an obedient citizenry. The image of Hobbes' *Leviathan* reveals a body surmounted by a king's head. For contemporary biopolitics, the king's head has been cut off and citizens govern themselves autonomously, through disciplinary but productive power relations.

While death was a major stake in the execution of sovereign power, authority and rule, life itself is at stake today, taking shape through productive discourses of population optimization and individual well-being. Biopower operates through a 'bipolar technology' of rule: governance of the species body and individual body (Rose, 2007: 52). Rather than operating through overtly exclusive means, political power today operates through a discourse of inclusivity, humanitarianism, hospitality and freedom.

Sovereignty becomes refashioned and entwined in population-based and disciplinary practices. Today, biopower involves the simultaneous optimization of population health and individual health. Following Foucault, biopower is indispensable to the advancement of capitalism and liberalism. Life itself is carefully managed by the administrative structure of the state, which coincides with individual self-discipline and management. Our late modern politics – for we are not in a so-called ‘post’-modern era – encourages autonomous, self-sufficient, able-bodied, productive and disciplined responsible citizens (Brown, 1988; Butler, 1990; Foucault, 1995, 1999; Rose, 2007). As I will discuss throughout the dissertation, and take up more rigorously in Chapter 6, while biopower is a crucial concept for our modern politics, its limitations come to the fore when confronted with place. Separating bodies from place conflicts with an embedded view of human being-in-the-world (Cloke & Jones, 2001). I thus seek to situate bodies in place.

Putting Biopolitics in its Place

In response to Western, liberal notions of rationality and ‘individual responsibility’ for the management of land and life, this dissertation engages with ontological questions of *place*.¹² Whereas space is broad and abstract, place is specific. While it can range conceptually from the macro level to the micro, i.e. from ‘nation’ to ‘home’, this dissertation hones in on place and place-making practices that are rooted and local. The meaning I affix to place aligns with Tuan’s claim that a place is a “centre of meaning constructed by experience” (1975: 152). Encounters with place produce knowledges,

¹² Competing worldviews stem from a long line of political rationality that can be traced to ancient political thought, refined by the Enlightenment. As René Descartes stated, “all that exists is mind over matter”, his musings thus “de-animated the world and swept away all instincts for myth, magic, mysticism and metaphor” (Davis, 2011). With the onset of science, individuals were ‘liberated’ from the tyranny of faith and collective ways of life. This was the “sociological equivalent of splitting the atom” (Davis, 2011). Enlightened ‘freedom’ came as a mixed-blessing. By de-animating the Earth in the human quest for modernity, alienation, isolation and cosmic loneliness ensued against the comfort of community and faith, as humans rallied behind a movement to survey, conquer, violate and subsequently dominate the non-human world. Despite our “veneer of civilization” that seeks to remove humans from the environment, this separation is illusory (Suzuki, 2007: 18). Humans rely on natural elements for its most basic needs: earth, air, fire and water. An animate view of earth is thus in direct tension with a possessive liberal ontology that seeks to separate humankind from the non-human environment. Other ways of thinking, other ontologies or worldviews, offer alternative visions of *life itself* and call this separation into question.

meanings and attachments; they entail strong emotional commitments and visceral feelings.

‘Place’ is a centre of meaning. Following Tuan, shared meanings and feelings produce ‘bodies of knowledge’ (1975: 159). Knowledge forms as individuals interact with place through experience. Relationships, between individuals and places, disrupt rational accounts of individual subjectivity that hierarchize individuals above place. Concerned with a discursive overemphasis on ‘lifestyle blaming’ for wound and injury in Aamjiwnaang, as a philosophical pursuit, I write against a *place-less* individual subject. Contra official government policy statements and unofficial speech alike, which construct the pathological ‘Indian’ as ‘at fault’ for wounds in this place, I seek to disrupt this discursive frame by wedging in local voices, on the ground, from the field.

Humans are directly involved with place through a phenomenal encounter; places are sensed, felt, breathed and lived. Bodies lead us into environments, into places. Rather than using political science as a positivist enterprise to ‘solve’ nature’s problems and problems about human exploitation or violence against the natural world, the methodology I bring to this inquiry adopts a discursive, or post-positivist orientation to examine how positivist, scientific ‘Truths’ about human-natural relationships are conceived. As such, I seek to understand how situated knowledges about environmental and reproductive injustices are formed and how they may differ from that of managerial ethics or approaches to bodies, to science and to possessive liberal individualism. Aligned with Brown, this dissertation aims to deconstruct the primacy of ‘rational-actor politics’, which emphasize autonomy and rights; though, by dispensing the unified ‘I’ subject, this does not mean I hope to cease being able to speak about individual feelings, actions and experiences (Brown, 1995: 40). My approach examines the co-constitution of peoples and places.

Bodies encounter and guide us to place. Following Casey, the body’s inhabitation or dwelling in specific places is a basic element requiring consideration in how we formulate and think about place encounters (Casey, 1998). This dissertation considers place to be encountered through the body over time, through space, mediated through everyday life and experience. As Casey suggests:

To be at all – to exist in any way – is to be somewhere, and to be somewhere is to be in some kind of place. Place is as requisite as the air we breathe, the ground on which we stand, the bodies we

have. We are surrounded by places. We walk over and through them. We live in places, relate to others in them, die in them. Nothing we do is unplaced (Casey, 1998: ix).

We find ourselves in a situation that is not simply laid out in uni-dimensional space, but lived out in dynamic place; a place of dwelling.¹³ Bodies and perceptions come into being through dwelling and inhabitation. One's orientation to the world, or worldview, is provided through the body, as a basis for "being-in-the-world" (Casey, 1998: ix). Bodily inhabitations within and of places are an inescapable and inextricable link between humans, values, debates about 'the political' and encounters with nature.

As bodies guide us into place, we encounter cultural knowledge that becomes sedimented into our perception of places. Following Ross:

Place is cultural and because humans are always in place knowledge is always articulated in relation to place. Knowledge in this understanding always emerges out of an encounter with a specific place or relational context that provides the conditions through which it becomes knowledge. This knowledge is then applied to other places and the relational contexts found in these places. In this view, knowledge exists because knowledge and experience are constitutive of the encounter with places (Ross, 2011: 63).

In contrast to space, the conception of place is specific. While 'space' is a broad and generalizable category, this dissertation considers place to be relational and particular. Places are thus encountered through practical engagement with one's surroundings. These encounters generate knowledge.

Places form through particular characteristics. As such, they have the capacity to give character to people who inhabit or dwell in a particular place. Thus, the character of people and place is intertwined. Those who inhabit places come to share features with the local landscape, but also mark land in particular ways. 'Space' has often been constructed as a *tabula rasa* – a pre-given medium – à la *terra nullius*, as that which is able to be mapped and contained. Place, in contrast, pays specific attention to the particularity of embodied place (Casey, 1998). The particular and practical ways that knowledge

¹³ Ingold draws from Heidegger to distinguish between 'building' and 'dwelling'. 'Dwelling' "treats the immersion of the organism-person in an environment or lifeworld as an inescapable condition of existence", as such, "the world continually comes into being around the inhabitant, and its manifold constituents take on significance through their incorporation into a regular pattern of life activity" (2000:153). To dwell implies relating to a space – not as a container – but as a meaningful place. *Dwelling*, entails a focus on *how* people interact with environments and live their lives. It pertains to "the forms people build, whether in the imagination or on the ground" within "the current of their involved activity, in the specific, relational contexts of their practical engagement with their surroundings" (Ingold: 2000: 186). Dwelling is not static, but an active practice.

interacts both materially and conceptually with place affects the multifaceted ways in which knowledges are constructed.

Bodily encounters, actions and positions – such as posture, word, sensation, memory, image and gesture – are held in place through common engagements and configurations. Although that which rests ‘on the ground’, with its sensuous surfaces, is liable to be swept up in myriad and interpretive spheres, it is held together by specific localizable knowledge. Places are never coherent or fixed; they are relational and multiaspectival (Massey, 2005). Thus, through relational zones, places of interactivity, power relations emerge. It is a core assertion of this dissertation that by engaging with places, one can gesture towards generating local knowledge, which can challenge, unsettle and dispel overarching generalizable terms. As Ross articulates: “there is not just ‘one’ movement, or form of movement/mobilization”; places and the cultural knowledge through which we know them are always hybrids, co-mingled spaces of ecological social relations that are always more than the product of human control (Ross, 2011: 100).¹⁴ This is how a particular place – Aamjiwnang’s location adjacent to Canada’s Chemical Valley – will be read and interpreted in this dissertation. There is no set number of networks, representations, or categorizable ‘Truths’ that can be called ‘Chemical Valley’; there are many inhabitations and articulations.

Aamjiwnang: A *Place* where Spirits Live in the Water

The Aamjiwnang First Nation Reserve, also known as the Chippewas of Sarnia, or Sarnia Reserve 45, is home to about 850 Aamjiwnang peoples, just across the Canada – U. S. border from Port Huron, Michigan, approximately 7km south of the City of Sarnia’s core, located as the southernmost tip of Lake Huron, Ontario. For nearly half a century, their land has been almost completely surrounded by one of Canada’s largest concentrations of petrochemical manufacturing. Much of their original reserve, founded by treaties 27 ½ and 29 in 1825 and 1827, dwindled over the years through various surrenders, the peak of which occurred through controversial land deals in the 1950s and

¹⁴ According to David Suzuki, ‘ecological’ comes from the word ‘*oikos*’; ecology is the study of home; to understand the conditions and principles that govern life’s ability to flourish and change (2007).

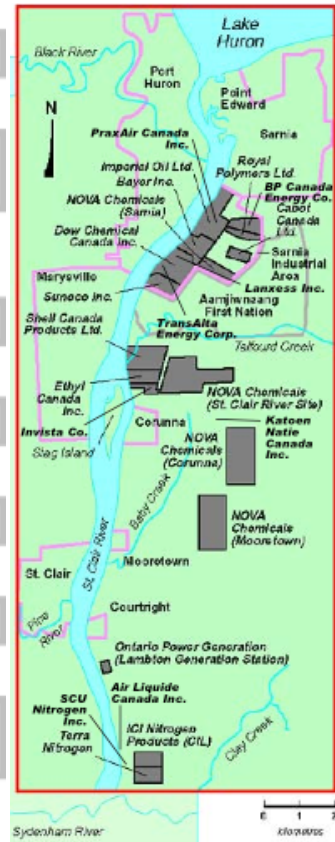
1960s when development companies sought to purchase the entire reserve. As Chapter 5 discusses in greater detail, this was allowed through the Federal government's fiduciary responsibilities, outlined in the *Indian Act*. The land base since compressed over the years, a partial consequence of land sales and surrenders, highway expansion and Municipal annexations. According to one local historian, they became "prisoners in their own home" (Plain, 2007). Pipelines, factories and petroleum storage tanks occupy today's territory and encircle the reserve.

In September 2011, the World Health Organization (WHO) surveyed 1,100 cities, in 91 countries and declared Sarnia to have the worst air quality in the country (Jeffrey, 2011). Canada ranked third in the world when it comes to air quality; yet, the airshed above Sarnia was found to have the highest concentration of particulate matter per cubic metre in all of Canada, on par with a population-dense city like New York. According to Dean Edwardson, General-Manager of the industry-funded Sarnia Lambton Environmental Association (SLEA), housed at Suncor's Sustainability Centre, "60% of what's measured comes from the U.S." (Jeffrey, 2011). Pointing to coal-fired plants across the river, he claimed that WHO's findings differed from local monitoring statistics; thus, begging the question of who is responsible for providing accountable information to citizens of Sarnia about the contaminants in their environment.

The Sarnia area, including the City of Sarnia and St. Clair Township, is characterized by a dense concentration of industrial facilities. A 2004 MOE report found facilities including chemical plants, natural gas sites, petroleum refineries, plastics recyclers, fertilizer plants, electric generation stations, a wastewater treatment plant and a landfill site (MOE, 2004). This report did not include inactive sites, which also house and store waste products and litter the landscape in this area (See: List of Surveyed Facilities, below). It is home to Canada's largest hazardous waste dump and a hub for the production for synthetic rubber, polyvinyl chloride and plastics.

List of surveyed facilities, MOE, 2004:

Air Liquide Canada Inc.	Invista (Canada) Company
Air Products Canada Ltd.	Katoen Natie Canada Company
Basell Canada Inc.	Lanxess Inc., (formerly Bayer Inc.) (three facilities)
Bayer Inc. (formerly H.C. Starck Canada)	Nova Chemicals (Canada) Ltd. (two facilities)
BP Canada Energy Resources Company	Nova Chemical Corporation (three facilities)
Cabot Canada Ltd.	Ontario Power Generation
Chinook Corporation	Praxair Canada Inc. (two facilities)
Dow Chemical Canada Inc.	Royal Polymers Limited
Enbridge Pipelines Inc.	SCU Nitrogen Inc.
Entropex Corporation	Shell Canada Products Ltd.
Ethyl Canada	Suncor Energy Products Inc.
Fibrex Insulations Inc.	Terra International (Canada) Inc.
ICI Canada Inc.	TransAlta Energy Corporation (three facilities)
Imperial Oil Ltd.	



Touring in and around Sarnia is an overwhelming olfactory experience. According to the 2004 MOE SWAT report: “A common risk to petroleum refining is exposure to hydrogen sulfide, which contains a rotten egg smell. However, concentrations above 150 ppm may overwhelm the olfactory nerve so that the victim may have no warning of exposure” (MOE, 2004). While low-level hydrogen sulfide (H₂S) may cause irritations in mucous membranes and the respiratory system, high-level exposures result in more neurological and pulmonary symptoms, including possible loss of consciousness. Very high concentrations lead to cardio-respiratory arrest because of brainstem toxicity (MOE, 2004). Several researchers point out the corresponding role between ambient air pollution and elevated hospital admission rates for respiratory and cardiovascular disease in London, ON, 100km east of Chemical Valley (Fung, *et al.*, 2005). As Chapter 4 discusses, by 2005, citizens and stakeholders concerned about the impact of pollution on health and wellness within Lambton County met, and by 2008 formed a Board of Directors for the Lambton Community Health Study.

Tourism literature, and accolades from the Chamber of Commerce tout the City of Sarnia, population 73,000, as a beautiful and desirable place to live and work. It is located within the County of Sarnia-Lambton, a gorgeous region affectionately referred to as “Bluewater Country” (Tourism Sarnia-Lambton, 2011). With a total population of 128,204, headquartered in Wyoming, ON, the Corporation County of Lambton encompasses four regions: Sarnia and Point Edward, St. Clair River District, Lambton Shores, and Central Lambton, and eleven municipalities (Statistics Canada, 2006). This is truly a rich place, in material and natural beauty. The reported 2005 median income for couple households with children was \$90,929, approximately \$3,000 higher than the average Ontario income level (Statistics Canada, 2006). Adjacent to Lake Huron, the County boasts miles of scenic waterfront, sandy beaches and breathtaking sunsets. It is a place to “discover your inner explorer”; “experience a festival of fragrance”; and “escape to a place that puts it all in perspective” (Tourism Sarnia-Lambton, 2011). In under an hour, Sarnia citizens can escape to Pinery Provincial Park, host to the last remaining Oak

Savanna Woodland in North America, about 15km away from the stunning site of Ipperwash Provincial Park.¹⁵

In addition to Sarnia's relaxed waterfront lifestyle, it is a hotbed of commercial activity. Oil was first discovered and produced during the 1850s, which spawned the emergence of an oil boom and industrialization in the area. Imperial Oil Ltd., soon followed. The affectionately-coined 'Chemical Valley' moniker emerged after the Second World War, during which time the Crown Corporation 'Royal Polymer' came into being, effectively starting an empire of rubber manufacturing, and gracing the \$10 bill (Bellamy, 2007). Sarnia's central position within the Great Lakes, waterways and accessibility to the U.S. make it an ideal location for industrial development. With deep-port access on the St. Lawrence Seaway, it is a global water corridor. Sarnia's location adjacent to Lake Huron and St. Clair River caters to the industrial sector, connecting to the waterways for processing, cooling, fire protection, marine docks and effluent discharge. In addition, Sarnia is serviced by CN and SCX rail, and by air through the Chris Hadfield Airport. Chemical Valley's industrial complex in South Sarnia contains an extensive network of hydrocarbon raw materials, such as natural gas, crude oil, ethylene and natural gas liquids (SLEP, 2011). It is a world leader in plant construction, process engineering and operations, metal fabrication, sustainable energy production and environmental technology and management. Moreover, Sarnia is at the forefront of petrochemical production and its relevant spin-off industries. Illustrating this, when the Gulf of Mexico oil spill disaster hit, BP turned to a Sarnia firm to 'mop up' the devastating mess (Dobson, 2010). Sarnia's own clean-up efforts remain a matter of continued debate.

Subsequent to nearly a century of heavy industrial manufacturing and refining, following the 1985 'blob' incident at Dow Chemicals – a release of perchlorethylene, a

¹⁵ Though outside the central scope of this dissertation, it is important to highlight the significant history of relations between the state and Indigenous peoples in Southwestern Ontario at Ipperwash, about 70km away from Aamjiwnaang. This site generated attention when an Indigenous protestor Dudley George was shot and killed by Ontario Provincial Police in 1995. In 2007, a provincially-sanctioned Inquiry completed its findings and revealed a lengthy story of state expropriation of this land base during World War II to build an army camp. While some First Nations citizens now reside in the former military site on their traditional territory – in abandoned barracks – relationships among the Kettle and Stoney Point First nations continue to be in flux. For further information see: <http://www.cbc.ca/news/background/ipperwash/> and <http://www.attorneygeneral.jus.gov.on.ca/inquiries/ipperwash/index.html>.

dry-cleaning solvent into the St. Clair River – this 64km stretch along the river became known as an “Area of Concern” by the Canada-U.S. Great Lakes Water Quality Agreement (Environment Canada, 2010). This rode the coattails of Dow’s legacy of releasing mercury into the river for many years. Prior to the introduction of environmental legislation, regulation and standards – during a time when Aamjiwnaang residents describe playing with and collecting mercury during childhood – in 2002 Dow chemicals began dredging to remove methyl mercury from the riverbed.¹⁶ By 2005, Pollution Watch named three of the Chemical Valley industries in the Top Ten respiratory polluters list (Ecojustice, 2007). As these environmental concerns began making waves, Environment Canada, the Ontario Ministry of Environment and the Environmental Protection Agency met to discuss a remedial action plan. Shortly thereafter, wetlands, wastewater treatment sites and various restoration projects appeared on the landscape.

Local residents residing in this area face a large pollution problem. Dow Chemical is but one facility of approximately sixty-two located within 25km of Sarnia and Aamjiwnaang (Scott, 2008). Community-based participatory research between members of the Aamjiwnaang First Nation and the Occupational Health Clinic for Ontario Workers – Sarnia (OHCOW) revealed a range of health concerns within the community, including: headaches, diabetes, thyroid issues, asthma, skin rashes, high cancer rates; neurological, reproductive and developmental concerns; and, a declining male birth rate, in addition to a loss of cultural practices on the land (Ecojustice, 2007; Mackenzie, Keith & Lockridge, 2005). With the help of OHCOW, these concerns were tracked on large ‘body-maps’ with colour-coded stickers and shown to the community. In addition to bodily concerns, industrial sources of air pollutants pinch the reserve on all sides: across from the Band Council chambers, the church, cemetery, traditional burial grounds, resource centre, and until recently moved, the day care centre (Ecojustice, 2010). Lead levels beyond acceptable MOE guidelines were found in Talfourd Creek, which weaves through industry and the burial grounds and into the St. Clair River.¹⁷

¹⁶ These interactions between citizens of Aamjiwnaang and their environment are discussed at length in Chapter 3, based on in-depth interviews and ethnographic methods.

¹⁷ Red-lettered skull and crossbones bearing “KEEP OUT” signs demarcate Talfourd Creek’s location in Aamjiwnaang. Trying to figure out the composition of the creek’s contamination composition requires

These living conditions are unsatisfactory to several community members and activists. To raise awareness, residents like Ron and Ada often provide public ‘Toxic Tours’. In 2009 Ron and Ada requested a legislative review under the Environmental Bill of Rights. Upon receiving no response, these individuals found themselves before the court. Soon thereafter, I participated in one such toxic tour, and ended up in Sarnia.

My Place

Aaniishnaa

Sarah, dizhnikaaz

Vancouver, ndoonjibaa

Niizhtana niizhwaaswi niin doonsibboongis

Anishinabee nige ndaw¹⁸

During my time residing in Sarnia, I joined a weekly Ojibwe class. We spent the first few weeks discussing the meaning of introductions. As my teacher continuously instructed: who you are connects to where you are from. While attending and participating in many events and ceremonies, community-members would often use Ojibwe words to introduce themselves to each other. I introduce myself as such here and explain how I came to live in Sarnia to research environmental and reproductive justice in Canada’s Chemical Valley. It is important to reflect on and clarify how I came to study here.

Growing up in B.C., Indigenous issues were always part of the political landscape, aesthetic and life of the province. The ongoing treaty process exemplifies this. My analysis is motivated by an effort to think through our inherited political histories and spaces. To investigate politics, we must both look elsewhere and nearby. On a personal level, I grew up on a body of water – the *Indian Arm* – just outside of Vancouver, B.C., on Tsleil-Waututh territory, in the village of Belcarra. As a youth, I spent many summers volunteering as a Beachkeeper, informing park visitors about ‘environmentally-friendly beach behaviour’, working as a day camp leader and enjoying recreational activities in

sustained monitoring sanctioned by the reserve in partnership with government officials and researchers. Though the testing ensues, questions are raised and concrete answers are few and far between. Despite the skull and crossbone-bearing signs, citizens continue to swim, fish and play in this waterway.

¹⁸ *Hello, I’m called Sarah, I’m from Vancouver, I am 27 winters old; I am a friend of the Anishinabe.* I introduce myself as such, to introduce this text, illuminating the relationships I have to myself, where I was raised over the years, and the recent relationships formed, which inform the pages here. This type of introduction is commonplace in Aamjiwnaang, indicative of the importance of the embedded nature of individuals and their locale.

Belcarra Regional Park. Only as a Masters student at the University of Victoria did I come to realize the importance of this park for the Tsleil Waututh people. Boulder Island's location in the middle of Belcarra Bay separated both my home and the park from the Tsleil-Waututh reserve across the water in North Vancouver. This Island was owned by the neighbourhood millionaire for 'storage' purposes; I grew up visiting, playing on and sharing ghost stories about past practices of this Island. Years later, as a graduate student, while meeting with a Tsleil-Waututh council member I learned about the ceremonial uses of both the Island and the park. The island was once a burial ground, the park a residential area. Today the Island is filled with waste, and the public park open for public use, while the Tsleil-Waututh look on across the inlet, from a distance.

While doing research on contested illnesses such as multiple chemical sensitivity (MCS) and fibromyalgia, I came across a CBC documentary film entitled *The Disappearing Male*. This film drew my attention to Aamjiwnaang and the ongoing struggles for both environmental and reproductive justice. The film pointed me towards an environmental movement there, premised upon corporeal health concerns and ongoing challenges to various regulatory authorities. I became curious about the ways in which citizens within the movement organized, articulated concerns and sought regulatory redress. As a political scientist, with a focus on health and citizenship, examining these struggles for my dissertation seemed like a suitable fit given my academic interests. The policy areas of 'health' and 'environment' are both domains of Canadian governance that fall within shared jurisdiction according to our Constitutional division of powers. When the twin issues of 'health' and 'environment' impact citizens on a First Nations reserve, responsibility for this 'policy ensemble' becomes even more opaque. If there is a normative motivation in this thesis, it is that this policy context will become less opaque and that we will think more seriously about environmental and reproductive justice in Canada.

Knowledge production is not merely something in the abstract space of a philosopher's mind; rather, it is co-produced through praxis, action or engagement, with real people, through lived-experience on the ground. As such, the task of a scholar, then, is to bridge the abstract world of ideas and empirical grassroots knowledge and to hitch macro-level conceptions about the world to the micro-level everyday experiences of real

people, practices and processes. Bearing this scholastic ethic in mind, as a student of political science, I seek to anchor my theoretical framing of ‘ecological citizenship’ in the minutia of everyday life. Thus, my inquiry is both deductive and inductive. It is deductive in the sense that I am building a theoretical framework, which I will read through the ‘field’, or site of study in question; simultaneously, it is inductive, as the knowledge generated stems from field research rooted in the ground.

Theory, and the practice of theorizing, is an inherent part of the process of knowledge production endemic to the act of creating a doctoral dissertation. In general terms, theory bridges abstract and practical realms of knowledge creation. It connects ontology – the study of what ‘is’ – to epistemology: how we come to know what we know. Studies of ontology, of what ‘is’, entail a discussion of what it means to be a human being in this world. In short, ontology speaks to the nature, condition, or context for ‘being’ itself. Analysis of how this being comes to be understood, interpreted and mediated is part of the scholar’s venture into the realm of building knowledge about the world. *How* this is conducted is the study of knowledge, or epistemology.

This dissertation considers ‘ecological citizenship’ as a situated practice co-produced through my own theorizing about ‘the world’, and by building up a story about a place, which stems from real world experience, as it is explained, mediated and interpreted to me as a researcher. Theory in this respect, as I see it, is an attempt to explain, as much as possible, some aspect about living in the world. Moreover, as I will discuss in greater detail in Chapter 2, I am acutely aware of my position of privilege as a researcher, as someone with so-called ‘expertise’ in the academic world. With this knowledge in mind, I aim to approach my field of investigation with humility and a genuine desire to transform the knowledge produced throughout the process of this project into a palatable medium for action and perhaps some kind of transformation.

While I base my analysis on written text and oral speech, I am motivated by a commitment to investigate the many silences in the field of Canadian politics, which often privilege macro-level institutional analyses. In contrast, this dissertation draws out some of the silent voices by focusing on the lived-experiences of those impacted by politics and public policies on the ground. Concretely, and methodologically, this entails

an analysis of relevant literature, texts, documents and speech, field research, lived-experience and interviews with research participants.

In the short span of a doctoral dissertation, the discussion of Anishinaabe ontology I present can only comprise of piecemeal snapshots, read through an analysis of institutional practice and conversations with the carriers of that knowledge. These carriers form a diverse group, including Elders, community-members, artists, and poets, among others. Caution is important. On one hand, it may appear as though I aim to construct ‘A’ single ‘Truth’, that I am creating knowledge out of nothing; I wish to be clear that this is not my aim. While I begin from an assumption that reality is diverse and that there is no *single* “Truth”, there are also some sophisticated metaphysical teachings illuminated by an Anishinaabe ontology that speak to the heart of tensions between contemporary Western life and an alternative way of being in today’s world.

An ontological analysis of ‘ecological citizenship’ requires an engagement with epistemology and a discussion of how we go about knowing what we know, or do not know. Rather than following a ‘positivist’ mode of social science, which seeks to ‘test’ a series of truth claims in pursuit of verification and falsifiability, or a purely ‘normative’ approach, which explores how the world ‘should’ be, I am concerned with how ‘is’, or ‘should’ claims are defined. Therefore, my investigation is critical and interpretive. A critical approach is one that questions established ontological and epistemological claims, searches for weaknesses and flaws, aims to expand the limits of knowledge production and makes some practical contributions to the lived world. I seek to both work towards practical application of knowledge as well as work within the realm of ontology by questioning assumptions about that world ‘is’, or ‘must’ be like (Soja, 2010). I am interested in how ‘being’ in the world is understood by various actors in Aamjiwnaang and Chemical Valley.

Chapter Overview

My dissertation – as a body of work – unfolds sequentially through seven anatomical systems. Commencing with the skeletal, this introductory Chapter 1 began by highlighting the perceived pollution problem in Aamjiwnaang. Consequently, I contend

that bodies are at the forefront of a movement for environmental and reproductive justice, held together by their corporeal concerns, set in a particular place. By situating concerned citizens' bodies in place, Chapter 1 outlined the implications of these struggles for the concept of citizenship. I introduced the feminist approach to biopolitics and ecological citizenship unfolding in this dissertation, which seeks to examine people, knowledge and power. Beginning with people, namely citizen concerns and practices, this analysis next moves to discuss struggles over scientific knowledge and expertise, followed by unpacking and problematizing an apparent policy ensemble for on-reserve environmental health. Chapter 1 explained the selection of Aamjiwnaang as a site for analysis, highlighted the central research questions and outlined the approach.

Chapter 2 outlines the treatment of citizenship in this dissertation. Conceptually, Chapter 1 introduced a biopolitical theory of citizenship, to connect bodies to politics. After outlining a biopolitical approach to citizenship – biological citizenship – Chapter 2 explains the unfolding framework of 'ecological citizenship', which draws from interview findings and brings in 'place'. As an interpretive investigation, Chapter 2 outlines the methodological approach undertaken in the dissertation to make sense of how struggles for environmental and reproductive justice emerge. The critical and interpretive methodology employed in this dissertation entails qualitative methods, i.e. in-depth interviews, archival research, participant observation and community-engagement, I discuss the relationship between engaged research, lived-experience and decolonizing methodology that inform the empirical chapters to follow.

Building upon interpretive and ethnographic observations, Chapter 3 draws directly from experiential knowledge expressed through community and stakeholder interviews with citizens of the Aamjiwnaang First Nation and engages with the everyday lived-experiences articulated by citizens. Drawing mainly from interview data, Chapter 3 presents a discursive analysis of concerns about the perceived pollution problem in Aamjiwnaang. I discuss the various ways in which citizens and stakeholders in Aamjiwnaang and Chemical Valley practice citizenship and articulate a simultaneous disdain and attachment toward the place they call their home, a sacrifice zone, where they live with their bodies on the frontlines.

As a precursor to Chapter 4 on struggles for scientific knowledge and expertise, Chapter 3 introduces ‘embodied citizenship’ as a ‘body of knowledge’ employed by citizens and stakeholders who mobilize to seek recognition for their environmental health concerns. Following Orsini & Smith, contrary to conventional modes of public policy analysis, which explore the ways in which problems are to be ‘solved’ through accessing or shaping the health care system, this chapter views citizens as active agents who mobilize distinctive knowledges (2010). I refer to these, borrowing from Foucault and Tuan, as ‘bodies of knowledge’ (Foucault, 1972: 59; Tuan, 1975: 159). In contrast to a technocratic model of public policy development, I consider citizens to be a diverse group of actors with unique motivations, identities and interests. Subsequently, Chapter 4 continues the discussion of ‘bodies of knowledge’ and highlights relationships between citizens, expertise and knowledge in various forms of activism, focusing on ‘external’ and ‘engaged’ forms of expertise mobilized within and outside Aamjiwnaang. By focusing on how these struggles play out in an ongoing County-wide health study, I demonstrate how the community seeks recognition for their environmental and reproductive health concerns in this politically charged and deliberative process.

Biological beliefs and values are tied to Canada’s official treatment of Indigenous peoples. Chapter 5 examines how the Canadian state has, and continues to regulate the bodies of ‘Indian’ citizens in Canada broadly-speaking and Aamjiwnaang in particular. Specifically, Chapter 5 reviews both official and unofficial policies between the state and Indigenous bodies. By examining the changing face of biopower and citizenship in Canada, this chapter presents a historical analysis of both official Canadian-Indigenous citizenship policies and practices and local policies and practices that affect the Aamjiwnaang First Nation. It reviews the changing governance structure and citizenship policies for First Nations – or ‘Indians’ – in Canada through an analysis of the *Indian Act*, as well as broader policy initiatives. Drawing from personal interviews, published materials and archival documents, Chapter 5 explores some of the continuities and discontinuities of official citizenship policies and practices in Canada as they affect Aamjiwnaang today. It traces historical links between citizenship, Indigenous governance and the body, as central elements of constructing this place. Chapter 5 situates Aamjiwnaang citizens’ struggles for justice within the context of this ‘policy ensemble’.

Chapter 6 distills the previous three empirical chapters and presents a theoretical discussion of ecological citizenship. Putting the findings in conversation with selected literature in Canadian politics, citizenship studies and environmental studies literature, Chapter 6 draws attention to the significance of “place” in the formation of ecological citizenship, practically and conceptually. I contend that ‘ecological citizenship’ is at once disempowering and empowering, as citizens assume responsibilities for the management of their land and life as disciplinary stewards, while simultaneously advocating for a radical form of recognition and belonging embedded within the non-human world.

Chapter 7, the final chapter, concludes the dissertation with an account of citizen involvement in Idle No More, Attawapiskat Chief Theresa Spence’s high profile hunger strike and weaves together implications of this movement for justice, democracy and citizenship. I subsequently present a synthesis of the dissertation’s core contributions, reflect on ‘anatomies of place’ and highlight the broader implications of the findings for ecological citizenship beyond Canada’s Chemical Valley. Chapter 7 highlights the theoretical, methodological and empirical contributions to political science, and offers some trajectories for future environmental and reproductive justice research. I conclude by drawing into focus the promising potential for arts-based approaches to social justice as an avenue to address many of the themes and concerns taken up in the dissertation. By collaborating with artists both within and external to the community, I sought to share voice, knowledge and power throughout the research process. My involvement with the Aamjiwnaang Green Teens and Kijig Collective on a documentary film exemplify this, in addition to collaborating with international photojournalist Laurence Butet-Roch, whose brilliant images make these pages visible.

Conclusion

Skin enfolds our bodies but does not define our limits because water, gases and heat dissipating from our bodies radiate outward, joining us to the world around us [...] we are an inseparable community of organisms that are kin (Suzuki, 2007: 16).

Being does not end with the skin. History, culture and existence are embodied through landscapes. Environment is not something ‘out there’ separate from human life. This dissertation takes Suzuki’s articulation of the body-place relationship above as axiomatic to construct an account of the ‘anatomy of place’, to investigate the emergence of

‘ecological citizenship’ in Canada’s Chemical Valley. As such, it focuses on the embedded and emotional nature of this place for citizens of the Aamjiwnaang First Nation. By examining struggles for environmental and reproductive justice, this dissertation explores the people, knowledge and power relations apparent in the constitution of ecological citizenship in Canada’s Chemical Valley.

As Chapter 2 discusses, citizenship is more than a civil, political and social set of entitlements; it is a practice. Practices and policies shape the rights, responsibilities and entitlements that form relations of power between ‘the State’ and its citizenry. Citizenship is not merely something to ‘obtain’, it is also a discursive, moral term, enacted through lived-experience. Thus, as a theoretically-minded political scientist, my aim is to trouble the categories and conditions through which authority and governance become constituted, conceptually and practically. I am particularly interested in how concerned citizens encounter and confront the policy ensemble for on-reserve environmental health. By situating power relations within formal institutions and in informal, on the ground settings, I seek to enhance knowledge and understanding about what these struggles for environmental and reproductive justice tell us about the formation of state-society power relations in Canada.

In raising these questions, this project is motivated by a desire to understand the subtle and not so subtle violences and injustices these struggles encounter, ideationally and institutionally. Following Shaw, I aim to contribute to a conversation about how our inherited circumstances constitute and legitimate some forms of authority and marginalize others (2008). Why study the plight of Indigenous peoples in a precarious place? Despite the well-intentioned remarks of many family-members, friends and colleagues, often delivered with a twist of envy, guilt and condescension: I am not taking on a social justice project for particularly noble or just motivations. I do not find ‘their’ situation to be markedly deplorable or righteous. Aligned with Shaw, I find ‘their’ situation to be revealing about core issues of ‘our’ contemporary politics, which illuminate relations of power between the state and citizens. The situation for many Indigenous peoples is especially revealing about the character of modern politics because Indigenous peoples exist in colonial settler defined political states and spaces: “our own identities are constituted partly in relation to them”, “our economies and political

communities are enabled by resources colonized from them” and “their situations reveal most profoundly the violences inflicted by our own modes of life and understanding” (Shaw, 2008: 5). The experience of Indigenous peoples in Canada is a condition of possibility for our own settled existence.

The claims made by many Indigenous peoples and movements seek to profoundly unsettle the sedimented foundations of Canadian sovereignty. In the process of developing an understanding of what motivates Indigenous mobilization i.e. inequitable distribution of resources, in addition to structural, discursive, ontological and epistemological conditions, I am mindful that the acknowledgment of these unfavourable conditions is not a license to ‘solve’ their struggles; rather, these tensions offer a stark reminder that we must understand uneven social conditions and power relations to conduct a critical ontology of ourselves, to understand our politics. This is a discomfoting enterprise, on which this dissertation embarks.

Chapter 2

Circulations and Citizenship: People, Knowledge and Power



Photograph by: Laurence Butet-Roch, December 2010

Introducing Aamjiwnaang¹⁹

This dissertation examines some of the ways in which citizens of this community are disciplined into becoming active ‘ecological citizens’ and discusses how this converges and diverges with an Anishinaabe approach to land and life that accounts for ‘place’. I refer to this as ‘ecological citizenship’s double-edge’. In Aamjiwnaang, citizens bear the responsibility for monitoring their own well-being. Community-members are called upon to practice self-care for their livelihood and habitat; consequently, governance of land and life become fused.

Political science as a field of study tends to be concerned with the location, distribution and expression of power, authority and social organization. One concept that links these components together is citizenship, which encompasses the ways in which individuals govern themselves in relation to each other, in pursuit of maintaining and protecting their rights and responsibilities in a political community. Political science as a discipline has been, and continues to be, concerned with the institutions that hold people together in public space. This includes a focus on formal institutions such as parliament, courts, and citizen assemblies; while I will look at the emergence of citizenship outside of these more formal settings as an emergent ethic, mode, or ecological practice situated in a particular political place, I am also concerned with the subtle expressions of state power and authority as they affect citizen engagement.

By locating citizen actions in Aamjiwnaang – a particular place – I seek to develop a place-focused account of the emergent practices of citizenship, engagement and resistance, which constitute a new way of thinking about “ecological citizenship”. Chapter 6 discusses this in greater detail, by digesting and distilling the empirical findings and putting Canadian citizenship scholarship in conversation with ‘green governmentality’ and environmental politics literature (Darier, 1996; Rutherford, 2007).²⁰

¹⁹ The name Aamjiwnaang pertains not only to a geographical area where the rapids meets the shore, but also refers to a spiritual connection that Anishinaabe peoples have to this locale. As Anishinaabe historian David Plain discusses, Aamjiwnaang is a word with no English equivalent; it is descriptive of a unique characteristic of territory, meaning “place where mahnedoog [spirits] live in the water” (Plain, 2007: 1). The territory once covered a much larger area on both the United States and Canadian side of the border; today, the name “Aamjiwnaang” has become localized to one small reserve.

²⁰ Following Laurie Adkin, the concept of “ecological citizenship” intersects with ‘green theory’ and ‘environmental justice’ to address fundamental questions about the relationships between humans, nature, race and politics (Adkin, 2009; Agyeman, Cole, Haluza-DeLay, & O’Riley, 2009; Bryant, 1995; Bullard,

Questions about ‘nature’ and the relationship between ‘humans’ and the non-human world are at the heart of how we define ‘politics’ and political life.

A considerable amount of the green theory and existing environmental/ecological citizenship literature emphasizes active citizenship.²¹ Frequently, normative or moral arguments are put forward staking the grounds for justice, to include notions of stewardship, responsibilities, virtue and justice. Following Adkin’s argument that much of this literature focuses on “normative” (i.e. duties and obligations) and “procedural” (i.e. institutional, deliberative) dimensions of environmental/ecological citizenship, my analysis starts from the perspectives of citizens on the ground, in a particular place to build up an argument about citizenship (Adkin, 2009: 4). Ecological citizenship as a framework for political thought provides a lens through which scholars can ask questions about belonging – the ‘ties that bind’ citizens to each other – and to the environments in which they live.

Ecological citizenship challenges liberal accounts of citizenship. I begin my discussion of ecological citizenship building from Adriana Petryna and Nikolas Rose’s sociological treatment of biological citizenship and subsequently draw from James Tully’s philosophical discussion of ecological citizenship. I then put this in conversation with what I refer to as an Anishinaabe approach to ecological citizenship, a conceptual formulation built up from on the ground practices, articulations and scholarship on Anishinaabe ontology. I explore how everyday activities can be interpreted as ecological practices, fusing land and life. As this dissertation will discuss, practices such as bio-monitoring, bucket brigades and body-mapping illuminate the challenges for Indigenous communities seeking state redress for environmental health issues, and the inextricable

1993; Cole & Foster, 2001; Darier, 1999; Eckersley, 2004; Fischer & Hajer, 1999; Luke, 1997, 1999; MacGregor, 2006; Rutherford, 2007).

²¹ The distinction between ‘environmental’ and ‘ecological’ is an important one for my unfolding argument. Whereas much of the green governmentality and environmental citizenship literature emphasizes responsibilities ‘for’ the environment, I am employing the term ‘ecological citizenship’ to refer to an ongoing, continuous, relational and interactional approach among and between humans and the non-human world. The term ‘ecological citizenship’ is all too often co-opted by formal public discourse to instrumentalize citizen behaviour and maintains a stewardship demarcation between humans and the non-human environment (see, for example, Environment Canada’s discussion of ‘Environmental Citizenship’ as a ‘personal journey’: <http://www.ec.gc.ca/eau-water/default.asp?lang=En&n=9E705000-1> this is also discussed at length in Darier, 1996 and MacGregor & Szerszynski, 2003).

link between body and landscape. I contend that activities – practices – taking place in the Chemical Valley compel us to think differently about citizenship in Canada.

Approaching Citizenship

This dissertation applies a discursive and interpretive approach to political science and policy. Such a framework takes as axiomatic that discursive and structural forms of power, authority, control and oppression are interconnected and overlapping. Broadly-speaking, discourse analysis is a qualitative methodology that focuses attention on the role that language and communication have on shaping the social world (Burnham *et al.*, 2008). It hones in on the ways in which power operates through language, texts, conversations, media and policy-making in the process of creating institutions and shaping behaviour. Texts include laws, policy statements, political debates, politicians' speeches, legislative proceedings, media statements, academic books and articles. Such texts aid the researcher with determining the development of discourses and how they legitimize some policy initiatives and marginalize others (Burnham *et al.*, 2008). Furthermore, discourses can be understood as systems of signification, where 'reality' is socially produced by people who give meaning and significance to objects in the material world. Sometimes, such discourses are organized in terms of binary opposites, for example male/female, healthy/ill, rich/poor, etc. Discursive and interpretive approaches frequently interrogate the lines between such demarcations. As I discuss later in this chapter, these analyses can also be enhanced through documenting narratives and field immersion through political ethnography.

Discourse analysis examines the ways in which everyday discourses and common perceptions and understandings are encouraged and reinforced by political elites, in the media and by individuals themselves. Therefore, discourses both frame and constrain courses of action. Some individuals are constrained in different ways than policy-makers, elites and the general population when responding to particular events or crises. Discourse analysis reveals contested bases of common assumptions and how these assumptions relate to different interests in society. By showing who 'wins' and who 'loses' from particular discourses, discourse analysis can contribute to the understanding

of social and political processes, and thus the formation and expression of citizenship at macro, meso and micro sites, i.e. ranging from the national to local places.

Theorizing is connected to lived-experience. In contrast to ‘formal’ models and logics of inquiry, generating theories about ‘the world’ in this dissertation stems from the messy contextuality of life experience (Schwartz-Shea & Yanow, 2012: 37). An interpretive inquiry seeks to ‘open up’ possibilities for politics by creating avenues for multiple voices to come to the fore. The interpretive investigation begins with the understanding that we live in a world of multiple intersubjective social realities. In addition to an individual act, meaning-making is a social practice; the researcher and the ‘researched’ alike interpret events and ascribe meaning to these events and experiences (Schwartz-Shea & Yanow, 2012: 41). This approach assumes that humans move through the world experientially; that ‘embodied’, experiential knowledge is full of multifaceted meanings. The normative purchase for accessing this knowledge gestures towards a possibility that it may generate alternative ‘bodies of knowledge’ based upon particular practices or forms of expression that would ultimately speak truth to power, or prompt the development of more widely representative and inclusive policy-making.²² This interpretive method informs my approach to thinking about and theorizing citizenship.

The concept of citizenship has a long social, economic and political history. During the early stages of ancient and classical Western thought, citizenship referred to a select group of individuals entitled to the privileges and responsibilities within a Greek city-state. ‘Being’ political has etymological roots in the Greek word polis, which accompanies a discourse of ‘being’ civilized (Soja, 2010). Tracing political thought back to its early formations, classical notions of the ‘polis’ or city-state presents a glimpse into the ways in which citizenship has been used to construct divisions between un/qualified citizens, un/worthy of political voice. Formally slaves, women and artisans were explicitly excluded from the civilized lifestyle of the polis. Though a thoughtful discourse on social justice did not emerge at the time, the origins of Western ancient and political thought shed some light into the beginnings of a discourse about participatory

²² There is thus an underlying normative element, or impetus in this dissertation, then, that by producing a critical analysis of official public discourse, this study will contribute to the collaborative pursuit of creating spaces for discursive change and ways of thinking, being and articulation. Such motivation aligns with a commitment to social justice and deliberative dialogue about multi-dimensional public policy issues.

democracy, the rights and obligations of citizenship and the meaning of democracy as a principle (Soja, 2010). The 'polis' was a privileged public space, filled with advantages, opportunities, obligations, rights and responsibilities. With the advance of the modern sovereign state-system, citizenship bore the mark of formal legal status; it defined the population along lines between those who could legitimately make claims on the state for protection vis-à-vis those who could not. Citizenship marked the making of modern political subjects. Thus, it was essential to identity-forming and nation-building projects. As such, 'citizenship' as a concept is full of political meaning.

Citizenship can be understood as a social category that simultaneously civilizes and modernizes. Throughout the history of political philosophy and practice, it constructed boundaries of belonging, demarcated so-called 'civilized' from 'uncivilized beings' and separated 'civilization' from 'nature'. The civil rights associated with citizenship were meant as a means to protect humans from their unruly nature. Outside the rule of law, there is no civilization and no citizenship (Tully, 2010). Citizenship was considered to be a status or category citizens received, a passive construction for individuals to attain. In the past and in the present, one is considered to be a citizen relative to the rule of law to which one is subject. The imposition of law's formal structure lays the groundwork for the status of 'citizen' (Tully, 2010). In effect, the civil law 'civilizes'; it creates the conditions of civilization and civility.

Modern citizenship has been understood as a category for those who deserve it. It was historically thought to be some 'thing' passive citizens attained. It is conventional to consider citizenship in terms of the granting of civil rights in the eighteenth century, followed by the extension of political citizenship in the nineteenth century and finally social citizenship in the twentieth century (Rose, 2007: 131). Such a conception of citizenship reveals a historical progression of citizenship projects, or initiatives, where authorities considered which classes or categories of citizens were potential candidates for rights, entitlements and participation in a political community. As such, citizenship formed, and continues to form, barriers between those included and excluded in a given political community. State authorities possessed the ability to define those who were entitled to participate in political affairs, could impose a system of legal rule across national and sub-national territories, oblige citizens to speak national languages, establish

universal education, design and plan public spaces and foster certain ways of thinking, feeling and acting in order to bind subjects together (Rose, 2007: 131). These citizen-creating projects were central to the idea of nationhood, as well as to the practical techniques of maintaining citizen attachment and loyalty. Though citizenship was historically considered as a necessary component of modern state-making, social, economic and cultural movements and forces such as multiculturalism and globalization fostered a political context for emergent forms of citizenship.

The ‘ethic’ or mode of citizenship practiced in the Chemical Valley by various actors reveals diverging ontological and epistemological positions about how humans perceive and relate to their land and environment. This has not been captured by the main approaches to political studies of Canadian citizenship in theory or practice, as Chapter 6 further distills. While the predominant approaches cling to liberal state theory, my dissertation takes a more critical turn and locates citizenship outside the formal institutional political arena; rather, I focus on policy implications for situated communities struggling for environmental and reproductive justice on the ground. As such, my approach to citizenship begins from below.

Discussions of citizenship are inextricably linked to debates concerned with restructuring state-society relations. The mere existence of Indigenous peoples in Canada, many of whom live on reserves and exercise a unique set of rights, challenges our conventional ways of thinking about Canadian citizenship through individual, civic, or (neo)liberal models. In contrast to T. H. Marshall’s writings on citizenship and social class, which outlined civil, political and social rights and delineations of distinct features about what citizenship ‘is’, I discuss citizenship as a practice (1964). Jenson & Phillips refer to ‘practices’ of citizenship as forms of access to the state, representation of interests within the state, and recognition of model citizens, where novel forms of individualized identities for citizens emerge to the detriment of ‘the social’ or group rights; specifically social elements of citizenship are increasingly eclipsed by market forms of citizenship (Hindess, 2002; Jenson & Phillips, 1996; Rose, 1996). Within the field of citizenship studies in Canadian politics, concerns with the demise of the welfare state are paramount; however, this discussion does not examine the specific ways in

which actors in Canadian society enact practices of citizenship as an active form of engagement at arm's length from the 'State'.

In contrast to addressing questions that concern the state's effective or efficient function in governing a healthy demos, I focus on the state's appendages or capillaries. I am interested in how certain "forms of thought, practices and subjectivities" become established, and thus supplement my "governmentality" approach to political analysis with ethnographic methods to assess the effects of power and "lived-experience of subjection" (Foucault, 1994; Brady, 2011: 266; Mckee, 2009: 474). To do so, I situate my examination of struggles for environmental and reproductive justice within Foucault's conception of 'governmentality' to examine what governments do (or not do), their rationale, and an analysis of the ways in which public policy subjects and objects of governance are neither obvious nor static (Brady, 2011; Foucault, 1994; McKee, 2009). Governmentality can be understood as an ethos of investigation and a way of asking questions; not necessarily 'why' things happen, but in addition, how. Drawing from Deleuze, Darier underscores governmentality's utility to political scientists not as a 'truth' concept, but as a toolbox to assist us with the continuous process of resisting truth claims and the effects of power (1996: 601). It is a way of approaching policy that accounts for modern and neoliberal subjectivity at the nexus of struggles over power and knowledge from the macro – state – scale through to the micro, individual level. This approach "emphasizes variation and context" and seeks to reveal the "messiness and complexity in the struggles around subjectivity" (Mckee, 2009: 479). Governmentality studies offer a lens through which scholars can examine the effects of power as mediated by actors or agents – in this case citizens – in particular places.

In contrast to citizenship approaches that centre on the 'State', or the 'individual' as a core axiom for analysis, a governmentality approach begins with regimes, or relations of power, shaped through discursive fields. How one speaks about an issue is inherently tied to questions about what is defined as 'the political'. From this approach, a governmentality lens examines the effects of institutions or structures on political behaviour. Beginning my analysis with people and political behaviour, I reflect back upon institutional assemblages and contend that struggles between people, over knowledge, and for power take place in very specific and particular ways.

‘Governmentality’, coined by Foucault during his lectures at the Collège de France in the 1977-1978 years, deals with the state, but extends beyond the realm of institutions to include its apparatuses, administration and citizenship, revealing power relations through the practices of the extension of the state’s tentacles into the spaces of everyday life. This view rejects the notion that ‘government’ is coterminous with formal or official institutions of power, known as ‘the state’; rather, ‘government’, in this dissertation, encompasses a multitude of processes and practices within and outside the state, that shape individuals, and communities, towards desired ends (Murray, 2004). This extension of state power operates through the ‘art of government’, and raises questions about how to govern oneself, how to be governed, how to govern others, and how to become the best possible governor (Foucault, 1994). The art of government twins two poles: hierarchical modes of governance on one hand, and the internal power relations among citizens themselves. Thus, citizens act as agents, as active carriers and producers of knowledge. Humans – citizens – are not simply ‘objects’, but rather agents who actively and collaboratively construct, and deconstruct, meaning.

Governmentality studies illuminate the paradox of freedom: at once, liberal theories of governance cling to the notion of individual choices, actions and responsibilities contingent upon free will; simultaneously, this rational, self-disciplined ethic is a linchpin for market-based commodification in a democratic capitalist society. A governmentality framework for political analysis considers the characteristics of liberalism as a mentality of government, which entices citizens to become self-regulating, culpable, and active individuals through gentle means; the ruler governs through the productive practices of agents at a distance, rather than through overtly repressive, bloody and spectacular means.

Studying political science and public policy from a governmentality frame illuminates the plurality of forms of government and activities that (in)form state-citizen relations. Though governmentality studies will focus on the capillary aspects of power and knowledge, where the ‘king’s head’ has been cut off, the state is not excused from this analytical framework: it is but one sphere among others to examine the ways in which power relations emerge and take form (Murray, 2007: 163). Foucault refers to analyses of governmental power and authority as a kind of topology, which includes the

multifarious layers of power and its reach beyond institutions to individual citizens (Foucault, 1994). From this approach, it would be too simple to draw any rigid dividing line between an external sovereign authority and internal citizen practices. As such, there is a continuity of government, upwards from citizens to the state, and simultaneously downward from the state to citizens; well-governed states require well-disciplined citizens to perpetuate productive political and economic relations. Approaches inspired by governmentality examine the play between the ‘inside’ and ‘outside’ of political boundaries between states/citizens, public/private spheres, government/freedom. It analyzes political authority and asks: Who governs? How?

From a governmentality lens, governance of the state population operates in sync with individual self-management as a form of ‘biopower’. Biopower is productive; power produces things: pleasure, forms of knowledge and discourse; it operates as a productive network that runs through society (Murray, 2007). It takes shape in a positive sense, premised upon the assumption that individuals are autonomous and rational beings who have the capacity and capability to govern their own lives and well-being. The rational, liberal logic of the state is transposed upon citizens themselves. The crux of biopower refers to the simultaneous management of populations and individuals. Control over a well-disciplined citizenry or population requires two maneuvers: mastery of territory in tandem with individually responsible and productive citizens. Biopolitical analyses examine the ways in which subjectivities are produced and ordered, both at local – individual, community – and more broadly, at national, population-based scales.

Governmentality studies examine ‘ensembles of power,’ an amalgam of institutional parameters and discursive fields. Power takes multiple forms, and constitutes fields of knowledge; it is diffuse. Actors operating within these discursive fields are constrained by practices that frame the parameters of speech and thought. As Chapter 5’s discussion of Canada’s ‘policy ensemble’ for on-reserve environmental health explores at length, governmentality includes an ‘ensemble’, or ‘assemblage’ of institutions, procedures, analyses and reflections, as well as tactics that allow the exercise of a specific and complex form of power to take shape (Foucault, 1994: 244). ‘Government’ refers to much more than ‘sovereign authority’ or the ‘State’; governmentality turns our attention towards this ‘more than’ quality of government and includes the multifaceted ways in

which society itself becomes governmentalized. Techniques of government, adopted by citizens and communities, permit the state's survival. Governmentality conceptualizes 'liberalism', as a mentality of rule, which cultivates state survival, through the creation of, and dependence upon free subjects.

Governmentality approaches examine the outcome of multiple thoughts and practices that shape assumptions about what government is and how it operates. As introduced in Chapter 1, the outcomes of 'multiple thoughts and practices' can be understood as 'bodies of knowledge', which I discuss further in Chapters 3 and 4. The agency of actors is limited by the discourses – by the 'bodies of knowledge' – in which they are embedded. Thus, language, speech and communication carry and transmit relations of power. Chapters 3 and 4 outline 'bodies of knowledge' pertaining to scientific expertise and struggles for justice, Chapter 5 examines the institutional configurations shaping and constraining these struggles.

The following section elaborates on the idea of citizenship as a practice. This notion stems from Petryna's work on biological citizenship (2002). Drawing upon the 1986 explosion of a nuclear reactor, Chernobyl, in the Ukraine, Petryna examines how wounded individuals organize and make claims to the state based upon their biological condition. She discusses the ways in which individuals who are living with uncertainty band together and form (in)formal networks. Petryna refers to this as an emergent social practice, where the damaged biology of a population becomes the grounds for social membership and the basis for staking citizenship claims (2002). Her analysis exposes how the forms and terms of engagement, struggles for resources, and rationalities go beyond traditional notions of citizens as bearers of formal legal rights. Instead, she offers 'biological citizenship' as a way of bringing the body forward as central to the nature of contested forms of inclusion and exclusion in a political community. Thinking about citizenship as a practice in this regard reveals informal aspects of power relations.

Citizenship: A Corporeal Practice

Biology and citizenship are inherently linked to state-making and the boundaries of belonging. Ideas and practices of citizenship involving citizens' self-conduct in relation to their health and reproduction underscore this connection. Aligned with Petryna, Nikolas Rose expands upon the notion of 'biological citizenship' to explore the connection between nation-building, colonization and ideas about desirable citizens based upon their biology (Rose, 2007). Life becomes a political object. Rather than solely thinking about the make-up of citizens imposed from hierarchical state authority 'above', an analysis of biological citizenship focuses on the languages and aspirations employed by individuals who understand themselves and relate themselves to others. These understandings, meanings, and framings, oriented around citizen agency and biology can be understood as expressions of identity formation and biosociality. In examining the relationship between politics and life itself, Rose's aim is not to call for a 'new' philosophy of life itself, but to explore how citizens embody an ethic of responsabilization for biology and the management of vitality. Challenging Rose, I move away from thinking about corporeal management or stewardship towards a more place-based understanding of the body.

In our modern age, humans are expected to assume great responsibility for biological management. In this respect, the body functions as a technology of control, which can be understood as an "assemblage of social and human relations within which equipment and techniques are only one element"; it refers to any assemblage "structured by a practical rationality" governed by knowledges, instruments, persons, systems of judgment, buildings and spaces, underpinned by certain "presuppositions and assumptions about human beings" (Rose, 2007: 16-17). These knowledges comprise values, ethics and norms about life itself, as 'bodies of knowledge'.

Much public health discourse reveals how humans are expected to take an active role in shaping their bodily functions, to promote life and vitality and to activate an interest in their own health. As a result, citizens are less and less considered to be passive recipients of health care, but must actively make choices to maximize and enhance their own wellness. Health management, regulation, surveillance and monitoring function as

imperative practices constituting citizen subjectivity. Citizenship thus forms around the vital characteristics of human beings and their active management. The bodies of citizens are of prime value to the enforcement and regulation of state authority, governance and control. Consequently, citizens are expected to take responsibility themselves to exercise “biological prudence”, for their own sake, for themselves, their families, and for the state (Rose, 2007: 24). Citizenship, in this way, can be understood as a practice from below, tied to, yet at arm’s length from the state.

Citizens form identities around their biology, or biosociality. A biopolitical lens to citizenship examines the ways in which individuals are collectivized and socialized around their biological make-up, activities and interests. Drawing from Paul Rabinow, Rose discusses “biosociality” as a way to characterize forms of collectivization organized around the “commonality of a shared somatic or genetic status”, which draws attention to emergent technologies that are assembled around the categories of corporeal vulnerability, suffering, risk and susceptibility (Rose, 2007: 134). Individuals congregate around a sense of shared corporeal status and engage in a kind of activism to refute dominant modes of governance and biomedical expertise. Consequently, individuals become experts of life itself. Chapters 3 and 4 situate the emergence of citizen expertise in relation to struggles for knowledge. As engaged corporeal experts, responsible for self-care and prudence, citizens become active agents who pioneer a new ethic of the self, a “set of techniques for managing everyday life in relation to a condition, and in relation to expert knowledge” (Rose, 2007: 146). Biological citizens are thus obligated to engage in activism and become responsible to live life through a series of calculations and choices in order to manage and preserve one’s livelihood.

As responsible individuals, citizens become concerned with managing their livelihoods, and are expected to inform themselves as to what appropriate actions to take to adjust one’s ‘lifestyle’ in accordance with living a positively healthy and viable life. Individuals are called to conduct life responsibility in relation to one’s self and others in pursuit of being a good biological citizen. This “responsibilization” is salient in all kinds of public health policy and programming in Canada, emphasizing ‘health promotion’ (Orsini, 2007). Such positive reinforcement has a flip side: it produces categories of unruly, unworthy citizens, seen to be unable to manage their own well-being.

A citizen's body – individually and collectively – is of prime value and interest to the operation of state power. Rose discusses the ways in which 'molecular' vital power is reframed through the devolution of authority from the state to individuals, through regulation at a distance, where individuals adopt an ethical code of conduct or care for the self. Biological citizenship in this respect operates around a kind of regime of the self, where individuals must be a prudent yet enterprising individual who "actively shape his or her life course through acts of choice, and activities that extend the search for health in the face of the fear of illness and the management of risk" (Rose, 2007: 154). In an era of vital politics, citizens are encouraged to become active citizens, as opposed to passive citizens who are the recipients of rights, and are incited to treat their body as a resource in pursuit of healthy, responsible and productive lifestyles.

Moreover, biosocial identities emerge when the vitality of a community is in question. For example, we can take a look at the experience of victims in Chernobyl, Bhopal, and Love Canal, among others, which reveal how life acquires value to be negotiated for recognition, redress and compensation. In these examples, and as will be explored in the chapters to follow with respect to the Aamjiwnaang First Nation, the damaged biology – and ecology – of a population forms the basis of 'vital' rights, and moreover belonging, expressed by injured citizens.

Biological citizenship brings the body front-and-centre. By introducing biological citizenship, I seek to bring the body 'in' to literature in Canadian citizenship studies. Despite some exceptions in Canadian political science literature, discussions of the body are few and far between. Consequently, there remains ample room for further exploration of body politics at the frontiers of citizenship in Canada.²³ As we will see, the practices of mobilization around biological citizenship in Aamjiwnaang shed light on this theoretical terrain. An empirical focus on the articulations and actions between citizens of Aamjiwnaang and the non-human environment reveal citizenship's double dilemma, as

²³ Except, for example, Michael Orsini in "Discourses in Distress: From "Health Promotion" to "Population Health" to "You Are Responsible for Your Own Health" in *Critical Policy Studies*, (2007); Michael Prince, "Claiming Disability Benefit as Contesting Social Citizenship" in Moss & Teghtsoonian, *Contesting Illness, Processes and Practices*, University of Toronto Press (2008); and, Michael Orsini, "Hepatitis C and the Dawn of Biological Citizenship: Unravelling the Policy Implications" in Moss and Teghtsoonian, *Contesting Illness, Processes and Practices*, University of Toronto Press (2008).

both a coercive force and emancipatory form of belonging. Situating citizenship in this place, adjacent to Chemical Valley, further illustrates this dilemma.

Ecological Citizenship

In the field of Canadian politics, the main citizenship debates are rooted in liberal state theory. While varied and rich in their own right, they do not examine embodied, corporeal practices connecting citizen action to place. Following Engin Isin, I contend that citizenship as a field of study should neither end with an analysis of the contents – rights and responsibilities – of citizenship; nor, with a sole focus on eligibility (1997). Rather, an interpretive approach emphasizes the material and discursive conditions of possibility for citizenship. Conditions can be understood through formal-legal structures, as well as through discursive formations, for example, constructions of the healthy, environmental, secured, neurotic, intelligent, second-class, peasant, worker, lazy, disabled citizen, and so on. Examining the conditions of possibility is central to understanding the meaning of citizenship.

It is not enough to look at what citizenship ‘is’. In order to understand the ways in which it produces the boundaries of belonging in a political community, one should ask how this ‘is’ becomes defined and enacted. In so doing, I seek to carve out space within the field of Canadian politics and citizenship studies to illuminate some of the discursive and practical means through which citizens are increasingly governed through biological and ecological responsibilities and practices. I situate this in a particular place: Canada's Chemical Valley. In this region, actors with a stake in the contentious issues surrounding their home interpret their role and relationship to this place differently than governing officials and members of industry. The ways in which groups and individuals act, interpret their rights and responsibilities and ascribe meaning to the environment is revealing about practices or ethics of everyday life. These are practices of ecological citizenship. Their meanings and interpretations are multifaceted and widely interpreted.

According to some residents of Aamjiwnaang, the land forms part of an attachment to a greater relationship with a spiritual world, whereas for the neighbouring industrial facilities, the land is considered a source of exploitation and or revenue. Some

interview participants align with what several scholars refer to as an Indigenous way of relating to land and environment (Alfred, 2009; Alfred & Corntassel, 2005; Borrows, 2002; Bryan, 2000). Many actors, though, will engage somehow in a kind of ecological ethic, whether “planting” a chemical holding tank, or practicing traditional medicine. Such actions ultimately reveal an ontological stance, or practice relating to being, place and one’s relationship to the landscape.

In Aamjiwnaang, not only does the body become an object and subject of governance, but so too does the environment. However, simply adopting a ‘biological citizenship’, or biopolitical lens to the stewardship practices in this community does not sufficiently account for the forms of belonging, citizenship and being that take shape in this place. As Chapters 3 and 4 reveal, citizens in Aamjiwnaang and the surrounding area interpret the relationship between oneself and environment in many ways, which expose contesting subjectivities. Experiential community concerns come into tension with scientific knowledge; much of these tensions centre upon different philosophies of human/nature, body/environment, self/Mother Earth relationships. I contend that these tensions highlight ontologically contested notions of how humans relate to their selves, lands and environments, and problematize the meaning of citizenship itself. Citizenship, as a relational practice is inseparable from identity. Ecological citizenship intersects with Indigeneity, and what it means to ‘be’ an Indigenous person. This radically troubles green governmentality or liberal approaches to citizen subjectivity, which portray citizen subjects as distinct from, and master over the non-human world.

Ecological citizenship is place-specific, and pertains to an interconnected relationship between the human and non-human world. In David Suzuki’s documentary *Force of Nature*, he suggests: “when you destroy the air, you destroy us” (Gunnarsson, 2010). This eloquently captures how many citizens of Aamjiwnaang ascribe meaning to their livelihood. It speaks to the ways in which the conditions shaping how one lives has much to do with how individuals act, respond to, and feel about their environments and consequently, themselves. Individuals relate to and are impacted by their environments. As Tully argues, individuals are embedded in larger relationships and habitats, for which

they are responsible (2008).²⁴ Tully goes on to discuss the ways in which many Indigenous Elders explain that the identities of their people are related to the places they live: “that the creator has placed them here with the responsibility to care for life in all its harmonious diversity” (2008: 250). Thus, the responsibility to care for all ecologically interrelated forms of life is timeless, when one looks back to the wisdom of ancestors and forward to seven generations in the future. Moreover he states: “this unshakeable sense of responsibility to the source and network of life is at the core of Indigenous identity” (2008: 250). This is coupled with an individual’s sense of their place in relation to nature; it is not a ‘stewardship’ mode of care, but an ontological practice. It is a way of life, and ultimately, a way of being.

Anishinaabe Thought

Ontology is at the centre of tensions between individual-centred visions of citizenship and an ‘Anishinaabe’ approach to citizenship. As stated, there are some divergences between Western liberal notions of citizenship that separate land from life, blaming individual citizens for their health and well-being, and an Indigenous or Anishinaabe approach. This dissertation emphasizes the importance of integrating Indigenous knowledge into a contemporary mode, or way of being, as an ‘Anishinaabe’ approach to ecological citizenship. This is a difficult and delicate task, which following Alfred, is nonetheless important for Indigenous and non-Indigenous scholars alike, who must co-assume responsibility for making Indigenous knowledge part of the present and future (2009). Within a spirit of reciprocity and intersubjective engagement, I seek to support Alfred’s call for academics to assist in this process of knowledge translation by creating some room for Indigenous knowledges and ways of being in the world within contemporary structures, institutions, discourses and practices. This is the spirit of mutual

²⁴ My interpretation of ‘ecological citizenship’ differs slightly from Tully’s, whereas I argue that his notion of ‘responsibility’ reproduces the distinction between humans and the non-human world and instrumentalizes citizen action. In contrast, the kind of ecological citizenship I present in this dissertation, based upon how I understand Anishinaabe ontology refers to a much more placed and embedded relationship. The non-human world is essential to one’s being; one is not separate from this world as a managerial steward.

respect, sharing and translation that I bring to both this written document and participatory action approach to research and knowledge production overall.

Before proceeding, some caveats: I wish to be clear here that there is no singular, identifiable ‘Anishinaabe approach’ to the environment, or ecological citizenship. This is a working term that I use to illuminate some of the tensions between ‘individual’ and ‘place-specific’ notions of health and the environment, as I understand them based on relevant literature, field immersion and interview results gathered throughout the duration of my research. Moreover, the mere act of ‘writing’ tradition comes directly into tension with an oral culture of knowledge translation and teachings. Many times, I was reminded that you cannot simply ‘read’ about Anishinaabe peoples, you have to live, experience and share knowledge, which cannot be transcribed neatly into text. It is one thing to read about native history, customs, rituals, ceremonies, beliefs and traditions; however, this is simply not enough to gain an appreciation and understanding of the culture. Community-members, Elders and my advisors repeatedly stated that the culture must be lived out. The culture must become part of a person’s being (Johnston, 2005). Written works only reflect a small proportion of unwritten traditions and practices forming Anishinaabe culture and life. Thus, my task as an interpreter between my place of field immersion and as an academic is a difficult yet compelling and imperative undertaking.

The term ‘Anishinaabe’ can be understood as an alternative to the word ‘Indian’, and refers to the original peoples. In Ojibwe, the term translates as “man made out of nothing”, a “spontaneous” being on a path given by the creator (Johnston, 2005: 15). Moreover, traditional teachings consider and articulate that man, or humankind was created from new substances unlike those out of which the physical world was made, connecting the corporeal and incorporeal. Traditions state that man, a composite being, was created according to the fulfillment of the vision of Kitche Manitou (Johnston, 2005: 119). Dreams, visions, and connecting the past, present, and future are central to understanding Anishinaabe ontology. It is also imperative to consider how an Anishinaabe way of being connects the corporeal and the incorporeal, including the physical world, such as plants, wildlife and land.

Western liberal thought tends to place beliefs, concepts and ideas into easily accessible and manageable categorical schemes. It is easy enough for government

officials, policy-makers and community-members to consider ‘traditional knowledge’ as something external to the present self. I trouble this distinction by drawing from literature and conversations to bring this knowledge into the fore. ‘Traditional knowledge’ is a concept that pins down thought into an object. For many who shared their knowledge with me throughout the research process, such ‘pinning down’ of knowledge into easily categorizable and immutable fact reduces the richness Anishinaabe culture. A more contextual, fluid, emergent, experiential and lived understanding of Anishinaabe culture is considered to be a more appropriate depiction. This resonates with Taiaiake Alfred’s dictum “don’t preserve tradition, live it” (2009: 181)! Knowledge, thus, is not to remain an immobile artifact. Alfred argues that traditional knowledge is a way of living life. It is in this respect that thinking about ecological citizenship as a mode, practice, or ethic, resonates with an Anishinaabe ontology.

An Anishinaabe approach to ecological citizenship places citizens within their environment. As Chapter 1 mentioned, it is commonplace for individuals to introduce themselves to groups by stating your name and the place where you are from. Where you are from (in)forms your being. ‘Nature’, or the environment, cannot be owned; one is not superior to nature, it is to be respected.²⁵

Cultivating a respectful and relational way of being in connection to one’s environment is central to many Anishinaabe teachings. Citing one teacher, a research participant referred to “walking the Red Road”, and the notion that “we humans must come to a moral comprehension of the earth and air”; further, she stated: “we must live according to the principle of a land ethic”. The alternative, she stated, “is that we shall not live at all” (Correspondence with Charlotte, May 17 2011). When we spoke further about the meaning of this kind of Anishinaabe ‘land ethic’, she informed me that from her perspective, it referred to: “Respecting and giving value to all living things and the environment we live in; land, air, water... Being grateful and giving thanks for everything, from the smallest organisms to the highest mountains...” (Correspondence

²⁵ The preamble to the Anishinaabe Nation Constitution depicts these values in the Seven Grandfather Teachings: Zaagidwin (Love), Debwewin (Truth), Mnaadendmowin (Respect), Nbwakaawin (Wisdom), Dbaadendziwin (Humility), Gwekwaadziwin miinwa (Honesty) Aakedhewin (Bravery). While each of these teachings is equally important, respect/Mnaadendmowin is considered to be a guiding principle for one’s relationship with Mother Earth as a living being.

with Charlotte, May 17 2011). Subsequent conversations with an Elder on the meaning of 'land ethics' as 'environment ethics' illuminated the following.²⁶

This teaching was given to all human beings from the time of Creation. I once was told, that the Medicine Wheel consists of 4 major colours of human beings. The Yellow people were to look after and make sure the Air was properly cared for. The Black human beings had the responsibility of the Waters. The Red human beings were to take care of the clean and respected Earth. The White human beings were to watch out for the Fire with great Respect. Fire is way out of control today. Fire is Spirit, and Energy in all of Creation. This includes "Technology". See today, how it is out of control. It is the cause of all the pollutions we see today, along with the loss of our Original Teachings. We, all were, from time to time, suppose to come together and meet with each other to see that Air, Water, Earth and Fire were looked after with Great Respect and Love. This has not been done in Hundreds and hundreds of years. Instead meetings are taken place to see how much more we can advance technology. It is almost "too late for environmentalists to do any good to get on our original paths, of our Teachings. The Mayans knew this. So did we, the Red people. "Land Ethics?????" Well, we can only try to get back to Land Ethics (Correspondence with Mike, May 19 2011).²⁷

Moreover, conversations with Elders and community members continued to firmly state with me that this 'land ethic' is not based upon 'traditional knowledge'; rather, it is to be considered a way of life. One gains knowledge through adopting this way of life. To bridge the following section on research methodology, I note here that much of Anishinaabe knowledge production can be understood as an epistemology of lived-experience. Acknowledging and respecting lived-experience is an essential part of knowledge generation, which motivates and informs my approach to research.

Decolonizing Methodology

As my research site takes place on and adjacent to a First Nations reserve, I am committed to an interpretive and ethnographic approach that is motivated by an attempt

²⁶ From a public online post by the same individual: What is environment to you? To me, it is Bimadziwin. Way of life. It is our life. It is all of Creation's life. It is the Seven Grandfather teachings. It is the teachings in the Medicine Wheel, circle of life. It is Human rights, Creation's rights to a comfortable and enjoyable way of living. It is maintaining, as caretakers of Mother Earth, in her entirety, sustainable beauty and flourishing entity. It is being responsible and caring. The Seven Grandfather teachings says it all. Environment is RESPECT, HONOUR, WISDOM, BRAVERY, HUMILITY, TRUTH, LOVE. IF INDUSTRY COULD ONLY UNDERSTAND THIS CONCEPT OF LIFE, AND OPERATE THIS WAY, MAYBE OUR ENVIRONMENT, OUR WAY OF LIFE, WOULD BE MORE CLEANER, MORE ENJOYABLE, MORE LIFE-LONG. We could enjoy our grandchildren, our great grandchildren, and the beauty Mother Earth gives us. MONEY-- only gives us temporary satisfaction....not a long life. It may be nice to make the money in these industries, but how long are we guaranteeing our children, our life for them. ENVIRONMENT IS BIMAADZIWIN.

²⁷ Mike is an Elder from the community, whose name has been used in this dissertation with consent.

to work towards decolonizing methodology (Smith, 1999). From my perspective, this means that the principles of respect, reciprocity and relationship-building are central to the project (Native Women's Association of Canada, 2009). This approach to data collection stems from a collaborative, participatory, community-placed model of research. Participatory research seeks to connect research to practice by sharing knowledge and authority about the research project with community-members by involving them in all stages of the process. Thus, I made an effort to include community-members at critical stages of the project's development, planning, design, analysis and results dissemination. As stated, I have, and continue to engage in the 'field' with the core principles of a decolonizing methodology identified by NWAC (Kovach, 2009; Native Women's Association of Canada, 2009; Smith, 1999). This requires working with, not speaking for the community. Moreover, the inclusion of a community-based advisory committee allowed me to consult with 'cultural navigators', to help facilitate a culturally-appropriate approach to the research design.

Furthermore, I sought to develop a field research strategy in line with the CIHR Guidelines for Health Research Involving Aboriginal People, *ownership, control, access and participation* (OCAP) principles developed by the National Aboriginal Health Organization (NAHO), and *Tri-Council Policy Statement: Ethical Conduct for Research Involving Human Subjects*, approved by the University of Ottawa Research Ethics Board. Ethical issues are central to this study, as any research with human subjects requires comprehensive ethical review. When working with Indigenous communities, this process becomes lengthy as relationship-building and internal approval processes take time to cultivate. Therefore, this model of research required additional time spent building trust with the community to ensure a compassionate, ethical and participatory project.

Ongoing research assistance in the community for a one-year period prior to the commencement of my own research project greatly enhanced access and relationship-building with the community. I also benefitted from participating in various decolonizing methodology workshops, such as the 'Toward Decolonizing Methodologies' workshop, organized by the University of Ottawa's Forum for Aboriginal Studies Research, which brought experts from academic, policy-making, ethics boards and Indigenous

communities together, who made themselves available to provide guidance to graduate students interested in conducting field-work with Indigenous communities.

I am mindful that Indigenous peoples suffer from research fatigue and are considered some of the most researched people in the world (Smith, 1999). It is therefore important to conduct meaningful, culturally-appropriate and compassionate research that also benefits the community. Even the word ‘research’ contains colonial and negative connotations for many First Nations communities. Thus, I took efforts to share knowledge with members of the community throughout the entire process. I sought to adopt a culturally appropriate style to the research context, including offering tobacco along with an honorarium for individuals who participated in an interview. While the interviews were illuminating as they shed light on certain kinds of knowledge, the more informal interactions and conversations over coffee, at community events and in public locations or in people’s homes provided a window into in-depth knowledge about people’s lived realities.

Engaged research emphasizes critical community participation in the research process and invites the community into the formation of the body of work itself. This stems from a belief that the influence and control over research must be shared between the academic and non-academic community; each are involved in an ongoing and emergent process of knowledge exchange. This model of research seeks collaborative partnerships in all phases of the research to foster shared learning. Moreover, it seeks to find balance between research and action. Such an approach emphasizes the importance of bringing local, relevant and ecological perspectives to the fore and acknowledges and integrates a variety of perspectives into the policy-making process. It also seeks to produce transparent, cyclical and iterative research, where findings and knowledge are shared and disseminated with participants.

Community participation is time and resource intensive. Some community-based research models build from the assumption that moving towards full community participation and engagement is optimal, necessary and advantageous.²⁸ This form of

²⁸ Community-based participatory research differs from community-placed research as it is resource intensive, seeks to develop community capacity, policy change and political activism. A stated goal of this methodology is to influence change in community health, systems, programs or policies (Israel et al., 2001). There is an assumption within community-based participatory research that community

research builds upon the strengths and existing resources communities have, to supplement with funds, training, employment and shared power relations (Israel et al., 2001: 184). From the community-based approach, there is a hope that research will be of direct benefit to the community. In practice, this faces some challenges. Often the very communities in question are under-resourced and overworked, and may have little time and interest in the details of academic research. Furthermore, there is an assumption within the notion of ‘community-based research’ itself that ‘community’ represents a coherent identifiable unit (Israel et al., 2001). The reality is that communities are often representative of a variety of perspectives and interests. It is important to be mindful of these concerns, challenges and divergences before embarking upon a community engaged research initiative.

Participatory research is appealing as it encourages an open and nuanced methodology. This flexible approach seeks to be transparent about what one is looking at, for, how and why. It commits to a continuous exchange of knowledge and ideas, but may not necessarily directly translate into concrete resources and actions. In my view, the most suitable way to think about this kind of participatory research is as a committed and engaged supporter, without trying to guide or steer activism within the community.²⁹ The iterative process of knowledge exchange itself is a productive enterprise, which seeks to speak to public policy gaps, and calls into question dominant discourses and practices that marginalize communities on the ground.

empowerment is a stated and understood objective, in addition to concrete social action. Following Flicker et al.: “community-based research aims not merely to advance understanding, but also to ensure that knowledge contributes to making a concrete and constructive difference in the world” (Flicker, 2008: 107). This endeavour emphasizes collaboration, participation and social justice, and attempts to dispel the positivist myth within social science research that objectivity reigns supreme and that science is apolitical. Despite these admirable aims to support community empowerment to make lasting personal and social change, a degree of romanticism about this method remains.

²⁹ Participatory research involves an investment in relationship-building and long-term commitment. Leading up to the research, careful attention to relationship-building continued to be of central importance. Following the designated study period, some form of long-term investment and commitment was expected, possibility with the anticipation of future collaboration. One way in which I sought to share voice and place with community members has been through continued involvement with youth groups, where I made myself available as an advisor and consultant within the established governance structures to support youth initiatives. My intention has been to share and disseminate knowledge about the research throughout the entire process, and to maintain a commitment to sustained involvement within the community.

Sustained engagement and ascertaining how best to ‘give back’ to communities in both theory and practice is a crucial part of any field-work. In addition to making theoretical and methodological contributions to scholarship, pressures emerge to make policy-relevant and meaningful recommendations and interventions in the spirit of social action. Throughout this process, the question of how to find my own place within this community as an external yet immersed researcher, and how to give back remained present. I sought to give back to the community by providing a policy brief to the Aamjiwnaang Health and Environment Committee on the ongoing Lambton Community Health Study. I also volunteered my time with an environmental youth group on various activities such as grant writing and event organizing, in addition to supporting this group’s work with the Kiijig Collective on creating a documentary film project. My aim is that research findings speak to policy gaps for environmental and reproductive justice in Canada, *with* and not *for* this community. An interpretive method thus seeks to contribute to the democratization of knowledge production by moving beyond technical researcher ‘expertise’ to include the voices and stories from those situated in the field.

Interpretive Methods: Bridging Governmentality and Ethnography

Researchers are not external to the worlds in which they investigate. Scholars committed to engaged and empirically-grounded research examine their views about ‘the world’ by seeking to render visible both the macro and microscopic aspects of our societies that are inexorably linked to broader socio-political forces, which may be invisible to mainstream society. To examine, evaluate and comment upon these forces, critical scholars conduct what Rabinow and Rose refer to as “fieldwork in philosophy” (1994: viii). Such fieldwork in philosophy takes thinkers outside of the armchair, laboratory or classroom, and into the materially and discursively constructed social world. It is a kind of applied philosophy; a logic of inquiry that moves beyond the conventional ‘scientific method’, wherein one articulates hypotheses, defines concepts, operationalizes variables, establishes relationships and ‘tests’ these to check for validity, reliability and generalizability (Schwartz-Shea & Yanow, 2012: 1). Scientific, positivist methods

contend with interpretive research methods, which focus on situated meanings and actors' meaning-making practices in particular settings.

A biopolitical study draws into focus how the manifestation and articulation of power relations occur at an arm's-length from the state, and can be situated with the body. As critical policy scholars note, politics and policy increasingly occur across different spatial horizons (Orsini & Smith, 2007). To explore embodied power relations in a particular place, this project examines the practices of citizens engaging in struggles for environmental and reproductive justice in Aamjiwnaang. Field research offers a compelling method to develop a nuanced understanding of experiences, emotions and activities on the ground, to advance a detailed understanding of how citizens ascribe meaning to their daily lives. Such an approach also offers a means through which the researcher can examine and evaluate discrepancies between expert or elite knowledge and local or situated knowledges (Haraway, 1991; Yanow, 2003). Chapters 3 and 4 elaborate upon these struggles for knowledge in greater detail.

Interpretive analysis focuses on processes of meaning-making. This involves positioning dominant discourses or narratives – the 'meta-narratives' – in relation to 'marginal' or often ignored narratives in an attempt towards a post-positivist or deliberative epistemology of knowledge and policy (Fischer, 2003; Orsini, 2007; Yanow, 2003). An interpretive approach builds from the premise that policy implications are neither transparent, nor easily evident. Such analyses will ask: 'what are the meanings' of a policy, rather than 'what are the costs' or 'how can we evaluate policy' (Yanow, 2000). This approach emphasizes language, communication, rhetoric, argumentation, and the formation of contested meanings (Fischer & Forrester, 1993; Fischer, 2003; Fischer, 2009; Yanow, 2003; Yanow, 2000). It entails considering the power relations involved in the formation and expression of privileged speech in relation to silences.

An interpretive approach to social science offers a perspective that views 'science' as a practice, laden with tacit yet manifold meanings. A researcher following an interpretive social science approach will conduct interviews based on the belief that there are multiple perceived and experienced social realities concerning particular events, rather than seeking to expose or declare a cohesive, singular truth. Such an approach:

reflects a constructivist-interpretivist methodology that rests on a belief in the existence of (potentially) multiple, intersubjectively constructed "truths" about social, political cultural, and

other human events; and on the belief that these understandings can only be accessed, or co-generated through interactions between researcher and researched as they seek to interpret those events and make those interpretations legible to each other (Schwartz-Shea & Yanow, 2012: 4).

This interpretive method seeks to identify power effects that manifest in the minutiae of everyday living, expressed through thought and actions. By focusing on localized practices of power relations, political scientists illuminate different relationships between truth(s) and power. This interpretive method exposes the production and circulation of uneven power relations in particular spaces, contexts or environments.

While this approach may seem to put forward the notion that power relations are omnipotent, transcendent, and omnipresent, it suggests that power also generates from the ground up through productive means. Thus, a Foucauldian analysis of power relations, tuned into the manifestations of power's microforms, also visualizes different kinds of relationships between power, authority and knowledge. This mode of analysis creates some wedging, or openness into dominant operations, formations and expressions of hierarchical power relations. Knowledge about multiple nodes or sources of power relations beyond the strict parameters of state-centric practices may open up opportunities for alternative voices and concrete social action. In this sense, knowledge becomes a powerful force for change. As Rabinow and Rose suggest:

In anatomizing the detailed ways of thinking and acting that made up our present, and constituted ourselves in the present, Foucault asked us to consider the possibility that we might invent different ways of thinking about and acting on ourselves in relationship to our pleasures, our labors, our troubles and those who trouble us, our hopes and aspirations for freedom (1994: ix).

Following suit, drawing inspiration from Foucault's 'governmentality' approach to social science research, my dissertation combines ethnographic and interpretive methods to investigate how meanings are ascribed to the citizen encounters within discursive fields – bodies of knowledge – in Canada's Chemical Valley in their struggles for environmental and reproductive justice.

As this chapter discussed, a governmentality-inspired interpretive lens focuses on the ways in which individuals and communities alike become objects and subjects of governance through material and discursive means. Interpretation includes both deskwork and fieldwork. It evaluates actors' perceptions regarding the processes they are involved in, and examines possibilities and constraints for action. By combining interpretive and ethnographic methods, my analysis examines how discourses come to be articulated and

understood by various community members. Through qualitative methods, including in-depth interviews, archival research, participant observation, and community engagement, this approach gathers information about formal and informal practices and perspectives.

An interpretive approach to political science is not a matter of saying things are or are not right. Rather, such an approach seeks to uncover what kinds of assumptions remain too familiar and unchallenged. It aims to deconstruct or unpack modes of thought, circuits of management and practices that we accept as given: the “truth will not set you free” (Murray, 2007: 162). Interpretive research sets out to ‘open things up’, to problematize, not to close down, complicate, simplify, or police the boundaries of any oeuvre. It aims to multiply lines of investigation and possibilities for thought. Governmentality reveals multiple dimensions of any oeuvre, narrative, discursive field or body of knowledge and correlate appendages. ‘Opening up’ that which constitutes ‘the political’ moves scholars to provide visibility to certain aspects of our normal, everyday experiences and make them profoundly political.

This post-positivist orientation suggests that thought can never be an entirely objective, external evaluation of a situation. Questioning that which is ‘given’, and transforming a group of obstacles and difficulties into problems constitutes a focal point of problematization. It aims to make visible the vectors that shape our relationship to ourselves and to practices of power. Thoughts, in and of themselves, have no foundational meaning. The thinker, or researcher, is neither entirely outside of the situation in question nor entirely enmeshed within it without recourse or options. Power is ubiquitous; it cannot be possessed or disposed. To this end, governmentality-inspired analyses evoke perpetual suspicion: everything is imbued with power-laden meaning.

Resistance to dominant discourses, practices and operations of power is a crucial feature of critical political analysis. The role of an engaged researcher is not to spearhead a social movement; perhaps an engaged researcher is best suited to call into question structural and discursive forces that constrain movement and agency. From such an approach, it is not the role of the academic to say: “it is imperative to revolt, do you not realize that your world is intolerable” (Rabinow & Rose, 1994: xxvii)? The scholar’s role is not to tell those experiencing injustice what to do or not do, what to strive for or what to reject. In contrast, the engaged scholar seeks to criticize the present, but not

“anesthetize” those who must act within it, and make conventional actions problematic while opening up space for movement without slipping into a prophetic posture, to make it possible to act but make it more, not less difficult to know what to do (Rabinow & Rose, 1994: xxviii). Social science researchers need to recall that actors have voice and agency, and are not helpless or passive. Following Latour:

Actors know what they do and we have to learn from them not only what they do, but how and why they do it. It is us, the social scientists, who lack knowledge of what they do, and not they who are missing the explanation of why they are unwittingly manipulated by forces exterior to themselves and known to the social scientist’s powerful gaze and methods (1999: 15-25).

To investigate the practices of power relations ‘on the ground’, a scholar may find themselves situated ‘in the field’ of those relations.

Ethnographic studies are crucial to the exploration of inclusion and exclusion – to citizenship – in any political community. This aligns with an interpretive methodology, which requires the researcher to navigate the relationship between official discourses, situated narratives, and local knowledges, grown out of daily practice and interactions. This method expands and explodes the boundaries of ‘the political’ to examine peoples’ lived realities (Kubick, 2009; Schatz, 2009). It is furthermore a disorienting enterprise for the researcher, which unsettles prior assumptions or truths that a researcher brings to bear upon the field of investigation. It assumes a considerable loss of control, and involves ‘interactive observation’, rather than ‘objective observation’ through a one-way looking-glass (Schwartz-Shea & Yanow, 2012: 54). An ethnographic approach to the study of political science provides a vehicle through which researchers can examine the location of power in unfamiliar places. One such place is Canada’s Chemical Valley.

Ethnography brings you exceptionally close to your ‘data’. In many ways, the field can guide the research design, plan and methodology. Interactions with ‘data’ and ‘research participants’ occur through ongoing and continuously evolving learning. It requires significant flexibility and openness, and comfort with hitching to a loss of complete control over the entire structured research process. Flexibility in the field is a conscious, intentional strategy: “It applies not only to the need to respond in the moment to things said or done, but also to how the research process may be changing initial research designs and questions” (Schwartz-Shea & Yanow, 2012: 55). Thus, research design in this setting is not necessarily linear; in contrast, the research question often

comes into focus in new ways, which can take place through a hermeneutic circle, and send the researcher off in multiple directions. It is a circular approach, thus iterative and recursive; “each of its parts informing and folding back on the others, enacting the same sense-making spiral that characterizes the conduct of interpretive inquiry” (Schwartz-Shea & Yanow, 2012: 55). It thus seeks to ‘open up’ rather than to ‘hone in’, emphasizing iteration over controlled design.

Formally delineating between ‘participant’ and ‘observer’ in the field falls within a constantly shifting continuum.³⁰ Like many locals, I also smelled peculiar odours, noticed when the stacks flared larger and brighter at night and wondered about the impact on those living close by. I too kept a record of the various leaks, accidents and spills from Chemical Valley on a large calendar. Sometimes these were reported in the media – radio, print or TV – while other times they were not. I connected to an online email and cell-phone text messaging alert system that would – in theory – let me know about such releases. Conducting fieldwork in this manner involves engaging in practices of daily life that resemble those of local residents. Thus, the only escape, or break, tends to be physical removal from the site itself.

Immersion in the field is an embodied, emotional and affective research strategy. The researcher places his or her body in what can be a foreign or unsettling context, lending itself to experience a range of impulses, feelings and emotions, which may (re)shape the research design. These are registered and unregistered, conscious and unconscious drives motivating the project’s formation. Generally speaking, ‘affect’ refers to the registered, yet unconscious experience of feelings or emotions (Wiebe, 2013). It is part of the body’s reaction to external stimuli, and may deal with gut feelings and visceral impulses and their relationship to cognition. By living in a new environment, one’s relationships and habitus, or mode of operating in a particular setting, become shaped by the field. As such, this kind of research is as much personal and emotional as it is

³⁰ A researcher in this setting takes on a duality of identities: at once participant and observer. Doing this kind of immersion and collaboration forced me to think critically about my expectations, and to be constantly open to rethinking my strategy. A reflexive approach requires, on the one hand, an openness to the development of research design in close consultation with community members, and on the other, a level of confidence about the value and direction of the project. Striking the balance between outside ‘expert’, and internal collaborator is crucial, but never simple.

political. Furthermore, in such a new and emergent setting, power relations are never absent from the research context. In addition to physically immersing one's body into the field, the separation between external expert researcher and internal community member becomes somewhat blurred, though never completely erased.

From an interpretive approach, the exploration of research questions is intimately tied to a particular setting. Situating oneself within that setting and thinking reflexively about one's positionality is crucial. I am cognizant of my position of privilege as a young female researcher, who has access to technology (car, computer, ability to pay honoraria etc.), mobility to and from the site, and identity as someone non-native to that place, yet interested in studying the experiences of others living in a precarious setting. Upon entering the field, I was motivated by conceptualizing my own experience as a 'researcher' in the spirit of what Dvora Yanow refers to as 'passionate humility', and willingness to revisit my own, sometimes hidden, assumptions (2003). This kind of passionate humility aligns with a commitment to conduct an ontology of the self as part of 'personal decolonization' (Irlbacher-Fox, 2009; Rabinow & Rose, 1994).³¹ A critical questioning of one's 'self' is not a search for universal values, or truths; rather, it calls into question, problematizes and dismantles assumptions.

The normative motivation in this dissertation is to expand the limits of knowledge production in pursuit of a more just society. My overall approach, interpretive research coupled with a commitment to a participatory and decolonizing methodology, aligns with critical scholarship and concretely seeks to contribute to social justice (Burnham *et al.*, 2008; Madison, 2005; Smith, 1999). In this study, I aim to share voice, knowledge and place with those who shared their experiences with me, and not just create 'travelers'

³¹ Acknowledging my place is part of an ethical and engaged approach to community research. While field research took me outside of the classroom and into the field, I am mindful of the privilege this mobility entails, and sought to make it clear to my community partners that sustainable and ethical research not only takes time to foster in the moments leading up to the research itself, but also through a long-term commitment. While I expected (perhaps naively) active engagement and participation from the community, it soon became clear that a long-term commitment and investment to social and environmental justice was also expected of me. Focusing on the human dimension of relationships with research participants is "part and parcel of treating them as agents in and of their own settings" (Schwartz-Shea & Yanow, 2012: 59). As 'normal' relationships require ongoing maintenance, so do research relationships. This required revisiting 'access' as an iterative process. It involved careful thought about how one self-presents, interacts and dwells with participants in the 'field'; it also requires delicate consideration of how one conceptualizes their departure from the field and the legacy one leaves behind.

tales' that I take back to my privileged academic community (Smith, 1999). By writing extensive field notes to record my own thoughts, interpretations and reflections, I continued to evaluate the views and values that I brought to the study with the intent of challenging my assumptions in order to make space for new meanings, ontologies and epistemologies.

Meaning-mapping and sense-making entails interviewing and accessing not only the voices within Aamjiwnaang, but also policy-makers at all levels of government. In this respect, I sought to assess multiple forms of situated 'local' and 'elite' knowledges (Yanow, 2003). This included reviewing written sources, conducting oral interviews, observing acts, interactions and spaces, and participating in the lived-experience of the community while being personally engaged (Yanow, 2000). By attending public meetings on and off the reserve, meeting informally with community members and conducting interviews with policy-makers and community members, I examined the 'face' of a public policy issue from multiple angles, and sought to map architectures of meaning in order to bring as many voices into the policy conversation as possible. As such, Chapter 4's discussion of the ongoing struggles for reproductive justice, situated within the Lambton Community Health Study (LCHS) emphasizes multiple perspectives and knowledges apparent in this local initiative, drawing from participant observation, document analysis, media scanning and interview findings.

Ethnographic research in Aamjiwnaang involved repeated encounters with community-members over a year-long period. In January 2011, I relocated to Sarnia, Ontario, approximately 720km away from Ottawa, where I resided two years prior. This followed a year of research assistance for Dr. Dayna Scott at York University, who had an ongoing relationship with the community based upon her environmental justice work with citizens of the Aamjiwnaang First Nation. During my time of research assistantship, I developed relationships and ties to the community. Following numerous trips to and from Ottawa to Sarnia, it became apparent that if I were to commit to exploring struggles for environmental and reproductive justice, close proximity would both be simpler and necessary. Following my intuition, and commitment to this study, I relocated to the field, to an apartment located in downtown Sarnia, for an indeterminate period of time. My

intention was to split time between Sarnia and Ottawa, with periodic visits between the two cities. Trips to Ottawa became less frequent as Sarnia became my adopted home.

The motivations for this uprooting were threefold: *first*, it would be easier to travel to and from Ottawa to Sarnia to attend public meetings. Specifically, as part of my participant observation methodology, I attended monthly LCHS Board meetings. After periodic visits in the Fall of 2010, where I attended each of the five Open Houses for the health study's community consultations, it came to my attention that the Board meetings were open to the public, which I attended from January 2011-December 2011. During each of the Open Houses, I listened to community concerns, took notes and maintained an interest in observing how the facilitators captured these concerns and presented them to the Board. With respect to the development of a community health study, I examined how the balance of power over knowledge, expertise and authority was articulated. Living in Sarnia, it was much easier to attend public meetings in Aamjiwnaang, which ranged from industry 'Open Houses', community consultations, environmental information seminars and Aamjiwnaang Green Teens meetings. Living in Sarnia made conducting sixty-one in-depth interviews over this period much more feasible. Interview questions were approved both by the University of Ottawa Research Ethics Board and community-based supervisory committee, in addition to the Aamjiwnaang Health and Environment Committee and Chief and Council. Participants were recruited by a flyer in the community newsletter – the *Tribeune* –; all interviews were conducted by myself, either at the E'Mino Bmaad-Zijig Gamig Aamjiwnaang Health Centre, a coffee shop, or in the comfort of someone's home (See: Appendices, attached).

I conducted semi-structured interviews with sixty-one participants over the year period of data collection. I conducted thirty-five interviews with citizens of Aamjiwnaang, and twenty-six interviews with policy-makers and public officials at all levels of government.³² Public officials include LCHS Board Members, policy-makers and public representatives. The shortest interview was 22 minutes, and the longest 2.5 hours. I spoke with past and present members of the Aamjiwnaang First Nation Health

³² It is important to note that in several instances 'policy-makers' include community-members who serve on the Band Council, Health and Environment Committee or work at the Aamjiwnaang Environment Department. As such, it is too simple to cleanly distinguish 'citizen' from 'policy-maker'. Chapter 3 focuses on the narratives of those living on or close to the reserve, while Chapter 4 offers an account of those speaking from a more official capacity.

and Environment Committee and Band Council Members. The Chief declined an interview, based on the premise that he did not consider there to be enough community support for the research, and he did not feel comfortable speaking on behalf of the community. After each interview I conducted, individuals received a flyer to distribute within the community (See: Appendices 2-6). Pseudonyms were used for all participants, unless they provided consent for their name to be recorded. Every attempt was made to ensure confidentiality in accordance with academic and community ethical protocols.

Examination of findings involved analyzing interview data and policy documents. Most interviews (with consent) were recorded on a handheld audio recorder. I took notes during each interview and subsequently listened to each interview and transcribed the interviews myself. Interview transcriptions, policy documents, reports, speeches and legislation were coded based upon subject themes (as discussed in subsequent chapters, my interview results were coded along expertise claims, categorized as ‘bodies of knowledge’). I looked for patterns, dissonance, and disjunctures between textual documents and oral narratives. The results are discussed at length in Chapters 3 and 4 of this dissertation, where I present an interpretive analysis of the findings.

Second, by immersing myself in the ‘field’, I was able to not only observe, but also participate in community events. Given my overall interest in struggles for environmental and reproductive justice, nearly everything in my surroundings became part of the research process. I continued to volunteer with the Aamjiwnaang Green Teens, attend community meetings on and off the reserve and plugged into the local Sarnia social scene. Field engagement was marked by daily media scans, tuning in to local radio, paying attention to local political platforms, linking up to web and text-messaging emergency alert systems, listening to the sirens, participating in environmental community events on and off reserve and overall relationship-building. These involvements led to the creation of an arts collective, the Kijig Collective, a collaborative group with the mandate to share knowledge about First Nations values and beliefs among its members through creative forms of expression. While writing up my research findings, I continued to reside in Sarnia and subsequently took on the role of

“Executive Producer” for a documentary film entitled “Indian Givers”, co-produced by the Kijig Collective, released for presentation at a local high school and on the reserve.³³

Field relationships entail recurring interactions between ‘researcher’ and ‘researched’ and cultivate the possibility for creating interactions that extend beyond the formal research time stamp. The engaged nature of these interactions calls a researcher to attend to the humanity of those who give of their time and resources in helping the researcher gain ‘access’, or greater understanding of the research topic at hand. Research participants are much more than simply ‘informants’, or ‘data’; this consequently entails treating ‘research participants’ in their full humanness and not merely as “means to an end” (Schwartz-Shea & Yanow, 2012: 59). As such, I frequently joined Aamjiwnaang citizens on speaking engagements, participated in panel discussions, attended stakeholder consultation meetings locally and in Toronto and Ottawa, was available to receive and offer advice on a range of arising research concerns and issues and share note-taking.

Third, field immersion is a community-placed research strategy, which involved sustained relationship-building.³⁴ Ethical, engaged research entails respect, reciprocity and relationship-building. Initial contact with members of the Aamjiwnaang First Nation took place upon the suggestion of Dr. Scott, outside of the site, in Toronto. I explained my doctoral research interests and assistantship with Dr. Scott to my initial interlocutor, a local activist and Aamjiwnaang First Nation citizen. Shortly thereafter, I visited the community and participated in a ‘Toxic Tour’ by one of the then members of the Aamjiwnaang Health and Environment Committee. I attended public community information events in the community and began to develop a rapport with the Aamjiwnaang Health and Environment Committee. While the reserve committee structure changed, I continued to work with Dr. Scott on building a positive relationship

³³ For further information, “Indian Givers” (2012) is a mixed-art documentary film, produced by the Sarnia/Aamjiwnaang-based Kijig Collective, made collaboratively by and for Native and non-Native youth, shot and edited by Ian Alexander of Rocketship Productions and SCITS student Sadie Mallon. This 60-minute film invites the audience on a journey with the characters by stepping into their lives as they reveal the survival of their spiritual identities in today’s world.

³⁴ As a participatory research strategy, in my view, this approach seeks to access situated knowledges for the purpose of raising awareness of and potentially challenging some of the dominant codes, norms and discursive parameters that frame public policy issues. It asks: what are people saying ‘on the ground’. It is an orientation to research that seeks to move beyond the subject/object gaze by bringing communities ‘in’ to the research framework. It is on this point, of community-engagement, where my view and approach to community-placed research differs from that of formal ‘community-based participatory research’.

with the incoming committee members to support the Aamjiwnaang Green Teens and co-organized a Community Forum on Pollution and Action, held in Sarnia during February 2011. I maintained relationships with my initial interlocutors as informal community advisors and also requested the assistance of an Elder and several other community members to guide and support me with the overall structure and framing of my dissertation project. Community advisors were offered honoraria for their continued time, advice and support. Moreover, I presented all recruitment and research materials to the Health and Environment Committee and subsequently requested and received approval from the Chief and Council to conduct my research. On an ongoing basis, I kept in contact with my advisors as well as the Health and Environment Committee.

The following two chapters present my interview findings. After discussing contemporary concerns and struggles by people (Chapter 3) for knowledge (Chapter 4), Chapter 5 examines the context through which biopower emerges, as a ‘policy ensemble’. This includes historical analysis, which is crucial to critical political science; a turn to the past helps illuminate the present.³⁵ To do so, I met with Elders, interviewed local historians and took many trips to local and national archives.³⁶ To problematize existing ‘mentalities of rule’, approaching history as a ‘genealogy’ calls into question the assemblage of discursive and institutional forces that constitute truth claims as objects of thought, or bodies of knowledge and examines their intersection with a larger ensemble of power.³⁷ Genealogies are constructed from discreet and seemingly insignificant truths,

³⁵ The approach this dissertation applies to history draws from Foucault’s notion of genealogy. Genealogy constitutes a history of the present, and asks what conditions enabled the epistemic shifts that took place to get where we are today. As a supplementary tool to governmentality analysis, genealogy assists with the examination of relationships between biopower and liberal mentalities of rule. This mode of historical analysis focuses on grasping how various forms, i.e. ‘bodies of knowledge’ and discursive fields shape common assumptions about government. Such an approach is useful as it reveals how forms of biopolitical knowledge, including scientific terms and expertise, legitimize particular ways of thinking and knowing.

³⁶ Furthermore, some of the historical analysis was conducted in a collaborative fashion. As the timing of my archival research coincided with work being undertaken by the Kijijig Collective and Aamjiwnaang Green Teens to produce a documentary film project, I collaborated with this group of young people to translate some of this historical knowledge into the classroom at the local high school. In my view, this constituted a concrete way to share voice, power and knowledge throughout this process, to sustainably and productively ‘give back’ to the community in a respectful and reciprocal fashion. As such, genealogical analysis is a form of constant activism in our present time, with movement towards consideration of other conditions of possibility for being in this world, while bringing ‘in’ other voices, stories and narratives to the fore.

³⁷ Counter to black and white historicizing about one-dimensional facts, events or truths, genealogy is gray. It operates in a field of “entangled and confused parchments, on documents that have been scratched over

which cannot be the product of metahistorical analysis and opposes the search for “origins” (Foucault, 1994: 352).³⁸ A critical, discursive analysis generally begins with the assumption that all objects and actions are a product of historically specific conditions (Burnham et al., 2008). Chapter 5 employs a genealogical method to examine the biopolitical ‘policy ensemble’ facing Aamjiwnaang.

The historical component of the dissertation draws from a textual analysis to investigate the policy configurations as a biopolitical ‘ensemble’.³⁹ This ‘policy ensemble’ entails a review of Canadian-Indigenous citizenship laws and policies, jurisdiction, governance for on-reserve environmental health and local configurations affecting Aamjiwnaang’s struggles for environmental and reproductive justice. Subsequently, Chapter 5 discusses the historical formation of the Aamjiwnaang’s geography through official public policies at the Federal, Provincial and Municipal level. I develop a picture of the historical legacy of power relations between the Canadian government, industry in the Chemical Valley and Aamjiwnaang. This includes an analysis of archival documents at Federal, Provincial, and Municipal levels, and collaboration with the local Band council and its Health and Environment Committee.

and recopied many times” (Foucault, 1994: 351). As a method, it entails accumulating a vast source of materials, attuned to minute detail.

³⁸ In *Nietzsche, Genealogy, History*, Foucault differentiates his interpretation of “genealogy” from that of German philosopher Friedrich Nietzsche, whom he seeks to distinguish himself from for his practice of tracing genealogies to their original sources. In contrast, Foucault argues that history teaches us “how to laugh at the solemnities of the origin” See: Foucault, M. (1994). *Nietzsche, Genealogy, History*. In N. Rose, *The Essential Foucault*. New York: The New Press: 353. In contrast, a Foucauldian genealogy examines the accidents that accompany any “origin”, or beginning (1994: 354). Thus, Foucault emphasizes historical continuities and ruptures.

³⁹ Inspired by Foucault’s notion of ‘genealogy’ and Grosz’s conception of ‘time travels’, this dissertation does not proceed in linear, chronological fashion (Foucault, 1994; Grosz, 2005). Rather, in an attempt to disrupt a dominant “settler-centric chronology” of history it seeks to discuss ensembles of power, through peoples’ struggles over knowledge, with the aim of critiquing the present and opening up the future to other possibilities (Bertram, 2011: 161). Aligned with Bertram, my approach to history in this dissertation attempts to decentre the privilege of Canada’s “colonial chronology and geography” imbued with a biological, political and territorial lineage that privileges histories “inscribed with Euro-Canadian notions of development, settlement and permanence” (2011: 173). Following Grosz, I am interested in the *becoming* of the present conditions (2005: 2). Rather than mapping out political possibilities in advance, it gestures towards the possibility of surprise and an openness towards what is unknown. As a fissure of the present, my dissertation is written at the threshold of the past and future, without privileging the progress of the present. I seek to present a dis-ordering of things, rather than a linear, chronological ordering in order to situate ecological subjectivity and generate some considerations about how things could be otherwise. Time, thus, is an interpretive concept. As the dissertation moves back and forth in time, a reader could pick up the text at any point to interpret the unfolding story on their own terms, at their own pace.

Material reviewed includes regulations, policy statements and media articles.⁴⁰ I examine the effects, techniques and strategies of power nationally and locally in Chemical Valley.

Conclusion

Citizens struggling for environmental and reproductive justice articulate various conceptions of ‘knowledge’, ‘science’ and ‘expertise’. Drawing from interpretive and ethnographic methods, the following chapters examine how citizens mobilize knowledge in their struggles. The following chapters discuss sixty-one interviews to create a typology of ‘bodies of knowledge’ apparent in the struggles for justice in Canada’s Chemical Valley. I classify these as embodied, engaged and external. While I create three distinct categories, or ‘bodies’ of knowledge, it is important to note that these often overlap. I acknowledge that scientific expertise and ways of knowing are implicated in struggles for justice in dynamic and multifaceted ways. In any movement, each of these identified bodies of knowledge is likely to play out in different ways at various stages of activity.

⁴⁰ Pursuant to Canada’s Access to Information and Privacy (ATIP) process, I used key-word searches in order to access official data and examine the evolution of Aamjiwnaang’s ongoing struggle for reproductive and environmental justice. Some findings are discussed in Chapter 4.

Chapter 3

**Home is Where the Heart is:
Embodied Citizenship in Aamjiwnaang**



Photograph by: Laurence Butet-Roch, January 2012

“I wouldn’t move. No way. We are in the heart. The whole heart. You know Turtle Island? Aamjiwnaang is the heart of Turtle Island. North America is shaped like a turtle, we are where the heart is supposed to be [...] It’s the heart [...] You can hit every major artery; every town that was booming back in the day you could hit from here in a day’s travel” (Bob).

Introducing Home, Where the Heart is

Citizens of the Aamjiwnaang First Nation residing in closest proximity to Canada’s Chemical Valley experience a unique set of concerns vis-à-vis their Sarnia neighbours. Here, spills, leaks, chemical releases and accidents are a frequent occurrence. When such incidents take place, sometimes members of the industry are the first responders, other times residents of Aamjiwnaang call the Ministry of Environment (MOE) Spills Actions Centre, a 1-800 line that collects concerned citizen calls. At that time, a MOE Environmental Officer may opt to check out the event to determine an appropriate course of action. Sometimes an alert siren may sound; however, more often than not, the siren shrill signifies no real cause for alarm. Most often, when a serious incident occurs, CVECO – Chemical Valley’s Emergency Control Organization – will issue a code associated with the incident. Commonly, an “information code 8”, referring to an “internal non-emergency situation, that may be noticed by the public” (CVECO, 2011) results. Frequently, these accounts accompany the statement that there is “no offsite impact” (Sarnia Observer, 2011). Sometimes spills are not reported at all, and residents are expected to call the MOE should they smell something abnormal. For many, the sense of normalcy for Chemical Valley’s closest neighbours, indeed, causes alarm. For others, this scene is nothing out of the ordinary; it is part of the everyday life of this place. This chapter examines how Aamjiwnaang citizens access, deploy and articulate experiential knowledge in their struggles for environmental and reproductive justice by illuminating citizen activities with direct reference to their stories, in their own words.

This chapter draws from interviews with thirty-five community members of the Aamjiwnaang First Nation. Some of those interviewed have, or continue to have, an official role within the community as an activist, employee or public official. This discussion highlights some of the ways in which community members mobilize their concerns about the lived-experience in their everyday lives as they ascribe meaning to this place they call home. As embodied citizens, their bodies function as carriers of

knowledge. I first discuss the experiences of living in a sacrifice zone, followed by an examination of citizen action, and conclude with the impacts on physical and cultural survival.

Living in a Sacrifice Zone⁴¹

Living amidst the hub of Canada's densest concentration of polymer and petrochemical industries is a matter of life and death; citizens dwell between light and darkness. As discussed in the introduction of this dissertation, stacks frame the reserve, upsetting the serenity of this place. Use of a 'night light' becomes a sick joke in Aamjiwnaang. Community members recount: "I remember being at my parents house back near LaSalle and the flare would light the whole room up; on Waboose; even here sometimes it lights up everything" (Quinn). During the spring of 2011, not only did one of Suncor's stacks light the sky, but also the ground, as the gaseous ditch caught fire, startling citizens and regulators. MOEs 'last ditch effort' to punish the perpetrators left Aamjiwnaang citizens perplexed, as little, if any, regulatory redress occurred.

As the stacks perforate the sky – piercing the airshed and dominating the landscape – these manufactured night-lights affect the bodies of Chemical Valley's closest neighbours. The stack vibrations remind citizens that the rhythm of this environment beats to the tune of an industrial drum; citizens feel and hear the rumble on a recurring basis (Quinn). Many community members worry about these effects on their children and future generations. As one concerned mother articulated: "I still have a young daughter who is being exposed to a lot. There are leaks down here – benzene and whatever. So I think she's, you know, being exposed. The sooner I move her away the better for her health" (Tiffany). While some members voice concerns about their own

⁴¹ The concept of a 'sacrifice zone' is developed at length by Steve Lerner to highlight the ways in which some communities disproportionately bear the burden for toxic exposure and environmental contamination. As Lerner states, sacrifice zones are also known as "environmental high-impact areas", impacting "fenceline communities" or "pollution hot spots"; the name "sacrifice zone" dramatizes the fact that "low-income and minority populations, living adjacent to heavy industry and military bases are required to make disproportionate health and economic sacrifices that more affluent people can avoid", thus, his unequal exposure can be understood as "environmental racism" (2010: 5). While Aamjiwnaang's location can be interpreted in this way, citizens here are not passive victims. I begin with the sacrifice zone, move to discuss community action and mobilization, and conclude with reflections about cultural survival.

health, many express frustration and sadness about the impact on the generations to follow.

These citizens are frustrated hearing that there is “no offsite impact”; impacts are felt, smelled and feared in this place: “They always say when there is a spill or release that there is no ‘offsite impact’ [...] they think about their property, but don’t think about us living next to them” (Sam). As one community member aptly noted: “They say ‘no offsite impact’ ... that’s a good one; it’s not like the fumes or anything stop right at the gateline” (Tiffany). Frustration with the persistence of several facilities’ declarations that their releases contain ‘no offsite impact’ incites some community members to state: “That’s the stupidest thing I ever heard. It’s airborne. That stuff gets carried around for miles” (Edward). The plants cannot control the wind direction. Bright orange windsocks frame the reserve’s perimeter, offering a symbolic and recurring reminder that at any given time, noxious fumes could be pouring over Aamjiwnaang.

Citizens describe previously thinking that the government was protecting them. At present, they are no longer so sure: “I know, we’ve lost a lot of our people from some kind of cancer [...] whatever is coming out, you breathe it in; but they don’t realize, someday down the road...[...] they never come to the rescue” (Sam). There is an acknowledgement that the environment is harmful, but concern that nobody – neither the government, nor industry or nor media – monitors the plant activity closely enough:

Sometimes they don’t tell us, or whatever, when there’s like a, chemical spill or whatever, they don’t say and they’re supposed to [...] it seems they keep it right out of the media or something. Like when you had that flare, it landed in that ditch on Vidal, and that wasn’t even in the media. But people took pictures of it. But after it was out, it was burnt; great big burn marks on the grass. (Nancy & Bella).

Distrust of both the industrial facilities and neighbouring regulators is an ongoing issue. The flare’s dominance of the surrounding airways does not go unnoticed. At night, “you can really hear the flaring. I don’t think that’s normal. To me, they are not informing the public about what they are burning” (Evelyn). Of further notice: “With the smokestacks you can constantly see them flaring and I don’t think that’s normal...with the flaring, they are releasing something but they are not telling you what they are releasing; they are so high at times” (Evelyn). There is confusion around who is to blame for this situation. Perplexed, individuals struggle for governmental recognition of their concerns:

It's mind-boggling how the plants, they can get away with it. I don't know if it's the government or what. Somebody's got to step in and say it's affecting peoples' health. People in the plants have health concerns. But they need the money to pay for their mortgage or put their kids through schooling. So they risk their health for that benefit. That's not right (Evelyn).

Community members feel trapped in a “sacrifice zone”, at the mercy of a limited state role in the protection of their health and environment (Lerner, 2010):

Sarah: Can you see Suncor from your residence?

Sam: Oh yeah. I'm only a ¼ mile away. When a tank blew up, that really shook up everything. We drove up aways and you could feel the heat. From this building (Sam).

Living in this kind of ‘sacrifice zone’ affects community members living with their bodies on the frontlines. Citizens in this zone are alerted when an emergency takes place through a siren system, which may result in a shelter-in-place or evacuation. Should a shelter-in-place be ordered: “The first thing you should be doing, unless advised otherwise...it's like close the windows and shut the air off. Turn on the radio – it takes about a half hour more – before you're notified. It could be all done with before the radio gets it. That's probably an emergency management point of view” (Tiffany). Children notice as well. One grandmother recounted her grandson's cry: “Grandma, we gotta get inside. We're being poisoned right now” (Tiffany). In his view, should the sirens sound, it's time to remain inside; fear of the environment is a prevalent concern.

Sirens, thunder and lightening are common audible signals striking fear and anxiety for Aamjiwnaang citizens. Community members recall being sent to neighbouring ‘safe havens’ – the Holiday Inn, St. Clair High School, the Lambton College cafeteria – constituting memories imprinted upon the psyche of the community's adolescents; consequently, fueling one individual's fear each time a thunder or lightening storm occurs for its potential to strike the adjacent petroleum holding tanks (Ken). As outlined earlier, the 1993 incident resulted in a community evacuation when lightening hit an adjacent chemical holding tank; this event is fresh in the minds of individuals living next to the Valley: “It was really traumatic for me; ever since then I've never trusted a lightening storm” (Elle). The explosive impact of this incident left a lasting impression on community members: “When a Suncor tank got hit by lightening we got evacuated, it was scary. I was living near Esso, I was worried about my mother and brothers” (Frank). Residents recount:

I remember. I was fifteen when the one caught on fire. We had to leave. They tell you to stay inside. It's weird to live like that we live in kind of, being scared, of your own [...] your home is like a refinery" (Edwin).

As some discuss, if the plants were to "blow up", there would be a "chain reaction; all the plants would blow up, so that's what I think about too" (Candace & Blair). Concern with the possibility of a 'chain reaction' event is a recurring issue: "everything would be wiped out. I heard Sarnia is on the Top Ten bombing list...because it would cause a chain reaction if a bomb went off" (Candace & Blair). Citizens concerned about their livelihood and well-being ask: "We get blown up – who's responsible" (Nathan)?

Moreover, the constant threat of evacuation impacts daily life in Aamjiwnaang. An Elder revisits the past public service announcements – via megaphone – alerting citizens to leave their homes: "I have experienced a few... there hasn't been sufficient protective gear" (Kimberly). Each time there is a thunderstorm or severe weather alert – and they are frequent in Lambton County – citizens cower with anticipation. Such circumstances prompt some community members to ask: "What if we have a tornado and it hit those places: what would happen? Would we all blow up" (Nancy & Bella)? For many, the end seems near. This normalization of fear, of potentially blowing up, is commonplace: "I know a lot of people are proud of their heritage and don't want to just give up and leave, but my fear is that with everything going on in the world and with stuff getting closer to home, it's going to be the end with no warning and there's nothing we can do to stop it" (Charlotte). 'Hope' is a concept with limited meaning for individuals grasping with their circumstances on the contours of industrial civilization; in its place, fear resounds.

Aamjiwnaang citizens live in a constant state of alert. On Mondays, at 12:30pm sharp, the test sirens sound: "I forget sometimes. That scares me. I'm always scared, worried and still think some days, what if we all have to evacuate: where are we going to go? Are we actually going to get out that fast?" (Larry & Sonja). For others, the sirens cease to register in the consciousness for many citizens. As the sirens sound at least weekly, this startling experience causes customary alarm:

Sarah – How often do you hear the sirens?

Elle – Every 4th day. The thing about it is: it's normal. Really, when the sirens go off, I ignore them. I've grown accustomed to them. They honestly do not bother my children either. It's normal; it shouldn't be.

Some community members claim that when the sirens sound: “It’s not a big deal”, and that there is not point “running around with your head chopped off” (Billy). These individuals laugh off community distress around this routinized sensorial existence. Characterizing the everyday normalcy of the siren’s presence in this place, individuals describe how their perpetual chime helps them to keep time:

Especially when you test them – every Monday at 12:30 – I set my watch to them. It doesn’t bother me. I hear them go off and I know it’s Monday. I don’t know if any of their systems work all that well, there are different systems. One system would automatically dial residents’ phone numbers; they do put it over Cogeco – I would get a test alert on Mondays. The idea is that if there is a real emergency you turn on your TV... if there was an emergency and I was supposed to evacuate I don’t know how I would ever tell (Edward).

For one plant worker, you could: “hear the sirens when you go for lunch break...” (Frank). The siren shrills become part of the normal life in this environment.

For others, sirens seem to silence citizens, fearful of chiming in about their daily reality. Many articulate a deep-rooted fear and suspicion of Aamjiwnaang’s industrial neighbours: “I think they’re slowly killing us off” (Elle). Fear stems from witnessing widespread sickness – asthma, arthritis, nosebleeds (and so on) – cancer deaths, growths on fish and an array of mental health concerns. This landscape weighs heavily upon citizen bodies in Aamjiwnaang, at all stages of life.

Whether it’s the smell of rotten eggs or the greenish-glow grazing the sky, individuals living within the Valley experience a stimulating aesthetic experience. Benzene exposure continues to be a visceral concern: “I’ve seen it; I’ve tasted it [...] workers were asked to dump coveralls in benzene; it would eat the oils right off”; moreover, repeated exposure prompts some to speculate as to whether it could affect one’s own reproductive health (Ken). Chemical Valley leaves a poor taste on this community’s palate.

Over the years, fish consumption patterns have changed: “I grew up on it. You can taste the toxins. You can smell ‘em when you’re cooking them. You’re used to it. We ate quite a bit during the fishing season. That was our dinner” (Ken). For many, it takes leaving the community to recognize the ongoing environmental health concerns. Some individuals articulate comparable differences with the neighbouring Kettle Point reserve: “When I used to come to Sarnia before, it just stunk, from Kettle Point; after living here,

you just get used to those smells” (Tiffany). Others describe their appreciation of nature when vacationing. While in Florida, one individual noted: “I was looking at a palm tree, I’m going to take a picture of that; it just looks so nice. I realized it’s because there was a blue sky...we never get to see blue sky. It’s always gray with smog” (Tanya). Living in a state of alarm, as citizens continuously on alert, is a normalized everyday experience.

At times, darkness literally marks the bodies of children in Aamjiwnaang: “The supervisor from the Day care called me, there was black soot on the kids clothes and on the ground, and I called MOE and they said they can’t prove where it came from” (Nathan). Originally adjacent to the HWY 40 and across from the former Polymer plant and present-day Lanxess, with the support of industry, the day care relocated into the heart of the reserve. To this day, the community Band Council Chambers, Resource Centre and a family services building remain in its place. This sensorial scene remains with community members: “There’s a smell that comes off the styrene plant...and it reminds me of being little, when I was there. It puts me right back. When I was in day care” (Ken). Those living adjacent to Chemical Valley grew up with the looming presence of an accident, spill or evacuation as a persistent threat to their well-being.

As soot simultaneously fell on the clothes of young children at the day care centre, homes, driveways and cars – citizens picked themselves up from the debris: “There was a release...it was on my car, on the trampoline, on my deck; it was all this black soot” (Quinn). The pittance of citizen compensation arrived in the form of \$300 per exposed household. Growing up here, adults reflect on their evacuation experiences: “I remember my parents saying ‘stay indoors and close the windows. Not to swim in the river’. I even heard ‘don’t eat the deer’; everything was contaminated” (Quinn). Monetary compensation seems futile as citizens pay the price for their corporeal and community survival.

Children grew up with these facilities framing their horizon of livelihood. Getting into heavy metal as a youth has a different connotation in Aamjiwnaang: “It’s like mercury; when I was a kid, our biggest thing was, you’d get mercury. Put mercury on a penny and you’d get a dime; use it to get candy” (Kirk). Kids would play games: “When I was a kid, we would play a game and scoop up mercury” prompting citizens to ask: “So if it’s on the shore...what is on the bottom” (Billy)? Curious citizens with many questions

receive few answers. For parents, toxic barriers frame youthful enjoyment of the landscape:

You can't do too much with your kids, sometimes it stinks; you don't know what's in the ground, or waters here. At the pow wow...in the creek back there, there were a bunch of kids playing and I thought, where are these kids' parents, why are they letting them play there, when there is a sign that says it contains toxic materials. When your kids go outside you worry about them because you don't know what they are going to get into when they get out there (Candace & Blair).

With their castle-like majesty, some children find the smokestacks enthralling, while others voice an awareness of their potential harm. As one mother shared: "My son always points it out too. He says it stinks. He knows they're not good for us; he's only three. He says 'put them in the garbage! It's stinky'" (Nancy & Bella). Sirens, smells and stacks become a fixed feature of the built landscape surrounding this community.

Noise, light and olfactory pollution intrude upon the reserve. In addition to the familiarity of propane or butane smells, growing up in Aamjiwnaang, community Elders describe the ubiquitous stench associated with growing up near the Scott Road dump: "When there was a south wind from the dump...it was really bad. When you got a warm south breeze...it supposed to feel so nice, but when it stinks, you can't enjoy that" (DJ). These sensorial experiences etch the youthful psyche.

The illumination of Chemical Valley captures the youthful Aamjiwnaang imaginary. Young people in the community recount their experiences while gazing up at the sky to make shapes with their imagination out of the fluffy atmosphere. Children grow up thinking that the encirclement of their territories by their industrial neighbours represents a normal aesthetic. At Christmastime, the stacks illuminate this reality:

Something used to burn over there...and you could see the smoke for miles and miles. The smoke was so big. I was a child. You know how a child will look at the clouds and say that looks like a bear or whatever...the smoke looked like that I would sit out there and never thought that smoke was going to hurt me. I don't know if they covered that up or what. They used to take everything back there [...] at Christmas time, light it up. I thought that was really pretty...they were bright, all different colours; like a bunch of Christmas trees (Nancy & Bella).

The location and placement of Chemical Valley's sparkling smokestacks surrounding the reserve is an uncannily bright yet stark reminder of the bleak reality facing these citizens.

Not all young people in the community look at the surrounding stacks with awe, however. Families recount stories where their children were prompted to speak up during community consultation proceedings, simultaneously evoking rage and admiration that youth are propelled to speak out and articulate their ongoing fears: "I've noticed our

young people know a lot more because they are very concerned [...] I get scared, thinking, ‘we’re just surrounded’. It just takes one day...for something to blow up and everything is gone” (Larry & Sonja). Concerned with pollution in the creeks, trees and deer, citizens refrain from catching game and wildlife on their land. When sirens, evacuations or shelter-in-places occur, citizens experience a range of emotions, from ‘fear of mutating’ to apathy (Stew). Citizens of all ages express fear, for present and future generations.

To the naked eye, these stacks appear as god-like cigarettes, spewing smoke up into the atmosphere. The bike lanes along the reserve’s riverfront, snaking up along South Vidal Avenue, leave much to be desired from the community’s most accessible transit route, prompting one individual to note: “When we go by Vidal street, the air is really bad, it hits you in the chest: I’m always covering my face. I should just walk around with a mask” (Lily). Cognizant that “you can’t go through your life wearing a respirator”, individuals make the most of their environment (Olivia). Citizens who seek to live active and healthy lifestyles must trek far from the reserve to get away from it all. Visions of citizens jogging along HWY 40, Vidal St. or the riverfront juxtapose the irony for those individuals trying to manage their lifestyle choices: “I like to go running, but it’s hard to do. Oh maybe I will hold my breath when I go by” (Heidi). Vidal offers the only viable bike route from the reserve into town. Another citizen astutely articulated: “I’d rather have pollution than get hit by a car” (Stew). Many citizens carry on, living their lives as any other citizen enjoying their surroundings. To leave, the only reprieve, it seems, is a limited option for community-members who consider this place ‘home’.

Moving in town provides little respite, as the twinkling landscape on the horizon reminds citizens that their existence hinges on the persistence of an industrial town; though citizens are free to move off the reserve, many articulate that they cannot escape the presence of smokestacks, plume and the sound of sirens in their dreams (Tonia). Citizens residing both on and off reserve raise families and try to survive while accepting the severity of their circumstances.

Community members often voice a concern with feeling helpless when faced with challenging the plants’ presence in their everyday lives. Moving away provides little solace. After moving her family off the reserve, one mother voiced: “I don’t think I can

change things. So I don't think about it. It's not something you think about when it's there everyday. So you just lay down and take it. It's all you can do" (Tonia). Individuals feel stuck; weighed down and helpless: "like an arranged marriage gone wrong" (Tonia). Some – but not all – citizens feel compelled to voice their discontent:

I probably could [speak out], but it doesn't do any good. If Shell is going to expand, or Suncor, or whoever, or build a new plant or a new plant comes in, there's not much we can do about it; we can't say: 'we don't want you here, you're killing us', they say 'but the money! Look at the jobs we provide" (Edward).

Some individuals remain unfazed by their surroundings: "Right now, when you catch this...your body either stops it or it doesn't. There's nothing they can give you" (Kirk). What would seem upsetting or distressing to some appears as just another day, another experience, another toxin impacting everyday life.

Accountability to Aamjiwnaang citizens for industrial releases is not a transparent process. Sometimes, the reserve's boundaries are policed: "We call it the 'yellow canary' – we say there is a strong odour coming from an area, can you go see what it is? What happens if you go there...there is a strong odour but you don't get out of there; they don't prepare you for stuff" (Quinn). This 'cop sniff test' is but one tactic employed by those charged with issues arising of environmental concern. Those who are literally employed to police the plants worry too about their health. One individual, exposed to benzene sought compensation, only to be brushed off: "What do you do? Someone says seek legal advice? It's a billion dollar...I don't have the money for a lawyer...so I never did" (Quinn). Benzene is but one chemical among many released in the Valley.

The felt landscape of Chemical Valley becomes fondly familiar for its closest residents. When the sirens sound, some individuals state that they simply "turn the radio on...and carry on" (Candace & Blair). When the sirens sound, citizens know to turn on the TV or radio, and then wait. The familiarity of this place is at once felt and smelt. One member stated: "That's how I knew I was home...you get that 'home feeling' from that nasty chemical smell" (Bob). And what do you do when you smell something out of the ordinary? There are some – limited – possibilities: "First thing is look the way the wind is blowing. If the wind is blowing the other way...I don't think you have to move. If you smell something...you should take shelter. Even if you can...if there's an offsite leak, you can't prove it; the wind will blow it away...they are like 'what'? We didn't do

nothing” (Bob). Some citizens stand their ground. Should there be an evacuation announcement, not everyone would be hasty to leave the reserve “vulnerable and defenseless” and subject to foreign occupancy (Bob). You have the option to evacuate your home; you cannot evacuate your body.

Bodies on the Line: Taking Action

Community members voice being sickened by their environment. One family’s son awoke one morning with a bloody nose, his body covered in bruises. Diagnosed with leukemia, his swift passing rocked the community and family members began to mobilize. These families carry on, unrelenting, hoping to make their environment and home a better place for future generations. Sickness abounds in the community:

As long as we are living in this area, we are always going to be sick. No matter how much they reduce the emissions. From the smokestacks; you can see it – you can smell it. It affects the breathing, your sense of smell...we’re always going to be sick people [...] I just don’t think its fair that we’re sick. It shouldn’t have to be that way (Elle).

Darkness juxtaposes the bulbous plumes of white smoke enframing and choking out life on the reserve: several community members voiced a concern to me that there is a heavy feeling when you enter the reserve, and that a dark and black “concoction of toxic, killing chemicals” frequently hovers over this First Nation (Elle). People are sick and sickness is a shared feeling among this community’s population.

Citizens living in this community worry about a range of health issues including physical and mental ailments. Some individuals report difficulty focusing and that many children in their community grow up with learning disabilities (Elle; Ken). One individual stated: “I’ve noticed the younger generation, teenagers and that, have commented that they all have ADD or ADHD: ‘you name it, we’ve got it’. They’re all on pills for some kind of condition they believe was due to the environment. I found that kind of amazing that so many were diagnosed with learning disorders” (Tiffany). Mental and physical health concerns alike are widespread in the community.

Reproductive, respiratory, cardiovascular and cancer are commonplace health concerns in this community. Frequently, citizens connect these concerns to the immediate environment: “I’ve seen many people die from complications from whatever comes out

of these releases; there's been a lot of cancer; we're loaded down with asthma" (Sam). The breadth of health concerns in this community spans far and wide. From thyroid issues to fibromyalgia, arthritis to a declining birth rate: community members are concerned (Kimberly; Stew). Cancer is so present that it prompts some to articulate that "good health" in Aamjiwnaang can be reduced to being free from cancer (Edward). There is a common sentiment that Aamjiwnaang is facing an "epidemic of cancer" (Ken). Cancer, among other health issues, is everywhere. Many fear that nobody's dying from natural causes (Candace & Blair; Elle; Nathan; Tiffany). Cancer is a repeated concern in the community: "This year, if I took a number of people who've passed on, 99% is health related somehow to the environment in this community [...] I've yet to see a natural death. That's a concern" (Nathan). Some citizens begin to mobilize for change to draw attention to these corporeal circumstances affecting their community.

Frustration with this noxious environment propels some citizens to assume the responsibility for mitigating their livelihood. As such, they are interpellated into being citizens on alert.⁴² They keep spill calendars, document the frequent releases, smells, and accidents, experience shelter-in-places, close their windows at night, evacuate, monitor wind direction, speed and general air quality. These citizens embark upon a variety of tactics and strategies to seek recognition for their concerns. To raise awareness, and voice concerns, community members participate in various environmental campaigns, which periodically receive sporadic flurries of local, national and international media attention.

At the turn of the 21st century, several local and national environmental initiatives garnered attention.⁴³ Aamjiwnaang – formerly "Sarnia Band 45 – Chippewas of Sarnia" –

⁴² Judith Butler draws from Marxist theorist Louis Althusser to discuss 'interpellation' and subject formation. As an example, she presents the case of an individual being hailed by an officer of "the law"; as the officer casts a call: "Hey, you there", the subject turns around and answers, and comes into being as a consequence of language, within pre-established ideological and discursive configurations (1997:106). When subjects are hailed, called, and interpellated in such a manner, they respond to external terms.

⁴³ During this time, Lambton Industrial Society became SLEA, the Sarnia Lambton Environmental Association, with a stated emphasis on environmental concerns in the Valley, the City of Sarnia completed extensive wastewater treatment upgrades, and the Federal Treasury Board of Canada introduced the "Federal Contaminated Sites and Solid Waste Landfills Inventory Policy", followed by the Federal Contaminated Sites Inventory (FCSI). In addition, INAC – now AANDC – developed a *Contaminated Sites Management Policy* (with a primary focus on Indigenous communities north of 60°)(AANDC, 2002). According to a recent Auditor-General report, the Federal government fails miserably when it comes to addressing contaminated sites, gathering adequate information, producing action plans to deal with high-risk sites in a timely fashion, or allocating adequate, stable and long-term funding to see this program take shape (Auditor-General, 2010).

began to take a more ‘active’ role in approaching and engaging with government and industry associations. Local citizens pick up responsibilities where governments fall short. By 2002, under the leadership of Ron Plain, the Aamjiwnaang Health and Environment Committee formed in response to Suncor’s desire to establish Canada’s largest ethanol plant, just metres away from the Community’s Band Office; enough is enough, they said, and in 2004, a roadblock ensued, in protest. The protest forged Aamjiwnaang onto Canada’s media landscape. Suddenly industries, government officials and researchers took notice.

In 2004, a flurry of outside interest regarding the high-volume of accidental releases in Chemical Valley poured over the community. Aamjiwnaang’s new Emergency Response Planner Nathalie Nahmabin stated that community members felt like a big “sitting duck” in Aamjiwnaang (Mathewson, 2004). Health and Environment Committee members wrote to the Ministry of Environment, Natural Resources Canada, Environment Canada, and Health Canada to protest the Federal government’s provision of \$22 million in funding to Suncor’s site expansion as part of Canada’s Ethanol Expansion Program. The community refused to be idle.

Angry sentiment persisted in February 2004, when Imperial released 150,000 litres of solvent into the river, followed by a Suncor release of 44,000 litres of crude oil (Poirier, 2004).⁴⁴ In communication with the Sarnia Police, Suncor asked Aamjiwnaang residents to shelter-in-place.⁴⁵ A few months later, Suncor spilt 140 litres of gasoline, benzene, toluene and other chemicals into the St. Clair River. Drinking water downstream in Wallaceburg, Walpole Island, and Stag Island shut off for the fourth time in eight months and radiator fluid was detected in the water both on Walpole Island and in the City of Wallaceburg (Mathewson, 2004). Finally, government officials took action.

These events elicited both government and community responses. Following an increase in the number of detected spills in 2002-2003, in 2004, under the leadership of Environment Minister Leona Dombrowsky, the Ministry’s 30-member “Industrial

⁴⁴ Under the *Environmental Protection Act*, any industry that spills must notify MOE and the local municipality.

⁴⁵ As outlined in the introduction to this dissertation, a ‘shelter-in-place’ warning ensues in the event of a chemical release. In principle, Sarnia’s safety sirens will sound to alert the public about the impending harm. Given such an occurrence, residents are encouraged to stay indoors, close all windows and secure vents, seal gaps in windows or doors with tape, and tune into local radio (CAER, 2013, see: <http://www.caer.ca/shelter.html>).

Pollution Action Team”, conducted a year long sweep of regulatory compliance within Chemical Valley between 2004-2005 (MOE, 2004). The high-profile “SWAT” team inspected thirty-five facilities.⁴⁶ Thirty-four of these facilities were found to be non-compliant with one or more regulatory requirement (MOE, 2004: ii). The sole compliant facility, a chemical plant, merely stored products and off-specification materials. Common deficiencies included: lack of spill contingency and spill prevention plans, no Certificate of Approval (COA) for wastewater collection and treatment or air emission control treatment, altering equipment, systems, processes or structures contrary to the COA for air or waste, and improper chemical handling, storing and identification. Overall, 260 instances of non-compliance with environmental and legislative and regulatory requirements were identified.

As the MOE SWAT team’s activities took place in the Valley, environmental and human health issues attracted widespread media attention. In February 2004, CBC’s “Disclosure” broadcast a series looking at health impacts in Chemical Valley following the recent Imperial Spill (Mathewson, 2004). The sequence of spills, accidents, leaks and explosions, caused the community to look at their bodies in alarm. Aamjiwnaang citizens mobilized to learn more about the impact of toxins within their community. In addition to emergent environmental concerns about toxins in Talfourd Creek, which swirls through the reserve, ongoing research about ‘gender-bending’ or endocrine-disrupting chemicals in the nearby waterways documenting the impact of hormone- mimicking chemicals on wildlife, such as intersex fish, feminized amphibians, and other reproductive abnormalities, caused citizens of Aamjiwnaang to look at their own population and birth patterns with raised eyebrows (Scott, 2009; Weisskopf, 2003). Endocrine-disrupting chemicals – PCBs, cadmium, arsenic and lead – were detected in Talfourd Creek. For many years, this creek served as a drainage ditch for industries including Suncor, PaxAir and Dow.

Members of the Health and Environment Committee teamed up with the Occupational Health Clinic for Ontario Workers – Sarnia, to conduct a door-to-door

⁴⁶ The sweep resulted in the issuance of thirty-two Provincial Offender Orders MOE (2004). Some violations were referred to MOE’s Investigations and Enforcement Branch for follow-up. Concerns included steam powered flare stacks burning multiple waste streams and fugitive emissions. MOE also identified tracking waste management practices and processes as a recurring issue.

body-mapping survey of ongoing health concerns in Aamjiwnaang. As Scott discusses, ‘body-mapping’ is an epidemiological technology that pools the collective complaints of a community to identify patterns (2008: 319). This technique makes community concerns visible by affixing colour-coded sticky dots on human-size body maps to visually reflect their symptoms (See: ‘Body-Map’ image below).

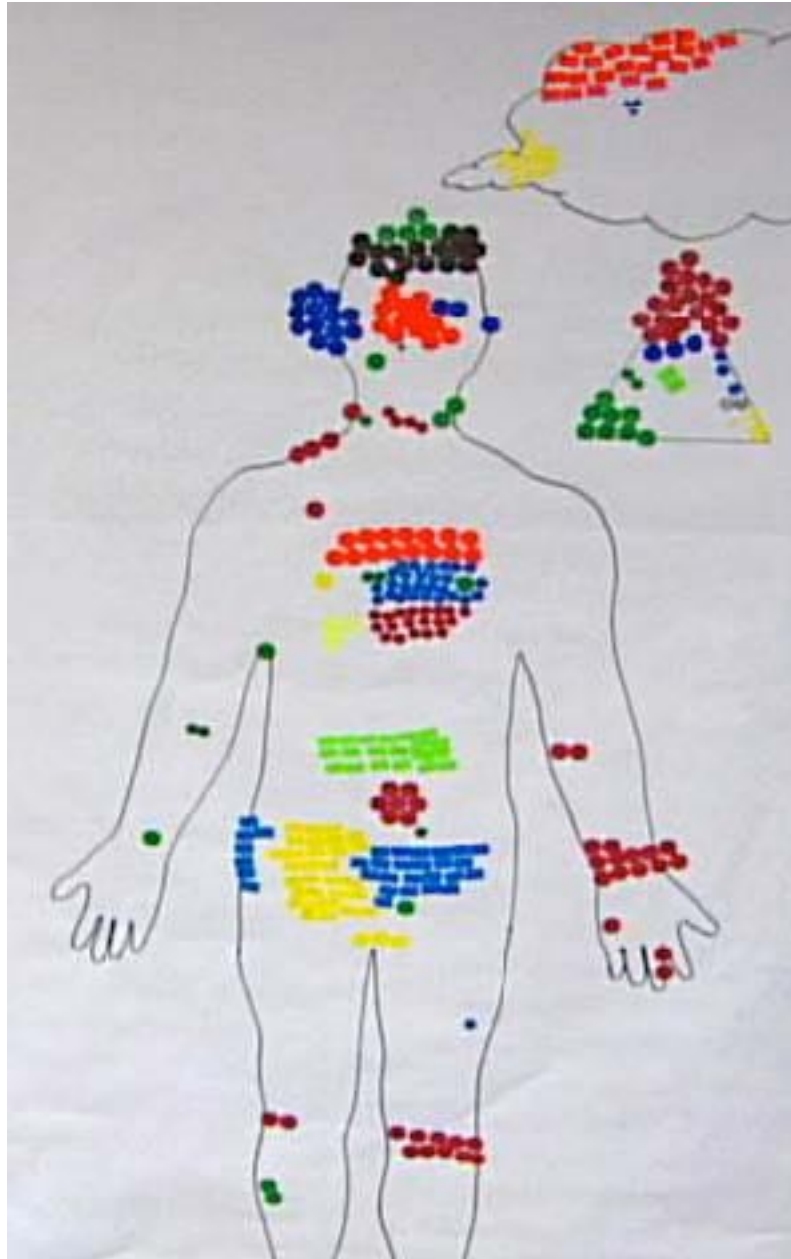


Image reproduced from the Aamjiwnaang Environment Department's files, with permission (courtesy of Jim Brophy & Margaret Keith)

A team of researchers, including OHCOW and Aamjiwnaang members engaged in a participatory research strategy to document community health concerns. Community researchers tracked birth ratio data over a 20-year period, noting that between 1999-2003, 86 girls and 46 boys were born, thus illuminating a declining male: female birth ratio of 2:1 (Mackenzie, Keith, & Lockridge, 2005). The study revealed that since 1993, the male birth rate declined significantly. News that women were giving birth to a disproportionate number of girls garnered national media attention (Mittelstaedt, 2004; Mittelstaedt, 2005). Citizens of this First Nation expressed concern that girls would have to marry off-reserve to keep the population alive; fears about the potential loss of culture ran rampant. A movement for reproductive as well as environmental justice was born.

Shortly thereafter, recognition of Aamjiwnaang's unique place within Chemical Valley began to reach policy-makers at various levels of government. Emergent concerns regarding the twin issues of 'health' and the 'environment' on a First Nations reserve illuminate the nebulous dimensions of trans-jurisdictional policy-making. Exemplary of this, as will be discussed in Chapter 5, following the dumping of nearly 600 hazardous waste barrels on one of the reserve's back roads in 2004, community-members struggled to find the appropriate authorities in place to remediate the situation (Poirier, 2005). Consequently, trans-jurisdictional boundary meetings between various levels of government, including the Environmental Commissioner of Ontario, took place the following year.⁴⁷

Chemical Valley bears witness to a series of initiatives in order to draw attention to the environmental health impacts in this community. Aamjiwnaang citizen Wilson Plain and his family participated in an ongoing national "Toxic Nation" bio-monitoring study, which used blood and urine samples to determine individuals' body burdens across the country (Dobson, 2006). In response to Aamjiwnaang's birth ratio study, former

⁴⁷ The 2005 meetings rode the tailwinds of several other leaks within the community. As mentioned, the community faced another benzene leak at Nova and a subsequent evacuation in 2005 (Mathewson, 2005). Moreover, in addition to a boiler and small fire in 2004, Suncor announced yet another initiative, the billion-dollar GENESIS project. In response, Aamjiwnaang citizen and then Health and Committee member Wilson Plain called for the *Environmental Protection Act* to designate Bands as 'sensitive', thus requiring special consultation before any proposed developments (Mathewson, 2005). The same year, community members found deformed puppies at birth and faced over a dozen spills. Soon thereafter, the Band contemplated relocation, though no serious proposals surfaced.

SLEA President, the Mayor and local County representatives called for a Federally funded comprehensive public health study that focuses on Lambton County (Dobson, 2006). Health Canada agreed, provided that local health authorities would play a leading role. Negotiations between local stakeholders regarding the establishment of a governance structure ensued.

Meanwhile, Ecojustice, a national charitable organization dedicated to defending Canadians' right to a healthy environment, published an expository report: *Exposing Canada's Chemical Valley*, indicating the results of the community-based body-mapping activities and detailing the ongoing health concerns in Chemical Valley (Ecojustice, 2007). Community participatory activities continued: providing 'toxic tours', bio-monitoring, body-mapping, participating in nearly a dozen documentaries, and community-based air-monitoring initiatives such as 'bucket brigades', with the help of California company Global Community Monitor (GCM). The bucket brigade:

allows residents of contaminated fenceline communities to actively participate in environmental monitoring and regulation. In essence, those residents are equipped to sample the ambient air in their communities at times and locations of their own choosing. The team consists of 'sniffers' and 'samplers' in a coordinated network using low-cost grab samplers that are explicitly designed to be inexpensive, easy to use, and made of materials that can be found at a local hardware store (Scott, 2008: 336).

Bucket brigades are a form of citizen-based epidemiology, which has been used as a strategy in Aamjiwnaang. GCM showed Aamjiwnaang citizens how to collect air samples when a spill occurs using a plastic bucket, approved by the U.S. Environmental Protection Agency (See: 'Bucket Brigade', image below):



(CBC image: "First Nation Bucket Brigade", 2008: <http://www.maryanncolihan.com>)

Residents thus take samples, log the time and smell, wind direction, physical sensation, document any smells, and subsequently send samples to a California lab to be tested for toxic chemical composition. According to one community member:

The bucket brigade picked up stuff...but the Ontario Government doesn't recognize that; we got this information from California. It was a lot of money to send down a sample to pay for it. They said no, it's American; it's no good in Ontario Canada (Sam).

The ongoing costs affiliated with the bucket brigade fall upon the reserve. When community members detect a smell – anything on a “stink scale from 1-10” – above six, they are advised to take a sample (Sally). Citizens voice concern with the chemical composition in the air around the cemetery. Of the government's response to their environmental health concerns, the community is frustrated: “They keep saying ‘it's our lifestyle factors...choices that come into factor’” (Sally). From smoking, to drinking, to using carpets, fabric softeners, cleaning products, and make-up, targeting ‘lifestyle factors’ or ‘choices’ as a matter of personal responsibility for health remains obtuse.

Citizens of the Aamjiwnaang First Nation have employed a variety of strategies to raise awareness about their corporeal and environmental concerns. In 2008, Health Canada funded a health symposium held in Sarnia. While it drew an international crowd, Health Canada representatives refused to speak publicly about its fiduciary role for Aamjiwnaang's environmental health. That year, Aamjiwnaang received its own air-monitor, where it remains today, located adjacent to the Band's health centre. As Aamjiwnaang citizens monitor spills and continue to live in Chemical Valley – with their lives on the frontlines – struggles for recognition and remediation of their environmental and reproductive justice concerns ensue.

The volume and pace of developments and accidental releases in Chemical Valley overwhelms this community. Aamjiwnaang residents bear a large burden of environmental monitoring. The regulatory instruments available to them appear in a context of what the Ministry calls an “oversaturated airshed”. According to Ontario's Environmental Bill of Rights, when industries wish to change their operations, the public is entitled to a thirty-day window for submitting comments and objections to be reviewed by the Ministry (Environmental Bill of Rights, 1993). Given the high concentration of facilities adjacent to Aamjiwnaang, staff responsible for providing input and feedback on

the EBR website have stated that “this does not work for Aamjiwnaang” (Tina).⁴⁸ Consequently, the community sought alternative non-standard notice procedures and a different consultation arrangement. Chapter 4 will return to this discussion of community capacity and expertise in their ongoing struggles for reproductive justice.

Community members become accidental activists. At a recent community event, Lockridge describes her experience learning about her neighbourhood:

I didn't know that we had a say on what goes on in the plants. I didn't know what was being released, or how much, or the known health effects from it. I didn't know to call the Ministry of Environment's Spills Action Hotline to report any unusual smells or happenings, or to ask for a copy of the incident report. I didn't know that when there is an evacuation, that I should check the wind direction and know which plant it is, so I can take the safest route away [...] I didn't know that it wasn't safe to play here, in the river, or the pond, or the ditches. I didn't know that it wasn't safe to eat the fish, or the deer, or the rabbits here. I didn't know that I should keep my windows closed at night, since the flares from the stacks mostly burn at night, so as not to bother so many people. I didn't know which government is responsible for what. [...] I didn't know that when Suncor was digging their first flarestack, they were digging up human remains. I don't know what they did with them [...] These are some of the things that I didn't know, but I do know now (Wiebe, Field Notes, 2011; *Indian Givers*, 2012).

Faced with these unknowns, their concerns frequently become disregarded as speculative, unrepresentative and unscientific. Though this community lies beyond the point of impingement for industrial emissions, residents occupy a middle ground, and live with their bodies on the line between the insecurity of these ‘unknowns’ and the security of what they ‘know’ about their homes, bodies and environments (Wiebe, 2012). Citizens become charged with the responsibility to act as a steward for land and life.

For some, it wasn't until joining community organizations that they began to notice their surroundings: “When I got on these subcommittees I started realizing this...” (Sam). Citizens situated in this place, share knowledge and voice concern. Social mobilization includes joining committees and organizations such as ‘Victims of Chemical Valley’, participating in door-to-door health studies and creating Facebook groups – i.e. ‘Aamjiwnaang & Surrounding area against Chemical Valley’, or, ‘Save Aamjiwnaang Ecosystems and Forest (SAFE)’ among other activities, – to share information on issues arising within the community. Even the youth organize to raise awareness, share knowledge and seek change, through groups such as the Aamjiwnaang Green Teens or

⁴⁸ Since this interview took place, the Environment Department hired a full-time employee to monitor the EBR website.

Kijig Collective, to mobilize, use creative voices, raise awareness about everyday life and to defend their home and land.

While alive, citizens here try to survive. To do so, many seek knowledge about their corporeal condition. As one community member noted, Aamjiwnaang officials, the Health and Environment Committee in particular, “are trying to get blood samples” of its citizens to gain a better understanding of the community’s body burden (Kirk). Some community members have, and would like to continue to have some answers about their biological make-up: “I’d like to take a blood sample or something” (Sam; Sonny; Walter). Citizens participate in bio-monitoring studies in hopes of better understanding their chemical composition in their biology for a variety of reasons. As one individual stated: “Knowing all these things are here, to me, just means I’m closer to the fight. I can keep working to try and...you may not ever get these plants and chemicals out of here, but you can at least make people aware and smarten up” (Walter). For those community members taking action and mobilizing for change, they are living on alert, trying to keep their industrial neighbours accountable. Citizens voice the importance of keeping an eye on the Valley and making sure they are following the appropriate standards and regulations (Sally; Walter). Bio-monitoring studies are underway at the time of writing; whether or not the results will be enough to achieve regulatory redress will be a topic for future analysis. Some individuals express fear that without data linking harmful chemicals in one’s biological make-up to specific chemical refineries, environmental health concerns will not be an immediate priority, and that report findings will continue to be silenced by officials and policy-makers (Sonny). These individuals fear that it continues to be easy to discredit this experiential data.

Tired of living in a state-of-alert, charged with calling MOE regulators and government officials to address environmental health concerns, citizens grow weary. The onus of environmental monitoring on the reserve falls upon the shoulders of its citizens: “All the work that we do, we have to search and find everything before they take action; why are they making me do this and making my body like this? I can feel the stress. When I do hear the sirens, I do feel my body tense up; I try to find which way the wind is blowing” (Sally). Hearing the sirens shrill is a deeply felt lived-experience. Stress, and bodily impacts are constant: “When it turns towards you and hits you, the soundwave hits

you, hit me; I could feel it vibrating my entire body from inside out” (Steve). According to one member, as the plants burnt off excess gasses: “You can feel it; you can actually hear it because it’s so loud” (Evelyn). Citizens mobilize, articulate their corporeal injury and await response. Consequently, they are skeptical about whether or not the Canadian government has their interests at heart. Skepticism runs rampant, in response to concerns around fallout in the community one member stated: “They’re trying to – it’s just they are trying to pull the wool over your eyes – when you can plainly see a black cloud over your property” (Tiffany). Individuals question whether anyone is looking out for their best interests.

Mental health impacts are not to be understated here, as finding solace among the chaos of contamination remains a challenge for community members trying to cope. Citizens note that excursions into the bush are not exempt from the residue of Chemical Valley, as the constant whizzing stacks accompany hunters and gatherers on their expeditions deep into their territories. On finding a healing place, one individual mentioned parking along the reserve’s service roads, or into Corunna by the river, but not necessarily on the reserve because “it’s not just the visual and the smell; it’s the sound, the noise pollution; there’s no real place to be in solitude, no matter where you go, even if you’re in the middle of the bush you can hear the trucks go by, flames, cars going down the 40 HWY. No real peaceful place” (Charlotte). Consequently, citizens residing here turn a blind eye – or ear, or nose – on the Valley. Individuals have to cope by carrying on and living their lives: “You know it’s there. You have to drive right through it. Not look to the left, or right. And sometimes you smell that crap [...] I just stay in my house. It’s sad because it gets depressing when you have to lock yourself up” (Charlotte). Living like this functions as a kind of self-imposed shelter-in-place. As community members voice: “there’s no way you can deal with pollution. It’s around us. You’re going to go outside and walk around and breathe in pollution. What can you do? Put on a mask and walk around Aamjiwnaang” (Mike)? Feelings of helplessness coincide with apathy, despair and loss as community members try to survive, grasping remnants of their livelihoods while they try to survive as a distinct group of peoples.

A Matter of Cultural Survival

Health, home and habitat are inextricably linked in Aamjiwnaang. Community members contend “once that pollution’s in our bodies, it’s not going to leave, ever”, thus, “your body must become immune to it”... we are “used to it” (Larry & Sonja). Consequently, citizens of the Aamjiwnaang First Nation are frequently posed with the question of: “If your land is so toxic, and your health suffers, why don’t you just pack up and leave?” Resignation abounds: “For our future, health wise it’s definitely going to be a lot healthier for our community if we move” (DJ). Moreover: “I’m already thinking that if they don’t move the reserve I’m going to move myself. Eventually. I don’t want to move. I don’t want to live in this cloud of pollution. I don’t want to expose my kids to this when they don’t need to be. I don’t want this for them” (Diane). Fear of losing this connection, to the people, community and land inhibits some from leaving this area for residents living both on and off-reserve: “I would consider moving; I want to stay; I have a dedication to the Friendship Centre and to help out the people that way, but also being a Pipe Carrier, and this community doesn’t have too much culture or faith keepers, so I have to go away to learn those things” (Frank). Some will stay, some will leave, some will return.

Moving away is an ongoing possibility confronting citizens of Aamjiwnaang. Individuals living in this environment suspect that things would be better elsewhere. In Aamjiwnaang, there is a concern that “people live here for a few years and get asthma [...] they move away and aren’t angry anymore [...] they live here and start to get nosebleeds” (Elle). Relocation is a possibility that receives mixed reviews within the community. People ask: “why don’t you move”? Such questions evoke a variety of responses, notably: “well this is my home. Why don’t you make it safe” (Kimberly)?

Mobility, leaving and relocation may be an ideal situation; however, freedom of movement is a concept imbued with privilege: “I love my community, but at least one time per week, I want to move off Aamjiwnaang. But I feel helpless. This is our home. We shouldn’t have to go off where we grew up. It angers me, a lot” (Elle). There is a worry that no matter what citizens say or do, little change will occur.

Movement is a privileged notion with sedimented meaning in Aamjiwnaang. For many reasons, citizens attach meaning to this place, to their home:

That's why community members want to stay here. It's their home. When I was younger, the land used to be so fresh, and we used to respect the land more and live off the land, nowadays, with all the talk about pollution, back then, maybe they are cleaning it up a little more – or trying to hide it – with the technology they got now – it's still in people's minds though I think; you take a car, look how many years it takes to rust if you leave it sitting there...it's the same way with the land. When I was younger it was nice and green...then they moved in, and it took all these years for it to affect the land and animals" (Denny).

At the end of the day, Aamjiwnaang is home for citizens residing in this place, adjacent to Chemical Valley. Leaving is not a viable option:

I would never want to move away from here. This is my home. This is where I was raised. I've lived here my whole life [...] So many memories I have. This is my home. This is, right here, a house, that we call our real home; we wouldn't have this place if this world wasn't here. Our Mother Earth. That's our real home. This whole place, this house is going to be gone if we keep doing the same actions to this world. It is going to be gone someday (Larry & Sonja).

This is a place to 'be' First Nations: "Even though we are in the plants, it's the freedom. If you want to blast around, go fishing...it's not as regulated as in the city [...] I feel really close to nature" (Ken). When asked whether or not it would be viable to move the reserve, one citizen voiced: "This is where they are going to lay me to rest, here, 'cause it's my home'" (Sam). The environment is a matter of life and death for these citizens.

In place of family portraits, funeral cards adorned the mantelpiece of one interview participant. As some residents suggest, industry "might put food on the table and pay the bills but it might put you in the ground; that's the pay you get" (Nancy & Bella). Making a living in this community is a perilous affair. A worker noted: "When I got this job, I said 'I guess I'm sentenced to die' because of the air here" (Lily). Black humour, comments and remarks are revelatory of death's persistent visceral affront against daily life. As one citizen put it: "I plan on going to our noisy cemetery. That's where I plan on going" (Bob). Adds another: "I grew up here, I live here, I'm going to die here" (Nathan). Reserve passersby take note of the community flag's unrelenting half-mast status: "If you're not losing someone, you're supporting someone who's going through a loss to cancer all the time" (Lily). Frequently, citizens gather together and pay their respects in the reserve's cemetery to mourn the loss of their loved ones, as ceremonial song, drum and tears coincide with the whizzing, vibrating, flaring stacks.

The location of the reserve's cemetery, encircled by industrial refineries further demonstrates that dead or alive, the reserve is not a place where one can rest in peace.

Ecological vitality cannot be separated from cultural vitality. While “just being here is fine enough” for survival, the loss of a connection to the land for citizens of this community constitutes a much deeper disconnect: “When the youth lose that identity, being part of the land...it takes away from personal growth [...] all those areas, land and resources, and way of life that we live – talk about cultural genocide” (Ned). This notion of ‘genocide’ is not simply about the loss of people – as Canada’s colonial history reveals – but also about the loss of a way of life. While “people have already given up, they’ve already kind-of figured that we’ve lost it. The habitat is destroyed. It’s gone”, relocating from this place is difficult to swallow (DJ). Given the community’s lengthy history and deep-set attachment and rooting in this place: “A lot of things tie us into the land, for a long time; since the 1600s, that’s a long time just to move” (DJ). In order to maintain an Anishinaabe way of life, citizens must practice their teachings – whether fishing, hunting, gathering, etc. – to sustain their inherent rights.

While they are indeed concerned, about the loss of culture and traditional ties to the land and the impact it has on present and future generations, the reserve is one of the few remaining places where citizens can maintain a connection to their way of life, no matter how contaminated. Though acknowledging that the plants are making Mother Earth sick, one former Suncor worker noted:

When you go up top, you can see how the river bends; it snakes through. When you look at the reserve, you cannot see a house. All the trees are surrounding it. It hugs the reserve. It protects it all. You look over and you can’t see a single house. It’s like Mother Nature is just hugging the first nation like that. You can’t see anything. They say the leaves do protect. I do enjoy being here, hiking, sweats, absolutely (Ken).

Individuals lament the prospect that relocation looms in the foreground “to survive, our people, that is probably what we will have to do” (Ken). Cultural loss is one concern raised within the community.

Many do not articulate any concern at all. While some do not truly believe that the chemical plants affect the ground or soil, it is hard to dispute the fact that changes to the landscape impact how citizens practice territorial and ceremonial ways: “I was sitting here with another committee member, he won’t pick the heart medicine” (Frank). The pollution impacts healing practices in this community. As one Elder noted: “What

bothers me – we have four medicines – cedar, sage, sweetgrass, tobacco – which I use from here; I have cedar, we put out tobacco down when we use it; I feel that if you do it in a good way then it’s OK... but people are afraid to use the cedar because of the pollution” (Kimberly). Ceremonies too, are not exempt from contamination’s impact: “When we go into a sweat, which is a ceremony, which we call the womb of Mother Earth, we have steam coming up from the grandfathers in the sweat, that is going to be the purest air in Sarnia; you can still smell the pollution” (Mike). The way of life in this community has and continues to be affected by the impact of contamination on culture.

Cultural survival includes the preservation of community, land and language. Some refuse to use the sacred medicines from the community; others carry on as usual. Coinciding with the loss of a ‘traditional’, or Anishinaabe way of life, language plays a part: “It’s almost like our language died out...held on a little bit and it’s growing again” (Frank). Community Elders articulate a dire need for ceremonies to preserve a way of life (Kimberly). One example is the jingle dress, a sacred dance of healing, or the ‘fancy dance’ – dances are not for money but for deeper spiritual connectivity and healing – to connect to the four directions. Community members articulate: “It’s all connected” (Ken). Relationships are formed, maintained and mediated by song, drum and dance: connecting with the North, East, South and West through acknowledgement of the elements of Earth, Water, Air and Fire, individuals in this community attempt to survive and thrive in this place through the preservation of their customary and ceremonial ways of life.

Loss of this lifestyle continues to be a threat to their livelihood. Citizens express concern about not knowing where to turn to remediate this loss: “Don’t really know too much about the process of what it would take to get the land back to normal, other than healing itself” (Frank). The surroundings clearly impact citizens’ daily concerns.

Citizens cannot control how the wind blows: “I just think the wind is the wind. It’s going to blow the way it’s going to blow” (Elle). Citizens feel trapped, with limited options:

I honestly think it’s too late for my generation. Every single day I think about the cancer rate around here. I just think to myself: when is it going to hit me? What type of cancer am I going to get? [...] every day. Maybe that contributes to my anxiety. I do have anxiety. I am a worrisome person. I do worry about my family a lot. I do think about the environment and how it’s affecting us. Now that this interview is happening, I’m beginning to wonder now (Elle).

On existing ‘hope’ for the future generations, one community member articulated:

Sarah – When you say it's too late for this generation, what is the role for the future generations?

Elle – Will there be a role? That is what I ask. Will there be?

Is there hope for cultural survival? How can one connect to a 'traditional', or Anishinaabe way of life when encircled by this so-called 'modern' environment?

Several community members discussed the ways in which making life better in the present involves thinking differently about human-nature relationships. Rather than existing in an environment where toxic plume blankets individuals, citizens wish to “be in an environment where culture blankets an individual” (Ned). This kind of cultural preservation and consideration of an individual's rooting in larger environmental processes offers an alternative way of thinking – an alternative ontology – about the relationships between humans and their environments. As discussed by a Provincial environmental official: “The Aboriginal thinking is far better. It is far more consistent with ecological theory and a sophisticated science approach than our general conception which is set down by the bureaucratic separation, our institutional separations” (Gerry). This advanced ecological thinking – about humans, citizens and their relationships to each other and to the non-human world – offers an alternative way of conceptualizing the relationships between humans, the environment and citizenship.

An Anishinaabe approach to 'ecological citizenship' contests an egocentric view of the individual body. On the body, and the body's relationship to the surrounding environment, an Elder voiced:

I was told one time about a story about a filter that is within the human bodies, that filter is the liver [...] I would say that breathing all this air from the industries in here, we have to filter that air; a lot if it is toxic air, we have to filter that, so that filter is the liver; it's going through our bodies [...] when that filter is damaged or polluted with toxins that come into our body then it dilutes or blocks any emotions, emotional concerns that we have within our bodies; we just don't care about ourselves, our community. We show less care about what to do (Mike).

In contrast to the predominant Western biomedical mode of thought, bodily function and emotional capabilities are connected to one's relationship with Mother Earth.

Furthermore, as an Elder articulated: “Your emotions travel to your heart, from your liver, which emit these emotions, they travel to your heart and brain. When the emotions aren't pure and don't travel to the heart and brain then you lose the sense of a happy lifestyle. You lose the ability to shed tears about things and acceptance” (Mike). Citizens in this community look on as community members pass away. The emotional register is

affected: “There was an Elder who stopped here one time on a walk, passing through First Nations territory, she said ‘there’s no spirit in Aamjiwnaang’ there’s something lacking” (Mike). There is thus a view that pollution has killed the spirits of Aamjiwnaang citizens.

Some ceremonial practices take place on the reserve; others occur in a more serene setting with the aim of bringing knowledge back to the community. One practice is the humbling experience of a vision fast, which situates one’s human relationship with nature: “You get to understand yourself and see what you appreciate in life. You sit out there and look around and see the trees and plants and animals. You find out how weak and pitiful you really are. You look at those little birds; you can crush it and kill it. A human is just a blanket. That’s how you look at yourself as pitiful” (Frank). This ceremonial endeavour serves to remind humans of their place within humanity. An Elder continues: “Let’s not be so egotistical to think that it’s the only thing the pollution is killing: the birds, trees have to breathe in just as much as us; they’re part of the territory, animals, fishes, and all of life upon the waters and the land” (Mike). Animals, life, land and humans share connectivity. Confronting the egocentrism of our modern liberal society, the vision fast allows Anishinaabe peoples to “see how the earth could swallow you up and make you disappear. It makes you humble” (Frank). Citizens of Aamjiwnaang live in a continuous state of dwelling: between ‘modernity’, ‘progress’, ‘industrial development’, and ‘technological advancement’, vis-à-vis the humbling knowledge that humans do not master or own nature; they are but one element among other animate beings in a complex world.

According to some citizens, facing the severity of their circumstances involves rethinking the individualism and egocentrism of our roles, responsibilities and relationships to the ‘natural’ or non-human world. Community members voice that “if you respect Mother Earth” she will “respect you back” (Larry & Sonja). Environment takes on a deeper meaning according to some citizens in this place: “When I say environment, I’m talking about everything, human, animals – direct impact it has on the land and all those upon it”, furthermore: “we’ve all got a role. We all have a role and responsibility. We want an environment. It can be family, as an individual, family, community, nation – you want an environment that is going to be safe, healthy and

sustainable” (Nathan). Environmental protection and sustainability is a shared practice. This connection – between people and the place – offers a different, embodied yet territorial approach to citizenship. This understanding challenges technocratic and institutional models of environmental health policy in Canada. It also contends with liberal subjectivity.

An Indigenous approach to ‘ecological citizenship’ is articulated through the words, actions and practices of citizens trying to maintain an Anishinaabe way of life in Aamjiwnaang. Citizenship, according to an Anishinaabe way of life, takes on multi-dimensional meaning in comparison to a set of social, political or civic entitlements. Citing an inherent right to the land, community members articulate: “When we have a Constitution in place it will speak about citizenship and the natural laws that we always had” (Ned). Given the inherent right to land, and the inexorable tie Anishinaabe peoples maintain to their territory and ways of being: “We do have, as an inherent right, land. That is the reason why we have continued to be here. If we lose that land, that is when the state governments, or colonialism really takes effect. We have to have that identity – drums, dances – we have to have those traditions; ancestors speak about that” (Ned). These activities or practices are essential for cultural persistence. Ongoing interaction and engagement is a core component of Indigenous citizenship: “You take tools from the environment – you give respect and ask for permission” (Ned). Respect for the earth in the present draws strength from knowledge of the past. For example: “medicine wheel, circle – continuum of knowledge – passed down for thousands of years” informing an Anishinaabe ethic or way of being on the land and in the world today (Ned). This practice, a way of life, prompts a different way of thinking about citizenship, as an interactive and place-based approach.

As the subsequent chapter discusses, experiential, ‘traditional’, Anishinaabe knowledge continuously confronts scientific knowledge or expertise in the ongoing struggles for environmental and reproductive justice. With respect to Environmental Assessments, policy-makers request ‘traditional knowledge’ inciting one community member to state: “It’s up to us to talk about traditional knowledge; it’s up to us... there are two points of views; there is traditional knowledge and scientific knowledge” (Ned). Often, these worldviews are at odds. The ongoing Lambton Community Health Study

(LCHS) proceedings make this clear. Concerned with the recurring theme of poor ‘lifestyle choices’ popping up in public discourse as key reason for the adverse health outcomes in Aamjiwnaang, one Elder spoke out:

This isn’t rocket science [...] you don’t need all these reasons as to, for instance ‘lifestyle’, to know that there is something wrong here [...] it’s the cumulative effectives of what’s happening here. If cumulative emissions are of concern, are these the causes of cancer-related occurrences within people around here (Mike)?

As Chapter 4 discusses, there are considerable differences in how ‘science’ or ‘expertise’ become conceptualized. Struggles for recognition of Aamjiwnaang’s environmental and reproductive health concerns frequently dwell between data that draw upon corporeal, lived “experience” and a “steadfast scientific approach” (Mike). The meaning of ‘science’ is disputed and contested. As the subsequent chapter discusses, it is also appropriated. Citizens in this community maintain a multifaceted relationship with science, knowledge and expertise. In broad terms, there is considerable tension between modern Western science and traditional knowledge. As one interview participant highlighted: from a conventional ‘scientific’ stance, environmental discourse pledges allegiance to an ‘ecosystem approach’ and has “different cycles” where “we think about ‘trophic chains’ – the food predator...” and so on (Ned). In contrast, “according to traditional knowledge, everything has a spirit; it’s only here to provide for the next” (Ned). The ‘traditional’ or Anishinaabe way of life considers humans as but one entity responsible for and *to* other beings in this world.

An Anishinaabe ontology – way of being in the world – considers the multiplicity of relationships to be an inherent component of how we relate to ourselves, to each other and to the environment. This approach takes into consideration the medicine wheel teachings, clan system and a view of health that focuses on a ‘way of life’. As one Elder noted, this is “not just a governance and governing system but a way of life” (Mike). The Residential School legacy sought to extinguish ‘traditional’ or Indigenous ways of being, governing and existing in the world. In contrast to a hierarchical ordering of humans above nature, responsibilities were bestowed upon individuals as they were lowered down from the creator: “We talk about ‘nana boozhoo’, who had a relationship with everything; so, when you start talking about that relationship between Anishinaabe and Creation, you start to realize the importance of the mutual respect we have for one

another” (Ned). In contrast to the hierarchical model, an Anishinaabe approach examines the fluidity between humans and the non-human environment: “Environment is Anishinaabe/Anishinaabe is Environment. Our passion in life is a clean Mother Earth, a clean Environment” (Mike).⁴⁹ This respect for ‘Mother Earth’ forms a crucial foundation for the consideration of ecological citizenship according to an Anishinaabe worldview.

An Anishinaabe view of ecological citizenship considers ‘natural law’ to include human place among four elements – land, water, air and fire – to situate ourselves and relationships. Citizenship is corporeal, territorial and practiced. It cannot be separated from consideration of land, treaties and the environment: “When we start talking about that natural law; for instance, one of the treaties up north talks about the sun...as long as the sun shines, and the grass grows, and the water flows...and they were encompassing the different...spheres; you could talk about the ‘stratosphere’, or, ‘biosphere’, or ‘lithosphere’...which is the ground” (Ned). Citizenship from a ‘traditional’ view includes all that and more: “It’s kind of like the medicine wheel, with four directions, winds, grandfathers/mothers, four medicines...within that we talk about the life cycles: child, youth, adult, elder – there are many other teachings a part of the medicine wheel” (Ned). Rights and responsibilities are inherently attached to a care for and relationship to the land.

Citizens must advocate for animate and inanimate relationships. This relationship can be characterized by an understanding that citizens – Anishinaabe peoples – “have to advocate, as a citizen, still for those species, because that was the responsibility that was given to us” (Ned). Nature’s life-cycle is to be cared for, nurtured and respected: “Allowing that offspring to come...when it allows that and to be planted in another area; its make up is not just based on the oak tree – it’s based on the soil, moisture; the situation that is occurring within the environment, and so, it provides the oak tree – the oak tree provides, either shelter structure or warmth” (Ned). Acknowledging these resources are crucial for community development, identity and wellness. Adverse health outcomes result when this connection is ruptured:

For people to be trapped, and to feel, unprotected in our environment, either to go swimming, hunting, or to play – you know – it’s tough for them to realize the opportunities that we do have, especially when we do have 24hrs a day, 365 days of non, not really non, but ... we have pollution

⁴⁹ Personal correspondence with the author, June 27 2012.

of noise, light, air, ... and that affects not just us but the land itself – some animals, all they see is light, everyday, it's affecting their lifestyles as well (Ned).

The location and articulation of this community's struggles re-focuses our gaze away from an autonomous model of self-management, responsibility and health care; it seeks to move beyond a stewardship model of environmental management, towards a more place-based understanding of health and well-being. It is this very place, their home in the polluted heart of Canada's Chemical Valley, that is at stake in the preservation of Aamjiwnaang's vitality, as a matter of physical and cultural survival.

Conclusion

The corporeal and embodied experiences of Aamjiwnaang citizens trying to come to terms with their environment reveals how making a home in Aamjiwnaang is a bittersweet practice – combining a mix of anxiety and attachment. This chapter drew from the voices, stories and everyday experiences of citizens living in Canada's Chemical Valley to discuss some of the multifaceted ways in which actors seeking environmental and reproductive justice conceptualize and interpret the impact of their environment on their well-being. The daily activities and concerns reveal on the one hand a disciplinary responsibility for coping with and responding to encroaching threats while simultaneously drawing into focus a much deeper relational connection citizens of this First Nation have to their home, to their place. Chapter 6 further assesses the implications for this 'double-edge' of ecological citizenship. As I will discuss in subsequent chapters, a place-specific focus on situated practices presents an alternative way of thinking about 'ecological citizenship' in Canada. Thinking about 'ecological citizenship' contests theories of citizenship that focus upon a set of rights or entitlements; citizenship is more than a status. Citizenship is not something to be attained; it is something that takes place from 'below'. It is embodied and corporeal, situated on the ground, rooted in place.

By focusing on citizens' articulations, actions, reactions, movements and gestures, this chapter examined experiential dimensions of place and outlined various ways individuals respond to their environments in daily life. In so doing, I paid attention to seemingly ordinary taken for granted activities, of which meaning is rarely questioned.

My discussion demonstrates that such actions are in fact heavily imbued with meaning. Intersecting ‘place’ with citizenship moves beyond an approach to political science or public policy that focuses solely on ‘individual responsibility’ to consider the embeddedness of individuals in their environments. Chapter 3 presented an embodied or experiential view of citizenship, which considers the land to form a larger attachment and ontological stance in relation to the spiritual world; this is in stark contrast to a model of citizenship that considers ‘good citizens’ to be individual property-owning humans set apart from broader socio-political, economic and environmental forces and processes.

By examining the relationships between citizens, public officials, and ‘experts’, Chapter 4 examines some of the avenues in which various discourses and policy arrangements mediate, interpret and privilege some ‘truth’ claims. In discussing citizen efforts to contest scientific expertise, my analysis in Chapter 4 highlights how situated knowledges within this community challenge large-scale epidemiological surveys, which fail to account for the specificities of small-scale, placed locales.

Chapter 4

**Seeking Reproductive Justice:
Struggles for Science, Knowledge and Expertise**



Photograph by: Laurence Butet-Roch, January 2012

Seeking Reproductive Justice

Aamjiwnaang citizens increasingly worry about the pollution of their reserve. In addition to the notion that the environment has a physical impact on the body, there are also cultural, spiritual and emotional effects. In particular, as an Ecojustice report highlights, community members express a growing sense of fear – of the sirens, outdoors, air, water – and so on it goes:

These chemicals and related incidents have significant impacts on their cultural life, including hunting, fishing, medicine, gathering and ceremonial activities. Health impacts include asthma, reproductive effects, learning disabilities and cancer. The most common reported impact was fear. People on the reserve feared the outdoors, the warning sirens and unreported incidences (2007).

When toxins are found in food and wildlife, avoidance becomes impossible, exposure an everyday reality. The body comes to the fore at the frontlines of environmental harm.

Pollution marks the reproductive body in Aamjiwnaang making it a focal point in the struggle for justice in Lambton County. This chapter anchors a discussion of the reproductive body within concrete policy processes in a specific locale.⁵⁰ In addition to Aamjiwnaang's disproportionate burden of toxic exposure, a reproductive justice framework takes into consideration the way in which contamination affects this community's ability to reproduce future generations. According to SisterSong, an American social justice movement bringing together women of colour, reproductive justice refers to: "the right to have children, not have children, and to parent the children we have in safe and healthy environments is based on the human right to make personal decisions about one's life, and the obligation of government and society to ensure that the conditions are suitable for implementing one's decisions" (2013). As Hoover *et al.* point out, this affects Indigenous communities as well and is a framework that seeks to ensure that a community's reproductive capabilities are not inhibited by environmental contamination, which compromise a community's ability to reproduce cultural knowledge (2012: 6). As such, reproductive justice fuses health and environment, coupled with a need to protect culture and knowledge; reproductive justice cannot be separated from environmental justice. Moreover, individuals must have the right and ability to reproduce in culturally appropriate ways: "for many Indigenous communities to

⁵⁰ It is significant to note here that reproductive justice is not simply a women's issue, though women often appear at the frontlines of these struggles, discursively and structurally.

reproduce culturally informed citizens requires a clean environment” (Hoover *et al.*, 2012: 15). This chapter connects reproductive justice to policy by situating Aamjiwnaang’s social justice struggles within a deliberative public health exercise, the ongoing Lambton Community Health Study (LCHS).

LCHS can be understood as a deliberative health study. Deliberative health studies are not neutral and actively (re)produce discursive regimes, which shape and constrain citizen action. There is a wide and vast literature discussing the “deliberative turn” and promise of the public arena for reasonable communication, interaction and governance (Dryzek 2000; Fisher 2003, 2007, 2009; Fischer & Forrester 1993). Aligned with Hobson, this chapter focuses on the ways in which these processes continue to be “embroiled” within governmentality as an advanced liberal form of rule and rely on responsabilized citizen action with limited state intervention (2013: 64). Institutional processes like the LCHS are mechanisms that reproduce discourses and knowledges, which some actors may appropriate and internalize in their mobilization for social justice. This chapter assesses both formal and informal avenues for justice as this community mobilizes experiential, external and engaged knowledge and expertise to seek recognition and redress.

Experiential Knowledge and Exposure

The previous chapter highlighted some of the experiential concerns that form the grounds for citizen struggles for environmental and reproductive injustice in Aamjiwnaang. This lens examines how bodies are inherently knowledge-generators. As an embodied or corporeal ‘body of knowledge’, experiential knowledge questions the epistemic neutrality of biomedical knowledge or expertise (Orsini & Smith, 2010: 53). Examining the body as a kind of knowledge enables new categories of meaning and discourse about situated and lived-experience to come to the fore. Bodies constitute ‘messy data’ to advance claims and articulate injury (Epstein, 1996). Bodily experience becomes the linchpin from which citizens declare they have been harmed. Lived or felt experience consequently constitutes the experiential ‘expertise’, or grounds upon which corporeal claims are both consciously and unconsciously enacted and articulated by citizens seeking policy change. As

discussed in the previous chapters, examples of this include bio-monitoring, body-mapping and bucket brigades. Communities are called to take action themselves, with their bodies on the line, to gather knowledge about perceived pollution problems affecting their everyday life.⁵¹ I discuss experiential knowledge and subsequently contrast this ‘body of knowledge’ with citizen practices that deploy ‘external’ or ‘engaged’ bodies of knowledge.

In response to continued concerns about Aamjiwnaang’s ability to reproduce, a team of researchers used a community-based participatory research model to assess the live birth sex ratios for the Aamjiwnaang First Nation. This birth sex ratio assessment was part of a broader community-based investigation undertaken by citizens of the Aamjiwnaang First Nation in collaboration with the Occupational Health Clinics for Ontario Workers (OHCOW) along with scientific consultants, professionals, and students from a wide range of disciplines (Mackenzie, Keith & Lockridge, 2005).⁵² The exploration included quantitative measurements including soil, sediment, wildlife, fish and air sampling, along with a door-to-door health survey and interviews. It also included a survey and ‘body-mapping’ exercises. As Chapter 3 depicted, body maps were hung along the walls of a gymnasium and coloured stickers placed on the maps to indicate and visualize the number of health concerns experienced in the community. Body-mapping of 411 individuals between 2004-2005 revealed that 26% of adults experience high blood pressure, 26% of adults and 9% of children experience chronic headaches, 23% of children ages 5-16 have learning and behavioural problems, 27% of children experience skin rashes and 39% of women experienced a miscarriage or stillbirth (Ecojustice, 2007: Scott, 2008). Statistics collected by Aamjiwnaang Band member and community activist Ada Lockridge and her team indicated that one in four Aamjiwnaang children had a behavioral or learning disability, children suffer from asthma at nearly three times the national rate and four in ten women on the reserve have had at least one miscarriage or stillbirth (Ecojustice, 2007). Results further indicated that 40% of Band members require

⁵¹ Furthermore, the manner in which these claims are articulated differ from the conventional scientific model and occur through a more emotive or feeling forum, such as through art – mixed-media, photography, rap, music and film – and so on.

⁵² (See: Appendix 7). Worldwide, the human live birth sex ratio is remarkably constant, ranging between 102 and 108 male to 100 female live births; in Canada, the sex ratio is generally reported to be 105:100 (M:F) ($m = 0.512$) (Mackenzie, Keith & Lockridge, 2005). In Aamjiwnaang, the most recent interval period analyzed (1999-2003) revealed that nearly two females were being born for each male ($m = 0.348$).

an inhaler, about 17% percent of adults and 22% of children surveyed have asthma, while the Lambton County asthma rate sits at approximately 8.2% (Ecojustice, 2007). Results from the community health survey were published in an Ecojustice Report: *Exposing Canada's Chemical Valley* (2007). They were not published elsewhere.

In contrast, the esteemed journal *Environmental Health Perspectives* (EHP) published Aamjiwnaang's controversial sex ratio data in 2005 (Mackenzie, Keith, & Lockridge, 2005). For the study period 1984-2003, the number of live births, and their sex, was determined by drawing on data of self-reported births by Band members to Aboriginal Affairs and Northern Development Canada. Between 1984-1992, findings revealed a relatively stable birth ratio, while the period between 1993 and 2003 showed a rapid decline in the percentage of live male births (Mackenzie, Keith, & Lockridge, 2005).⁵³ The deployment of linear regression as a research methodology served to examine the trend in a proportion of live male births over time. This method drew from data sets of statistical units, with a goal of being potentially 'predictive' or 'forecasting'.⁵⁴ While the study's findings remained contentious, it spawned widespread media attention.

Aamjiwnaang's perceived male 'birth dearth' began to make waves. Leading up to and following the EHP publication, news headlines about living in a place "Where the boys aren't" brought this small community under the media's microscope (CBC, 2008; Hall, 2006; Mittelstaedt, 2004, 2005, 2007, 2008). News stories claimed that males were an 'endangered species' and that it may only be a matter of time before what was happening in Aamjiwnaang would happen in other communities across the world (Mittelstaedt, 2008; Puzic, 2008). A 2009 feature in *Men's Health* magazine outlined fear about this community's "lost boys" (Petersen, 2009). While these stories express concern

⁵³ The study's co-authors used linear regression to model the relationship between a scalar 'y' variable and one or more explanatory 'x' variables. The use of one explanatory variable is commonly referred to as 'simple regression', whereas more than one explanatory variable is known as 'multiple regression'.

⁵⁴ The 'y' variable is endogenous – regressed, responsive and measured – it is the dependent variable, while the 'x' variable is exogenous – the regressor, explanatory, covariate or predictor – the independent variable. According to the study's 'design matrix', 'x', must have a full 'p' value to hold; the p-value is held when a 'null hypodissertation' is rejected to be statistically significant. It correlates to the probability of obtaining a test statistic, which can be performed by a chi-square test, to assess the probability distribution. In this study, a Pearson's chi-square test was used to look at the 'control group' of a Chippewa First Nation.

about the loss of male babies, there has been limited attention paid to members of the community facing pregnancy and birth in this environment.⁵⁵

According to Aamjiwnaang environmental community activist Ron Plain, the community has to worry about every child who is born (Crenson, 2005).⁵⁶ The maternal body in this scenario is deemed particularly vulnerable to toxins as a carrier for their children. Toxins are generally stored in fat and during pregnancy and lactation; women's fat is metabolized and exposes fetuses and newborns at vulnerable stages of development to these chemicals (Smith, 2005). Toxic endocrine-disruptors mimic natural hormone production, disrupting reproduction and fetal development.

The ways in which the maternal body is hailed in the media as 'vulnerable to environmental contaminants' reveals some of the ways in which reproductive health is gendered. Popular and media reports suggest that the maternal body, specifically, is susceptible to hormone-mimicking, endocrine-disrupting chemicals nicknamed "gender-benders", which infiltrate the body and affect reproduction for future generations (CBC, 2008; Cohen, 2007). With all the media that concentrated on the 'lost boys', a gendered analysis of the Indigenous body is missing from the analysis. Indigenous perspectives of gender must also be taken into consideration when looking at discourse around the Aamjiwnaang First Nation's reproductive health.⁵⁷ Expectant mothers are commonly hailed as the first line of defence against toxins in the environment, which has the potential to harm future generations. Consequently, the maternal – reproductive – body is

⁵⁵ A reproductive justice lens draws attention to the fact that despite widespread media attention, several aspects of this story have not been the central focus: the structural, colonial, gendered and environmental inequalities inscribed through the reproductive body's pollution exposures. The popular language of concern around the community's "lost boys", "feminization trends", "gender-bending" and the "male predicament", which appear in various media sources, only scratch the surface of the embodied pollution concerns. Aamjiwnaang's reproductive struggles demonstrate how bodies become the surfaces upon which pollution stories are inscribed.

⁵⁶ Scientists and members of the Aamjiwnaang community argue that hormone-mimicking endocrine disruptors could be to blame for the skewed birth patterns, due to the interference of synthetic organic chemicals with natural hormones. According to Canadian Broadcasting Corporation (CBC) documentary *The Disappearing Male*, pollutants known as 'endocrine-disruptors' can interfere with hormones that determine the sex of a baby (CBC, 2008). Consequently, many individuals living in Aamjiwnaang are concerned about the future viability of their community.

⁵⁷ For example, as cited in Wiebe and Konsmo (2013, *forthcoming*): Historically, many Indigenous communities and First Nations had places for community members whose gender represented both masculine and feminine roles. Whenever gender is discussed as it relates to Indigenous Peoples it should be understood that: "In Native North America, there were and still are cultures in which more than two gender categories are marked" (Jacob 1997: 2).

constructed as a ‘site of contamination’ in material and discursive ways (Scott, 2009). They become gatekeepers, demarcating the boundary between some environment ‘out there’ and some ‘body’ inside.

Bodies at this juncture are made ‘vulnerable’, affected physically by pollution exposures and gendered discourse. ‘Vulnerability’ discourse shifts the burden of responsibility of managing health towards pregnant mothers who are assumed to be individually responsible for their well-being. This is an incomplete picture of the broader discursive and structural factors that shape and constrain access to reproductive health and justice. Words and seemingly inclusive and deliberative processes alike have the potential to reproduce colonial power relations by the act of discrediting or delegitimizing bodily claims.⁵⁸

Though the human health effects of environmental contamination due to toxins in the environment are largely unknown, scientists looking at local wildlife populations in the Great Lakes have documented the problem of ‘gender-bending’ chemicals, as a result of an unknown mixture of toxic chemicals in the air, soil and water (Kavanagh, et al., 2004; Weisskopf, 2003).⁵⁹ Scientists use the sex ratio as a sharp indicator demonstrating the effects as a result of exposure to chemicals disrupting the endocrine-system and reproductive health.⁶⁰ According to Weisskopf, a research associate at the Harvard School of Public Health, there are a lot of unknowns. In Lake St. Clair, about thirty miles from their reserve, fish have been discovered with both male and female gonads. The condition, known as intersex,⁶¹ is caused when a young fish that is genetically male is

⁵⁸ In *Conquest: Sexual Violence and the American Indian Genocide*, Smith identifies that to understand the reproductive body there must be recognition of colonialism as a key to Indigenous feminism and justice.

⁵⁹ In a 2003 study, Weisskopf and several colleagues found that mothers who consumed large amounts of PCB-contaminated fish from the Great Lakes were more likely to have girls. It is difficult to say how exactly the effects of endocrine-disruptors impact the general population; however, there is little doubt that endocrine-disrupting pollutants affect the sexual development of wildlife near Aamjiwnaang.

⁶⁰ Because hormones are so important to the development and healthy performance of the body’s organs, ‘endocrine-disruptors’ have the potential to cause a wide range of effects, from damage to the brain, sex organs, to decreased sperm production and immune suppression in adults (CBC, 2008; Cohen, 2007). They may also be responsible for rising cancer rates, reproductive abnormalities and declining sperm counts.

⁶¹ While this scientific language tends to construct gender changes in animals resulting from environmental change as abnormal or simply defective, I seek to challenge this notion and its dominance in environmental discourse. As discussed in Wiebe & Koonsmo (2013, *forthcoming*), Indigenous communities have multifaceted ideas about gender and identity while scientific Western research may tend to fall back upon binaristic gendered concepts. While providing a comprehensive, gendered, historical account of colonization is beyond the scope of this dissertation, I reiterate here that it is significant to acknowledge the ways in which discourse and deliberative processes are ‘gendering’. The formation of gender changes

exposed to chemicals such as the fertilizer atrazine, which causes female gonads to develop by acting like the hormone estrogen (Kavanagh, et al., 2004). Research also identified increased reproductive abnormalities for women who consume the fish. Weisskopf's findings suggest that maternal exposure to polychlorinated biphenyls may decrease the sex ratio of offspring (Mackenzie, Keith, & Lockridge, 2005). The phenomenon has been documented all over the southern Great Lakes, not just in fish, but in birds and amphibians as well (Mackenzie, Keith, & Lockridge, 2005). While the science is revealing about the impact of toxins in the wildlife, the human impacts remain unknown.⁶² Citizens of Aamjiwnaang live with these unknowns on a daily basis.

Following the EHP's publication, civil servants scrambled to grasp the ever-growing concern about the 'girl baby boom' in Canada's Chemical Valley, considered to be related to an unknown mixture of pollutants in the air, soil and water, possibly affecting the endocrine and reproductive systems (Mittelstaedt, 2005; Miner, 2005; Poirier, 2005; Spears, 2005). Health Canada correspondence from the time revealed that questions arising from this community led to confusion within the ranks of government. Officials scrambled to find out who was in charge.⁶³ The data, composition and methodology of the study itself remained a matter of continued debate; its credibility was criticized both within and external to the community.

Shortly after the publication of the EHP study, local politicians met with Health Canada representatives at Lambton County headquarters in Wyoming, ON, at the request of the voluntary industry association – the Sarnia Lambton Environmental Association (SLEA) – to discuss the formation of a community-based health study that would focus on the County as a whole. Health Canada pledged support, with local leadership and the Lambton County health unit produced its own reproductive health report. That report concluded that sex ratios in Lambton County do not differ from Ontario rates (Community Health Services Department, 2007). The small number of births recorded on-reserve during the same time frame were considered unrepresentative and too small

perceived to be due to environmental degradation apparent in this kind of language often fails to account for more nuanced and/or Indigenous views of gender.

⁶² It is important to note that according to many traditional Indigenous beliefs, animal health is connected to human health.

⁶³ For example, email correspondence between federal policy-makers from November 2005 revealed the following subject heading: "WHO THE FRIG IS THE LEAD...". Accessed through an *Access to Information and Privacy Request*.

for any conclusive findings of abnormal health harms and patterns. Aamjiwnaang's data were thus considered statistically insignificant, due to the overall low number of reported births. Shortly thereafter, Health Canada entered into discussions with Municipal authorities, industry and County representatives, widening the scope and scale of reproductive health concerns in the area, to generate a broader data pool, leading to LCHS's formation.

As this chapter will next discuss, corporeal struggles are also struggles over knowledge. When citizens enter the deliberative sphere, they encounter discursive fields of knowledge. This chapter assesses how these struggles for knowledge are bound up within discursive fields of 'science' and 'expertise'. While Chapter 3, and the introduction of this chapter focused on experiential and embodied knowledge, this chapter next examines how knowledge is mobilized and interpreted in the participatory, deliberative realm for citizens seeking reproductive justice. I discuss two forms of knowledge mobilization for expertise: 'external' and 'engaged'. Specifically, I first anchor external expertise as a body of knowledge in the ongoing Lambton Community Health Study (LCHS) and subsequently discuss engaged expertise as a body of knowledge situated within Aamjiwnaang. I focus on how citizens enter a "complex field of contingent governance" in Lambton County and within their own community as they form partnerships with governments and researchers (Hobson, 2013: 63). I illuminate how these processes are highly charged with political meaning and reveal multiple ways in which this community interacts with science and expertise in their struggles.

External Knowledge: Assessing the Lambton Community Health Study

In 2008, the Lambton Community Health Study emerged with its Board membership and mandate to look at the relationship between industrial activity and human health. The study drew funds from the Province of Ontario (\$50,000) and a voluntary industry-led association, the Sarnia-Lambton Environmental Association (SLEA) (\$15,000), as well as the Chamber of Commerce (\$10,000). The Federal government committed to offering \$100,000 "in-kind" support (Modern, 2010). Soon emerged many questions about

whether the Aamjiwnaang First Nations' unique reproductive health concerns were well represented by the Lambton Community Health Study process.

The Board's formalization in 2008 comprised a diverse group of stakeholders including municipalities, First Nations, business, labour, industry, occupational health, victims of occupational illness and County public health officials (Lambton Community Health Study, 2011). Both the local County of Lambton and Federal government (Health Canada) pledged to offer 'in-kind' support for the ongoing health study. As mentioned, the Board determined that their health study would contain three distinct phases. First, Phase 1 to establish a community-based governance structure,⁶⁴ which would identify a Board of Directors to oversee the project; second, Phase 2, including a comprehensive literature review, community engagement (i.e. a phone and online survey as well as townhall meetings), development of research questions and a call for proposals for Phase 3; and third, the undertaking of identified studies, communication of results to Lambton County residents and the identification of next steps (Lambton Community Health Study, 2011). Phase 2 was completed early in 2011 and at the time of writing in 2012, Phase 3 – actually carrying out a systematic and scientific health study – remains subject to funding.⁶⁵

The context for health policy development takes place within the rubric of government decisions, or non-decisions. As such, encounters with the health care system operate in politically charged environments.⁶⁶ By examining the meanings embedded within health policy discourse – the language, spoken and unspoken in various documents, terms of reference and media statements among others – we glimpse how social power and disparities are produced, contested and resisted in a particular domain.

⁶⁴ Traditional governance structures existed and still exist within many Indigenous communities to address issues that arose. The Lambton Community Health Study Board structure was not developed from an Indigenous model.

⁶⁵ It must be noted that in January 2013, LCHS chair Anne Marie Gillis announced that the board would develop a "Sustainability Action Plan" to ensure completion of the health study. See news release: <http://www.lambtonhealthstudy.ca/News/Pages/default.aspx>.

⁶⁶ The process of bringing citizens in to dialogue about public health issues shapes, conceptualizes and even constrains behaviour and action, embedding individuals in a very political process. The interpretive approach to deliberative policy employed in this chapter examines how language contains, carries and transmits subtle messages that shape social and political meaning as a 'technology of power' (Fiske & Browne, 2008). I thus examine how power stretches beyond the strict parameters of institutions or texts, upon individuals, and impacts attitudes, beliefs and everyday practices in the public, deliberative arena.

An interpretive analysis of such text, language, and communication questions the underlying assumptions taken at face value. By bringing citizens ‘in’ to a conversation about health, and in this case, on recognition of reproductive health concerns, a paradox of engagement becomes apparent: citizens are expected to adopt the terms for dialogue or debate, which may or may not provide a context for empowerment or recognition for particular claims. It is in this context that some citizens’ claims may become marginalized, which I will assess by focusing on four distinct yet interrelated features of the health study’s deliberative process: the politics of science, scale, lifestyle blame and jurisdictional ambiguity.

Science

Canada’s public health regime places a high degree of importance on large-scale population based epidemiological knowledge. ‘Truths’ in this model often assume the neutrality of science. Following Orsini & Smith, the privileging of scientific knowledge and expertise as an external resource to the mobilizing actors separates knowledge from the movement itself and puts knowledge up for grabs as an object that exists outside of political actors and political processes (2010: 47). Expertise, as such, is considered to be an external resource to the movement; actors are parceled off from ‘scientific knowledge’ or expertise, which is more readily accessed by state authorities. Consequently, the state has resources to reaffirm existing policies and assumptions. ‘External expertise’ thus sits as a hierarchical triangle with ‘scientific’ authority on top and descending knowledge towards the citizenry below as they vie for recognition and justice.

Communities maintain a complicated relationship with experts – governments, scientists and academics: on the one hand, these authority figures are considered to be threatening, while on the other, they constitute a kind of ‘necessary evil’ to engage with to seek redress. Several community members contend that governments bear the responsibility for tightening up laws and policies to create healthier peoples and environments in Aamjiwnaang: “the best thing you can do is get the government to tighten up their regulations to make it more stringent” (Edward). Health Canada, who maintains a fiduciary responsibility for First Nations health, approached Aamjiwnaang on

several occasions to offer guidance and assist the community to better understand the relationship between their health and environment.

Public health processes reveal contested divisions between scientific and community-based knowledges. According to one public official, scientists often hear from communities “‘show me that this is what I am telling you’, and scientists say ‘here is the data’; the difficulty is that what if the data doesn’t show that you have any facts on health, I can’t say that it does; I can say that it might, but I can’t say that it does” (Daniel). Consequently, tensions come to the fore between different knowledge-carriers. As is the case in both Aamjiwnaang and Lambton County, “Access to specialized expertise free-of-charge to help communities develop proposals has been difficult” (Daniel). In an attempt to correct, or plug this gap, Health Canada developed a network – FNEHIN – and tries to provide access to researchers from communities.

Tensions between on-the-ground experts and ‘fly-in’ expertise have deep historical roots in the manner in which academics appear in communities and tell them what to do. With scientific research, this constituted startling and upsetting interactions. Consequently, as one Federal official noted, there exists a legacy of skepticism on both sides between ‘scientific’ and ‘traditional’ knowledges; thus, the ongoing philosophical differences “between community-based ontology and scientific method” appear today (Daniel). This was most clearly illuminated by controversy surrounding the publication of the *Environmental Health Perspectives (EHP)* birth ratio study.

If a community is concerned with the reproductive health and biological makeup of its citizens, there is a policy protocol in place to generate scientific findings. From the perspective of one official: “The study was offered to the community; the Director of this Division at that time asked me to go to the community and meet with the Chief and Council and do a bio-monitoring study so we actually look at the levels of contaminants in human tissues, blood and hair, and examine the birth ratio for every year in relation to that, as well as examine the birth outcomes”, the community considered this proposal in 2004, and refused it (Daniel). This was one year prior to the publication of the EHP study. The administrative data – self-reported to INAC – indicated a gender imbalance; however, given that the data does not account for where people live, from the Federal government’s perspective, at a bare minimum, “you have to link exposure in the

particular geographic location” to be able to look at particular outcomes (Daniel). Health Canada began to conduct a follow-up community exposure assessment; yet, it never received support from Chief and Council, “so that was it” (Daniel). The community exposure assessment would comprise a Public Health Surveillance project to address public health concerns at a particular emergent data point. The refusal of the study left one official perplexed:

You see, research, fundamentally, research well done decreases the amount of political power that can be applied. Until you have research, then the decisions are value-based; you can claim whatever you want. When you have the research, then the knowledge you have limits your ability to achieve results. When you have resistance to research sometimes, it is because of the power of knowledge. In this particular case, it may not be convenient’, but that is speculation (Daniel).

As stated earlier, the reasons for why this study was refused stemmed from community concerns about control over the process; why there has been no revised study with amended community-based protocols in place remains an issue for future discussion.

Generating credible data continues to be a central issue for citizens of Aamjiwnaang and Lambton County. As a County official noted: “Any epidemiological study it’s about 95% argument about methodology and 5% about the results” (Glen). The Lambton County health unit maintains a responsibility for public health. In this capacity, staff gather health statistics and health data to conduct reporting as required.⁶⁷ Data is collected through national and regional surveys, and staff with expertise in epidemiological studies are responsible for collecting, analyzing and reporting on any public health topic including but not limited to: chronic disease, infectious disease, health promotion, as well as conducting surveillance. LCHS falls under the overburdened County staff. As a policy official noted, early on, there was an expectation that ‘expertise’ would be led by external authorities, not by County staff.⁶⁸ Consequently, “there’s certainly been no great enthusiasm to fund this since then”; moreover, as this official continued: “Frankly, I have tried to be careful, not to involve our resources – I mean public health resources – in this study; I wanted it to be an independent study”

⁶⁷ ‘Risk factor surveillance’ includes: chronic disease, healthy eating and physical activity programming – as well as keeping up-to-date statistics on practices and trends within the County. In these ways, the health unit tries to capture reportable diseases, maintains a database, keeps stats up to date and works collaboratively with staff on program development and evaluation.

⁶⁸ During the Board’s development, skilled facilitators were brought in to construct a model based on the Sudbury health study, yet there were considerable differences in place: “Sudbury was funded by industry on the direct order of the Ministry of Environment – we don’t have such a situation here” (Glen). The Ministry of Environment does not have an active role in the LCHS.

(Glen).⁶⁹ Thus, the County maintains a concern that its resources are limited and that the LCHS has the potential to be an overwhelming project beyond the staff's capacity.

Scale

County programs are based on 'evidence' and seek to ensure the effectiveness of service delivery. The LCHS falls within the research responsibilities of public health unit staff, and, increasingly, "environmental health" has taken the "forefront of the types of research that we want to do around here" (Dawn). Following the release of the birth ratio study in Aamjiwnaang, the Lambton County health unit determined the need for an Environmental Health Specialist position; one of the first projects was to look at the available data for reproductive health County-wide that moved beyond the 'small area geographical analysis'. The County health unit monitors data to the best of its abilities by drawing from available data sources. The 'data source' for the Aboriginal study, according to one official view, is 'questionable': "we couldn't replicate it" (Glen). Lambton County's findings did not show the same statistics County-wide as apparent in Aamjiwnaang.

The scope and scale of this study is relevant here. Results of the birth ratio study were contested within Aamjiwnaang, Lambton County and the Federal government. A public official cautioned: "Read the EHP article very carefully. StatsCan did an internal analysis on the basis of postal code – they haven't seen the same picture that was shown in the article" (Daniel). The data, clearly, are contested. "The specific dataset – the best we could figure out – the dataset was an administrative dataset, of children who were born to Band members; however, this includes those people who live in Aamjiwnaang as well as those who don't. In fact, for those who don't, we don't necessarily have information on where they live" (Daniel). Consequently, nothing according to this official could be definitive or conclusive; the results were merely speculative. To achieve the goal of having substantive government support on a health study of this scope, Board

⁶⁹ There is some speculation that public health officials deliberately kept their distance from the study on purpose. As the Board developed its governance structure, some authorities joined dragging their heels: "Medical Officer of Health said we don't really need to do a health study; after the first meeting [he] stated he wasn't convinced that the comprehensive study was worth the time and money" (Oliver).

members cite the importance of having reliable and scientifically sound data. One official maintained the position that the health unit would not fund a geocode (to be distinguished from postal code) study to delve further into Aamjiwnaang's reproductive, respiratory or cancer-related concerns – the 'sample-size' would be too small – epidemiologically-speaking; however: "they are welcome to anything that we put on for educational events; they're always invited; we try and involve them" (Glen). The epidemiological model itself, hailing the importance of large sample-sizes for the creation of generalizable results, discredits localized communities with smaller-scale concerns.

According to another board member, a good health study would need to be: "meaningful, scientifically valid, and is accepted by the public" (Elliott). Epidemiological expertise is considered to be a crucial component of the Board's work. As one local policy official noted: "we just wanted to make sure that this wasn't a problem on a wider scale that we should be doing something about" (Dawn). The question of whether or not there exists a skewed birth ratio in Aamjiwnaang contains many variables from an epidemiological perspective: "It's one of those things we'll continue to track. It's unfortunate that it always falls back on data...is it really an issue? With a small population...was it an anomaly" (Dawn)? The 'sample size' issue, in addition to 'lifestyle factors' – smoking, diet, drinking – colour the findings by limiting the scope of Aamjiwnaang's health concern. With a sex ratio, the larger the sample, the more stable the findings. While the Ontario and Lambton birth pattern rates remain relatively constant, with respect to Aamjiwnaang's unique reproductive health concerns, all that remains constant is the 'unknown'.

Regarding the data itself, some Board members brush off the existing statistics: "When you look at the data, we aren't far off other populations" (Claire). Population size re-appears as a statistical caveat for situated concern. The member continued: "When you look at smaller numbers, you have to look at a broader scale" (Claire). Thus prompting the question: what about smaller communities within the County, such as the Aamjiwnaang reserve? The response suggested a need for more "reliable data", while noting that "Aamjiwnaang is concerned" and that there is a need to look at "smaller areas within the community"; however, at present: "we aren't seeing major differences" (Claire). Everyone needs to be included, "not just a specific little population" (Claire).

Such a ‘little population’ would not generate credible statistical results it seems, from this paradigm. Board officials cite the need for larger sample sizes to make generalizable findings. This requires broader citizen engagement. To correct the disputed data, and contested biomarkers coming out of Aamjiwnaang, one official cited the importance of longitudinal studies, such as the Ontario Health Study (OHS), which would “encourage as many citizens to participate as possible” and provide more information about citizens and their health (Claire). This voluntary Ontario-wide study would generate data based on a much larger population base, and draw from standard epidemiological scientific principles.

With respect to the unique health concerns in Aamjiwnaang, the community’s ‘sample size’ renders the local population ‘vulnerable’ to being eclipsed by large-scale studies. As stated by an interview participant from the LCHS Board: “the problem I have with the First Nations is the ‘population’, the ‘N’ factor – the sample size is not big enough” (Elliott). Moreover, he continued: “The other issue, whether you like it or not, you have to look at genetics and lifestyle. A lot of our health issues are directly related to what we do, red wine...etc.” (Elliott). In this respect, individuals in Aamjiwnaang continuously come up against the language of ‘lifestyle factors’ and the notion that they should be more personally responsible for their health and well-being. Speculation of the reproductive, respiratory and cancer health concerns coming out of Aamjiwnaang at the townhall meeting held on the reserve and apparent in previous studies and media accounts appears at the Board level. Again, concern with the ‘image’ of Sarnia as a negative place – due to the legacy of asbestos exposure, mesothelioma and the moniker of being Canada’s “Cancer Capital” – prompt Board officials to re-brand Lambton County as a desirable, healthy and flourishing place to work and live.

While Aamjiwnaang’s population may be too small to produce statistically sound results, its geographic location is a recurring theme within the Board’s deliberations. Noting that “some pockets of the community are more concerned” [about their health], one Board member articulated: “obviously the closer you live to it [the chemical plants] the more concern there is” (Kier). With respect to specific cancer, cardiovascular and

respiratory concerns, there is some consensus that these issues raise alarm bells across the County.⁷⁰

Lifestyle Blame

In 2004, the Aamjiwnaang Health and Environment committee was approached to conduct some bio-monitoring, but declined. Individuals perceived the model of the study to be overly technocratic, and top-down, wherein government researchers would maintain authority over the process, conduct random body sampling and provide the overall direction of the project. From the perspective of members sitting on the Health and Environment Committee, the individuals approaching the committee were not sensitive to on-the-ground community concerns: “you can’t just randomly ask people: ‘oh we need your blood and urine’, and if they said ‘no’, they would assume there was no interest [...] this big dude coming in [...] we had done a fish and wildlife study; you need the fats and organs to test properly for chemicals [...] We were suspicious, ‘destroy samples’ [...] It’s hard to believe or trust the government...but it’s always been that way for First Nations people” (Sally). Several community members expressed concern that public servants on a conference call stated that it was “no wonder” that citizens were sick – their smoking and drinking were surely to blame – lifestyle, from the view of these officials, transpired as a major caveat here. (Heidi; Sally). Shortly thereafter, Aamjiwnaang refused Health Canada’s bio-monitoring study.

Some in Aamjiwnaang believe that when the community raised concerns around the birth ratio issue, Health Canada hired experts to refute the data, and tried to blame the outcomes on “lifestyle and everything else”, and that, “instead of being helpers, they are always trying to come into the other side by denying that things are happening instead of

⁷⁰ Regarding the birth ratio study, one Board participant noted: “that’s a concern that I don’t hear from anyone else” [...] that study was reviewed by people from McMaster and they said the ‘sample ‘size’ is far too small to make any conclusions, but if you look at Lambton County as a whole, you don’t get those numbers” (Kier). Consequently, there is “too small of a sample size to really make concrete assumptions or whatever, findings” (Kier). While citizens could voice their concerns during five townhall meetings in the Fall of 2010, one of which took place at Aamjiwnaang’s health centre, the need for a county-wide large-scale study continued to hold weight in the Board’s deliberations of how to generate valid data and concrete results. Several questioned whether it is a “community concern or more of an Aamjiwnaang concern” (Elliott). The contested birth ratio data appeared in a 2008 *Chatelaine* issue, which noted that the Chief acknowledged that much of the population resides off-reserve, making data difficult to track.

being supportive – they don't want to let the public know, and be held responsible” (Tina). The recurring theme of ‘lifestyle blaming’ offends and serves as a roadblock for systemic change. As my participant observations in townhall and board meetings highlighted, in addition to in-depth interviews, the ‘lifestyle’ language appears in the epidemiological framing of the LCHS operations, questionnaires, public forums and discourse. This individualizing framework of public health care posits the individual body as distinct from its surroundings and fails to recognize the integrated relationship between health and the environment.

‘Lifestyle factors’ was a recurring theme during Phase II of the LCHS. Citing lifestyle factors – tobacco use in particular – one official noted that certain factors could impede the credibility of the birth ratio study’s findings (Glen). This is an essential component of biomedical epidemiological studies: “We do that automatically because we are public health; it’s part of health promotion. We wouldn’t want to be part of a study that didn’t account for that stuff” (Dawn). The next steps, actually carrying out the study, may be best aligned with a ‘small-area analysis approach’ to further narrow the data – to examine specific clusters. At the time of writing, the Board had gathered data from the townhall meetings, online and phone surveys and was unsure of where to turn next – hence the potential partnership with OHS, or possibly Cancer Care Ontario. There is a need for enhanced expertise: “I don’t have my expertise in these types of studies, we need a team that says to the Board: ‘here are your options’, and helps the Board move forward” (Dawn). In fact, County officials said that any further work on the study is beyond the scope of their capacity: “Now it’s up to higher levels of government to provide higher levels of expertise” (John). The quality of expertise is presumed to be located at a higher level from this perspective.

Addressing ‘lifestyle factors’ falls under the rubric of ‘Health Promotion’, which is a key feature of County programming. Under this framework, County staff play an active role with the LCHS. Aware of the limitations of a pure biomedical model, focused on individual choice and lifestyle behaviours, the County health unit sought to move towards a ‘social determinants of health approach’ to public policy, which ‘creates environments where people can be healthy’ (Lloyd). County staff duties include providing accurate health status data in a timely and accurate fashion. Noting that: “the

Aamjiwnaang birth ratio study was a ‘watershed report or moment’”, staff discuss the importance of working collaboratively with multiple stakeholders, who need an equal seat at the table (Lloyd). As such, environmental health concerns involve multiple stakeholders, advocates, science and governments. Consequently, “when we are doing something like this, it’s fragile. If we don’t have all the stakeholders around the table, we have a risk of being unsuccessful” (Lloyd). It has not been an easy process, yet some officials argue that it is an essential one.

As Chapter 5 will discuss, casting the body – as an individual responsibility – to care for and manage, follows a lengthy Canadian history of biological regulation. As one interview participant articulated: ‘Indians’ were always numbered off: “ My Dad’s number was ‘687’; Everyone is still numbered, by the government...INAC; you’re numbered by, and then reserves are numbered. Off this reserve, I’m ‘809’; I’m the 809th Indian born on this reserve” (Billy).⁷¹ It has, and continues to be simple for the government to compartmentalize its Indian citizens, as bodies rendered calculable and categorizable. Consequently, individuals within the community feel that the government has a duty of care for the treatment of its citizens who face the result of government decisions on a daily basis: “I think they should be doing a lot more because they put the plants here ...they took the land away from us to build the darn things, why do they get to sell the land? We should be compensated” (Billy). There is only so much self-care that Indian bodies sequestered to this place can practice.

Jurisdictional Ambiguity

With respect to the LCHS, which entails both representatives from Aamjiwnaang and Lambton County, financial responsibility for the creation of this kind of study remains in limbo. There is a sense within the Board’s membership that: “Change is not going to come from Aamjiwnaang or Sarnia, it’s got to come from Provincial or Federal (governments)” (Steve). Frequently, representatives of Lambton County sitting around the table on the LCHS look to the Federal government – Health Canada – to intervene.

⁷¹ Random numbers were assigned to this interview in order to ensure maintain privacy and ensure confidentiality. The original numbers have been removed and randomly selected numbers used in their place.

Early stages of the Board's formation prior to 2008 have been characterized as a battleground wherein the "real battle" occurred over the next few months where the group "didn't want Aamjiwnaang or OHCOW involved" (Oliver). From one city official's perspective: "Health Canada started this – then ran for the hills after a few meetings when it was believed that they would be the funder and driver the process" (Oliver). This prompts him to ask: "is Health Canada an oxymoron? Are they designed to protect the status quo? They've been defenders of the status quo in a fairly bureaucratic organization" (Oliver). The former OHCOW Executive Director left Sarnia and the study early in 2008. At that time, the city ceased attending LCHS meetings. Notes an official: "it just didn't feel like a valuable use of time" (Oliver). Aamjiwnaang's position has also remained ambiguous regarding its continued role in the study. Municipal officials lacked clarity on Chief and Council's mandate for the health study, noting that there were "differing opinions between Chief and Council and Health and Environment Committee", and that the Chief rarely attended (if at all) health study meetings (Oliver). Historically, there were large tensions between OHCOW, activists in Aamjiwnaang, industry and the Medical Officer of Health. It was a "tortuous thing", and "it was arbitrary the way this was set up – who got on, who didn't"; consequently, once the County got involved, it "sanitized the urgency of it" (Oliver). On the role of the city, a health study is not something that falls within the local mandate of a community; with respect to community health studies in both Sudbury and Sydney, Provincial and Federal dollars contributed to the community's clean-up. These studies are rare. As one city official continued: "Communities can't afford these studies – millions of dollars", they are costly, and finding information is a nightmare; noting liability issues as a rationale for governmental inaction, he voiced that in Canada there is a "Denial of Information Act" – "we pride ourselves on it" (Oliver). Communities are thus caught in the jurisdictional cracks of Canadian federalism.

External validation appears in ongoing discourse within the LCHS Board. Health Canada and the Federal government become the "go-to guy", and maintain authority to validate citizens' health concerns (Cora). Health Canada's scientific experts provide 'clout' for citizens in Lambton County concerned with seeking recognition of their ongoing health concerns. According to local Member of Parliament Pat Davidson, Health

Canada offered \$100,000 of ‘in-kind’ expertise; however, Board members continue to be perplexed about the tangible service received for this magic number (Cora). Jurisdiction, and thus responsibility for health care in Canada is opaque and constantly shifting.⁷²

Some officials consider Health Canada to be an objective regulator; there is thus a sentiment that Health Canada has a duty to protect Canadians’ health:

I also think that they need to realize that they are not working for the companies. They are here to protect the health of Canadians. That’s where they get confused. They’re protectionists. If they get information, they think ‘oh they can’t let it out’. They put all kind of stops in the way. They stall...and then finally when they have all the experts come, the scientists say there is an issue, HC had to finally say there was an issue... (Tina).

Community members within Aamjiwnaang and the LCHS board articulate a desire for less adversarial relations.

The County maintains a political position within Canada’s jurisdictional fabric. The health unit staff report to County Council, and political needs; they are ultimately accountable to political decision-makers (Lloyd). Bridging between diverse authorities, stakeholders and interests is simultaneously an opportunity and a challenge to the County staff. Going forward with the LCHS, County officials articulate the importance of “a facilitated process that is transparent, led by a neutral facilitator that has the skill and political insight and the care to lead that process in a way that leaves everyone feeling valued and listened to” (Lloyd).

While it was the Federal government who initially approached both Aamjiwnaang and Lambton County officials – in 2004 and 2005 respectively – once the study began to formalize, funding for the actual completion of a health study at the County level has not materialized. Though Health Canada pledged \$100,000 of ‘in-kind’ scientific support, they have yet to provide any real dollars. Moreover, funding for the LCHS arose jointly through the industry-led Sarnia Lambton Environmental Association (SLEA) and

⁷² As Chapter 5 discusses, this is especially the case for First Nations citizens. A former County official discussed: “the way things are divided up in Canada. Historically, rightly or wrongly, or whatever; you do have this, um, ‘division of labour’; those people in Aamjiwnaang are all residents of Ontario, so the Province isn’t washing their hands of them” (Glen). This official raised the question of whether or not Aamjiwnaang could use its special status – as a federal responsibility – to leverage funds. He continued: “when we are talking to the feds, I don’t think they’re much interested beyond the boundaries of the reserve...but if something goes into the waterways [...] In terms of the way they are set up, it’s a native community, a Band, opposed to the County of Lambton [...] joint-funding would be a hopeful thing to see happen (Glen).

Chamber of Commerce (CoC). The Provincial government kicked in \$50,000 for a scientific literature review – Phase 2 of the study – and no known funders materialized for the final Phase 3: actually conducting a health study.

Some Board members are of the view that there is a need for specialized, external expertise, and that Provincial and Federal environment departments should play a larger role. Specifically, they are concerned that Provincial and Federal environmental departments “should be responsible for coming up with some money” (Claire). One Board member went on to state: “I’m surprised when the Ministry for Environment put statutes in place but don’t tie it back to human health. They should put forward funding to address that piece” while the Provincial Ministry of Environment (MOE) would send observers to meetings, they did not provide any financial support (Claire). She articulated the importance of securing multiple levels of government support to seek specific funding, as the community appeared to be “falling between the governments and the cracks” (Claire). In her view, there existed a need to “make them realize how important this is in the community”, and when “you’re working...then a documentary happens, a *Men’s Health* article...points to all the reasons to do the study”; moreover, she maintained the view that the community needs: “to make sure that we send this info off to the governments; this is the impression of our community that’s been given to others” (Claire).⁷³ It becomes clear, then, that a large motivating factor for the Board in completing the study is to ‘clear the air’ in response to media coverage about a high concentration of mesothelioma in Sarnia and Aamjiwnaang’s skewed birth ratio, and the negative image associated with this place. Whether or not its aim was, or continues to be to generate answers about some of the County’s most directly impacted citizens’ health concerns is an outstanding issue.

According to another Board member: “Canadians have all benefitted from the success of industry, if there’s going to be a better understanding of the benefits of industry, all Canadians should share in the cost”, citing benefits to Canadian citizens at large, there is a feeling within the Board that multiple levels of government, corporations

⁷³ Striking the balance between citizens’ health and economic prosperity looms large in Lambton County. Tension between these poles play out within the LCHS Board structure. Considered to be the “lifeblood of the community”, one County official articulated the needs of the chemical refineries to sustain a healthy economy (Glen).

and citizens alike share responsibilities for moving the study along (Henry). For many, the study is not moving along fast enough. Concerned with the pace of involvement, Board members call for more government engagement: “typical government organization; it’s creeping along. We’re waiting for someone else to shape our destiny because they have funding. We don’t. It’s moving way to slow for how people wish it were moving” (Henry). Input from senior levels of government into the study serve to pacify concerns about the study’s impartiality, or bias. While a role for MOE has been identified, some maintain a strong feeling that it “doesn’t seem like HC will do more than provide in-kind support; that’s been great so far”; however, “going forward... then the Federal government needs to chip in” and work with MOE, as “both are setting regulations; both are working hand-in-hand” (Henry). While Health Canada reviewed the Provincially-funded literature review, as well as reports from townhall facilitators Phil Brown & Associates, no concrete plan was put in place to synthesize the results and provide the Board with funding or direction on where to take the study next.

Health Canada’s role in the LCHS has received mixed- reviews by County and City officials. It was upon SLEA’s request that HC pulled together a series of meetings during the formation of the Board’s governance structure in 2005. Since then, the role has waned. While Health Canada was instrumental during the study’s early stages, according to a Board official, “once we got started...the relationship hasn’t been there” (Kier). Subsequent to the “fact-finding” that took place in Phase 2 – including online and phone surveys, townhall meetings and a literature review – Health Canada input “was really quite minimal”; the Board member further noted: “they’ve told us that they’re willing to give us \$100,000 in-kind support for Phase 2” (Kier). Since then, no definition of the \$100,000 in-kind support materialized.

Consequently, the Board requested another face-to-face meeting. Slightly frustrated, this prompted an official to state that “there’s been some communication at the staff level, but this emailing/letter writing back and forth is getting onerous. We need to have a face-to-face and lay it out on the table” (Kier). From this perspective, there is a need for government expertise to push the study forward. As “the province has given some actual dollars for the literature review, we paid a consultant”, to move into the next phase: “that’s what we’re looking to Health Canada for. We need some guidance” (Kier).

This guidance is crucial for conducting an empirical data study and gaining some solid answers. With the lack of governmental support, the LCHS Board is turning to university partnerships, the Ontario Health Study and Cancer Care Ontario to generate a direction. Citing that scientific expertise is costly, officials note that harnessing in-kind support from the County has been enough of a challenge, as duties have been placed on staff members in addition to regular responsibilities; while the Community Health Services as a County department continues to change and grow, they do not have the resources to fund a large-scale County-wide health study. As a result, Board officials are looking to Health Canada, or a consultant:

I think it's gotta be with Health Canada. We just don't have the expertise. At some point...I mean the thought of an outside consultant...but that's gonna take some big bucks. If Health Canada has the expertise, then why don't they just do it? Rather than bringing in..." I would rather see them do it... in my mind they have nothing to gain or lose from this project; they should have the ability to be fairly independent and unbiased. I think they definitely would have the expertise. I think Health Canada is probably the independent unbiased voice that should be leading something like this (Kier).

In 2011, the Board sent correspondence to Health Canada seeking clarity on the details of \$100,000 in-kind support. In the interim, the LCHS continued to be at a standstill as the Board waits for clarification on what Health Canada can do for them. At the same time, Board officials made contact with the Ontario Health Study to determine whether there could be a possibility of teaming some of the local concerns up with the Provincial study. While the Board members articulate frustration that "this thing's moving at a snail's pace", there exists a sense of optimism that Health Canada will provide some expertise and guidance on determining the scope and methodology for the study moving into Phase 3 (Kier). Furthermore:

It's just going to come down to one day we are going to hear from HC: 'yes we'll help you'. 'No we won't'. I think we've put forward a good case but at the end of the day, it's the Federal government that has the resources to do this kind of thing. They are either going to have to step forward or get out of the room. If they get out of the room, it's a done deal (Kier, LCHS Board Member June 13 2011).

Jurisdictional ambiguity trickles through LCHS concerns at the Board level.

When community health concerns appear on the landscape of a First Nations community, jurisdictional responsibility is opaque. According to a City of Sarnia official:

“This country is Constitutionally designed to fail” (Oliver).⁷⁴ It is all too simple for the Federal government to cite Provincial responsibility for health care in the country. Moreover, he continued: “when you throw First Nations in, you can deny responsibility” (Oliver). Initial concerns arising from Aamjiwnaang was considered to be an ‘advantage’ to Sarnia, in light of Health Canada’s fiduciary responsibility for First Nations health on-reserve. As this official noted that Sarnia is unique, as it is one of a few municipalities within Canada “with a reserve within its boundaries”; however, he was equally quick to point out that, the reserve is not part of the city’s constituency (Oliver). There are tensions coming in all directions, between concerned citizens of the Aamjiwnaang First Nation, union members, the not-for-profit organization Victims of Chemical Valley (VOCV)⁷⁵ and OHCOW in general agreement – vis-à-vis the denial or discrediting of these concerns at the County, Provincial and Federal levels.

Engaged Knowledge: On the Promises and Perils of Partnerships

Another form of knowledge mobilization takes shape when movements directly instrumentalize knowledge and expertise. From an engaged-interactional paradigm, in contrast to a hierarchical triangle of authority with scientific expertise held on high above citizen demands, citizens mobilize themselves within the parameters and language of science. As I next discuss with respect to Aamjiwnaang, this instrumentalization of knowledge and expertise at the community level takes place through partnerships and interactions with governments and researchers. As such, this engaged-interactional

⁷⁴ As one municipal policy-maker noted, in consideration of the twin issues of environment and health, the reserve constitutes a kind of regulatory black hole. “That area – really, we have an understanding most of the time that we can go on and assess the odour – but I have no authority, under the EPA, to do anything out there; I’m a normal citizen on that property” (Ethan). Environmental management in Aamjiwnaang requires outside-the-box thinking. “If you draw a box, and the source is outside the box – the Province of Ontario – I can deal with the source; but inside the box, I really can’t do anything. I’d have to call INAC or EC to deal with the problem” (Ethan). Permission is required of anyone seeking to travel on or through a First Nations reserve: “We still ask the Chief for permission to come on the property. They are a government; we deal with them as a government. We respect that line. We have to. If I’m caught telling somebody to do something and I have no authority I could be liable. My employer won’t back it because I’m not in my area” (Ethan). Consequently, authorities “regulate outside that box as much as we can” (Ethan). For some ‘outside-the-box’ nuisances, little can be done. For example, to cite one official, flares are a “necessary evil” (Ethan). Evidently, there exists a certain kind of discomfort about how to provide ethical and external expertise.

⁷⁵ A not-for-profit organization established by widows of former plant workers concerned with the impact of asbestos-related mesothelioma on workers in Chemical Valley.

framework fuses expertise and agents within the movement. As a result, the emergent policy process employs shared language. This may form through the use of techniques such as citizen engagement and other forms of citizen juries or focus groups to legitimate ‘expert’ knowledge on which policy is based (Orsini & Smith, 2010: 47). Science, and scientific terms, are used directly by citizens themselves seeking to re-shape policy development. To defuse antagonistic contestation, citizens are consulted and engaged. Citizens are invited ‘in’ to the policy process through the formation of boards, broad-based consultations with stakeholder engagement, partnerships, collaborative initiatives and community-based research. This may affect the ways in which policy-makers present research as increasingly sensitive to community concerns (Orsini & Smith, 2010: 47). In short, the penetration of scientific expertise into the movement itself disrupts the traditional break between ‘science’ and ‘civil society’, and calls for a more active and mobilized citizenry. I discuss the mobilization of ‘engaged knowledge’ in three ways: through community expertise, government consultation and partnerships.

Community Expertise

In 2002, the Aamjiwnaang First Nation Health and Environment Committee formed a direct response to Suncor’s plans to establish the largest ethanol plant in Canada. The plant eventually located elsewhere, and by 2007, the HEC created an “Environmental Officer” position for the community to develop community expertise.⁷⁶ By creating the ‘Environmental Officer’ position, interests within the community could be distilled through technical expertise. Similar to MOE’s Provincial officers, who are governed by

⁷⁶ Officials in Aamjiwnaang interact with multiple layers of governance: within the community, municipality, province and state. The creation of an ‘Environmental Officer’ position arose amidst a post-Ipperwash political climate in Ontario, during a time in which the province established the Ministry of Aboriginal Affairs and began seeking more involvement with First Nations communities. This led to some improvements in the working relationships between Aamjiwnaang and provincial authorities on environmental issues. With respect to the federal government – who maintains a fiduciary responsibility for Aboriginal peoples in Canada – department staff mentioned that they only received a federal ‘Environmental Officer’ on their reserve three times within the last five years, for the purposes of surveying fuel tanks; in addition to this, they have had some contact with staff from the Department of Fisheries and Oceans regarding contamination of Talfourd Creek (Tina). Prior to the Ipperwash Inquiry, and the formation of the Ministry of Aboriginal Affairs, Provincial Officers charged with responding to and addressing environmental issues in Lambton County refrained from monitoring the reserve. Community officials confirmed that these relationships are changing towards more collaborative dealings.

the *Environmental Protection Act*, Aamjiwnaang's Environmental Officer served to provide the community with both the technical expertise and as a pin-point for ongoing concerns. This employee thus would assume the position of a kind of 'watchdog from within' to monitor ongoing environmental issues in the adjacent Valley, while also ensuring more comprehensive consultative arrangements. In particular, the Environmental Officer position conveys Aamjiwnaang's environmental stance to industries and government. Pertinent issues articulated to Provincial and Federal authorities include "concerns regarding contaminants, the St. Clair River, and the airshed" (Tina). Much of this position entails managing relationships between a diversity of citizen interests in Aamjiwnaang and at the stakeholder level – including industry and governmental authorities.

Environmental staff members are largely charged with disseminating important information about ongoing projects to the community. This includes the use of newsletters, website maintenance and developing effective notification processes when new industrial developments take place. Moreover, staff seek to "develop a procedure for the Certificate of Approval process, the notification process", while noting that "the 'EBR system does not work for Aamjiwnaang – this is the part where we require accommodation" (Tina).⁷⁷ Due to the volume of ongoing changes, developments and concerns, staff time cannot be purely devoted to monitoring the MOE's Environmental Registry. The 'Environmental Bill of Rights' contains a legislative requirement such that anyone the Ministry deals with must post CoA requests. In place since 1993, the Environmental Registry is hosted on a website, searchable by territory or company. It contains 'public notices' about all environmental matters proposed by government ministries covered by the Environmental Bill of Rights: "The public notices may contain information about proposed new laws, regulations, policies and programs or about proposals to change or eliminate existing ones" (Ministry of Environment, 2012). Details about each development require further investigation. From the perspective of staff at Aamjiwnaang, there is not enough information to determine what the actual impacts will be; the postings are "really difficult to get through"; following a series of unreturned

⁷⁷ After this interview took place, the Aamjiwnaang Environment department hired full-time staff solely tasked with monitoring the EBR website.

phone calls, staff articulate that so too is ‘getting through’ to MOE officials when community concerns appear (Tina). This system does not work for an oversaturated community who cannot expect limited Environment Department staff to continuously monitor and investigate each EBR posting.

Councillors and community members who participate on the environment committee for two-year terms articulate a variety of tactics, strategies and avenues for changing relations with their closest neighbours: “I would like to see those guys pay us compensation; I know it’s not going to bring back people who are gone but maybe it will smarten them up and bring back their technology” (Sam). The Health and Environment Committee (HEC) meets bi-monthly, frequently with industry, government and academic representatives. “Being on Council you hear a lot about what they are doing and stuff like that [...] sure they started having meetings and coming here and showing them what they are doing and what they are making” (Sam). This community ‘consultation’ receives mixed reviews:

“They try to make us at ease [...] I was just here the other day talking about, they do samples, they come along here, I say have you guys been doing samples here...oh yeah, we come, once a week or month...on a hot day, or rainy day, or I don’t know, they come at a certain time...if they can close the beaches up there somewhere, there’s gotta be the same thing coming down here” (Sam).

The Ministry of Environment has a discretionary ‘non-standard procedure’ working relationship with the Aamjiwnaang First Nation in order to enter their territory and monitor environmental contamination, despite their limited mandate to formally regulate on-reserve concerns.

When the Aamjiwnaang Health and Environment Committee (HEC) formed in 2002, it undertook a variety of practices to raise the community’s voices and residents’ awareness: “I think the HEC was as active as circumstances would allow. We were paying attention to the issue of an ethanol plant; that was our focus. In the meantime, there was a plant that was going to be added on by Suncor – the Genesis project” (Sonny). Community members were frustrated about the so-called ‘good neighbour’ policies articulated by plant representatives. With respect to the proposed ethanol plant: “The goal there was to install facilities to carry out the sulphurization of diesel fuel”, it was to cost “something like \$800 million, and “the Council never got any notice, even though the Ministry – the legislation didn’t require it” (Sonny). While the community

was busy organizing to protest this plant, they didn't realize that plans were concurrently underway to expand elsewhere: "we were busy addressing ethanol, location, and everything – and we didn't get a chance – there was no opportunity to ask about the Genesis project. Of course they didn't offer, even though they posted it on the EBR, they posted, but again as 'good neighbours', they should have" (Sonny). As community members rallied to protest the ethanol plant, they did not have time to monitor the Environmental Registry, where they would have learned about the establishment of the Genesis plant. Consequently, they felt that their voices fell on deaf ears and ignored by their 'good neighbours' yet again.

Community mobilization is not free of charge. In addition to working with carriers of scientific expertise, community-members pick-up the tab for their air samples. This is a costly practice, at: "\$15 per bag, then to ship it off is another \$30, then to get it tested...\$500...just the raw data; then someone has to look up the standards" (Sally). What recourse would community members like to see? "Stricter fines, standards..." (Sally). Many of these chemicals continue to be unregulated in Canada; yet, citizens live here with their bodies exposed. From nearly every house, the flarestacks pierce the skyline and frame the landscape. Within the community, there is a limited understanding of where to begin cleaning up the long-term, accumulated pollution burden: "There's no support...whenever somebody wants to do something, we're told 'no' [...] There is grant money, for just that purpose, to clean the waters. I just found one. I'm trying to do a little bit of everything right now. One of my main objectives when I started my co-op was to find grant money, and I looked at the environment, and there's money for that, cleaning up the waterways" (Charlotte). Finding grant money is one obstacle: political will, another; and generating community momentum and capacity an ongoing challenge for communities seeking change.

Consultation

According to Supreme Court of Canada jurisprudence, there is a Constitutional requirement for governments to consult and accommodate Aboriginal peoples when projects impact their lands or resources, specifically, their Aboriginal right and title to the

land. Many of these requests under the Duty to Consult', come to Aamjiwnaang staff.⁷⁸ There are various grants and funds they can access as "capacity-building for consultation" (Tina). Aamjiwnaang's Environment Department successfully secured funding for two people to focus on developing community capacity, and essentially "to handle these issues instead of paying consultants and different people who come in" (Tina). With respect to consultation, industry reps must come to the communities as more than 'good neighbours' or 'good corporate citizens'.

Over time, governmental and industrial authorities have changed the ways in which they interact with First Nations communities. Regarding the Ministry's Certificate of Approval (CoA) permitting process for new industrial developments, and impacts to Aboriginal peoples: "The Government has put most of the companies on notice that all [applicants for] CoAs have to consult with First Nations" (Tina). In Aamjiwnaang, community officials successfully leveraged funding from multiple scales of government to secure an industry-standard air-monitoring system at their health centre. In collaboration with government officials, community staff "developed a protocol for information and how it should be done appropriately" (Tina). A large part of the Environment Department's staff time includes sharing information between governments, industries and scientists, constituting 'community outreach', which includes: "trying to provide information and get as much information to the community as possible" (Tina). Furthermore, the department collaborates with governmental and scientific experts to understand environmental degradation in their community.

The consultation protocol in Aamjiwnaang entails various stages of engagement. Initial contact is made to the Chief, who then puts correspondence into a 'consultation file'; "every Monday the Consultation worker collects them and makes a briefing note", then subsequently replies with the community's position, which depends on the scale and magnitude of the initiative (Tina). If Aamjiwnaang requests 'full consultation', this requires special meetings with Chief and Council, community open houses, technical reporting requirements, impact benefit agreements or compensation for peer-reviewed

⁷⁸ Information on 'Duty to Consult' protocol is available at AANDC, Accessed September 19 2012: <http://www.aadnc-aandc.gc.ca/eng/1100100014664/1100100014675>. As most government decisions that trigger adherence to Duty to Consult protocols occur at the Provincial level, it is of importance to note the Ontario Ministry of Aboriginal Affairs consultation program: <http://www.aboriginalaffairs.gov.on.ca/english/policy/draftconsult.asp>. Accessed May 21 2013.

consultation. The community may then ask for ‘accommodation’, under the guidance of Chief and Council and the Economic Development Department, which may come in the form of scholarships, business opportunities or employment (Tina). Environment staff have files on many of the companies that work with Aamjiwnaang, but not all. Most have ‘community liaison personnel’ who liaise with community members. At this point, Aamjiwnaang staff can address and articulate requirements. Several plants abide by a ‘Good Neighbour Campaign’ or policy that requires community outreach and engagement (Tina). Evidently, part of the environmental staff role in Aamjiwnaang involves liaising both with companies and government officials.

There is a strong sentiment in the community that consultation is not enough to satisfy citizen unrest: “they just come and say ‘hello’” (Nathan). Consequently: “There are a number of issues that are going on, the challenge with human rights [...] and I hope that it does really establish; and I hope they’re successful in that – to build a foundation for environmental concerns [...] I really hope it enables us to develop policies” (Nathan). By engaging with governmental authorities, these citizens instrumentalize their place within existing institutional frameworks to seek redress for their concerns.

Community consultation is not a blanket term. Rather, it has multiple meanings and interpretations. As an activity, it comprises much of the Aamjiwnaang Environment Department’s staff time and involves multi-level stakeholder negotiations. As one employee articulated:

I’m dealing with a lot of items that come into the office, for when people have dealings with our community. Federal court, the Crown, has to have ‘meaningful consultation for projects regarding Aboriginal peoples and their territories’, they have to consult with the First Nations; it means ... because there is a reserve here, Kettle Point, Walpole; the Crown, has to consult (Walter).

Some members question the legitimacy of any ‘consultative’ engagement by the adjacent facilities: “I don’t think there is...unless they do it behind everybody’s back...there’s something new on Plank Road that wasn’t there last year; you’re just driving around, and they appear...and we are pretty much surrounded. It was only the North-West and Shell were here and now its on the South-East and pretty much all around the reserve; now there’s Praxair and all kinds of things coming up” (Charlotte).

Citizen concerns regarding environmental contamination and correlative health outcomes confront industry interests in the public domain. Such concerns became

apparent during a second term with the Aamjiwnaang HEC, in response to a series of meetings with public officials from MOE in Toronto for the “419 Initiative”, a MOE-led regulatory initiative seeking to address community concerns around cumulative impacts. Community experience came into tension with the ongoing “Open for Business Initiative” underway in the Province of Ontario.⁷⁹ Though MOE continued to have a quasi ‘open-door’ policy for environmental and public health stakeholders interested in meeting to discuss regulatory amendments, it was not always feasible for Aamjiwnaang representatives to attend the ongoing deliberations: “I get information on my emails about what’s happening...I guess I still get considered a stakeholder, but I think because of the budget that we have in Health and Environment they can only send representatives that are picked from the committee; I’d have to go on my own, I don’t have the funds, I’m interested and I’d like to; if I could afford to I would” (Mike).

Though many community members, officials and employees continue to work with and engage in government-sanctioned policy processes – from the 419 Initiative to the LCHS – those involved also demonstrate a kind of ‘consultation fatigue’: “It doesn’t take no year-long study on statistics and data to know there is something wrong here. My statistics on human interactions with what is happening around here is all I need to know that there is something wrong around here. The deaths that are happening on Aamjiwnaang are 80% if not better, cancer-related deaths” (Mike).⁸⁰

Stating that investigating the persistent health concerns in the community was not “rocket science”, he continued, depicting an alternative approach:

What I am really disturbed with is that the form of studies that the government, the approaches that they are making are all based on a linear governmental approach, you know, they have, in their linear government, the MOE, the MoHealth, and when you say you have a health related

⁷⁹ While conducting participant observation, I attended a series of “Regulation 419” meetings in Toronto with members of the Aamjiwnaang Health and Environment Committee, Ministry of Environment (MOE) and other environment and public health stakeholders in the province. I also received ongoing email updates. At my first meeting, it was apparent that in the days preceding, the Premier met with industry representatives as part of the “Open for Business” initiative, consequently taking precedence over environmental stakeholder interests with respect for amendments to the existing regulations. While industry members met with the Premier directly, stakeholders present at the meetings met with mid-level public servants. The level and degree of specialized access to one set of particular interests over another was striking. In response to my disclosure about my dissertation research to one MOE Director, he enthusiastically replied: “well, this is politics!” It was in a sense reassuring that my examination continued to be of relevance to the political climate of the province. Information on this initiative is available here: http://www.ene.gov.on.ca/environment/en/resources/STDPROD_096528.html

⁸⁰ This use of statistics reflects a ballpark figure from this community-members’ experience and point of view.

incident that might have to do with the environment, they say no it's one or the other; if you wanna talk about health let's have a health meeting, if you wanna talk about the environment, let's have an environment meeting (Mike).

This appears in contention with a more circular approach:

Everything was interrelated as to cause and effects and solutions [...] If there was an environmental issue, somewhere down the line we knew there would be a health issue, same for the health...even with the social aspect of the government, which could've been children playing outside with social activities; so that social activity is a health-related incident which probably tied in with an environmental concern (Mike).

This circular approach appears in experiential knowledge claims regarding health and the environment, and contrasts to a technocratic model, which tends to split health from the environment:

I mentioned this to our environmental people in meetings sometimes; they sometimes say 'we are talking about environmental issues not health', and I mentioned the linear and circular approaches, so at the next meeting they had a couple of health representatives there, which was a good step forward; it hasn't happened too often (Mike).⁸¹

Such an approach trickles down from the Federal, Provincial and Municipal authorities to affect the administrative composition of some First Nations communities themselves:

They have a similar government situation there. It's very – their structure is very much the same as Federal and Provincial guidelines and structure. That is sad for me to observe that within our community. We talk about within our Chiefs meetings, that I used to attend with my father, and we talked about getting back into the Clan system, circular government; it's still being discussed, within our systems (Mike).

It is often within the pre-existing institutional frameworks that communities are incited to make claims and seek regulatory redress for their ongoing concerns.

Community engagement is an active part of public policy-making at all scales of government. As stated, the requirement to consult with Indigenous communities is a Constitutional requirement in Canada. Ontario's Aboriginal Affairs Branch in the Ministry of Environment articulates the importance of 'consulting early and often' (Molly). 'Deep consultations' are a continuing theme in Aamjiwnaang – from a proposed Shell refinery to the ongoing environmental assessment process, to the changes to

⁸¹ Organizing and mobilizing citizens for change persists as a challenge in external antagonisms with encroaching industry and internal to the community's administrative structure itself. While some citizens articulate the importance of fusing 'health' and 'environmental' concerns, workers and citizens concerned with these two policy domains do not always have a clear understanding about their respective portfolios: "[the community] separates Health and Environment too... Health Committee meets once a month", while the combined Health and Environment Committee meets bi-monthly (Diane). While this community organizes to engage with and protect the health and environment of its citizens, even citizens themselves are confused about the manner in which their concerns are addressed.

regulation 419, citizens in this community are continuously consulted on an ongoing basis and invited to participate in various meetings, open houses and workshops. As one policy-maker noted, providing guidance to community-members on technical matters is a challenge and often requires specific expertise: “Communities want to be independent, but they may not have experts on hand. Communities want to know what their rights are and all the volumes of information and putting the two aspects together...” (Molly). Community ‘capacity’ is thus a challenge. For the purposes of consultation, ‘health’ is not specifically included under section 35 of the Constitution, which protects rights; this causes some officials to note that there are gaps in Canada’s Constitutional design for public policy-making regarding on-reserve environmental health.

Regulatory gaps in Canada affect communities faced with contamination. Aamjiwnaang officials noted that Health Canada did provide funding for a ‘Feasibility Study’ in 2007/2008, which sought to determine the scope of Aamjiwnaang’s environmental health concerns; though limited Federal involvement has taken place with respect to environmental health since then, officials state that the post-Ipperwash Provincial context may be more conducive to systemic change in light of the Ministry of Aboriginal Affairs’ “New Relationship with Aboriginal people”, implemented by the Ministry of Environment (Molly). Though the Ministry is still working on successes regarding consultation, officials see opportunities for community empowerment and engagement in beautifying their environment. With respect to Talfourd Creek: “they probably need to do something positive for the creek; empower people, that there are things they can do. There is funding for that [...] there isn’t funding to devastate a creek by dredging it” (Molly). There are opportunities for action within the institutional realm of public policy-making and within communities themselves who mobilize for change.

Over time, new ‘non-standards’ or unconventional public-policy partnerships have emerged between officials and communities. One concrete example of this is the air monitoring system on the reserve. More broadly, an overall attempt to work through non-standard ‘relationship building’ has improved the way in which Aamjiwnaang interacts with the adjacent regulators. Noting that “building trust is very difficult”, one MOE official praised the work of the Environment Committee: “We have to treat this as a personal relationship rather than a government-to-government; I think that would help”

(Ethan). By developing “a non-standards response procedure, any time of day” officials cite this as demonstrative of their “level of commitment as an organization” (Ethan). Enhanced relationship-building becomes important for citizen participation when communities face trans-jurisdictional policy issues. According to Provincial officials, the reserve is, in a sense, a “black hole” for public-policy making when it comes to on-reserve environmental health (Gerry).⁸² As mentioned, the establishment of an air monitor on the reserve involved all levels of government in collaboration. According to this official, while the legislative composition of Canada’s Constitutional fabric may seem to produce this kind of ‘black hole’, that doesn’t mean that meaningful partnerships and arrangements cannot take place in an ad hoc, special or ‘non-standards’ medium: “We build our institutions with our own problems; it is an artificial problem” (Gerry). In his view communities on the ground can address this artificial problem.

Partnerships

To assist with the heavy amount of responsibilities assumed by the Environment Department, partnerships with researchers, scientists and academics develop. Over the years of Aamjiwnaang’s community activism, various researchers and ‘experts’ have sought and been sought after to liaise on various initiatives. Part of the Environment Department’s role is to “guide them through the systems and processes” (Tina). The department thus connects experts to the community’s administrative processes including meeting with HEC and Chief and Council. One initiative underway is a partnership with biologist and former International Joint Commission scientist Michael Gilbertson. The community is seeking to have a better understanding of its birth patterns and collaboratively “trying to set up a mapping survey of where the births have happened on the reserve to correlate where possibly some of the miscarriages are happening, were

⁸² One of the issues with community capacity is the lack of public policy expertise located within Sarnia. According to local MOE staff, there are no ‘policy folks’ in a department with twelve Environmental Officers (Brenda). All Certificate of Approvals (CoAs) are done in Toronto. When an accident, spill or release occurs, ‘first responders’ can be companies, citizens or MOE officials. There is a ‘non-standard procedure’ in place for calls coming in from Aamjiwnaang: “If somebody calls from Aamjiwnaang, they get a response right away from ERP (Environmental Response)” (Brenda). Consequently, with Aamjiwnaang MOE staff usually go out and check out the scene no matter what, whether specific odour complaints or a visible release.

there more boys born in a certain area of the reserve? Trying to figure out where skewing is happening, and correlating, over time, looking at some of the wind data and some of the chemicals that were in the area” (Tina). These types of partnerships constitute one mechanism for the community to address its concerns.

Some citizens have joined forces with government authorities, citizen groups and sought scientific expertise to raise awareness and voice concern. A few community members cited participation and involvement with a “Victims of Chemical Valley” group, initially formed by widows of plant workers, predominantly sick with mesothelioma. In addition to involvement with citizens’ groups like these, Aamjiwnaang citizens and officials have conducted birth ratio, bio-monitoring and body-mapping studies, blockades and bucket brigades. In each of these forums, community members partnered with scientific experts to lobby for change: “We got Gilbertson to interpret the Windsor study; birth ratio study...had to keep quiet until it was published” (Sally). This scientist is but one expert approached by community members: “We had talked to Health Canada; they wanted to do random blood, hair, urine sampling...that didn’t sound right to us; we didn’t like that, so the OHCOW folks said we could do a self-reporting one; they had done body-mapping and a health survey, and Walkerton folks as well, to see what was happening” (Sally). When the initial Health Canada study was ‘offered’ to Aamjiwnaang (and rejected) they instead opted to partner with the Occupational Health Clinic for Ontario Workers – (OHCOW) to conduct their own door-to-door participatory health study, the results of which included large body-size maps with corresponding colour-coded stickers on relevant body parts indicating the community’s ailments.

Citizen mobilization comes in many forms. While some work within the existing administrative alignments, others contest the system from the outside. Successful movements frequently require both positions. As a community member voiced:

We don’t need more Adas; we couldn’t handle more Adas. We need people to support Ada. We need people like you, who can stand up, who have the credentials, the papers behind them to say what she is saying is accurate, to qualify everything she says. We need other people there who are better at empowering groups of people. Ada is good with a certain group of people (Steve).

From his perspective, there are times when mobilizing and accessing scientific expertise can be advantageous to the movement.

During the public consultation phase for the Lambton Community Health Study, one of five townhall meetings was held on the reserve, and two Aamjiwnaang citizens participated in the phone survey. It is unknown how many participated in the online survey. As interest in this study faltered, the community pursued other community health possibilities, from partnering with the University of Michigan in their bio-monitoring study or participating in the Assembly of First Nations' bio-monitoring study, Aamjiwnaang looked elsewhere for meaningful partnerships in order to paint a more accurate picture of their environmental health concerns. As the LCHS moves forward in partnership with the Ontario-wide 'Ontario Health Study', there is a strong feeling in Aamjiwnaang that "there's no sense sitting around for another four years for the government deciding what they need to do – 'let them fight it out'" (Tina). Though the ongoing University of Michigan bio-monitoring study may not get the community the answers they are looking for, it is one attempt to gain some knowledge. At the time of writing, Chief and Council was advised by the Environment Department to pull out of the LCHS but no decision on this continued involvement had been made; staff members continue to attend monthly Board meetings.⁸³

The role citizens play in developing scientific expertise is a matter of debate within the LCHS board. Within the LCHS governance structure, there is a "technical committee" with more specialized biomedical expertise that plays a role in overseeing the process (Cora). This voluntary process – whether citizen engagement in Aamjiwnaang, in-kind service offered by Health Canada and Lambton County, or the continued meeting of the LCHS 'committee' – demonstrates citizen action with limited redress.⁸⁴

⁸³ There is much confusion within Aamjiwnaang regarding the LCHS's continued value to the community. One representative noted that the process continues with little result: "Kind of seems productive when you walk in and you learn it all at one time" and while this sounds great and all "you realize how long it's been going on for and there's not really much of a hope getting the funding that they're hoping for; I can't imagine what they could've discussed for however many meetings they've been meeting for" (Tanya). Funding the actual health study remained an outstanding issue for several board members. With respect to funding health programs on a reserve, there are annual contribution agreements between Federal, Provincial and Band authorities; substantive tangible federal contributions remain notably absent from the health study. While Indigenous leaders continue to maintain that Indigenous peoples in Canada have a treaty right to health and services to protect health, rights and responsibilities are unclear when health tethers environment.

⁸⁴ As a voluntary process, this model assumes that individuals have the time, resources and capacity to change their environment. One Board member noted: "We are a committee not a board" and asked: "what role do citizens play in environmental stewardship" (Cora)? In contrast to a top-down hierarchical model of public health governance, this kind of citizenship engagement draws from grassroots expertise to come

As discussed, Health Canada has a fiduciary responsibility for on-reserve environmental health. One of the core tenets of Health Canada's mandate in this policy field is to support community-researcher partnerships.⁸⁵ The First Nations and Inuit Health Branch is responsible for programs such as the First Nations Food Nutrition and Environment Study – which is a partnership between UBC and UNBC as well as the Assembly of First Nations – in addition to the First Nations Environmental Contaminants Program.⁸⁶ As conducting surveillance of 600+ communities would be onerous, this model requests that communities tell policy-makers what their concerns are.

Federal officials – 'Environmental Health Officers' (EHO) – establish relationships with communities as advisors and develop Federal-community partnerships. EHOs may not have all the expertise required – as specific environmental knowledge is needed – so communities are encouraged to partner with researchers. The role of the Federal government for specific environmental clean-up projects or health studies is neither seamless nor immediately apparent. While FNIHB can fund specific research, the onus is on communities themselves to request Federal support for health studies: "There is no program outside of the Research and Environmental Contaminants Program" (Wanda). EHOs visit communities and conduct preliminary assessments and they bring expertise – with community consent – "We are talking about this as a collaborative initiative" (Wanda). With respect to environmental health projects, a Regional Director "couldn't provide individual compensation; all you can do is fund a study, awareness

forward and manage environmental health concerns; yet, it does not necessarily lead to substantive, structural redress.

⁸⁵ Contending worldviews can make collaboration a challenge. Tensions between 'scientific' and 'traditional knowledge' become apparent in these partnerships. Moreover, it is significant to note that there are many worldviews and voices within communities, consequently, Health Canada attempts to: "try to make sure that this voice is not suppressed, that it is supported and given 'scientific accompaniment' not at the expense of that knowledge but in addition to it; so it's a bridge" (Daniel). Research is thus a tool. According to this official: "if you don't want researchers coming to you, that means you have no questions to be answered. That's fine. But if you do have questions, than there is no other way than to try and figure out what the problem is, unless you have some organized approach to identify the relevant data, analyzing data and defining problems and thinking about solutions. It's just a tool" (Daniel). As with any partnership, the relationship between (external) research expertise and (internal) community-based expertise is a precarious dance, not without its correlative advantages and pitfalls.

⁸⁶ Policy-makers cite guidance in policy-making from an 'ecosystems approach' that integrates: administration, interpretation of results, economic equity and multi-disciplinarity (Daniel). Funding for programs coming through FNIHB is done in collaboration with communities who partner with researchers, primarily scientists. With respect to Aamjiwnaang specifically, it was approached by Health Canada to 'partner' with Walpole Island on a bio-monitoring study but "refused and wanted to do it themselves"; they found Attawapiskat instead (Daniel).

workshops, more support from EHO, more research, go to community meetings, fund a full-time employee if there is a significant concern in the community” (Wanda). From the Federal public health paradigm with respect to on-reserve environmental health: partnerships, collaboration and engaged expertise require active interaction between communities, policy-makers, science and citizens.

Provincial regulators vie for community-legislator partnerships. There is a need for jurisdictional clarity pertaining to responsibility for a community-based health study involving Indigenous peoples’ environmental health. While “funding a health study is directly the Federal government, as is contamination of wildlife – those are clearly Federal”, there are other issues that warrant multi-level partnerships: “On the air monitor, everyone agreed, and somehow the money came around; it starts with people cooperating and everyone recognizing there is a problem and then talking about it” (Gerry). Jurisdictional clarity requires a better understanding of Canada’s public health system. Medical Officers of Health are Provincially funded, quasi-municipal and have “no natural linkages with the Federal”; consequently, “it’s tough for municipalities to be helpful or initiate anything” (Gerry). Health units are partially funded by Provinces and municipalities; there is a Provincial level but also a Federal Medical Officer of health responsible for Aboriginal peoples on reserves.⁸⁷ One of the biggest challenges, thus, is the “lack of communication between the two” (Gerry). Provincial Medical Officers are in charge – but have no access to on reserve data.

All levels of government play a role – albeit in piecemeal fashion. MOE has been seeking a more active relationship with citizens of Aamjiwnaang since 2004. During that time, the Ministry got more involved on reserve lands: “We have done fish, clam, sediment, water quality for a number of years”, also, put in an air monitoring station –

⁸⁷ Thirty-five health units administer public health across the province of Ontario. These units administer health promotion and disease prevention programs to inform the public about healthy lifestyles, communicable disease control, provide education, immunization, food inspection, healthy growth and development, parental education, health education for all ages and screening services (Ministry of Health and Long-Term Care, 2012). Each health unit is governed by a health board, an autonomous corporation under the *Health Protection and Promotion Act*, and administered by a Medical Officer of Health who reports to the local health board. This board is comprised of elected representatives from local municipal councils. The Provincial Ministry of Health and Long-Term Care shares costs with the municipalities. As such, the role of the Medical Officer of Health is powerful and political, and plays a role in shaping priorities for local communities, leveraging funds and allocating resources.

with Federal collaboration – and is now stepping into the ‘black box’ of on-reserve environmental health issues. MOE actively seeks to ‘cross the line’: “we don’t make that line any more’, saying ‘it’s just the feds’; ‘the feds are not here’, so ‘we are stepping in and trying to do the right thing and be responsive’” (Brenda). While more could always be done, with limited resources, large-scale activity is difficult and health issues are outside the scope of MOE’s immediate mandate.

Conclusion

Aamjiwnaang’s employees and citizens are frequently torn between two modes of being: developing technical capacity to respond to and mitigate environmental health concerns, or continuing to live life ‘as usual’ and ignore the impending threats to their home and habitat. With respect to the former, staff efforts include practices such as participating in the LCHS, Regulation 419 meetings, conducting Traditional Plant Surveys, providing comments and being involved in archaeological digs, organizing and participating in various workshops and symposia, responding to and partnering with companies such as Imperial, Suncor and Shell, communicating ongoing projects to the community, identifying spots for remediation and essentially: “trying to develop relationships with different companies and government” (Tina). Effective communication between technical experts and community members constitutes a large portion of the Environment Department’s ongoing work.

With respect to the Lambton Community Health Study, there are several reasons why citizens of Aamjiwnaang feel their struggle for reproductive justice have been discredited, or eclipsed throughout this public deliberative process. These reasons focus on the issues associated with the representation of this community’s concerns vis-à-vis the interests of Lambton County at large. *First*, as discussed, the biomedical power and authority embedded within the language of science, epidemiology and statistical significance overlooks and discredits Aamjiwnaang’s situated, experiential claims. There appears to be a presumption at the County level that the 2005 birth ratio study was not statistically sound and thus un-representative of the County’s generalizable concerns at-large. As mentioned, Lambton’s County Health Services Department analyzed sex ratios

for the entire County and individual townships “in order to determine if sex ratios differed from Provincial ratios and if communities adjacent to the reserve and local industry were differentially affected” (Lambton Community Health Study, 2011: 17). The results of the study revealed “no trends towards a declining sex ratio, i.e. fewer male births, in Lambton County or its individual townships between 1981 and 2001” (Lambton Community Health Study, 2011). The report concluded that sex ratios in Lambton County did not differ greatly from Ontario data as a whole; this study did not look at Aamjiwnaang’s distinct data.

Scientific, epidemiological and biomedical principles become cast as legitimate, apolitical, technical and ‘true’. The privileging of this technocratic model posits a ‘body of knowledge’ where expertise is externalized from the experiential, corporeal knowledge derived from the bodies of those mobilizing for justice. This conflicts with a corporeal account, which tends to conceptualize bodies as knowledge generators, and emphasizes connectivity; for example, one interview participant from Aamjiwnaang indicated that public servants often hail scientific discourse in public policy processes to classify human life as separate from inanimate life and forget that “we are all tied into one, every human, animal, tree, we are all one. We can’t survive without us either” (Tracy). Chapters 6 and 7 discuss this tension further.

Second, the Lambton Community Health Study seeks to understand health concerns from the County as a whole, which encompasses eleven municipalities. This is in stark contrast to the Aamjiwnaang First Nation health study, which began in 2005. Given the impact of long-term cumulative effects as well as the community’s geographical location encircled by industry, it is unclear how this history and unique situation would be represented and accounted for at the County level. As Scott discusses, casting too wide a net has the potential to dilute pollution’s effects on human health (2008). The body burden is disproportionately distributed across Lambton County.

Third, public discourse at the Board and County level repeatedly raises the issue of ‘lifestyle choices’. The language of lifestyle choices was apparent both in discourses about risk factors during pregnancy, throughout the reproductive process, evident in public statements, media accounts and interview data. In response to the launch of a Charter challenge by two individuals from the Aamjiwnaang First Nation, Dean

Edwardson, Lambton Community Health Study Board Member and Director of the industry-led Sarnia-Lambton Environmental Association told the Sarnia Observer: “the cumulative effects of pollution are hard to establish, given local weather patterns, *resident lifestyles* and other factors. It’s hard to predict the impact the legal challenge will have on local industry” [*emphasis added*] (Jeffords, 2010). Furthermore, residents expressed concern during the Lambton County townhall meetings that they were, frankly, tired of hearing the discourse of ‘lifestyle blaming’ for reproductive harm, alluding to smoking and drinking habits among residents (Phil Brown and Associates, 2011). During participant observation at these townhall meetings, which took place over five days during the month of November 2010, it was clear that the discourse of lifestyle blaming and individual responsibility for health outcomes was a recurring theme.

Fourth, the process issues of funding, resource distribution and fiduciary responsibility for on reserve health led to a power imbalance within the structure of representation for Aamjiwnaang’s reproductive health concerns. Funding for the health study is provided by a combination of the Provincial government and industry (Phil Brown and Associates, 2011). The Province of Ontario funds pledged early in 2010 covered the completion of a literature review. Prior to 2010 the only real dollars came from stakeholders in the business community, the Chamber of Commerce and the Sarnia-Lambton Environmental Association; though, both Lambton County and Health Canada contributed ‘in-kind’ services in staff time and technical and scientific expertise (Morden, 2010). According to Ben Martin, assistant to local Member of Parliament Pat Davidson, Health Canada’s ‘in-kind’ services are valued at \$100,000, higher than the \$50,000 awarded by the Province. As the subsequent chapter discusses, there appears to be a policy gap: while Aamjiwnaang vies for their reproductive health concerns to be recognized, the legal and administrative authorities responsible for this policy domain remain unclear. These four reasons contextualize Aamjiwnaang’s struggle for reproductive justice, embedded within discursive and structural power relations. I have argued that the reproductive body is at the forefront of these struggles, but it cannot be separated from the landscape, place or environment. The following chapter expands on a discussion of jurisdictional ambiguity, as a biopolitical ‘policy ensemble’, both shaping and constraining Aamjiwnaang’s struggles for environmental and reproductive justice.

Chapter 5

**A Nervous State?
Biopower and Canada's Policy Ensemble**



Photograph by: Laurence Butet-Roch, December 2010

Descent attaches itself to the body. It inscribes itself in the nervous system, in temperament, in the digestive apparatus; it appears in faulty respiration, in improper diets, in the debilitated and prostrate bodies of those whose ancestors committed errors (Foucault, 1994: 356).

A Nervous State

Bodies ascribe historically constituted meaning across time and space. Like a nervous system, which sends sensory information, via neurons, from the body's organs to the brain, politics extend from the head of state into the capillaries of society. With settler contact came diseases such as smallpox and tuberculosis; the vitality of Indigenous peoples was always at stake in these relations. An examination of the Canadian government's past and present treatment of Indigenous peoples and bodies situates the contemporary struggles for environmental and reproductive justice in Aamjiwnaang. As such, this chapter examines Indigenous citizenship through a biopolitical lens to respond to the following questions: What led to the emergence of these struggles? What forms of power take place as this community confronts a complex policy ensemble? How does this affect citizen vitality?

Indigenous bodies have always been at stake in practices of Canadian state-making. Following Alfred & Corntassel: members of a settler society perpetuate the colonial legacy of our "imperial forefathers", which did not only attempt to eradicate the "physical signs of Indigenous peoples as human bodies" but also attempted to "eradicate their existence as peoples through the erasure of the histories and geographies that provide the foundation for Indigenous cultural identities and sense of self" (2005: 598). Mindful of the connection between the body, geography and culture, this chapter investigates the ways in which biological beliefs are tied to Indigenous politics in Canada, how the Canadian state has and continues to regulate the bodies of Indian⁸⁸ citizens in Canada and how this has changed over time, in space.

⁸⁸ The concept of the 'Indian' in Canadian law, policy and discourse is charged with contested meaning. The term 'Indian' will be used in direct reference to the *Indian Act*. The *Indian Act* came into effect under section 91(24) of the 1867 Constitution Act, which gave the federal government the exclusive authority to legislate in relation to "Indians and Land Reserved for Indians". The legislative authority for these relationships now resides with the Federal Minister of Aboriginal Affairs and Northern Development Canada (AANDC). Despite the explicit language in the *Indian Act* referring to Canada's Indian peoples, this chapter uses the term Indigenous peoples, as the concept of the 'Indian' in Canada is itself a mis-informed colonial creation, as discussed further by Kiera Ladner (2003: 44). Aligned with Alfred &

This chapter explains the Canadian state's role in bodily surveillance and management of its Indigenous citizens, both in Canada and Aamjiwnaang. It begins by examining Canada's past and present treatment of 'Indians' through in/formal citizenship policy, next discusses the jurisdictional configurations for on-reserve health, which produce a 'policy ensemble'; finally, the chapter concludes by discussing Aamjiwnaang's geographic situation within Chemical Valley as a political place. To do so, this chapter draws on Foucault's notions of genealogy and biopower.⁸⁹ These theoretical tools offer a lens through which we can examine the simultaneous macro and micropractices of biopower taking shape at population and local scales. This endeavour is both textual and discursive, and illuminates the manifestation of biological citizenship's twin poles for Canada's Indigenous peoples: through governance of the species and individual body.

Indigenous Citizenship and Biopolitics

Public health statistics present an unflattering snapshot of the status for Indigenous peoples' health and personal lifestyle choices: high rates of smoking, drinking, obesity, HIV, low life-expectancy and the fastest growing population in Canada (Health Canada, 2003). It is commonly known that Indigenous peoples in Canada suffer higher rates of injury, suicide and diabetes than most Canadian citizens (FNIHB, Health Canada, 2011). What this picture fails to capture is the long history of Canada's colonization, settlement, displacement of Indigenous peoples through institutional arrangements such as Residential Schools, and control over the social determinants of health (such as the

Corntassel, this thesis employs the term "Indigenous peoples" and only 'Indian' with respect to law or policy that uses this language (2005).

⁸⁹ As discussed in Chapter 2, a genealogical approach explores both the continuities and discontinuities of history – including its accidents and ruptures – which privilege some stories over others. Rather than searching for a coherent origin story, genealogy is a mode of historical analysis that focuses on how various types of knowledge and discourses shape widely held presuppositions about what government is, how it should be conducted, for whom and to what ends (Foucault, 1994; Murray, 2007). Furthermore, a biopolitical lens focuses on citizen-making practices that entail population-maximizing strategies as well as strategies that emphasize individual care and responsibility. Biological citizenship reveals the workings of biopower, which tie citizen bodies to politics. Biology, health, illness, statistics, censuses, epidemiology, eugenics, population-management and reproductive technologies are all phenomena characterizing the study of living human beings. These phenomena exercise a form of power that operates through the management and categorization of biological variability – race, fertility, gender – which can be shaped, managed, and selected to achieve political objectives (Rose, 2007: xi). An examination of biopower and biological citizenship exposes the paradox of 'freedom': governments require 'free' citizens to achieve ends.

provision of sub-standard housing, the persistence of boil water advisories, widespread environmental contamination, and prejudice within the education system). In contextualizing these unflattering statistics and unpacking some of the past injustices embedded within Canada's treatment of Indigenous peoples, this chapter examines practices of population management, undertaken by the state to regulate Indians in the country, monitoring their movement, bodily capacity, and tying them to often marginalized pockets of land, mere fractions of their traditional territorial bases. This first move in unsettling some of the settled assumptions that many Canadians take to be 'T'ruths' paves the way for understanding some of the continuities in these discomfoting practices that persist in the present.

Canadian settlement leading up to Confederation can be characterized by physical coercive violence. This included a three-pronged approach: militarization, civilization and protection (INAC, 1978). Indian policy commenced with military alliances that sought aid or neutrality from Indians in war and friendship during peace. Following the war of 1812, an increase in the numbers of settlers led in part to the decimation of Indigenous peoples, societies and lands. Subsequent to this military encroachment, Indigenous peoples experienced the onset of a 'civilizationist' policy, spearheaded by missionaries, Federal colonial Indian Agents and Crown Superintendents. This coincided with a philanthropic, paternalistic policy towards the 'children of the state', to redeem or save Indians from their savage lifestyles, in order to 'raise' them up to good standards of Christian levels of civilization in mainstream society (INAC, 1978: 1). This policy, initiated in the pre-Confederation period, continued until after Confederation, and appeared explicitly in the *Civilization and Enfranchisements Acts*, which revealed a genuine desire for Indians to assume the full rights and responsibilities of citizens, with little or no regard for existing ways of Indigenous life, society and governance.⁹⁰ There

⁹⁰ At the time of Confederation, the 1867 Constitutional division of powers profoundly affected Canada's Indigenous peoples. In tandem with retaining control over Indians and Indian lands, Canadian authorities sought to advance assimilative policies. Then Prime Minister John A. Macdonald sought to do away with the tribal system and assimilate the Indian people into the Canadian body politic (McLachlin, 2003). It must further be noted that Indians were not heavily involved or consulted during the Confederation debates. The Confederation period is further characterized by assimilationist and integrationist policies. The 1869 *Enfranchisement Act* is no exception to this, which maintained an intention to see the eventual disappearance of reserves in Canada.

was a genuine belief that this protective and patriarchal legislation would precede legislated benefits within the parameters of the predominantly Christian settler society, and save ‘noble savages’ from their wayward ecological practices and beliefs (INAC, 1978: 16). It was to these ends that the 1850 *Land Acts* and 1857 and 1859 *Civilization and Enfranchisement Acts* became carefully framed, blazing the trail for the *Indian Act* of 1876, and any legislative changes following Confederation in 1867.

Indigenous peoples consistently dwell between so-called ‘traditional’ practices and ‘productive’, Western liberalism. On one hand, Indigenous peoples were encouraged to civilize by adopting the settler society’s social graces; on the other, they were isolated on reserves. Indians were encouraged to be farmers or good citizens by cultivating land according to the way of settler societies. This was made clear during early Western expansion. John A. Macdonald’s 1879 National Policy aimed to rapidly advance industrialization, which coincided with the 1842 Bagot Commission’s goals to encourage Indigenous peoples to take up farming and establish themselves on land held in freehold tenure (Kelm, 1998).⁹¹ ‘Good Indians’ at once had to integrate into the ways of an increasingly urbanized society, while those isolated on reserves existed in a state of dwelling, waiting for resident teachers, Indian agents and missionaries to successfully integrate them into the rest of society. In some instances, state policy literally sequestered communities of ‘refuge’ to live out their ‘twilight years’, as was the case in Manitoulin Island (INAC, 1978). In the years leading up to Confederation, Commissioners envisioned several settlement schemes. As Froome Talfourd – Indian Superintendent from present-day Sarnia (former magistrate and lieutenant-governor for the Kent militia) – remarked on the Imperial Government’s “Indian policy” in 1858: separatist systems would be inadvisable in the settled districts of Canada, but “may be beneficially carried out in the ‘wild districts’ bordering Lake Huron and Superior. [As] nature has provided a refuge for ‘wandering Tribes’ of that section on the Great Manitoulin Island” (INAC, 1978: 29-30). Moreover, during this pre-Confederation period Talfourd stated:

⁹¹ Further details on John A. Macdonald’s National Policy are available online through Library and Archives Canada (see: http://www.collectionscanada.gc.ca/confederation/023001-3010_36-e.html). Accessed September 15 2013. During the decades leading up to the implementation of Canadian confederation and the National Policy, Indian Affairs were evaluated under the Bagot Commission (1842-1844), which sought to improve the standard of living for ‘Indians’ in the context of uniting Canada (see: <http://www.collectionscanada.gc.ca/aboriginal-heritage/020016-2002-e.html>). Accessed September 15 2013.

Any hopes of raising the Indians as a body to the social or political level of their white neighbours is yet but a glimmer and distant spark. We believe that any general amelioration or marked advance towards civilization must be the result of long and patient labour, and the development of many years (INAC, 1978: 29-30).⁹²

These comments foreshadowed the *Civilization and Enfranchisement Act*, 1859-60, and the *Management of Indian Lands and Property Act*, 1860 (RCAP, 1996). These initiatives demonstrate tensions between contending visions of land use, ownership, and property rights, during the pre-Confederation period of assimilation, protection and civilization.

Prior to Confederation, health care for Indians came through missionaries, Indian Agents, traders and the Hudson's Bay Company. In the mid-1800s, the Hudson's Bay Company, on 'humanitarian grounds', began to inoculate Indigenous peoples against diseases such as smallpox. A more subtle expression of Indian population management took shape through the humanitarian approach, carried out through an assortment of 'semi-trained' police agents, missionaries and officers (RCAP, 1996). North West Mounted Police (NWMP) surgeons provided routine medical service visits to Indians, and also played a role in quarantine and with the outbreak of diseases such as TB, influenza, smallpox and whooping cough (Boyer, 2004). Finally, in 1904 Canada officially appointed a Superintendent-General for Indian Health. This followed a realization that the death rate for the Indigenous population in Canada doubled that of the general population (Boyer, 2004). Epidemics were rapidly spreading, perpetuating the stigma that Canada's Indigenous peoples could not advance from a nomadic society into modernity.

Canada's territorial expansion characterized Federal Indian policy between the introduction of the BNA Act and 1876 *Indian Act*. All Indian legislation was consolidated during the 1870s, leading to the 1876 *Indian Act*.⁹³ In 1868, Parliament passed an Act to create the Department of the Secretary-of-State of Canada for the management of Indian and Ordinance lands, and a Canadian Secretary-of-State as 'Superintendent-General' of Indian Affairs, who gained control over management of Indian lands, property and funds

⁹² Also referenced by John Leslie, *Commissions of Inquiry into Indian Affairs in the Canadas, 1828-1858: Evolving a corporate memory for the Indian department*, Indian Affairs and Northern Development, Ottawa, 1985, as quoted in Royal Commission on Aboriginal Peoples (1996), Vol. 1, Chap. 9.

⁹³ During this time, Canada acquired Rupert's Land and North West Territories from the Hudson's Bay Company; Manitoba became the fifth province, British Columbia the sixth in 1871 and Prince Edward Island by 1873. With these pivotal political moments underway, the federal government made efforts to solidify its control of its Indian population.

(INAC, 1978).⁹⁴ Essentially the Canadian Secretary-of-State acquired jurisdiction over all public Crown Lands, and the Governor-in-Council could make regulations for the protection and management of Indian lands and timber thereafter. As Indians became wards of the Federal government, Canada continued its ‘guardianship policy’ for Indian affairs, while continuing economic expansion through its civilization programs (INAC, 1978: 53). By 1876, these policies culminated into the inception of Canada’s *Indian Act*.

The *Indian Act* consolidated all laws pertaining to Indians. Governing the Indian ‘body’ was, and continues to be part of its regulatory constitution. Section 2(1) states:

“*Band*” means a body of Indians

(a) for whose use and benefit in common, lands, the legal title to which is vested in Her Majesty, have been set apart before, on or after September 4, 1951,

(b) for whose use and benefit in common, moneys are held by Her Majesty, or I declared by the Governor in Council to be a Band for the purposes of this Act.

Historically, the Act defined Indians as: “all persons of Indian blood, reputed to belong to the particular Body, or Tribe of Indians interested in such lands and their descendants” (INAC, 1978). The *Act* was, and continues to be orchestrated by the Federal minister, as Superintendent of Indian Affairs. In addition to this explicit declaration of bodily surveillance and management, the policies in place pertained to tracking the Indian population through a census register, referred to in the Act as an ‘Indian Register’. To be Indian required registration with the Band and with the Federal government; membership of this population was highly managed, tracked and surveilled.⁹⁵

The *Indian Act* reflected past and present efforts to expand frontier society through land ownership, regulation, and integration of Indian peoples to mainstream Canadian citizenship. Canada dangled enfranchisement as a carrot to entice Indians to towards the acceptance of good civic responsibility, aligned with 19th century beliefs in progress and modernity. ‘Good Indians’ were incited to give up their land for the right to vote, own property, and sit on juries; to be a serious-minded individual meant to be a

⁹⁴ The Receiver-General of Canada retained proceeds from Indian timber and land sales, and leases, under credit in an ‘Indian fund’ - i.e. land held in trust.

⁹⁵ The Minister retained authority to form and dissolve Bands, approve land use, appropriate ‘public land’ at will, survey and subdivide reserves, regulate burial grounds, establish schools, incite health initiatives, determine the location of roadside construction, manage sales and transactions, offer certificates of possession for on reserve housing allocation, and set the parameters for Band Council by-laws and governance (AANDC, 1985). In 2005, as the previous chapter discussed, citizens in Aamjiwnaang sought to understand their data on their own terms, leading to the sex ratio study.

responsible property owner, which conflicted with many Indigenous values and beliefs towards land and ownership. The ‘white settler society’, through regulatory tools and instruments, encouraged Indians to adopt local government structures resembling that of the ‘developed’ communities, in pursuit of progress and advancement (RCAP, 1996). This was most clearly reflected in the *Indian Advancement Act* of 1884, which outlined the authority of the Indian Agent to preside over Band Councils. Indian Agents were *de facto* sovereign doppelgangers – ‘petty sovereigns’ – acting out the will of the Federal authority in Indigenous communities across the country (Butler, 2004: 56). Should Indians wish to leave the reserve, they required written permission from the Indian Agent; Indians were thus regulated at every move.

In 1894, the zenith of biopolitical population management came into maturation: the Residential School System. These schools served to ‘re-form’ Indian bodies; capturing minds required capturing bodies (Kelm, 1998). Residential Schools originated to Christianize Indian youth. They were run jointly by the state and churches across the country. In the events leading up to formal Residential School policy, churches Canada-wide opened their doors to offer sanctuary for orphaned children, to provide a home away from the Aboriginal home life associated with dirt, disease and death (Kelm, 1998). Native students were to adopt a good Christian lifestyle. Compulsory school attendance of Indian children did not require the consent of children, parents, or communities. The Governor-General of Canada implemented provisions, through an 1892 executive Order-in-Council decision to jointly operate industrial and Residential Schools, fusing church and state responsibility for biological control of Indian citizens. This Order served to “kill the Indian in a child”, and imposed cultural conformity for over a century (CBC, 2008). These schools were predicated on the basic notion that First Nations were “by nature, unclean and diseased” (Kelm, 1998: 57). Children were forced to attend schools at a distance from their families, and home, barred from the Provincial school system (Government of Canada, 1991). This policy followed the preceding trend of civilizing the Indian through the ways of the dominant settler society, sequestering Indigenous culture and encouraging good Christian ethics. The church-run, government-led aggressive assimilative initiative expected that this adopted ‘lifestyle’ would be passed on to future

generations, as children were easier to mold than adults (CBC, 2008). State doppelgangers as Indian Agents ensured their attendance.

Residential Schools operated as a technology of rule to ‘modernize’ the Indian. These schools had a two-pronged approach to assimilation and civilization: isolation and integration. In the peak of their operations in 1931, approximately 80 schools were open. 130 schools opened overall across the country, except in Newfoundland, Prince Edward Island and New Brunswick (CBC, 2008). The last closed its doors in Saskatchewan in 1996, and about 150,000 Indian children went through the residential school system (CBC, 2008). As a tool of civilization, these schools often punished students who spoke their languages and practiced their ways of life. Some students lived in substandard housing conditions and experienced physical and psychological abuse. Graduates did not “convocate” to the “waiting world of agricultural labour, but to the sanatorium, the hospital, and the grave” (Kelm, 1998: 80). Many returned to their communities broken, unable to adapt and ashamed of their Indigenous heritage.

Though the Prime Minister formally apologized for these injustices in 2008, the process of reconciliation is an ongoing struggle, as ‘Indians’ are required to re-articulate their corporeal harm to state authorities, in order to prove their injury and seek redress in the form of a ‘Common Experience Payment’. The Independent Assessment Process today “allows former students to tell their story in a private hearing – sometimes with the alleged abuser present” (Curry, 2011). Adjudicators listen to the stories and approve compensation using a bureaucratic matrix that increases the payment based on the severity of abuse, including an estimation of long-term emotional impact. Cultural and human sacrifices are accounted for through a litigious system of monetary compensation for physical, sexual and mental abuse.⁹⁶

During the inter-war period, a more aggressive form of assimilation ensued, led by Deputy Superintendent for Indian Affairs, Duncan Campbell Scott. Regarding the ‘Indian problem’, during his tenure between 1913-1932, in 1920 he sought to amend the *Indian Act* and argued: “The happiest future for the Indian race is absorption into the

⁹⁶ Whether this is the appropriate avenue for reconciliation remains an outstanding contentious concern (see: de Costa, 2009, 2013; James, 2006, Woolford, 2013).

general population, and this is the object and policy of our government” (Titley, 1986: 31). In his view, the Indian problem was a cumbersome issue. He stated:

I want to get rid of the Indian problem. I do not think as a matter of fact, that the country ought to continuously protect a class of people who are able to stand alone... Our objective is to continue until there is not a single Indian in Canada that has not been absorbed into the body politic and there is no Indian question, and no Indian Department, that is the whole object of this Bill (Titley, 1986: 50).

The peak of the Residential School system can be attributed to his vision of the body politic. In 1933, Superintendent-General Murphy contended that the time had arrived for the government to take the ‘final step’ in making ‘the Indian a full citizen’, in order to obtain “that degree of advancement which entitles him to the full responsibilities and privileges of citizenship” (INAC, 1978: 130). In 1938, the Superintendent-General could issue a prospecting and mining lease on reserves with or without a surrender. The Superintendent-General retained its role as an agent of the Crown, a ‘petty sovereign’ stand-in, whereas the Indians continued to be treated as wards of the Crown.

Following the Depression and World War Two, a general public interest in ‘Indian problems’ emerged.⁹⁷ Specifically, changes to Indian health governance ensued at this time. During this post-war period, Indian Health Services transferred from the Department of Mines and Resources to the Department of National Health and Welfare, which came to be present day Health Canada (INAC, 1978). In addition, several other health proposals emerged. The United Native Farmers’ Organization of the Sto:lo Tribe in Sardis, B.C., recommended that the *Indian Act* be renamed the “Native Canadian Act”, and the Songhees Band suggested that Indian health and educational services be placed under Provincial jurisdiction (INAC, 1978: 138). The Standing Committee received many recommendations to enhance the transition from ‘wardship’ to citizenship, with the intent of aiding Indians to advance themselves (INAC, 1978: 142). This led to proposals to amend the *Indian Act* in 1951.

When the 1951 *Indian Act* passed, an assimilationist policy of transferring Indians from wardship to citizenship emerged. In 1950, Federal responsibility for Indian Affairs

⁹⁷ Strong Indigenous participation in each World War fostered a new attitude towards improving the conditions and livelihoods for Canada’s Indian population. House of Commons debates in 1945 reflected this, formalized through the creation of a Special Joint Committee of the Senate and House of Commons in 1927, and again from 1946-1948, then 1959-1961 (INAC, 1978; Parliament of Canada, 2011). Several forms of social reform emerged.

transferred to the Department of Citizenship and Immigration. Limited administrative structures changed during this time, although a Construction and Engineering Service was created. The Special Senate Standing Committee produced a report to the House of Commons, which encouraged the Federal government to make some changes to the *Act*, though many of the provisions remained in place. Changes to the *Indian Act* brought about the 'Indian Register' (AANDC, 1951). The amendments enhanced discretionary ministerial authority to govern the lives of Indigenous peoples, abandoned the 'blood quantum' by replacing it with a status policy that stemmed primarily from the male lineage, allowed women to participate in 'Band democracy', continued to encourage voluntary enfranchisement and offered Bands in 'advanced stages of development' to generate a local on reserve tax base. If a woman married a non-Aboriginal man, she was automatically enfranchised, as was any individual who received a university degree, or became a doctor, lawyer, or clergyman. Furthermore, the Act continued to prevent Aboriginal peoples from wearing ceremonial regalia, practicing in various cultural activities such as the potlatch, wearing costume publicly and banned intoxication. Changes to the *Act* also opened the door to Provincial law-making, in areas such as child welfare policies, where *Indian Act* provisions were vague.

The motivation to assimilate Canada's Indian population continued into the 1960s as responsibilities shifted to various departments within the Federal government. Finally in 1960, Aboriginal peoples received the right to vote federally in Canada without the threat of losing their status. During this time, the Ministry of Citizenship and Immigration continued to temporarily house responsibilities for Indian Affairs, followed by a transfer to the Department of Northern Affairs and National Resources in 1965, and subsequently the establishment of Indian and Northern Affairs Canada (INAC) in 1966. Shortly thereafter, two phases of research emerged from INAC, known as the "Hawthorn Report", published in 1966 and 1967 respectively (INAC, 1966; INAC, 1967).⁹⁸

The political mood of the time emerged with the 1969 *White Paper*, introduced by then INAC Minister Jean Chrétien. This paper proposed to quash the *Indian Act*, turn

⁹⁸ As discussed by Canadian scholar Alan Cairns, and elaborated upon in Chapter 6, this report offered a kind of civic 'citizenship plus' membership to Canada's Aboriginal peoples, an extension of Canadian citizenship (Cairns, 2000). The concept in the Hawthorn Report alludes to an attempt to reconcile individual equality and collective difference yet remains hitched to a notion of 'common' civic citizenship.

reserve land into fee simple title, transfer formal responsibility to Provincial governments, encourage economic development, abolish INAC within five years, transfer remaining programs to Departments of Regional Economic Expansion, Secretary-of-State, and Manpower and Immigration, abolish Indian status, and make ordinary citizens out of Aboriginal peoples. ‘Ordinary Canadians’ meant individual, property-owning citizens, with little regard for Indigenous values, beliefs and ways of life. Moreover, Aboriginal peoples were not consulted in the formation of the *White Paper*. The Paper outlined what it ‘meant’ to be an Indian:

Not always, but too often, to be an Indian is to be without – without a job, a good house, or running water; without knowledge, training or technical skill and, above all, without those feelings of dignity and self-confidence that a man must have if he is to walk with his head held high (INAC, 1969).

The Indian was considered to be someone lacking. Specifically, the Indian ‘lacked’ power: “the power to act as owner of your lands, the power to spend your own money and, too often, the power to change your own condition” (INAC, 1969). As a move to change the status of Canada’s Indians, the *White Paper* sought to change the course of history. Specifically, this meant to offer Indians the ‘gift’ of freedom: freedom to develop Indian culture in a political environment equal to all Canadians.

The *White Paper* called for a rupture – a break with the past – with the intent to replace the paternalism of the *Indian Act* with equality, to lead Indians to a richer and fuller life. Citizenship, freedom and equality are all terms that appeared in the *White Paper* to incite Indians to develop an identity within the framework of Canadian society, to offer them the “rewards and responsibilities of participation, the benefits of involvement and the pride of belonging” (INAC, 1969). Canada attempted to entice Indians into the warm fabric of society, with little regard or respect for Indigenous values, perspectives and contributions. Consequently, Indigenous communities and organizations across the country rejected the *White Paper*, and instead proposed a *Red Paper* in 1970, emphasizing a concern with Federal responsibility for health care to First Nation peoples and the importance of strengthening community control of their lives and of government-delivered community programs (Health Canada, 2005). Both the *White* and *Red Paper* served as an impetus for the emergence of new relationships between the Federal

government and Indigenous peoples with more active and politicized Indigenous organizations, such as the present-day Assembly of First Nations.

Indian people were rarely allowed to maintain control or autonomous self-governance of their lands except as the government allowed. ‘Crown’ ownership and the 1876 *Indian Act* tied ‘Indians’ to a land system lacking flexibility. The *White Paper* depicted a system inhibiting development (Government of Canada, 1969). Should a Band wish to gain income by leasing its land, it has to do so through a cumbersome system involving the government as trustee; it cannot mortgage reserve land to finance development on its own initiative. To address this discrepancy among Canada’s citizenry, the *White Paper* claimed to recognize that “full and true equality” called for Indian control and ownership of reserve land (Government of Canada, 1969). Essentially, the *White Paper* purported that to combat disparity, ‘Indian’ communities should join forces with the ‘civilized’, ‘modern’, ‘technological’ society and develop their land in line with a system of property ownership. Such a notion of ‘progress’ is widely contested.⁹⁹

Changing the parameters for the biopolitical management of Indigenous peoples is an ongoing reality in Canada. Since the *White Paper*, several notable legislative and policy attempts have been made to work towards state-Indigenous reconciliation. At times, these attempts followed on the heels of what scholars John Borrows and Peter Russell refer to as ‘flashpoint events’ such as the Oka/Kanehsatà:ke and ‘Ipperwash’ crises (Borrows 2005; Russell, 2010). For example, the Government of Canada launched the Royal Commission on Aboriginal Peoples (RCAP) in 1991, as a response to conflict in Oka/Kanehsatà:ke. This process involved a sixteen-point mandate to investigate the state of affairs between Canada and Indigenous peoples, with the intent of working towards reconciliation and positive coexistence between these Indigenous and non-Indigenous citizens.¹⁰⁰ Similarly, the Government of Ontario established the ‘Ipperwash

⁹⁹ This notion of ‘progress’, property and what constitutes a ‘good life’ in terms of Canadian-Indigenous relations is a matter of continued debate (See for example Alfred, 2009, Flanagan 2000). These debates are often framed in terms of ‘economic prosperity’ and ‘self-determination’ or ‘sovereignty’. These issues are commonly discussed in the media (i.e. Alcantara, 2013 on CBC: <http://www.cbc.ca/day6/blog/2013/01/11/dr-christopher-alcantara-grand-chief-joe-hall-aboriginal-property-rights/> and Palmater, 2013 on CBC’s 8th Fire: <http://www.cbc.ca/day6/blog/2013/01/11/dr-christopher-alcantara-grand-chief-joe-hall-aboriginal-property-rights/>).

¹⁰⁰ It is also notable that the RCAP recommendations featured prominently in Idle No More teach-ins and suggestions for coexistence and reconciliation. I discuss Idle No More in Chapter 7.

Inquiry' in 2003 and developed a final report in 2007.¹⁰¹ While crises mark these flashpoints in the 1990s, leading to the aforementioned political inquiries, several subtle initiatives also coloured Canada's landscape for its treatment of Indigenous peoples following the *White Paper*, leading up to the present time. As Ladner & Orsini discuss, the Federal *First Nations Governance Act* tabled in 2002 sought to shift away from the colonial approach apparent in the *Indian Act*; however, it received widespread criticism for its lacking consultation and persistent paternalism, for its "paradigm paralysis" in treating Indigenous peoples as a "target population" rather than as active political agents (2005: 190-191). Conducting appropriate partnerships, consultation and reconciliation with Indigenous peoples presents an ongoing challenge to the Canadian state.

Historical legacies of civilization, assimilation and protection colour contemporary struggles between Canada and Indigenous peoples. Glen Coulthard refers to our current time as the "4th cycle of struggle", culminating in the Idle No More movement (2013). As Coulthard argues, Canada has and continues to manage Indigenous dissent through promises of partnerships and reconciliation. The first cycle of struggle began with the previously mentioned *White Paper* and ended with the section 35 Constitutional recognition of existing Aboriginal treaty rights. According to Coulthard, this phase included the supposed 'gift' of recognition through the 1973 Comprehensive Land Claims Policy, which he describes as a process to extinguish rights and to pave the way for further development and settlement (2013). The second cycle he refers to then leads us to RCAP, preceded by political crisis. He characterizes this as the "sting of non-action" followed by "business as usual" (2013). As such, the momentum building up to substantive change according to RCAP's mandate of creating a "renewed relationship" between Indigenous peoples and the state, based on mutual respect, recognition and responsibility, fell flat. Thus began a third cycle, culminating with the Indian Residential Schools Settlement. During this period, in January 1998, the Federal government implemented "Gathering Strength – Canada's Action plan"; according to Coulthard, this plan reiterated the longstanding policy framework to circumscribe land and state access to resources, and coincided with the Assembly of First Nations response that the Federal

¹⁰¹ Further information on this Inquiry is available at: <http://www.attorneygeneral.jus.gov.on.ca/inquiries/ipperwash/mandate/index.html> Accessed May 16, 2013.

government continued to fail to address disparate socio-economic indicators (2013). Struggle ensued – from Burnt Church, to Grassy Narrows – direct action, blockades and court decisions, which did not generate substantive institutional traction in Canada, and the legacy of Residential Schools plagued Indigenous communities across the country. In 2007, the Federal government introduced the Indian Residential Schools Settlement agreement and launched a Truth and Reconciliation Commission (Coulthard, 2013). By 2008, the Federal Government of Canada apologized for Residential Schools, and pledged to begin a new chapter in Canadian-Indigenous relations.¹⁰² Following the apology, Coulthard contends that we entered a fourth cycle, bearing witness to incessant attempts by the government to make Indigenous lands and resources accessible to non-Indigenous peoples for capitalist exploitation and ongoing settlement (2013). Despite the Government of Canada’s statement in support of the UN Declaration of the Rights of Indigenous Peoples in 2010 – albeit three years after rejecting it when introduced in 2007 – and an expressed commitment to protect Indigenous rights, as Coulthard points out, systemic and structural colonization persists as we entered a fourth cycle of struggle. Indigenous activists and scholars are seeking to undo this ongoing suppression and subjugation, to be Idle No More, and to mobilize in solidarity for decolonization.¹⁰³ Turning to the past points to an avenue through which we can situate these contemporary struggles and their precarious relationship within Canada’s legal structure.

Constitutional Configurations

Since the assertion of British sovereignty in Canada, Indians have been subject to the principles of fiduciary law. The Crown’s fiduciary relationship with Aboriginal peoples is *sui generis* – one of its own kind (Boyer, 2004). It operates through paternalistic, caring, and ‘protective’ language for Aboriginal ‘beneficiaries’, outlined in the *Royal Proclamation of 1763*. The British Crown’s successor, Canada, assumed these fiduciary

¹⁰² The apology is available on the Aboriginal Affairs and Northern Development Canada website: <http://www.aadnc-aandc.gc.ca/eng/1100100015644/1100100015649> Accessed May 22 2013.

¹⁰³ The Federal government’s statement in support of the UN Declaration of the Rights of Indigenous Peoples is available online: <http://www.aadnc-aandc.gc.ca/eng/1100100015644/1100100015649> and UN Declaration available at: <http://social.un.org/index/IndigenousPeoples/DeclarationontheRightsofIndigenousPeoples.aspx> Accessed May 22 2013.

responsibilities. Aboriginal peoples were treated in a guardian/ward relationship. Thus, the Crown acted out of ‘moral’, in contrast to ‘legal’ authority; the state was thus not administratively responsible for its actions: a “sacred political obligation” did not equate a ‘legal obligation’ (Boyer, 2004). It is discretionary. This has practical application with respect to health care.

Historically, the *Indian Act* outlined various authorities for health care, though the jurisdictional responsibilities remained vague. Provincial Medical Officers in any municipality or health district were charged with the administration of Provincial health regulations, empowered to ensure the enforcement of Provincial acts and regulations. The *Act* listed ‘places of detention’ that pertained to health regulation: hospitals, sanatorium, clinics, lockups, goals, reformatories, or any other place designated by the Superintendent (INAC, 1978). The Superintendent ensured the enforcement of Indian health. It was required that persons with infectious diseases must place themselves under the care of the state, and undergo treatment under the course of action prescribed by a Medical Officer or medical practitioner. The Superintendent or Medical Officer could enter, in daytime, any dwelling or other premises situated on the reserve under his charge, to inquire as to the state of health or any person therein, or to examine the hygienic condition of the dwelling or other premises (INAC, 1978). The Crown’s fiduciary responsibility for the protection of Indigenous health continues to be marked by its opacity.

Health care for Indigenous peoples in Canada falls within an opaque jurisdictional configuration. Primary responsibility for ‘Indian’ health remains at the Federal level, while health care for most Canadian citizens appears largely under the rubric of Provincial or Territorial jurisdiction.¹⁰⁴ First Nations and Inuit peoples obtain much of their care from the Provincial and Territorial health systems, including hospitals and physicians; data is kept within Provincial and Territorial databases (Health Canada, 2011). The Federal government provides drug, dental and ancillary services. Such

¹⁰⁴ The Federal government maintains responsibility for the direct delivery of health care services to more than a million people, including status Indians living on reserves, Inuit, members of the Canadian Forces, the RCMP, eligible veterans, Federal prison inmates and refugee claimants (Picard, 2011). The Federal government is also responsible for public-health programs and health protection measures, including food safety, regulation of pharmaceuticals and medical devices and consumer safety. At approximately \$3.3 billion a year, the health budget is larger than most provinces (Picard, 2011). Approximately a third of the budget is allocated for health research.

services include dental care, prescriptions and medical supplies, allied health services outside of hospitals – mental health, community-based preventative care and home care – are not provided by Provincial governments to First Nations communities on reserve (Health Canada, 2011). These costs fall under Federal jurisdiction, administered by Health Canada. The Federal government directly funds health professionals including dentists, dental therapists, optometrists who provide services to remote and isolated communities on a visiting basis, or funds First Nations and Inuit who travel to larger centres for specialized and emergency treatments. Historically, and in the present, health services often function through a network of delivery mechanisms.

In 1867, Canada's Constitutional structure established powers between the Federal and Provincial governments in Canada; the British Parliament omitted any mention of legislative power over health and health care. Consequently, the subject of health does not expressly fall under the ambit of either the Federal or Provincial governments; Provinces have jurisdiction over the administration of health care, while the Federal government sets priorities and principles outlined in the *Canada Health Act* as a matter of policy through its spending power (Boyer, 2004). Constitutional ambiguity, and overlapping jurisdiction regarding health and health care provision is problematic, and takes on heightened concern in the context of Canada's Indigenous peoples. Consequently, jurisdictional squabbling between the Federal and Provincial governments frequently results in a convoluted health delivery system for Indigenous peoples, aligned with under-funded 'hit or miss' Provincial programs serving this population (Boyer, 2004). Canada's fiduciary obligation towards Indigenous peoples, arising from Aboriginal rights and treaty rights, are poorly understood. These treaty rights stem from the Treaty 6 "medicine chest clause", though in practice, it does not apply evenly to all

Indigenous peoples.¹⁰⁵ Primary responsibility for this policy domain remains unclear (Boyer, 2004). There is no Constitutional obligation to provide Aboriginal health care.¹⁰⁶

There is an overall lack of clarity on Canada's jurisdiction and responsibility for Indigenous health. As a result, services are often poorly defined; there is much confusion about the requirements for adequate Federal funding. According to an Auditor-General report, several structural impediments include: ambiguity about service levels, a legislative base, an appropriate funding mechanism, and organization to support local service delivery (Auditor General of Canada, 2011). It is often unclear who is accountable to First Nations citizens to achieve improved outcomes or better services. The Federal government generally claims responsibility for funding services but not administering service delivery. Thus, sometimes First Nations communities work more closely with Provincial authorities (i.e. school boards, health boards and social services); other times, they pick up these responsibilities with their available resources and become actively engaged in policy development.

Despite the comprehensive scope for health care coverage in Indigenous communities, health care service delivery operates in a piecemeal fashion, which leaves many communities struggling to address their healthcare needs. Following Picard: "it is shameful that our wannabe leaders do not have to explain why, in 2011, we tolerate entire communities living without safe drinking water and reliant on 'honey pots' – human sewage collected in buckets or plastic bags" (Picard, 2011). Consistent drinking-water

¹⁰⁵ Only Treaty 6, one of the numbered post-Confederation treaties, contained a specific "medicine chest" clause, which was awarded literal meaning by the Saskatchewan Court of Appeal in *Regina v. Johnston* (Craig, 1992: 7). According to this treaty, Her Majesty agreed that a "medicine chest shall be kept at the house of each Indian Agent for the use and benefit of the Indians at the discretion of such agent" (Craig, 1992: 15). The *Regina v. Johnston* decision found that the treaties do not give the federal government any greater legislative authority, or jurisdiction than they already had. Some treaties (i.e. 7, 8, 10, 11) may have made comparable provisions; consequently, some First Nations contend that they are entitled to health services as an inherent treaty right.

¹⁰⁶ Canadian health care falls under section 92 as a provincial responsibility. The "doctrine of paramountcy" applies to give federal legislation pre-eminence over provincial legislation (Craig, 1992: vi). For Indigenous peoples, health is a discretionary policy domain. Consequently, the federal government often develops programs to support First Nations communities without establishing a legislative or regulatory framework for them. Therefore, for First Nations members living on reserves, there is limited legislation supporting programs in important areas such as education, health, and drinking water (Auditor General of Canada, 2011). Instead, the federal government develops programs and services as a matter of 'policy'. While provinces have jurisdiction over health care in the country, they do not have a 'responsibility' for the provision of health care services to Indigenous peoples (Craig, 1992: 3). Jurisdiction carries with it financial responsibility.

advisories on reserves challenges the myth of Canada's pristine natural landscape, as it contradicts the common conception that Canada is one of the most desirable places to live.¹⁰⁷ The obligation to provide comprehensive health care to Canada's Indigenous peoples is further occluded when health tethers environmental concerns.

While the Provincial government shares responsibility for environmental issues with the Federal government, the Provincial government does not formally have a role in on reserve health issues. The Federal-Provincial division of powers produces a zone where environmental health issues become "lost in a limbo of inter-jurisdiction or layered jurisdiction" (Agyeman, Cole, Haluza-DeLay, & O'Riley, 2009: 12). The location of the reserve as a Federal responsibility adds another layer to this complex array of responsibilities. Consequently, the reserve becomes lost in jurisdictional battles over who has to foot the bill for those harmed in this liminal space. Citizens in many of these communities experience a disproportionate effect of chronic pollution living perpetually on alert.

Ontario's environmental protection is governed through the *Environmental Protection Act (EPA)*. This act grants the Ministry of the Environment (MOE) powers to deal with the discharge of contaminants, which may cause negative effects (Ministry of Environment, 1990). It contains a general discharge prohibition on 'contaminants' in combination with the issuance of 'permits' for emissions in accordance with a Certificate of Approval issued by the Minister of the Environment (Scott, 2008). These certificates are legally binding licenses that set out the conditions under which a facility can operate. As Scott discusses, the approach is predicated on the development and implementation of standards, many of which were established more than twenty years ago (Scott, 2008). The standards determine the allowable emissions for each facility by using air dispersion models developed to ensure that between the location of the stack and the property fenceline ("the point of impingement", in the regulation's terms), the pollution becomes

¹⁰⁷ Though, it is important to note that boil water advisories is one component of sanitation and infrastructure environmental-health related concerns, which differ from chemical or industrial impacts on human health. Moreover, in Aamjiwnaang, they are linked to the Sarnia municipal water supply that draws from Lake Huron, upstream from Chemical Valley. Their concerns thus are more relevant to the chronic effects of pollution in the air, and on their health; though, there are considerable concerns around soil and water, as well.

diluted to the point that it is below any applicable health threshold. Following Scott: “The regulation seems to be based on the unlikely assumption that pollution never leaves industrial property” (Scott, 2008: 33). Furthermore, “cumulative effects” are not taken into consideration in the MOE certificate of approval process, which is of significant concern to local residents of Chemical Valley. This means that each facility can assume that the background levels of contaminants is zero in order to conduct its modeling, although, in Chemical Valley for example, over sixty high emitting facilities cluster together in close proximity, which makes this assumption blatantly false. Moreover, the human health harms taking place in Aamjiwnaang, and adjacent to Chemical Valley for that matter ‘remain ‘unintentional’; yet, pollution is a ‘fixed feature’ of modern economies” (Scott, 2008: 37). Citizens thus take up the charge to keep their legislators accountable, as communities appropriate responsibility to manage environmental health.

Emerging Responsibilities: From Crown Ward Toward Active Citizenship

Sovereign state authority in Canada has always been tied to the regulation, surveillance and management of Indian bodies. As Kelm states: “The drama of colonization was acted out in Canada not only on the grand scale of treaty negotiations and reserve allocations but on the supple contours, the created representations and the lived experiences of Aboriginal bodies” (1998: 57). The manifestation and expression of this authority is changing. At the turn of the 20th century many Indigenous peoples and communities were decimated by smallpox, tuberculosis and other communicable disease (Health Canada, 2011). Little coordinated effort existed at a national level to address these health crises. In 1904, the Department of Indian Affairs appointed a medical Superintendent-General to start medical programs and develop health facilities. Many First Nations and Inuit health programs are delivered across the country through collaborative efforts between Federal headquarters and regional employees in partnership with Indigenous communities.

While the regulation, surveillance and management of health care for Canada’s Indigenous peoples has always been centralized, responsibilities for this policy domain increasingly operate through partnerships devolved from the state towards communities themselves. Reiterating that the Constitutional obligations for the provision of health

services to Indians is ambiguous, in 1974, the Minister of National Health and Welfare tabled the *Policy of the Federal Government concerning Indian Health Services*. The Government wanted to ensure “the availability of services by providing it directly where normal Provincial services (were) not available, and giving financial assistance to indigent Indians to pay for necessary services when the assistance (was) not otherwise provided” (Health Canada, 2011). This policy sought to ensure that healthcare was available to Aboriginal people, and to see that they had financial assistance to cover the cost of medical treatment. This policy recognized the need for “community development, a strong relationship between Indian people, the Federal government, and the Canadian health system” (Health Canada, 2011). This preceded a new policy in 1979, acknowledging the state’s ‘special relationship’ with Canada’s First Nations and Inuit communities.¹⁰⁸

The language of health promotion prominently appeared on the landscape of Canadian public health policy in the 1970s. This was in part due to policy perspectives and statements such as that of the 1974 Lalonde Report, which emphasized the role individuals play in improving health (Lalonde, 1974). With respect to Indigenous communities, the 1979 policy strongly encouraged individual responsibility for health:

Indian communities have a significant role to play in health promotion, and in the adaptation of health services delivery to the specific needs of their community. Of course, this does not exhaust the many complexities of the system. The Federal Government is committed to maintaining an active role in the Canadian health system as it affects Indians. It is committed to promoting the capacity of Indian communities to play an active, more positive role in the health system and in decisions affecting their health (Health Canada, 1979).

¹⁰⁸ This special relationship flows from Constitutional and statutory provisions, treaties and customary practice (Health Canada, 1979). Seeking to enhance the derelict health status of many Indigenous peoples, Health Canada implemented this policy in pursuit of seeking community engagement. The Federal government acknowledged that “only Indian communities themselves can change these root causes and that to do so will require the wholehearted support of the larger Canadian community” (Health Canada, 1979). In addition to stating that uninsured benefits would now rely upon “professional medical and dental judgment”, the policy outlined three pillars: community development, socio-economic development and cultural and spiritual development. The second pillar acknowledged the Federal government’s role serving as advocate of the interests of Indian communities to the larger Canadian society and its institutions, and to promote the capacity of Indian communities to achieve their aspirations. The policy contended that: “This relationship must be strengthened by opening up communication with the Indian people and by encouraging their greater involvement in the planning, budgeting and delivery of health programs” (Health Canada, 1979). The third pillar called for an interdependent system of health management: including enhanced public health activities on reserves, health promotion, and the detection and mitigation of hazards to health in the environment (Health Canada, 1979). This policy strongly encouraged ‘active’ engagement, participation and management of health care in Indigenous communities.

This policy, based on the principles of ‘health promotion’, ‘community-engagement’ and ‘partnerships’, sought to combat the so-called “tragedy of Indian ill-health in Canada” (Health Canada, 1979). Similar to the previous 1974 policy, the subsequent policy also recognized the need for community development, a strong relationship between Indian people, the Federal government and the Canadian health system.

A new climate of rights, recognition and responsibilities emerged in the 1980s. In 1980, a report by the Advisory Committee on Indian and Inuit Health Consultation, known as the ‘Berger Report’ recommended “methods of consultation that would ensure substantive participation by First Nations and Inuit people in the design, management and control of health care services in their communities” (Health Canada, 2011). Berger imagined an end to the longstanding dependency of Indigenous peoples on institutions, fostered by the Federal government. His report gave credence to the idea that Indigenous peoples could manage their own affairs: “the language was Conservative, but the report was radical” (RCAP, 1996). Whether the Report can be interpreted as a step toward empowerment remained a matter of continued debate. The Canadian Charter of Rights and Freedoms blew onto Canada’s national landscape in 1982, which guaranteed individual rights and freedoms, as well as pledged to guarantee Aboriginal treaty rights and freedoms under section 35. In 1985, Bill C-31 came into force, which amended the *Indian Act* with the aim of removing gender discrimination in line with Charter rights. Shortly thereafter, Health Canada’s Medical Services Branch started to put plans in place to transfer control of health services to First Nations and Inuit Communities.

Other initiatives followed suit. A 1983 Report of the Special Committee on Indian Self-Government known as the ‘Penner Report’ suggested that an essential element of a new relationship between the Federal government and First Nations and Inuit people required recognition of ‘Indian Self-Government’; health was identified as a key area for this relationship. Between 1983 and 1986, FNIHB encouraged community-based health initiatives, with the intent of localizing control for health within First Nations communities. On a case-by-case basis, many communities across the country achieved greater ownership for health care. By 1986, the Federal government’s “Community Health Demonstration Program” had funded 31 programs, though many criticized the

persistent paternalism set out in the parameters for funding arrangements (RCAP, 1996).

This was an imperfect process. As one tribal leader articulated:

This policy direction had been criticized as an attempt to abrogate treaty rights and have Indian people administer their own misery. Nevertheless, we entered the transfer process — but with our eyes wide open. We saw transfer as a way to achieve some of our objectives, and we felt we could look after ourselves in dealing with government (RCAP, 1996).

As the state decentered its authority towards community, so too did the overall policy area of Indigenous health. In 1986, Parliament passed the *Sechelt Indian Band Self-Government Act*. The following April, the British Columbia Legislative Assembly unanimously passed a bill to give the Sechelt community municipal status (Health Canada, 2011). The Sechelt Indian Band signed the first Self-Government agreement in which a First Nation community assumed control of its health services.

Two years later, on March 16, 1989, Cabinet approved the health transfer policies for First Nations health south of the 60° parallel. Canada's Treasury Board supported the transfer of Indian health services from Medical Services, Health and Welfare Canada (now Health Canada) to First Nations and Inuit peoples wishing to assume responsibility. Formal authority was transferred to the Strategic Policy, Planning and Analysis Directorate (Health Canada, 2011). A Subcommittee on the Transfer of Health Programs to Indian Control was established with representation from experienced First Nations health professionals. The Subcommittee incorporated the experiences from the aforementioned Community Health Projects, and recommended a developmental and consultative approach for health transfer (Health Canada, 2011). The health transfer policy framework then drew from these recommendations. In 1989, the Treasury Board approved the financial authorities and resources to support pre-transfer planning and to fund community health management structures. At this time, the Department of National Health and Welfare, First Nations and Inuit Health Branch, received Cabinet approval for transferring Federal resources for Indian Health programs south of the 60th parallel to Indian control. Several Tribal Councils soon thereafter signed on to a Health Services Transfer Agreement.

The 1989 Health Transfer Policy reaffirmed the three pillars outlined in the 1979 Indian Health Policy. Its main focus was to “increase community participation in all aspects of the health program, and to encourage and support the transfer of control of

health programs to Bands, Tribal Councils or other First Nation authorities prepared to accept such authority and responsibility” (Health Canada, 2011). With respect to Northern Health Services, the orderly transfer of health services to the Territorial Governments, in full consultation with First Nation and Inuit authorities was a key concern. The 1988 Indian Health Transfer Policy provided a framework for the assumption of control of health services by First Nations people, and set forth a “developmental approach to transfer centered on the concept of self-determination in health” (Health Canada, 2011). Through the process, decisions to enter into transfer discussions with Health Canada rested with each community. Once involved, communities had the option of taking control of health program responsibilities at a pace determined by their individual circumstances and capabilities.

Following the release of the 1996 Royal Commission on Aboriginal Peoples (RCAP), the Federal Government released a new plan: *Gathering Strength – Canada’s Aboriginal Action Plan*. This Action Plan outlined various ways in which Health Canada pledged its commitment to diabetes and tuberculosis initiatives, to develop the Aboriginal Healing Foundation, and a healing strategy to address the legacy of Indian Residential Schools, in partnership with the Department of Indian Affairs (Health Canada, 2011). It emphasizes renewing partnerships, strengthening Aboriginal governance, developing new fiscal relationships and supporting strong communities, peoples and economies. The same year, the Treasury Board approved the Integrated Community-Based Health Services Approach as a second transfer option for communities to move into a limited level of control over health services (Health Canada, 2011). In 1995, the Federal government announced the Inherent Right to Self-Government Policy. The same year saw the distribution and implementation of the 1994 *Pathways to First Nations Control Report* (Health Canada, 2011). This report outlined the essential differences between The Integrated Approach and Transfer. The Integrated Approach was understood as an intermediate measure, to provide more flexibility than Contribution Agreements, but less flexibility than the Transfer Agreement (Health Canada, 2011). The 1990s saw a period of public health policies that expected Bands to expand, consolidate and create new programs to improve health services, with more streamlined funding mechanisms in place based upon agreements between INAC, Health Canada and Indigenous communities. In

2000, the Medical Services Branch was renamed the First Nations and Inuit Health Branch (FNIHB) and remains housed at Health Canada.

Today, jurisdiction for the effective management of Indigenous health is multipronged, and involves government agencies, communities and individuals. To effectively carry out its mandate, FNIHB, partners with First Nations and Inuit communities to gather information on population health status, health determinants and risk factors. To this end, the regional offices collect and report information from various sources (FNIHB, Health Canada, 2011). Territories are not required to report vital statistics as they have responsibility for primary health care, though mandatory reporting requirements are in place for FNIHB-funded programs including communicable disease control and environmental health initiatives. Communicable disease control includes reporting on immunization levels (by biomarkers such as: age, sex and antigen). For diseases with epidemic potential, Provincial, Territorial and regional offices require notification within 24 hours. Legislation to support communicable disease control remains under the domain of Provincial and Territorial governments.

In addition, ‘environmental health’ falls under Health Canada’s ‘health promotion’ initiatives for Indigenous communities. These range from the effects of mould, poor drinking water, to nutrition and food safety, and include natural and human-built conditions that affect an individual’s ability to achieve and maintain good health. FNIHB’s website is filled with resources about environmental health, and enthusiastic descriptors of “what you can do” (Health Canada, 2010)! Health Canada’s public service announcements state: “We all breathe the same air”; “Don’t smoke regularly in your home”; “Dust and vacuum regularly”; and “Follow water advisories” (Health Canada, 2010). Thus, individuals are encouraged to play an active role in environmental health management, for themselves and their homes.

The metaphor of the body politic both serves as an allegory and entails practical application within Canada. Politics creep into human bodies, away from centralized institutions and policies, assumed by communities, and consequently citizens themselves. Biological regulation decreasingly takes place through overt, coercive power relations towards productive and inductive means of governance. As one Aamjiwnaang historian notes, prior to Confederation, smallpox infested blankets were given to Indians as ‘gifts’

(Plain, 2007: 35-36). This is but an early example of biological warfare. At the time of ‘white settler’ contact, Indigenous health declined as a result of the onset of new diseases, loss of traditional lifestyle, imposition of new diets, depletion of food resources, dislocation, confinement to reserve land and the Residential School system (Boyer, 2004). A biopolitical lens offers a glimpse into some of the ways in which citizens confront a ‘policy ensemble’ for on-reserve environmental health. These confrontations are also struggles for knowledge. The next section moves from the macro practices of biopolitical power to fuse time with space, and discusses Aamjiwnaang’s becoming as a political place.

From Space to Place

Space is fundamental to the exercise of power. Historically, the colonial doctrine of discovery adopted a notion of *terra nullius*, a term deriving from Roman law, which considered land to belong to ‘no one’; this ‘unowned’ or ‘unoccupied’ land was ‘no man’s land’. This policy for the expansion of colonial empires enabled ‘sovereign’ states to claim ‘empty’ territories as their own. For Indigenous peoples within Canada, the conditions of possibility for the sovereign Canadian state perpetuates, and continues to facilitate a spatial politics of demarcation and segregation that manifests colonial power in the present reserve system.

Previous chapters highlighted some of the ways in which struggles for environmental and reproductive justice involve citizen mobilization and struggles for knowledge. In this section, I demonstrate how space – geography and location – intersect with human experience through time and space (Massey, 2005). This chapter began by examining the policy configurations shaping and constraining the Aamjiwnaang First Nation’s struggles for environmental and reproductive justice in Chemical Valley. Following the previous section’s overview of Canada’s jurisdiction for the policy ensemble of on-reserve environmental health, I subsequently navigate and map the power relations that play out in the construction of Aamjiwnaang’s placement within a contested

zone: Chemical Valley, a place imbued with meaning.¹⁰⁹ I thus seek to connect the broader ensembles of power with the particular site of Aamjiwnaang's geographic and political formation. A site, following Bertram, reveals the "complex effects" of power (2011: 170). The formation of this site, as a political place, comes into being over time and through space. It is also uniquely experienced on the ground – as Chapter 3 highlighted. This chapter now brings time and space together in the construction of place, and the following chapter "digests place" to highlight key findings and consider the implications of thinking politically about place.

Spaces tell stories. They communicate values, meanings, beliefs and feelings, and are spaces for "organizational acts" (Yanow, 1998: 215). Spaces are structures created by society. As such, they are social productions, and not merely an "environmental context or container for society" (Soja, 2010: 91). Spaces are much like characters that constitute part of the plot; they both contain and carry messages. As communities change over time, so do their interpretations and meanings. Interpretive spheres are inherent in the defining of political place. Built spaces are not passive. They are at once "storytellers and part of the story being told" (Yanow, 1998: 215). In addition to the literal dimensions of space, boundaries can be metaphysically and socially constructed through linguistic and discursive policy arrangements. For example, the production of a name such as 'Chemical Valley' is imbued with meaning. Interpretive investigations of space will look at values, beliefs, aesthetics, affect and feelings they evoke to ask: what stories do spaces tell?¹¹⁰ This dissertation asks what stories citizens of Aamjiwnaang tell about their home, and what their struggles for environmental and reproductive justice reveal about relationships between their land and livelihood. Land is more than simple geography for Aboriginal peoples: "it is the root of their spirit, belonging and way of life" (Suleman,

¹⁰⁹ In addition to regulatory configurations, places are formed through meaning-making practices. Following Stein, places include location, experience and emotion (Stein, 2006). These practices taking shape in Aamjiwnaang were eloquently depicted by graduate student Kevin Smith, who draws from the work of health geographers Gesler, Appleton and Wilson, to discuss emergent concerns around "contaminated therapeutic landscapes"; his work addresses some of the ways in which language, symbolism, ideology and meaning affect the physical, emotional and spiritual health of a particular place (Smith, 2008). This applies to the specific site in Aamjiwnaang.

¹¹⁰ Though beyond the scope of this dissertation, it is significant to note that thinking through the reserve's location as a 'political place' intersects with notions of race, space and gender. I discuss this, and the gendered scope of reproductive politics and struggles for reproductive justice elsewhere at length (Wiebe & Konsmo, *forthcoming 2013*).

2011: 11). This section seeks to hitch ‘meaning’ to space, to produce place, which is temporally constituted as well as mediated and interpreted in daily life.

Places are defined and differentiated by boundaries, which, like the space they demarcate, can be literal, figurative, or metaphorical (Stein, 2006). Whereas physical boundaries are the most visible or evident, and may demarcated through ‘natural’ means, such as rivers, lakes, and streams, or ‘built’, such as walls, buildings, streets; they may also include legal or political arrangements, such as Municipal, Provincial, or Federal delineations or responsibilities. They can be simultaneously literal and figurative, for example, living ‘downstream’ and/or ‘across the tracks’ (both of which are the case in Aamjiwnaang). Moreover, the Aamjiwnaang First Nation is uniquely situated within Lambton County. Administratively, it falls within the Municipal boundaries of the City of Sarnia. According to Sarnia Mayor Mike Bradley, Sarnia is the only city in Ontario with a native reserve within its boundaries; thus, meriting the importance of having a “close working relationship” (Carruthers, 2010). He frequently refers to this unique situation as ‘one of a kind’ in the country, leading to a positive relationship between Indigenous and non-Indigenous Lambton County citizens. How did this ‘unique’ configuration come to be? A turn to the past illuminates the present.¹¹¹

Pre-Confederation Nation-building

The pre-Confederation period can be characterized by a time of expedited ‘civilization’ and ‘modernization’.¹¹² The earliest documented explorers included French fur traders and explorers as well as Jesuits (Elford, 1982). In 1615, Samuel de Champlain arrived in Georgian Bay; waves of explorers and missionaries soon followed his path across the Great Lakes. The 17th century can be characterized by a period of ‘naming’, soon followed by 18th colonial policies of *terra nullius*, and ‘claiming’ of ‘empty’ space in the name of colonial rule. In 1670, Father Hennepin named the ‘St. Clair River’, which today

¹¹¹ The primary source for this historical material comes from the ‘Lambton Room’, the Lambton County library headquarters, located in Wyoming, Ontario. I requested documentation pertaining to the history of the Aamjiwnaang First Nation, and was subsequently provided with the ‘Native Box’ of material: 10(4) Box 6. Files 10DA-D were of particular value here.

¹¹² It was during this period of ‘modernization’ and civilization that the controversial ‘Malcolm Cameron’ land sales took place, subsequently the source of much consternation.

passes along the present Aamjiwnaang First Nation Reserve. Some of Sarnia's earliest French settlers preferred British to American rule, and came from Michigan after the British surrendered Detroit to the Americans in 1795 (Elford, 1982: 141). Several settlers rented land from Indians, farmed and exchanged goods in Detroit.

The 18th century witnessed the Seven Years War between France and Britain, during which time the 'Chippewas', as they were then known, had historic ties to France. By 1763, British rule reigned supreme, and the *Royal Proclamation* came into effect. This period spawned the onset of various treaties, and those who remained loyal to the British were rewarded with land in present-day 'Canada'. Though treaties were formed, war ensued yet again with the War of 1812. In the 1800s, the colonial department for Indian Affairs generically referred to the First Nations communities in Lambton County as 'Chippewas', though each group also had a French name. Members of the Walpole Island First Nation were part of the 'Chippewas of Chenail Ecarté', Stony and Kettle Point of the 'River Aux Sauble' and Sarnia Reserve 'River St. Clair' (Elford, 1982). Alliances shifted with the War of 1812. During this time, 'Indians' of the Great Lakes predominantly assisted the British against the Americans, and the British government encouraged settlement in Southwestern Ontario as a form of repayment.

In 1827, the Treaty of Amherstburg, also known as the 'Huron Tract Purchase' of July 10, 1827, was signed in the 'Upper Canada Treaties Area'. The 1827 treaty – Treaty #29 – aimed to set aside lands 'reserved' for them. The Ojibwe nation – the Chippewa – ceded land to the Crown with the understanding that it would receive adequate compensation in due course. Land designated as 'Enniskillen' was never formally surrendered, and remains the subject of an outstanding land claim to this day.¹¹³ These

¹¹³ As recently as 1995, the Aamjiwnaang First Nation commenced legal action, declared title to unsurrendered land, and sought damages for trespass and breach of fiduciary duty. Referred to as the 'Chippewas of Sarnia/Malcolm Cameron Case', the Ontario Court of Appeal rejected the claim in December 2000 through the court's use of 'judicial discretion'; according to Confederacy of Nations – Assembly of First Nations Resolution 31 – the Court ignored section 35 of the Canadian Constitution, which recognizes and affirms Aboriginal treaty rights [(Assembly of First Nation, 2001) Resolution 31 by the Confederacy of Nations – Assembly of First Nations also noted that the Court failed to apply section 35 as it had done for the *Sparrow*, *Gladstone* and *Delgamuukw* Supreme Court Cases. See: <http://64.26.129.156/article.asp?id=2986> Accessed April 3, 2012]. These sales were controversial, as they were largely enacted through the authority of federal 'Land Agents'.

treaties were signed between the ‘Sarnia Band’ and the British Indian Department; the Department of Indian Affairs referred to the Chippewas in this area as the ‘Sarnia Band’.

This period of ‘civilization’, ‘modernization’ coincided with oil discovery and industrialization. The town of Sarnia soon began to encroach on Chippewa land, as offers emerged to acquire land south of current Davis to Clifford streets; a ‘Land’s Office’ was established, wherein an Agent could sell lots and then reimburse the tribe through the government. By 1857, ‘Stag Island’, formerly referred to as ‘Isle-aux-Serfs’ was surrendered by the Chippewas to the Crown. Today, it remains a popular vacation destination among American cottage-goers. In 1848, oil was discovered in the neighbouring town of Petrolia, and by the 1860s the onset of an oil boom came into effect. A final pivotal moment marking the pre-Confederation period and the reduction of the Chippewas was the separation of Walpole Island; thereafter, the Department of Indian Affairs referred to the remaining Bands of the Huron Tract as the “Sarnia Band”, with reserves at Sarnia, Kettle Point and Stoney Point.

The discovery and exploitation of oil reserves in Lambton County affected the landscape of the territory, and the subsequent formation of the Chippewas’ neighbourhood. On March 24, 1871, Dominion Oil refinery purchased twenty-three acres for \$4,000 from the reserve government (Smith & Smith, 1976). On June 21, 1872, Dominion Oil received twenty-three acres on the Indian Reserve, 462 feet on the river, south of the Indian Creek. Mr. Mackenzie, the Indian Agent valued it at \$3,345; his superiors later raised it to \$5,000 and the Company Manager said they would have paid \$6,000 if pushed (Smith & Smith, 1976). By April 5th that year, the Board of Trade asked the Indian Department to sell part of the reserve; on March 7, 1873, new shipyards were proposed on Indian land (Smith & Smith, 1976). The mere fact that the reserve maintained the land base it holds today is a testament to the perseverance of this Indigenous community’s survival, though its sustained existence has been continuously under attack by the privileged gaze of colonial rule and capital expansion.

From Confederation to Post-War Nation-building

As the *Indian Act* came into force in 1876, Sarnia Band 45 came into being. Shortly thereafter, both Kettle and Stoney Point First Nations sought separation from the Sarnia Band. During the end of the 19th century, Indian Department policies encouraged reserve subdivisions, specifically, that their reserve land would be comprised of separate lots.¹¹⁴ These lots would include ‘location tickets’ for individual families; the goal was to encourage First Nations to adopt an ‘individualistic lifestyle’ and to farm. By ‘reserving’ their bodies in these marginalized land bases, government policy continued to encourage and foster a sedentary lifestyle, which encouraged living in one place, farming and becoming good Christians – i.e. become ‘civilized’.

The political landscape in Chemical Valley’s post-war climate continued to enframe struggles for geography on the reserve. This coincided with a 1919 manoeuvre by the Dominion Alloy Steel Corporation to negotiate for over 900 acres of land, bounded on the east by Scott Road, southwest on Vidal to Imperial Oil, following north to the intersection of Churchill. Dealings culminated in a 1919 surrender to the company for the price of \$200,000. The parcels of land later became occupied by Polymer Corporation, Dow Chemical, Imperial Oil, Fiberglass, Cabot Carbon, and residential dwellings in the former village of Bluewater. These ‘negotiations’ or ‘surrenders’ paved the way for the encroachment of heavy industrialization that ensued during the ‘welfare state’, or World War economy in Canada.

Canada’s war economy impacted the landscape of Chemical Valley, and can be characterized as a period of heavy, mass industrialization. As the state enhanced petrochemical and polymer production in the Valley, Indians who fought for Canada received the ‘privilege’ of Canadian citizenship and became enfranchised. This also meant giving up any special “Indian” status, and the rights that went along with it (Debassige & Pyne, 2011: 2). The severity of the state’s grip clenched Aamjiwnaang, as

¹¹⁴ During this time, the Sarnia Band voted to have Kettle Point and Stoney Point reserves surveyed and subdivided. Many community members resisted a survey, due to fears that it would open up the door to the sale of their land and resources. Deputy Duncan Campbell Scott governed as an influential Federal official who oversaw and implemented Indian policy. During his leadership, the Department of Indian Affairs sought to formally create two Bands in 1919: Sarnia Band, and Kettle and Stoney Point.

well. It was during this time that the City of Sarnia sought to annex the reserve, thus, ensconcing it within the Municipal boundaries.¹¹⁵

The following decades around present-day ‘Chemical Valley’ were marked by a series of controversial land sales. Much of the Sarnia Band 45 reserve land was earmarked for sale through land deals between private investors and the ‘Crown’.¹¹⁶ Demonstrating the separation of authority from the community, negotiations were handled by lawyer D. B. White of Sarnia firm Sons Ltd., who initially sought backing from Wall Street based New England Industries in November of 1956.¹¹⁷ During a second round of negotiations, backing was substantiated by Dimensional Investments Ltd. and negotiations took place between ‘Crown Trust’ representatives, a Sarnia law firm who acted for D. B. White, while also representing the Sarnia Chippewa Indian Band. It remains unclear the degree to which the First Nations community members themselves had a legitimate voice in these dealings.

Following a series of intensive meetings and talks, the Band Council gave permission to Crown representatives, the “Crown Trust Company of Canada”, to open negotiations with locates to purchase their properties, for a total of 3,400 acres of reserve land.¹¹⁸ This desirable reserve land represented a ‘final frontier’ as the last remaining large portion of land in the rapidly developing down-river industrial area, lying between Imperial Oil Ltd., Polymer, Sun Oil Refinery, Canadian Oil, Ethyl Corporation, and a

¹¹⁵ Details about municipal annexations can be found on the City of Sarnia’s website. It is noted here that in 1955 the community of Bluewater was relocated, whose former site lies just across the highway from Aamjiwnaang: <http://www.city.sarnia.on.ca/visit.asp?sectionid=907>

¹¹⁶ According to the *Sarnia Observer*, the client interested in the reserve land was kept in secret by ‘crown trust’ (Sarnia Observer, 1958).

¹¹⁷ New England Industries, an American development, mining, pulp, chemical, shipping and investment corporation provided a plan to purchase all of the Indian reservation lands in Sarnia for general industrial development; though they stated they were not buying this land as a “wildcat speculator”, they pledged to cooperate with industries already in Sarnia as well as other cooperating industries. Their intent was to develop the area as a planned ‘industrial park’, to suit industry by direct site resale or building on a lend-lease basis. On March 22 1957, the Band Council agreed to a land surrender, for the purchase of land valued at close to \$9 million and the promise to build a ‘model riverfront village for all Indians families involved’. Half of the purchase price was to be distributed among the 457 Band members and the remainder placed ‘in trust’ with the Federal Government on behalf of the Indian citizens [See: Nicholson, P. (1959). Cabinet at Ottawa Pass \$6,500,000 Deal. *Sarnia Observer*].

¹¹⁸ In 1958, Negotiations took place between realtors D. B. White and Sons and Toronto-based ‘Crown trust’ representatives; it is not clear what place or role authorities from the Band members themselves played in these high-level, high-stakes deliberations. It was also suggested during this time that ‘locates’ would be forced to move their homes to the proposed 361 acre “Indian Village”. Immediately following the land surrender, payments would go to the Receiver-General, subject to terms approved by the Governor-General-in-Council.

projected site for the DuPont linear polyethylene plant, among others (Sarnia Observer, 1958). Community members were far removed from these dealings.

Negotiations took place between then Federal Indian Agent Ward Leroy and the ‘Crown trust company’ seeking to bid for purchase of 3,100 acres. A week prior to the industrial bid, the Band voted unanimously to reject an offer of \$5,950,000 for the whole area (Lack, 1958) (see: image below).



Members indicated concern about the loss of riverfront, and that the offer was too low. These dealings were under negotiation between ‘Crown trust’ representatives acting on behalf of Toronto-based corporation, Dimensional Investments Limited, represented locally by real estate firm D. B. White and Sons and the appointed Indian lawyer.¹¹⁹ In

¹¹⁹ ‘Crown trust’ prevailed in December 1958, when 3,000 acres of reserve land were purchased for private interest. The Band voted in favour of surrendering 3,000 acres of land to “Crown Trust Company of Canada Ltd.” For \$6,500,000. The 12:30am vote followed a series of heated discussions: 88 in favour and 37 against the surrender; 84 votes were required to make the surrender valid (Lack, 1985). The vote was monitored by RCMP; Chief Adams was the last to cast his vote, subsequently, \$100 was handed out to each locatee by ‘Crown Trust’ representatives and Toronto Trustees Clark and White. ‘Crown Trust’ acted as an agent for Toronto firm Dimensional Investments Ltd. Part of the deal included the construction of a ‘special Indian village’; moreover, the dealings were subject to final approval from the Governor-General-in-Council. According to Band solicitor – ‘Indian lawyer’ – John McEachran – this was the ‘last opportunity’

addition to this dealing, two other negotiations remained on the scene, yet in the background: one with the city regarding a sewage treatment plant, and another with Ontario Hydro-Electric Commission for a new transformer station. The geography of this community was and continues to be pinched by the encroachment of industrial development from all angles.

State rule was, and continues to be, inseparable from reserve management, administration and governance. Following an hour-long cabinet meeting, Prime Minister John Diefenbaker stated: “The sale of Indian Lands at Sarnia will now go through” (Nicholson, 1959). The Conservative government’s Cabinet passed a \$6,500,000 deal; local Member of Parliament J. W. Murphy proudly stated that 3,000 acres of ‘prime industrial property’ would now be made available at the price of \$6,500,000 (Nicholson, 1959). This paved the path for new industries to enlarge Sarnia’s established ‘Chemical Valley’, such as the possibility of spin-off industries for byproducts of Imperial Oil Ltd.’s new \$30 million petrochemical plant. Touting ‘long-term development’ and the promise of ‘job-creation’, Mr. Murphy gleefully added that the Hon. Ellen Fairclough would sign the contract letter that afternoon; Cabinet went into session in the House of Commons East Block at 9:00 am with a day-long agenda ahead, by noon, then Director of Indian Affairs in the Department of Citizenship and Immigration arrived and summoned the representatives of the principals in the transaction so they would be on hand to deal with the Cabinet’s decision (Nicholson, 1959). A 1958 Order-in-Council quashed the proposed deal; whereas, this second attempt to promote the massive single sale was approved through the negotiations of local agents who secured the necessary vote of December 20th from the Band Council and community members for the land surrender.¹²⁰

for the Band to make an offer. 3,000 acres were surrendered in the final agreement. \$350,000 payments were to be immediately issued to Band members. On December 9, the Band Council voted in favour of selling five acres of reserve land to the city for \$29,000 for the city’s new multi-million dollar sewage disposal unit; however, the meeting ‘failed to realize an absolute majority of more than 50% of eligible votes’ thus, the deal was ruled inconclusive and a request was forwarded to Hon. Ellen Fairclough, Minister for Citizenship and Immigration, for a second vote (Lack, 1958). Further negotiations ensued. On December 15th, discussions with Ontario Hydro took place regarding a proposed site for the new transformer station to be built on the reserve. Evidently, the reserve’s territory changed significantly during this time.

¹²⁰ Archival notes reveal that the land would be appraised under the *Veterans’ Lands Act*, to be tabled in March 1959.

Funds held in trust by the Federal government finally reached the Band in 1963. In the fall of that year, Chief Telford Adams announced that the Department of Indian Affairs would release \$600,000 held in trust to approximately 500 Band members (Sarnia Free Press, 1963). This deal pertained to monies owed from the \$9 million Dimensional Investments land deal, which received Federal approval through an Order-in-Council in September, 1963. Monies were held since April 27, 1961, when the former Hon. Minister of Immigration and Citizenship, Ellen Fairclough cancelled the agreement between Dimensional and the Indians because Dimensional failed to meet a deadline for final payment of \$4,500,000 including a 30-day grace period (Sarnia Free Press, 1963). The Band received \$1,650,000 of the \$2,682,500 paid to the government. According to Chief Adams, these monies were held by the Canadian government who thought that “Indians would not spend the money wisely”, as per the *Indian Act* (Sarnia Free Press, 1963). Though Chief Adams lauded local Member of Parliament, Walter Foy of Lambton West for his efforts in getting the monies released, the sales were not free of controversy.¹²¹ Though formal State-Indigenous relations changed in the subsequent decades, subtle, informal practices of colonization continued to shape these relationships. Law and policy pertaining to Indigenous citizenship and enfranchisement coloured Canada’s geopolitical landscape. Changes affected Indigenous citizens across the country, and Aamjiwnaang citizens in particular. Dissatisfied with these configurations, citizens began to mobilize and take action to defend their land, culture and heritage.

Social Mobilization: Canada’s Changing Political Landscape

The 1960s marks a turning point with respect to Canada’s treatment of Indigenous citizens. During the time these industrial negotiations took place, Indians were not allowed to have lawyers. It was only in 1960 when Canada’s ‘Indians’ received the right to vote, and changes to the *Indian Act* began to take shape in public discourse and

¹²¹ Article headline: “Indian Land Sale Queried in House” – controversy flared in the House of Commons Wednesday over the sale of Indian Reserve land; Hon. Ellen Fairclough, Minister of Citizenship and Immigration responded to Liberal questions; minister questioned by Paul Hellyer (Liberal, Toronto Trinity) why she allowed the sale of \$7 million worth of land to a company with a minimum capitalization of \$40,000 without proof of its financial ability to undertake the transaction. The original \$9 million deal included a promise to build a model tier village for all Indian families.

consciousness. Shortly thereafter, a series of social policy movements, actions and (non) decisions took place. Riding the wave of Rachel Carson's *Silent Spring* publication, a mainstream environmental movement began to form in Canada and the U.S. Moreover, it is noteworthy that during this time in 1966 the neighbouring industrial community of 'Bluewater', originally located within the heart of Chemical Valley, relocated for 'health and safety concerns' (as indicated on a present-day plaque marking the site). At this time, the 'Lambton Industrial Society' expanded, increasing the number of member companies from three to fourteen, and became chartered as a 'non-profit' corporation in 1967.

Strained relations between the City of Sarnia and Aamjiwnaang marked this period of social change. The following year, under the leadership of Fred Plain, a 'special' joint Band Council meeting with the City of Sarnia was held, where Plain voiced concern that Municipal annexation of the reserve's land happened without the community's knowledge, and they had consequently become 'part of' the city's Municipal boundaries overnight. Shortly thereafter, the city began a comprehensive study of how to seize the reserve roads. At the same time, the threat – or promise – of industrial 'development' lurked at the reserve's perimeter.¹²² As previously discussed in this chapter, one of the most notable public policy frameworks marking this decade regarding Canada's policy towards 'Indians' was the 1969 *White Paper*, which sought to bring Indians 'in' to Canada's political fabric as assimilated citizens just like everyone else.

Geographically, the reserve exists as a kind of jurisdictional 'black hole', or 'mecca' amidst one of the densest petrochemical and manufacturing complexes in Canada. As discussed, two attempts to 'dispose' of the reserve took place in 1957 and 1959 by New England Industries and Dimensional Investments, respectively. Local, national and international developers continued to set their sights on this territory. In 1965, planning firm Acres Research and Planning Ltd. provided a report to the

¹²² For example, advice provided to the Sarnia Band Council in November 1965 by planning firm *Acres Research and Planning Ltd.* indicated that the economic 'potential' of the Sarnia reserve was dependent on the present and future growth of the petrochemical industry and related services. The report further stated: "this location has seen rapid development of a major petrochemical complex since the end of the Second World War; there are eleven major oil, gas and chemical industries in the area" (p. 6). The report went on: "regarding 'present land use': except for a few small garden plots and orchards, the land is not used in a productive capacity. It is used as residential land for the homes of the Band members. Even this utilizes only a portion of the total acreage" (p. 7). [See: Acres Research and Planning Ltd. (1965). *The Sarnia Reserve Industrial Society*. Sarnia].

Chippewas of Sarnia Band to explain why this place was so desirable for industrial development. Specifically, the report noted that:

- (i) The gas and oil pipelines from Canada's western oil fields pass through the United States south of Lake Superior and cross back into Canada at this point
- (ii) The St. Clair River provides process and cooling water of the desired quality and temperature in large quantities
- (iii) Economical transportation by water is provided by the St. Lawrence Seaway system using the St. Clair River
- (iv) Industries are dependent one upon the other for sources of materials so that a complex of industries creates an attraction for other industries of the same type
- (v) Sarnia is close enough to serve the major Canadian market lying around Toronto and is also favourably located to the US market for certain products used in agricultural production
- (vi) The salt beds lying between 1,500 and 2,700 feet below the surface represent the greatest depth of salt deposition in Southern Ontario and are a source of chemicals for the industry. Caverns hollowed out in the beds provide economical storage for liquids and gasses (Acres Research and Planning Ltd., 1965).

The report further noted the 'special *nature* of reserve lands' [emphasis added]. The unique features depicting the 'special nature' included its political status in the Canadian Confederation, policy arrangements and scenic qualities. These 'special' relations precede Confederation.¹²³ In 1827, the Crown and Chippewa Bands signed the first treaty to set aside a 6,160 acre reserve. The Acres report noted that "reserve land is set apart for the use and benefit of a Band", that the majority of "Band electors" must agree to releasing any part of the reserve for use by a non-Indian; and furthermore, that all "dealings must be done with Crown sanction, which must accept final responsibility for the equity of the deal" (Acres Research and Planning Ltd., 1965: 9).¹²⁴ These points are pertinent with respect to land transactions, as reserve lands are not available on the 'open market' without prior review under the auspices of the *Indian Act*.

The following decade continued to reveal the persistence of industrial advancement on reserve land. In 1977, the *Sarnia Observer* reported that Polysar sought a right-of-way from the adjacent 'Indians' to run an overhead pipe bridge across the reserve (Sarnia Observer, 1977). This 66-foot wide strip in question crossed Tashmoo

¹²³ As per the 1763 Royal Proclamation, only the 'Crown' was empowered to negotiate with Indians for land settlement.

¹²⁴ Moreover, the report noted the unique properties of the reserve's "natural parkland", and specifically, that this natural area should remain located along Talford Creek to keep it "open as a drainage way", to serve as a buffer, approximately 400 feet wide, and that no building should be erected within 200 feet of the line between industrial and residential uses (Acres Research and Planning, 1965). These points reveal competing views of land use; on one hand, the land is to be a source of 'development', on the other, it is a collective resource for the entire Band's use.

Avenue: land ‘owned’ by the Department of Indian Affairs, not the City of Sarnia. The First Nations citizens under the leadership of Chief Ray Rogers and Polysar representatives remained at an impasse. Shortly thereafter, another parcel of land to the west of Tashmoo Avenue, and North of Lasalle, came into dispute.

Past policies pertaining to Indian enfranchisement led to the formation of territorial donut holes on First Nation reserves. One contested tract came before the Ontario Supreme Court between citizens of Aamjiwnaang and Shell Canada Ltd. The case regarding 200 acres of land west of Tashmoo and north of Lasalle was the subject of an appeal regarding a past decision by the Ministry of Indian and Northern Affairs, who was not supporting the Band’s claim and would not front any costs for the Band’s legal battle (Pattenaude, 1978). Then Industrial Development Officer Wilson Plain questioned the title of the land, which became private property during the 1920s when Indian Band members Francis Wilson Jacobs, a former Chief, and son Henry Wilson Jacobs became enfranchised – ‘citizens’, thus no longer ‘Indians’ – so they could buy property allocated to them by the Band. These men took out mortgages and then bought the land from the Band at \$8 an acre (a total of \$1,600) (Pattenaude, 1978). Plain questioned Jacobs’ title to the property, as a government proclamation was never issued before the land was mortgaged, and thus questions whether they truly ‘owned’ the land subsequent to enfranchisement.

According to Plain’s claim, the non-issuance of a proclamation was an oversight, thus rendering illegal land transactions after 1926. The contention here centres upon the fact that clear title to the land was never certified. Plain sent then Minister of INAC, Hugh Faulkner a letter stating this concern. In response, INAC stated: “in our opinion, Henry and Francis Jacobs held the land in fee simple and were under no special restrictions regarding its use or disposal” (Pattenaude, 1978). As of 1931, Sarnia began taxing the land after Lambton Loan and Investment Co. foreclosed under the power of sale subsequent to holding the mortgage for five years. Subsequently, an auction for the land was held. At the price of \$50 an acre, no offers were made, and the Band, unaware the land was ‘theirs’ did not put in a bid (Pattenaude, 1978). Lambton Loan and Investment Co. held the property under power of sale until 1944 when it sold to Russell Hewitt of Sarnia for \$8,000, who intended to develop the land for residential use. This

land, valued at approximately \$1 million at the time of the court case, was annexed by the City of Sarnia in 1951. Shell Canada Ltd., located south of the disputed property, eagerly waited to purchase the tract of farmland for future expansion, prompting a legal battle.¹²⁵

The Fall of 1978 continued to witness struggles between the Band, corporations and government officials. Yet again, Industrial Development Officer Wilson Plain argued that the Ministry of Indian Affairs failed to adhere to its responsibilities for reserve land and citizens. He argued that the Ministry gave land to Imperial Oil Ltd, in 1947, which contravened Federal statutes at the time (Stevenson, 1978). The disputed land comprised five acres at the south end of Christina Street off Clifford, within the boundaries of Imperial Oil, sold without Band consultation. Plain argued that this sale was contrary to section 51 of the *Indian Act*, wherein: “no release or surrender of a reserve or portion of a reserve shall be valid or binding unless assented to by a majority of the electors” (Stevenson, 1978). According to Plain’s claim, Indian Affairs acted negligently; at the time of the land sales, the Band was not entitled to independent legal representation. Consequently, concerns around the Federal government’s breach of ‘trust’ loomed large. As stated in the *Sarnia Observer*, local Member of Parliament Bud Cullen, and then Minister of Employment and Immigration were informed about the situation (Stevenson, 1978). It was the second time that summer the Band requested ministerial intervention regarding a land claim.

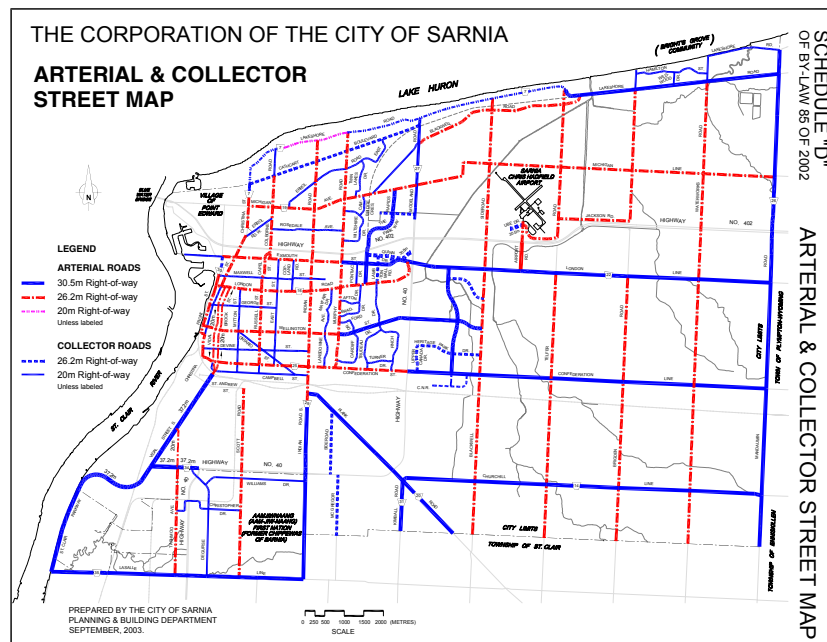
An Emerging Era of Jurisdictional Catastrophe

Environmental degradation and catastrophe dominated Aamjiwnaang’s geographic and political landscape for this community in the coming decades. Following the infamous

¹²⁵ The land in question remains a territorial ‘black hole’ amidst the reserve land, In June, 1978, the Ontario Superior Court of Justice dismissed the Chippewas’ land claims for “fairly legal and complicated reasons”; specifically, because the ‘Crown’ has the right to grant title to Indian reserve land, there was no claim against the lands by the Indians under the *Registry Act*, and, there existed ‘no prior knowledge’ that Indians ‘owned’ the land (Sarnia Observer, 1978). As the Jacobs family received land from the Band Council upon enfranchisement, the land under their possession no longer required a government proclamation to be mortgaged or sold since the land became no longer registered under the *Indian Land Act*; in short, it could be treated like any other private property. In September of that year, the Band was refused the right to appeal, and denied leave to appeal the decision. This was not the only land claim that ensued in the following years.

Dow ‘toxic blob’ incident, as discussed in the introductory chapter, by 1987, subsequent to the Great Lakes Water Quality Agreement, a 64km stretch from Lake Huron to Lake St. Clair – adjacent to the reserve’s Western riverside edge – became designated as an ‘Area of Concern’ (Environment Canada, 2012). Families gradually ceased to fish, as their livelihood became soiled by contamination in the air, earth and water. This is but one area of concern in the ensuing era of environmental catastrophe that continued to confront Aamjiwnaang and their struggles for environmental justice.

The jurisdictional ambiguity around on-reserve environmental health policy became most apparent on May 18th 2004, when Sarnia Police located an overturned tractor-trailer with 45-gallon corroded drums containing toxic chemicals such as styrene, toluene and ethylbenzene on and adjacent to the Aamjiwnaang reserve. Daniel Thomas, a Sarnia resident and ‘scrap dealer’, had been renting a property at 650 Scott Road, across Highway 40 from the reserve’s northern edge (see: City of Sarnia map, below).



Band members were alerted to the barrels’ location when one of the barrels, which had been ‘stored’ on reserve land, exploded. Thomas was in the process of transferring the barrels from the off-reserve Scott Road site – a numbered property listed to the name ‘Lawrence Brander’ – to a reserve property at 701 Scott Road when his trailer hitch broke

(Poirier, 2004). Some of the chemical barrels were found lying 100 feet away in a brushy, swampy area. Sarnia police responded to calls from the community about peculiar odours coming from the trailer containing the chemical drums. Prior to that, the Ministry of Environment (MOE) had inspected the holding site at 650 Scott Road; however, ‘no offsite impact’ was previously discovered. Consideration of the fallout from the consequences of potential health effects did not appear to be grounds for any such ‘offsite impact’ at that time. The property’s perimeter, framed by a chain-link fence, only awards so much protection to fugitive releases into the adjacent air, soil and water.

The following day, the Band held an Emergency Control Group meeting with officials from the Band, Municipality and Provincial authorities. Federal representatives were largely absent from the deliberations. When it was time to determine who bore the responsibility for cleaning up the mess, Band officials complained: “every time there is a spill, the jurisdiction card is played” (Sarnia Observer, 2005). The ‘point source’ for the origin of the barrels remained in dispute; it was unclear whether the barrels were on ‘Provincial’ territory, reserve land, or Federally-regulated waterways. By Monday May 20th, the *Sarnia Observer* ran a cover story saying that Chief Phil Maness, frustrated with his community being a local “toxic dumping ground” had “had enough”, and declared a “state of emergency” in accordance with the *Emergency Management Act* over the barrels (Poirier, 2004). Perturbed by the lack of government enforcement, Maness stated that the Band may need to start enforcing its own justice on environmental offenders. His response was fueled in part by the legacy of concerns around findings from a 1996 study conducted by the University of Windsor that revealed more than a dozen contaminated sites on the reserve namely from mercury and heavy metals.¹²⁶

Federal-Provincial authorities began to ‘drum’ up the political will necessary to weigh into this divisive issue. Then Provincial Minister of Environment, Leona Dombrowsky issued a clean-up ‘control order’, stating: “When I came into work today I said ‘we have to get this dealt with as the environment and people in the community are

¹²⁶ These findings coincided with several releases in the months preceding, prompting in a series of ‘shelter-in-place’ warnings due to fugitive releases from the neighbouring plants. In addition, another abandoned property on Scott Road, ‘Welland Chemicals’, continued to house toxic chemicals for years following the shutdown of this plant in 2000, prior to its designation as a ‘Brownfield site’; meanwhile, young people from the community utilize the site as a source of playful activity, including paintballing.

being exposed” (Bowen, 2004). The order required the immediate securing of all barrels, cleaning up all the leaked material, an inventory of the barrels and categorization of them as industrial product or waste. Furthermore, it required a survey of the site for contamination and creation of a plan for dealing with contaminated soil (Bowen, 2004). Toxic materials had been stored at the off-reserve site for over eight years. According to listed property owner Lawrence Brander, with the introduction of a catalyst, material could be converted to a fiberglass resin, it would then harden, and thus could be sold for profit, and used as a building material like concrete (Bowen, 2004). Brander was, apparently, unaware of Thomas’ plans to transport the materials across the highway onto reserve land, though in later court proceedings, witness testimony indicated that Brander was to pay Thomas close to \$20,000 to dump the waste on First Nations land (Huebel, 2005). Scientific experts were called in to clarify the composition of these chemical compounds: according to University of Victoria chemistry professor Reg Mitchell, the mixtures could be understood as ‘solvents’, with a little bit of plastic dissolved in them (Bowen, 2004). The Sarnia police pledged to investigate possible violations of the *Transportation of Dangerous Goods Act* and *Highway Traffic Act* when the barrels were being moved across the highway, charges which are indictable as a Provincial offence.

A month later, Thomas was arrested by London police while attending a court appearance for fraud under \$5,000. He was subsequently charged under the *Criminal Code of Canada* for ‘nuisance’, in addition to endangering the public (Huebl, 2005). According to the MOE cleanup control order, Brander and Thomas were to devise a remediation action plan by June 4th. Brander was instructed to provide a revised plan, including an inventory of the drums and plans for their removal, which was never submitted (Poirier, 2004). The Ministry issued follow-up orders to four parties – Danny Thomas of London, Campbell Street Industrial Park Limited, Charles Dally of Bright’s Grove and 569006 Ontario Limited, care of Sarnia’s Lawrence Brander – each of whom either had possession or ownership of the barrels held at 650 Scott Road; the order gave parties until August 3rd to abide by the latest order or absorb environmental cleanup costs. Should the parties not make the August 3rd deadline, the MOE would have grounds to proceed with the cleanup at the expense of the parties. As the June 4th deadline came and

went, Sarnia's MOE office forwarded the 'non-compliance' report to the Ministry's Investigative and Enforcement Branch, to determine whether or not to pursue charges.

Paid for jointly by then-INAC and Band funds, an independent environmental remediation company soon cleaned up the leaking barrels; however, the 650 Scott Road site continued to host some remaining toxic refuse. MOE hired a contractor to remove a total of 669 barrels, containing 25,000 kilograms of surface material (Bowen, 2004). An ongoing debate over payment for subsurface contamination ensued, with an estimated cost in the ballpark range of \$400,000. Finally, in December of that year, under the *Environmental Protection Act*, Leona Dombrowsky authorized Provincial staff to remove and safely dispose of the contaminants. Confusion around jurisdictional responsibility for on reserve contamination ensued. Consequently, in January of 2006, the Aamjiwnaang First Nation Health and Environment Committee under the Chairmanship of Ron Plain, and office of the Environmental Commissioner of Ontario, led by Gord Miller, met to clarify trans-jurisdictional responsibilities for this murky policy domain.

On January 26th, 2006, citizens of the Aamjiwnaang First Nation invited representatives from all levels of government in Canada – Municipal, Provincial and Federal – in addition to neighbouring residents of First Nations communities to attend a day-long policy meeting. Meeting notes from the Environmental Commissioner's Office outlined that words like 'jurisdiction' and 'border' are words with very specific meaning for government representatives. As such, this meeting would focus on ways to improve the resolution of environmental issues in the community without challenges to any department's legal authority, jurisdiction or mandates. In other words, the meeting examined ways in which things can be improved given the existing legal and regulatory framework (Office of the Environmental Commissioner of Ontario, 2006: 3). It was further noted that some jurisdictional issues were beyond the scope of the meeting, such as the Ontario Municipal Board decisions, annexations and land sales, in addition to the 'intricacies of contaminant effects', epidemiology and human health concerns.

The Aamjiwnaang Health and Environment Committee came forward with a long list of agenda items for discussion. These included:

1. On site contamination in sediments.
2. Concern over consuming local game, produce from gardens.
3. Chronic health issues.
4. Historical land transfers / OMB decision.
5. The Scott Road Barrel incident.
6. Levels of government and their roles.
7. Frequency and nature of spills and releases.
8. Sirens and the fear of the unknown.
9. Air quality data and monitoring.
10. Two-way communication.

Each of the ten items was discussed at length. Commissioner Miller noted that the Province of Ontario had previously demonstrated ‘creative use’ of its legislation to ensure public safety: for example, the Province’s use of emergency evacuation powers for northern communities under forest fire legislation to evacuate Kashechewan residents on the shores of Hudson Bay when it had a contaminated water problem (Office of the Environmental Commissioner of Ontario, 2006: 3). General concerns raised ranged from the issue that there was no inventory of contaminated sites on and adjacent to the reserve, toxins in Talfourd Creek – which originates in Provincial territory and flows through the reserve, accessing funding from the Treasury Board’s contamination clean-up fund (most designated sites are located in Canada’s north), plant operations that precede the Ministry of Environment’s legislative mandate which originated in 1974, possible contamination of traditional medicines and sweat lodge materials like cedar and stone, accessing up-to-date health records about the status of Aamjiwnaang citizens, a regulatory gap regarding hazardous waste on Federally-regulated lands such as First Nations territories, emergency response, fear and episodic events such as leaks, spills and ‘fugitive releases’, air quality monitoring, data and access, lack of MOE consideration of ‘ambient air quality’, and finally, lack of adequate consultation on emerging industrial expansions. These concerns are revealing of the community’s chronic and cumulative impacts spewing from their Chemical Valley neighbours, which underscore the opacity of ‘on-reserve environmental health’ policy. Each of these points illuminates the reality that while jurisdictional borders may be prevalent for this ‘policy ensemble’, ecosystems, naturally, transcend rigid demarcations.

As discussed in the previous section, Canada’s ‘division of powers’ makes issues around remediation of contamination and environmental health in general a multi-faceted

and difficult ‘policy ensemble’. In 2007, the Environmental Commissioner of Ontario commissioned environmental legal firm Ecojustice to produce a legal opinion on ‘Spills to First Nations Land’. The memo articulated that Federal legislation, under *Canadian Environmental Protection Act, 1999 (CEPA)* contains significant legal mechanisms that should ensure the clean-up of spills both on reserve and off-reserve where Provincial legislative regimes are either inapplicable or lacking in efficacy; tools under *CEPA* are rarely used effectively by the Federal government to ensure the First Nation lands get cleaned up (Ecojustice, 2007). The legal opinion stated:

Experience suggests that the Federal government is unwilling to apply CEPA to Provincial lands despite its ability to do so. Similarly, Ontario appears unwilling to seek avenues to apply Provincial regulation on reserve. This situation leaves First Nations in the conundrum that neither level of government will adequately ensure the clean-up of spills on reserve (Ecojustice, 2007: 3).

This legal formulation leaves First Nations communities with limited avenues for redress. According to Ecojustice, given this “less than ideal scenario”, the ultimate solution would require political will, whereby Ontario and the Federal government recognize the “inherent self-government of First Nations to manage their environments” (Ecojustice, 2007: 3). ‘Spills management regimes’ would thus be negotiated government-to-government (to reconcile legal regimes) in order to ensure protection of First Nation interests from spills on and off reserve lands. It is further significant to note that Aboriginal laws exist that deal with land and environmental management. Such laws, assuming they have not been extinguished over the years, currently co-exist and operate alongside legislative and common law systems (Ecojustice, 2007). Finding a way to reconcile these legal systems is mandated by section 35 of the *Constitution Act, 1982*.

Moreover, the ‘duty to consult’ Aboriginal peoples flows from the Crown’s fiduciary duty to seek reconciliation. The other option available to First Nations communities is to pursue litigation to ensure the clean-up of spills themselves which can be difficult with the limited access to resources. As discussed in Chapter 1, citizens of this First Nation are actively pursuing litigation at the time of writing. This is a challenge, as it assumes that First Nations have the capacity and resources to act against a large corporation and to confront the government. As I discuss in Chapter 7, responsibility for the policy ensemble of on-reserve environmental health remains in limbo.

Conclusion

The provision of health services to Canada's Status Indians living on reserve is a discretionary matter of public policy. As such, these relationships take place through a custom-designed, 'special' relationship existing between the Federal government and 'Indians' in Canada. It is not a legal requirement. This relationship stems from Constitutional and statutory provisions, treaties and customary practice. First Nations communities may articulate and voice their concerns for reproductive and environmental justice as they mobilize for recognition in such contested political space.

This chapter situated Aamjiwnaang's geopolitical location within the Canadian Constitution, Federal-Provincial division of powers and Chemical Valley. Chapters 4 and 5 sought to demonstrate how this community falls between the Constitutional cracks, lost in what Borrows refers to as 'legal limbo' (Borrows, 2002). As a result, communities with their bodies on the frontlines of these struggles mobilize for political action and change. This chapter brought together time and space to discuss the formation of Aamjiwnaang as a political place, to situate ongoing struggles for environmental and reproductive justice within the configurations of a biopolitical 'policy ensemble'. As the next chapter discusses, a place-based approach to political science and 'ecological citizenship' exposes the limits of governmentality and biopolitics. It forces us to rethink the meaning of citizenship in broad terms, and ecological citizenship in particular. I next discuss and distill some of the ways in which ecological citizenship's double-edge intersect biopolitics with place.

Chapter 6

**Digesting Place:
Ecological Citizenship's Double-Edge**



Photograph by: Laurence Butet-Roch, December 2010

Life at the Threshold

Indigenous citizens living in Aamjiwnaang dwell between the tireless task of managing environmental risk and practicing their way of life. As such, citizen actions mark the threshold of their existence; they are at once forced to reconcile with their ominous industrial neighbours while pursuing life free from contamination, caught between worlds. Citing Heidegger, Lorna Weir articulates that thresholds “mark the transition from inside to outside” and bear the “in-between”, of light and dark, truth and illusion (Weir, 2006: 1). Thresholds make relations possible, between people, in places. They mark entry and exit, and undergrid a sense of transience or liminality. Encircled by Canada’s Chemical Valley, citizens live here “in a bubble”, a geographic zone demarcated by their industrial neighbours and a complex policy ensemble governing on-reserve environmental health (Luginaah, Smith & Lockridge, 2010). For those struggling to make sense of this bubble, their home, everyday activism requires a heightened sense of commitment, mobilization and engagement to hold their industrial and government neighbours to account.

A biopolitical analysis sheds light on the lived-realities for citizens of Aamjiwnaang in this affective, toxic zone. As citizens mobilize to resist and confront this landscape, they face a dilemma: resist or appropriate responsibility for finding the answers to questions they have about their environmental health. From a ‘green governmentality’ lens, following Rutherford, responsibility for environmental management shifts away from the state to the population as “citizens are called up to take the mantle of saving the environment”, which allows for the management, self-regulation and surveillance of behaviour, laying claim to “the kind of subjectivity that those who are environmentally conscious wish to have”; consequently, the governing of such subjectivity “does little to address the neoliberal order which contributes to environmental problems” (Rutherford, 2007: 299). Through regimented, disciplinary activities, ‘good environmental citizens’ appropriate responsibility for mitigating environmental risk with limited systemic change. In Aamjiwnaang, daily practices in the ongoing struggles for environmental and reproductive justice – monitoring spills, documenting releases, conducting bucket brigades, body-mapping and bio-monitoring to

name a few – are practices of action-oriented activism. Simultaneously, they are struggles over power, of knowledge, revealing the dilemma, or double-edge of empowerment for these citizens seeking change to their surroundings and to their health. This is the paradox of ecological citizenship.

The everyday struggles for environmental and reproductive justice in Aamjiwnaang are double-edged. On one hand, actions can be interpreted as disciplinary practices of biopolitical power, where citizens adopt governmental responsibilities at arm's length from the state. On the other hand, the biopolitical subjectivity assumed by the green governmentality lens falls short when delving deeper into the articulation of a very specific, placed, corporeal and ecological harm that emerges in this distinct location.

Citizenship in Aamjiwnaang is practiced: it is simultaneously embodied and emplaced. As previous chapters demonstrated, the specific 'place' of this community comes into being genealogically over time, as a geographically configured struggle for justice, and bears witness to enacted and practiced forms of resistance. "Place" is a culturally specific concept, reflecting "community cohesion", which anchors the community's culture and history, while also "articulating a collective sense of responsibility for the well-being of members both within and surrounding the community" (Luginaah, Smith & Lockridge, 2010: 367). This understanding troubles the atomistic biopolitical subjectivity that a governmentality framework assumes by connecting these struggles to their specific social location. Place locates individuals as interconnected and embedded within their environments; individuals embody environments. Conceptualizing the double-edged place-based subjectivity of ecological citizenship troubles governmentality's grip on the autonomous political subject: distinct from one's non-human, inanimate world. The conception of ecological citizenship I put forward in this chapter is not a de-territorialized form of belonging; rather, it is local, rooted, embodied and emplaced.

Ecological citizenship is not a normative stance about how the world "ought to be"; it is not about how citizens "should" band together to form attachments and adopt duties to construct a better, more environmentally and socially-conscious world – although these ideals are admirable – ecological citizenship is an ontological stance. My interpretation of ecological citizenship builds from the ground up, as an inductive form of

analysis, generated from my empirical findings and articulations of Anishinaabe beliefs. I argue that ecological citizenship is a double-edged sword: at once binding citizens to disciplinary practices of biopower, and simultaneously articulating a radical form of belonging. Thus, simply reading through this case with a governmentality lens as a problem of “green governmentality”, “environmental governmentality”, or “ecopolitics”, where citizens become disciplined to absorb the virtues of good, responsible citizenship in a climate of state reduction would be too simple (Darier, 1996, Luke, 1997, Rutherford, 2007).¹²⁷ Instead, I contend that the emergence of embodied and emplaced citizenship troubles disciplinary subjectivity and forces us to radically rethink the meaning of citizenship itself.

Citizenship debates that examine the politics at stake in the threshold between public and private life, between human and the non-human worlds, interest feminist scholarship for several reasons. As Sharilyn MacGregor aptly notes, and as elaborated upon in Chapter 1 of this dissertation, citizenship is a deeply gendered concept (2006: 5). Furthermore, in the context of a declining welfare state and a period of neoliberal economic and political restructuring, the activities assumed by the ‘private’ realm have particular meaning for the labour practices of women. It is also notable that women tend to be at the forefront of many environmental and reproductive justice movements. With respect to Aamjiwnaang, Ada Lockridge’s experience as an active, voluntary, unpaid activist for her community in this regard is exemplary. Moreover, citizenship is inextricably linked to debates about identity and the performative dimensions of gender (MacGregor, 2006: 6). There is no singular coherent vein of feminist, ecofeminist or ecological approach to citizenship; however, it is undeniable that the meaning of citizenship in theory and practice has a lengthy and gendered genealogy.

¹²⁷ Sharilyn MacGregor in *Beyond Mothering Earth* highlights three trends in contemporary green theory approaches to ecological citizenship: first, calls for sustainability and the communitarian “greening of citizenship”; second, citizenship as a kind of practice of “ecological stewardship”; finally third, as “earth citizens in global society” (2006: 84-96). Her feminist critique of this literature astutely highlights the subjectivity of a gender-neutral citizen embedded within this scholarship. In addition to her well-articulated criticisms, I would also add that the absence of ‘place’ in green citizen claims-making in this literature is notable, heralding an atomistic yet globalized ethics for environmental citizens, and emphasizing changes to ‘lifestyle choices’ as a precondition for agency in the public sphere. A placed-account of ecological citizenship accentuates the limits of this model for ‘active participation’ in both private and public realms.

Ecological politics, feminism and citizenship intersect with struggles for environmental and reproductive justice. Following MacGregor, a project of ‘feminist ecological citizenship’ considers the merits of a political approach to citizenship that engages with non-essentialist and democratic dimensions of political life (2006: 6). While this dissertation is not centred upon debates within ecofeminism, I share MacGregor’s call to think politically about the gendered conditions of political life itself, and the need to re-imagine relationships between the human and non-human world, which are an inherent feature of struggles for environmental and reproductive justice. A feminist approach to ecological citizenship does not relegate reproductive or ecological politics to the private sphere; rather, as I discuss in Chapter 7, it forces us to interrogate the politics involved in demarcating between the private and public realm, and prompts us to look critically at the gendered dimensions of the public arena where struggles for knowledge and power take place. Mindful of MacGregor’s critique of ‘experiential reductionism’ in feminist thought broadly, and ecofeminist thought in particular, I share her interdisciplinary wariness towards essentialism, informed by postmodern feminism, which calls for an interrogation of both private and public identities, and evokes caution towards fetishizing or essentializing grassroots movements, agency and authority (2006: 8). For these reasons, it is imperative that a feminist and interpretive approach to ecological citizenship examines discursive and material conditions for public political life in equal measure. Furthermore, a critical ecofeminist approach has much to offer the study of citizenship in Canada.

Situating Citizenship in Canada

Scholarly debates within the field of contemporary Canadian citizenship studies predominantly centre upon belonging and how to best bring people into the nation, within the rubric of liberal state theory. Some scholars discuss citizenship as a unifying concept to maintain attachment to the state; others worry about the decline of the social welfare state, others still see emergent spaces as opportunity structures for citizen claims in an increasingly devolved neoliberal world. Green theory and environmental justice debates intersect with these discussions about state-society relations and responsibilities for

ecological management. Environmental debates about responsible practices of ethical stewardship emphasize rights, duties and responsibilities in a democratic welfare state. In the next section, I will contextualize these debates to distinguish between environmental citizenship and how I understand, articulate and conceptualize ecological citizenship based on my research findings. I discuss the double-edged character of ecological citizenship, as that which simultaneously co-opts and empowers citizens in Aamjiwnaang, and thus seek to interrupt a biopolitical grip on subjectivity with place.

Canadian scholars hail Canada as one of the most open-minded, hospitable, inclusive, tolerant and even ‘post-modern’ societies in the world (Ignatieff, 2009; Kymlicka, 2004; Kymlicka, 1995; Kymlicka, 1989; Simeon, 2004; Taylor, 1994). A more critical account contends that in a so-called ‘post-modern’ society, oppressions and violence are increasingly subtle and invisible, taking shape through a “fluid confluence of politics, economics, psychology and culture” (Alfred, 2005: 30). Most debates about Canadian citizenship assume the primacy of inclusiveness and coherence without problematizing the more subtle and informal forms of internal exclusions taking shape from the ground up.

Liberal approaches to Canadian citizenship seek to bring outsiders in. Renowned Canadian scholars envision accommodating difference through ‘building-in’ mechanisms, focusing on the ‘ties that bind’ citizens together (Banting, Courchene, & Seidle, 2007; Cairns, 2000; Kymlicka, 2004; McRoberts, 1997). Prolific diversity scholar Will Kymlicka highlights how in light of Canada’s 130-plus years of existence, we have built a prosperous, tolerant, peaceful, free and democratic society with one of the most ethnoculturally diverse countries in the world (Kymlicka, 2004). Specifically, regarding the place of Indigenous peoples, he claims that: “there is no Western country in which Indigenous peoples have achieved a more prominent political status” (Kymlicka, 2004: 1). From a liberal-democratic theory framework, accommodating, tolerating or respecting difference does not require alternative governance mechanisms; elastic Canadian institutions are equipped to recognize the needs of minorities.

Despite minor modifications, this suggests that our institutions offer an ideal forum to accommodate minorities, including Indigenous peoples. Kymlicka acknowledges that the dialectic between the nation-state and minorities differs between

the experience of immigrants and Indigenous peoples; however, he maintains a hopeful stance, committed to Canadian democracy and suggests that the “package of nation-state building and minority rights that we see emerging in many Western democracies is better than our earlier approaches to ethnocultural diversity, and better than the apparent alternatives” (2001: 3). Such an approach to citizenship and accommodating difference places a high degree of importance on the malleability of formal-institutional structures. Counter to this optimistic poise, as my research demonstrates, there are cracks and gaps within our institutions that impact minority communities on the ground, and challenge our existing democratic institutions. A focus on community experience accentuates these failings. Kymlicka does acknowledge the gap between liberal democratic theory and practices of minority rights (2001: 4). While I differ from Kymlicka’s desire to ‘save’ our institutions, I share his argument that political theorists need to bear in mind the façade of institutional ethnocultural neutrality. Moreover, there is also a gap between democratic theory and the impacts of our constitutional configurations for communities fighting for justice. His reflections on Indigenous rights and environmental justice begin to bridge this gulf (2001: 134). Going further, examining grassroots practices grabs abstract democratic theory by the throat and grounds it within the minutiae of everyday life.

Approaches to Canadian and Indigenous politics with a liberal orientation emphasize commonalities across political space. Some scholars contend that creating attachments to the state through civic entitlements is the best way to construct communities of belonging (Cairns, 2000; Flanagan, 2000). By extending civic rights and responsibilities, a “Citizens Plus” vision of Canadian citizenship can be understood as an alternative to assimilation, while respecting difference (Cairns, 2000: 61). Critical of a “nation-to-nation approach” outlined in the Royal Commission on Aboriginal Peoples (RCAP), several scholars within this paradigm begin with a foundation upon a liberal individual ontology of the self. These approaches are concerned with the “oneness” of the Canadian nation (Cairns, 2000: 200). Flanagan goes so far as to call the RCAP a “stop-sign for human progress”, pursuant of an “Aboriginal orthodoxy” (2000: 194). To take a step forward, Cairns resurrects a pre-1969 *White Paper* policy document, the *Hawthorn Report*, and offers instead the “Citizens Plus” model for viewing Canadian and Indigenous relations (2000). This vision seeks to mediate between collective and

individual identities without forcing Canada to be a “container for international nations” (Cairns, 2000: 199). According to Cairns, a coherent and unified nation requires Indigenous peoples to maintain special rights while respecting individual responsibilities and obligations to fellow Canadian citizens through civic duties. He contends that RCAP’s ‘nation-to-nation’ version would weaken the idea of common citizenship.

Aligned with Flanagan, Cairns’ vision for the accommodation of Indigenous citizenship in Canada draws upon a civic form of Western possessive individualism. This prevails in Cairns’ criticism of the “treaty federalism” model, which he argues would offer a view of Canada as a multinational polity, and consequently would only reduce “our feelings of responsibility for each other and our willingness to share” (Cairns, 2000: 7; Ladner, 2003). The “Citizens Plus” model operates within a discourse of individual rights. It seeks to bring Indigenous peoples fully into the category of Canadian citizens. In addition to the “normal rights and duties of citizenship, *Indians* possess certain additional rights as Charter members of the Canadian community” [emphasis added] (Cairns, 2000: 162). This language of ‘individual rights’ does not necessarily mitigate the claims for Indigenous communities seeking to be recognized as sovereign nations; and thus, the ‘Citizens Plus’ model does not move beyond an assimilative vision of Canada’s treatment of Indigenous peoples. The language of citizenship itself, attached to a set of individual rights, may perpetuate the pitfalls of present-day colonial Canada.

Institutional approaches to the study of citizenship articulate hope about the capacity for Canada’s structural configurations to recognize and accommodate diverse multinational claims. Along these lines, Papillon expresses optimism about the opportunities for Indigenous peoples within the Canadian federation. He suggests that federalism itself does not cause the exclusion of Aboriginal people; rather, the historical expression of federalism is to blame (Papillon, 2009). Although he concedes that federalism may constitute a barrier to Aboriginal autonomy, in principle, federalism brings together ‘self-governance’ and ‘shared government’ to offer a promising framework that translates these claims for self-determination into Canadian institutions (2009). Moreover, he contends: “Federalism should not be seen as a solution to Constitutional disagreements but as a process through which such agreements can be managed in a democratic way” (Papillon, 2008: 125). From this perspective, federalism

is more than a set of institutions but also an idea. He gives federalism a societal lens, and suggests that federal principles, combining autonomy and shared governance, offer a promising conceptual framework for the self-determination claims of Aboriginal peoples (2008, 2009). Therefore, federalism is not an obstacle for inclusion into Canadian society, but an opportunity structure to accommodate a plurality of national groups.

A societal approach to federalism – comprised of both institutions and ideas – focuses our attention outside the formal parameters of institutional configurations into the practical realm of public policy. Papillon states that while we are not in a ‘post-colonial’ arrangement, there are nonetheless important developments occurring across the political landscape in the “realm of everyday governance within Aboriginal nations and communities” meriting political investigation, which also appear through “interactions between Aboriginal, Provincial and Federal governments in the design and implementation of public policy” (2009: 406). This institutional lens draws into focus the dynamic, shifting relationships between communities and Constitutional configurations.

This malleable discussion of federalism takes us in two directions: one, towards ‘executive federalism’, another, towards ‘daily governance’. Papillon argues that an “executive-centred model of shared governance, through co-management bodies and intergovernmental relations” emerges as Aboriginal nations have a seat at the negotiating table for their political, economic and social rights (2009: 422). Though not a perfect process, Papillon draws upon the *Paix des Braves*’ experience to highlight the successes of this community in adopting an executive bilateral and trilateral model for shared governance to achieve its aims. Papillon is hopeful about the promise of this quasi-federal model of political power bubbling up from below into the orbit of Canadian federalism.

The aforementioned *practices* of community-institutional encounters can also be understood in terms of *partnerships*. According to Papillon, aligned with current neoliberal governance trends, Federal and Provincial governments embrace a new partnership vision of the state, which shapes the state’s relationship with Aboriginal peoples. He suggests that one key outcome of this shift is that Aboriginal policy-making has become increasingly multilevel, which reflects on the one hand a weakened central state, and on the other hand, a reproduction of governance through more (in)voluntary means, akin to Foucault’s governmentality (Papillon, 2012). Despite this paradox,

Papillon suggests that this new governance comprises creative spaces or scales, where Aboriginal peoples have more control over their own resources, claims and identities (2012). As such, they are not passive victims, but active agents, with the capacity to manoeuvre through Canada's federalism matrix. On this point, we slightly diverge.

Papillon suggests that the new multilevel reality achieved by the *James Bay Northern Québec Agreement* is best illustrated by negotiation between the *Paix des Braves* and the Quebec government. He articulates a “double dynamic” for Aboriginal citizens seeking self-determination: “le néolibéralisme, associé à un État plus fragmenté et décentralisé, peut aussi ouvrir la porte à un mode de gouvernance en rupture avec le modèle universaliste et uniformisant associé au régime de citoyenneté libéral classique” (2012: 2). Federalism, and multi-level-governance arrangements thus create opportunity structures, or spaces for Aboriginal peoples to articulate and leverage their claims according to rules defined in their own terms. Papillon acknowledges citizenship's double-edge, as simultaneously empowering and oppressive: “la citoyenneté est aussi, pour les Peuples autochtones, perçue comme un outil d'oppression et de domination” (2012: 3). Here is where we differ: he maintains a position on the hopeful side of the coin, wherein Canada's institutional parameters in these re-defined neoliberal spaces offer potential for emancipatory maneuverability. While emergent spaces and tactics may operate within an opportunity structure for Aboriginal peoples at macro and meso scales, this account conflates executive legitimacy with the diversity of community perspectives and experiences at the micro level, on the ground.

Conceptualizing interactions within Canada's institutional federalism matrix as a *practice* here remains at the formal, institutional realm of political life. Akin to visiting a “good dentist” to re-tool the configurations that respond to and reflect our multinational citizenry, Papillon offers federalism as a “mechanism to acknowledge competing views of the polity and manage the Constitutional frictions they create democratically” (2008: 137). While he highlights the executive approach for Aboriginal peoples, the analysis reads as unfinished with respect to the informal realm of “daily governance”. In this regard, the discussion of federalism “from below” ends within the institutional dimensions of executive Aboriginal leadership – it eclipses community-level experiences.

While his analysis of federalism may be “from below”, it certainly is not one rooted in the daily experiential practices of governance at the local, community level.¹²⁸

This account treats federalism as an institutional and value-filled framework for cooperation. Aligned with Tully, Papillon suggests that we should conceptualize federalism as a “normative framework to facilitate the constant negotiation and struggle over the definition of communities” (Papillon, 2008: 137, Tully, 1995). Approaching federalism in this way to recognize distinct identities for various groups internal to the federation does enable an opening to re-configure Canada’s formal arrangements; however, analytically, liberal and institutional approaches alike remain fixed to structural scales of political inquiry without substantive regard for the lived-experiences outside of these formal sites.¹²⁹ Thus, the layering analysis for multiple federalisms within Canada’s political community begins and ends within institutional parameters.

Taking a different turn, post-colonial scholars attempt to trouble Canada’s colonial grip on Indigenous citizenship. This is a critical approach that seeks to disrupt mainstream Western thinking that propels seemingly subtle oppressions apparent in our modern structures and discourses. This approach stems from the assertion that Western colonialism unevenly impacts peoples, cultures and places. Post-colonial scholarship examines the residual effects and persistence of colonialism in the present, and strives to think of ways to move beyond social, economic and political oppression in pursuit of mutual recognition and respect. Such approaches emphasize the multi-national and plural dimensions of citizenship and seek to identify the conditions enabling or constraining justice and participation in civil life, including the ability to self-govern.

¹²⁸ A caveat: Papillon & Jenson discuss significant challenges that the James Bay Cree posed to the Canadian political landscape and Canada’s citizenship regimes in “Challenging the Citizenship Regime: The James Bay Cree and Transnational Action”, *Politics & Society*. 2000. 28(2): 245-264 and elaborated upon at length in Papillon’s doctoral dissertation (2008). *Federalism From Below? The Emergence of Aboriginal Multilevel Governance in Canada: A Comparison of The James Bay Crees and Kahnawá:ke Mohawks*. While rich and rooted in practices of political engagement, they remain at the macro (state) and meso (executive Aboriginal) level, conflating community-based lived-experience at the micro (local) level. As such, this analysis scales up without scaling down, providing an incomplete account of governmentality’s effects on the ground.

¹²⁹ For a comprehensive critique of ‘recognition’ in political thought and practice, see Glen Coulthard in “Subjects of Empire: Indigenous Peoples and the ‘Politics of Recognition in Canada”, pp. 31-50, in *Home and Native Land: Unsettling Multiculturalism in Canada*, M. Chazan et al., eds. Toronto: Between the Lines.

Colonialism within this framework is not seen as a dead artifact of the past; rather, it springs with life and impacts people's everyday experiences. Post-colonial approaches to the study of Canadian politics examine the persisting manifestations of colonization in order to critique and expose some of the hypocrisies or fallacies of national identity. This has particular resonance for Canada's Indigenous peoples. Scholars within this orientation to the study of Canadian diversity, recognition and accommodation of Indigenous peoples go a step further than liberal state or institutional approaches to question the nature of state sovereignty itself. This questioning opens up space to imagine the possibilities of re-negotiating Canada's sovereign authority and seeks to bring in a multiplicity of perspectives and voices into the (re)making of Canada.

In general terms, post-colonialism is a hopeful discourse. It aims to move towards progressive social and institutional working relationships with marginalized members of society in pursuit of living in a time of peaceful co-existing relationships in a decolonial world. According to James Tully, in contrast to a modern Constitutional politics that seeks to impose uniformity in the name of unity and power, the way forward for Canadian-Indigenous relations is through 'strange multiplicity' and Constitutional dialogue (Tully, 1995). Tully argues that we can take the metaphor of a vessel, namely Bill Reid's *The Spirit of Haida Gwaii*, as a way to think about bringing in a multiplicity of needs into a Constitutional conversation. Tully introduces the concept of a 'multilogue' as representative of a respectful and reflective disequilibrium. This refers to an ability to change perspectives, to see and understand aspectively, which takes place through participation in intercultural dialogue (Tully, 1995: 24-25). In contrast to Cairns' concern about two societies traveling in separate vessels down the river of life, sharing the same river but not interfering with each other's choice of direction, Tully offers a different vision (1995; 2000). He puts multiple nations within the same vessel:

As you walk around the canoe you soon realize that it is impossible to take it in from one comprehensive viewpoint. It defies this form of representation. Rather, you are drawn to see it from the perspective of one passenger after another, and their complicated interrelations guide you to see the whole now under one aspect, now under another. Since recognition is never definitive, the particular Constitutional arrangement of the members of the canoe is presumably not meant to be fixed once and for all. Constitutional recognition and association change over time, as the canoe progresses and the members change in various ways. A Constitution is more like an endless series of contracts and agreements, reached by periodical intercultural dialogues, rather than an original contract in the distant past, an ideal speech-situation today, or a mythic unity of the community in liberal and nationalist Constitutionalism (Tully, 1995: 24).

By listening to the many stories others tell, and providing stories in turn, Tully argues that participants in a ‘multilogue’ come to see common interwoven histories together from a multiplicity of paths. Recognition of a particular narrative or identity is not meant to be definitive to a particular Constitutional arrangement; rather, membership of the canoe is not meant to be fixed once and for all. This post-colonial account aligns with liberal state theory, as it maintains an optimistic position on developing accommodating and respectful relations among diverse citizens within Canada’s institutional framework.

There is no ‘one’ post-colonial voice in Canadian political thought. Not all scholars support Constitutional malleability, or find the existing governance structure within the modern legislative framework of state authority sufficient for authentic post-colonial relations. Indigenous scholar Taiaiake Alfred argues that Canadian sovereignty does not work for Indigenous peoples; the formal institutional terrain insufficiently accommodates difference (2009). Aligned with Tully in many respects, Alfred argues that the future of Canadian-Aboriginal relations does not lie within a fixed vision of a unified nation-state; yet, he goes further to contend that the future of Canadian-Indigenous relations requires a return to spiritual and ancestral teachings, outside Canada’s institutional confines. Canadian sovereignty, according to Alfred, produces a patronizing, false altruism, which forces Indigenous peoples to live as co-opted artefacts (Alfred, 2009). Thus the state, he argues, will not and cannot accommodate Indigeneity, no matter how pliable. This ontological stance fundamentally challenges liberal and institutional conceptions of citizenship.

A critical approach to citizenship also highlights the patriarchal formulation of ‘Indian’ citizenship. Constitutional struggles for recognition have particular resonance for Indigenous women. It is significant to note that Canadian citizenship has, and continues to be a gendered concept.¹³⁰ Feminist approaches to post-colonial thought bring in

¹³⁰ A chronological analysis of the *Indian Act* reveals some of the discursive practices that have shaped access to citizenship rights for Indigenous women in Canada. To decode the ways in which these practices shape perceptions of Indigenous women, citizenship and nationhood, Jo-Anne Fiske argues that the *Indian Act* was a sexist, patriarchal document that stripped Aboriginal women of their place in their communities (Fiske, 2008). It was not until an amendment to this Act in 1985 that women who married non-status men could retain their Indigenous status; however, at the same time, they lost their right to collective property. The control over status itself remained, and still remains under the authority of the federal government. As an alternative, Fiske argues for sororeal citizenship, where women's reproductive roles can be conceptualized at the centre of society, and an identity and membership grounded in relationships of mutual respect and responsibility constituted through women united through kinship and social ties (Fiske, 2008).

questions of gender to the study of Canadian citizenship and politics. Furthermore, an intersectional feminist post-colonial approach invites scholars to think critically about the interacting ways in which Canadian citizenship broadly, and Indigenous citizenship specifically, continues to be shaped by race, class and gender (Hankivsky & Christofferson, 2008). The *Indian Act* and subsequent struggles for recognition affect Indigenous women in particular ways. In addition to post-colonial and feminist approaches to citizenship studies in Canada, a third critical approach examines state-society changes and the impacts of a withering state upon communities.

Much of political economy scholarship in Canada highlights a concern with changes to the Canadian social welfare state. Several scholars contend that in an advanced state of neoliberalism, we are in a time of social decline and the rise of individualism (Brodie, 2002; MacDonald, 2011; Rose, 1996; Slowey, 2000, Smith, 2007).¹³¹ Those aligned with this approach emphasize the social and economic dimensions of citizenship, and examine relationships between, and impacts of neoliberalism and globalization on the changing nature of citizenship. As MacDonald argues, drawing from the example of child welfare devolution in Manitoba, a ‘Neoliberal Aboriginal Governance’ order is emerging, as a strategy for state-crafted responses to Indigenous demands (2011: 257). This neoliberal order gives way to the rise of privatization within liberal democratic states.

Neoliberal governance impacts Canadian-Indigenous relationships. This “ever-shifting context” has implications for Indigenous citizenship (MacDonald, 2011: 260). According to Brodie, citizenship entitlements evolved from a ‘post-war legal-based’ framework, towards a ‘rights-based’ framework that peaked in the 1960s, and as of the 1980s, we have entered a period of ‘neoliberal governance’ (Brodie, 2002). She criticizes the neoliberal paradigm for ‘hollowing out’ citizenship rights, and the movement from state protection and the promotion of welfare to a citizenship model based on individual

This social praxis requires re-imagining citizenship from the perspective of caregivers vis-à-vis consumers. In effect, Fiske argues that we need to respect the right ‘to be’ a citizen other than as a market consumer and producer. This language making citizens into ‘producers and consumers’ is also a concern for scholars who centre their analyses upon a decline of the welfare state and the formation of an increasingly hollow state.

¹³¹ Though it must be noted that perspectives range on the promises and perils of neoliberalism within this approach. For example, whereas MacDonald is wary of neoliberalism, Slowey, aligned with Papillon in many respects, highlights some opportunities for devolution and community self-government.

responsibility. Some of the welfare state debates about citizenship demonstrate how citizens become reframed into consumers following decades of neoliberal political ideologies, programs and initiatives. A new ‘citizenship regime’ in an era of neoliberal governance thus includes the privileged position of private authority to the detriment of state-sanctioned programs (Brodie, 2002; Jenson, 1997; Jenson & Phillips, 1996). Emerging relations between the state, market and society produce an ‘interesting time’, witness to the transfer in authority for health and environmental policies away from the state towards communities (Jenson, 1997). These approaches begin to turn our focus away from the state, towards communities. This shift comes to light with respect to citizens’ experiences in Chemical Valley, as communities increasingly take on an active role in shaping their health and environment, and monitor their own risks, with limited state intervention.

Ecological Citizenship’s Double Edge

At first blush, it appears evident that the practices of self-management in Aamjiwnaang – from monitoring spills, calling 1-800 lines, conducting bucket brigades, bio-monitoring and body-mapping – demonstrate a hands-off approach by state authorities for ongoing contamination. Amidst this limited state role, citizens pick up responsibilities for environmental and reproductive health in their struggle for recognition, redress and justice. A biopolitical analysis highlights some implications of these practices for citizenship, justice and ultimately as I will discuss in Chapter 7, democracy. Concerned with the impact of disciplinary biopolitical subjectivity on citizenship, a governmentality lens applied to these practices of responsible environmental management and self-care sheds light on the ways in which citizens become disciplined into technologies of rule as a kind of ‘environmental governmentality’ or ‘green governmentality’ (Rutherford, 2007, Darier, 1996). When coupled with biopower, governmentality as a mode, art or mentality of rule, illuminates some of the ways in which citizens in Aamjiwnaang struggling for environmental and reproductive justice mobilize with their bodies on the frontlines. This mobilization, I have argued, can be understood as a practice, and a kind of engagement or activity that prompts a rethinking of citizenship.

While I find a governmentality frame insightful to conceptualize the contemporary manifestation of biopower and biopolitics in these struggles, it would be incomplete to simply replace ‘bio’politics with ‘eco’politics, to replace biopolitical subjectivity with ecopolitical subjectivity. Citizen attachment to this place troubles or challenges the individual agency presumed by this frame. As such, ‘place’ serves as a conceptual wedge, to problematize governmentality and biopower in these struggles. In my view, justice, thus, requires making space for place within citizenship studies conceptually and in practice. Chapter 7 returns to the normative dimensions of justice.

The operation of biopolitics takes shape through official policies and power ensembles, as well as on the ground, experienced by citizens. At once a population-maximizing strategy and individual-management technology, state biopower thus requires communities and individuals to manage human and non-human life simultaneously across macro, meso and micro scales, from (inter)national to local levels. In Aamjiwnaang, as citizens mobilize their bodies through practices such as bio-monitoring, bucket brigades and body-mapping to better understand the relationship between their human and non-human life, to protect their health and environment, we glimpse how life and land become objects for governance and administration. In this respect, citizens perform a kind of ‘active citizenship’ to maintain stewardship over their bodies and lands. As the concluding chapter discusses, without transformative policy change, this active form of responsible and disciplinary citizenship leaves systemic injustices intact. Thus, new thinking about citizenship as not only embodied and corporeal but also rooted in the ecology of place is imperative. Rather than thinking about biopolitical citizenship in purely instrumentalist terms, as a kind of appropriation of ‘green governmentality’ the lived-experiences coupled with the ontological rootedness in place challenges an individualistic approach (Darier, 1996; Rutherford, 2007). It is this tension that I bring to bear upon the distinction I make between ‘green governmentality’ and ‘ecological citizenship’.

Chapter 1 discussed citizenship as a concept highly imbued with dualistic meaning. From demarcating between ‘mind/body’, ‘male/female’, ‘reason/emotion’, ‘public/private’, citizenship has always marked the inside/outside of political life. Such binaristic delineations feature prominently in contemporary green theory and

environmental citizenship literature. Following Gabrielson & Parady, much of current green theory emphasizes Western, Eurocentric notions of ‘stewardship’, ‘duties’, and ‘obligations’, and give “epistemological privilege” to citizen responsibilities *for* nature as a kind of body-blind “ecological enlightenment” (2010: 376-379; Barry, 1999, 2002, Dobson, 2003). These conceptual configurations disembodify citizens *from* their environment. Calling for corporeal citizenship, Gabrielson & Parady seek to theorize a more inclusive version of citizenship that “allows for greater recognition of the diverse attachments individuals have to the natural world and better attends to claims of recognition and social justice” (2010: 376). As both a feminist and environmentalist formulation, such a theorization calls for greater attention to bodily and material dimensions of citizenship. Not only is this conception of corporeal citizenship embodied and attentive to the particularities of human difference, it also recognizes humans’ “inescapable embeddedness in differing social (discursive and material) contexts that shape subjectivity and consider our collective agency” (Gabrielson & Parady, 2010: 376). Bridging corporeal feminism and green theory, a connected form of citizenship troubles the aforementioned binaries and creates some epistemological cracks for rethinking the ontology of citizenship as inherently ecological rather than instrumentally ecological, and gestures towards more radical avenues for environmental and reproductive justice.

Lifestyle practices, choices and responsibilities are at the gut of ecological citizenship’s double-edge. In large part, “green agency” is conceptualized as an “individualistic commitment to take rational control over the body and the private sphere through ‘green lifestyle’” initiatives such as recycling, waste-management and community clean-up (Gabrielson & Parady, 2010: 383). From a Foucauldian frame, we might think of citizenship as just another way to discipline citizens, or to absolve the state from its responsibilities to care for those most vulnerable at the margins of society. Conversely, a radically different ontological view of ecological citizenship considers agency to be embodied and emplaced, situated and intersectional.

Citizenship is janus-faced: it simultaneously serves to define and demarcate populations in addition to offering up a radical mode of belonging. Thus, citizenship as both a community and government-led strategy is “simultaneously coercive and empowering” (Cruikshank, 1999; MacGregor & Szerszynski: 2003, 7). Citizens are

embedded within power relations. As Barbara Cruikshank states: “the citizen is an effect and an instrument of political power rather than simply a participant in politics” (1999: 5). Citizens are both constituted by power and agents with power. Following Rutherford, ecological citizenship can be read as fundamental to the “production of regimes of governmentality that create the conditions of possibility” for citizens governing themselves, bodies and environments (Rutherford, 2007: 298). Ecological management of health and habitat operates at the fulcrum of power/knowledge subjectivity.

Ecological citizenship’s double-edge becomes most apparent when considering not only citizen practices in Aamjiwnaang, but also ontological perceptions of place, which Chapter 3 highlights. On one hand, the ongoing activities and practices in Aamjiwnaang reveal ‘active citizenship’ where citizens become self-disciplined subjects as environmentally catastrophic first responders and health experts at arm’s length from the state. In this respect, they become vehicles for the operationalization of governmental power. With limited state intervention, citizens assume the responsibility for bodily and environmental management. Consequently, “this allows for the management, self-surveillance, and regulation of behaviour in such a way that lays claim to the kind of subjectivity that those who are environmentally conscious wish to have” which does little to resist the governing political regime (Rutherford, 2007: 299). On the other hand, citizens in this community articulate a radically novel form of belonging that is both corporeal and territorial: it is rooted in place-specificity. This is thus the dilemma of ecological citizenship: as simultaneously coercive and empowering. Citizens at once appropriate and contest a kind of eco-political subjectivity.

Preceding chapters examined the struggles for environmental and reproductive justice from an interpretive lens, inspired by Foucault’s concepts of governmentality and biopower. Beginning with people – citizens – and their lived-experiences, subsequent chapters focused on the ways in which knowledge intersects with power relations, intertwined within a ‘policy ensemble’ for on-reserve environmental health. By examining people’s struggles for knowledge and power, my analysis illuminated citizen concerns and practices as at once individual, responsible practices of self-discipline and embedded within larger structural and discursive socio-political forces shaping and constraining their freedom and agency. My aim in beginning with experiential elements

was to highlight the significance of this place, of social location, to their values, beliefs and sense of belonging. I contend that this connection to place problematizes the individualizing logic of governmentality and biopower. It further troubles conceptions of ‘ecological citizenship’ as a global, trans-national and fluid ever-shifting force (Barry, 1999, 2002; Dobson, 2003). Rather, I argue that drawing from struggles in Aamjiwnaang, ecological citizenship is placed, particular and specific.

The logic of governmentality and biopower assume a hyperactive subjectivity and atomistic individualism from citizens. In this frame, “neurotic” citizens exist in a constant state of alert, and must change their behaviour to be an environmentally responsible steward and thus, good environmental citizen (Hindess, 2004: 305; Isin, 2004). There is an assumption that individuals will manage their lifestyles and livelihoods in the private sphere. Consequently, citizens struggle for recognition by the state at the margins of society (Isin, 2002). However, there are some limitations in thinking about the neoliberal biopolitical subjectivity of citizens. I thus seek to think differently about Indigenous citizenship by considering a radically different form of ecological citizenship.

A biopolitical approach to citizenship simultaneously examines individual responsibility and broader structural and discursive socio-political forces. Citizenship as a concept imbued with meaning makes a claim on political life. Following Cruikshank: “citizens are not born, they are made” (1999: 3). As citizens mark the inside/outside of democracy, a biopolitical lens interrogates how lines are drawn in making the distinction between public and private life to expose, critique and disrupt the ways in which “democratic modes of government entail power relationship that are both voluntary and coercive” (1999: 3). The biopolitical lens offered in this dissertation draws into focus how in participatory and democratic societies and schemes, technologies of citizenship operate according to a certain political rationality. As such, citizens are both effects and instruments of political power.

Classic citizenship theory and contemporary neoliberal practices of privatization each relegate corporeal activities to the private, bodily realm as an object of rule. Cruikshank picks up Mouffe & Laclau’s discussion of “radical democracy”, wherein emergent social movements interrogate, and potentially dissolve the public/private distinction in political life (1999: 6). As is the case in Aamjiwnaang, translating these

concerns into the public arena poses both a hindrance and an opportunity for citizen claims. With respect to the Lambton Community Health Study, struggles for reproductive justice led to the formation of a County-wide health study; however, the unique concerns of this community remained unaddressed, thus, exposing the limitations of deliberative public policy in this instance. While the Lambton Community Health Study enlisted public participation, it neither led to actually carrying out a health study nor responding to Aamjiwnaang's concerns. Transformative change therefore requires some kind of political translation from the private to public domain, beyond merely bringing citizens 'in' to political processes.

As I will conclude in Chapter 7, while citizen agency and resistance begins with bodily practices, a radically reformed public arena that makes space for participatory and placed expertise is equally significant. Demanding or assuming that citizens must make lifestyle changes is not enough to mitigate struggles for environmental and reproductive justice. Calling citizens into participatory public forums as engaged and active volunteers is insufficient for radical political engagement. Placing the onus upon individual citizens to acquire knowledge about environmental and reproductive health harms does not meet the needs for broader social justice concerns that extend beyond individual autonomy, and serves to justify a limited public role. Thus, attention to the relationship between individuals and broader public socio-political configurations is important. Shifting attention away from individual ir/responsibility towards systemic injustice flips the gaze back upon the formal political realm. To address the root causes of systemic reproductive and environmental injustice, change requires both a blurring of the public/private divide and a shift from private practices towards public transformation and place consciousness. This does not mean shifting 'active citizenship' from the private to public arena, but rather re-tooling the public arena itself to carve out space for subjugated knowledges at the interstices of the public/private split.

Confronting Biopolitics with Place

Ecological citizenship's janus-face hitches citizens to state power at arm's length while carving out space for emergent practices that challenge biopower and biopolitical

subjectivity. On one hand, according to governmentality's liberal logic – or more specifically, 'green governmentality' when applied to environmental politics – values of management, stewardship and self-care, citizen behaviour becomes operationalized to pick up state slack; on the other, the site-specific practices in Aamjiwnaang reveal a radical form of belonging. Such is the dilemma for citizens caught within the Constitutional cracks for environmental and reproductive justice. While concerned with these ongoing struggles, I wish to be clear that I am not imposing a story about victimization; rather, there is much potential in drawing from the practices of everyday life in Aamjiwnaang to re-tool citizenship for socially just ends.

Such re-tooling situates citizen claims, articulations and enactments where power takes place. Rather than offering a monolithic governmentality study of environmental and reproductive justice, a geographical focus on place-based identity offers an opportunity to nuance governmentality (Rutherford, 2007: 303). In this vein, my place-based intervention on governmentality and biopolitical subjectivity takes a specific focus on the social location of Aamjiwnaang. The location of the Aamjiwnaang reserve, a unique, geographical site, produces meanings, which reveal 'place' through the daily activities of its citizenry. Interpretations of meanings about environments, or spaces, create certain understandings. Health geography literature distinguishes between space and place to suggest that space refers to a physical location, while place refers to the symbolic and interpretive meanings that emanate from individual and collective relationships to a space (Gattrell & Elliot, 2008). As such, the Indigenous reserve must not be read as a dead or passive space; rather, it must also be interpreted as a lively, vibrant, flourishing and active place, imbued with meaning.

Distinguishing between 'space' and 'place' is crucial to understanding contemporary struggles for environmental and reproductive justice on an Indigenous reserve. Reserves are places with thick and textured histories; they are also spaces that keep people in place. As discussed at length in Chapter 5, Canadian sovereignty is predicated on the historical and present dis/placement of Indigenous peoples within Canada on pockets of their traditional territorial land bases. In addition to dis/placing Indigenous peoples from their territories and emplacing them on reserves, early settlers appropriated them by effecting exclusive jurisdiction over their land and lives, opening

them up to resettlement, capitalist development, and promoting the advancement of resource exploitation and Western traditions of land-use, i.e. farming and development. The long-term effects of this dis/placement led to conditions of overcrowded housing, welfare dependency, limited education, health issues and high rates of unemployment. Following Razack, in precarious zoned-in spaces like reserves, marginalized bodies appear almost transparent, forgotten, left behind as a part of earthy debris (Razack, 2002).¹³² As such, space is inextricably linked to power.

Opening up of space for settler interests to the detriment of Indigenous peoples in Canada has been and continues to be an essential maneuver for external authority and control. Following Alfred, the regime of European settlement produced a vacuum, or “empty space”, thus making the domination of Canada’s Indigenous peoples possible and available for exploitation (Alfred, 2009: 45). As a result of the colonial perpetuation of the notion of *terra nullius*, Indigenous peoples were not seen as civilized masters of the land. *Terra nullius* produced an ‘empty zone’ or space to be fortified through state boundaries. Consequently, Indigenous peoples became reduced by the settler society as natural savages to be controlled and contained. This (mis)conception of land as an empty space permitted, and continues to permit its colonization (Taussig, 1987). A pre-contact notion of *terra nullius* justified European settlement and moving Indigenous peoples onto reserves (Razack, 2002). Today it justifies filling these spaces with toxic waste.

Spaces do not form out of nowhere; they are human constructions. A place-orientation to citizenship brings time and space together to examine how people construct meanings, attachments and identities in particular locales. As such, examining histories as well as the ongoing practices in place illuminate stories and how citizens make sense of and hitch meaning to their environments. Following Thornton: “to understand places, one must understand the people who inhabit them” (2008: 6). By conducting an experiential approach to place, this dissertation emphasizes the connections between space, power and

¹³² Making this image strikingly clear, one simply has to tour the perimeter of the Aamjiwnaang First Nation reserve in order to see landfills, disposal sites and sewage treatment facilities, in addition to the numerous chemical facilities surrounding the small space this First Nation has left from their initial treaty agreements. In fact, conversations with residents reveal the history of repeated dumping of toxic waste on land that was already ‘wasted’ through Indigenous occupation. As Leanne Simpson argues, Indigenous peoples are all too often perceived as ‘resources’, on lands available for exploitation, rather than as people (See: <http://www.yesmagazine.org/peace-justice/dancing-the-world-into-being-a-conversation-with-idle-no-more-leanne-simpson> Accessed March 14 2013).

knowledge in Aamjiwnaang, and the enduring role that location plays in this community's struggles for environmental and reproductive justice. Place plays an anchoring and constitutional role in identity and as such, Indigeneity.

Whereas space is universal and abstract, place is specific and particular. Place is a lived, interpretive concept always in the making. As Thornton suggests, "place is a framed space that is meaningful to a person or group over time", it comes into being over time, through spatial configurations and experience (2008: 10). Drawing from Bourdieu's notion of 'habitus', Thornton discusses how individuals reshape spaces through practical experiences of living; the lived dimension gives place an inherently ecological dimension: "while social structures organize people into space-time, ecological conditions also shape how people live" (2008: 15). Places are at once products of history and geographically situated social interactions that stretch across time and space.

An experiential consideration of place brings together citizens' embodied, corporeal and lived-experiences. As such, the body plays a significant role in the making of place. Human beings, with sensory capacities and corporeal orientations give felt and sensed meaning to space as they constitute place. They are subjective and full of emotional attachment (Cresswell, 2004: 7). We can thus think of place as a network of relations produced out of the interactions between bodies and territories. A placed account of ecological citizenship, thus, simultaneously corporealizes and territorializes citizenship, as something rooted, particular and enacted through bodily practice. Examining citizen actions in specific places brings corporeal individuals into space-time, as a chronotope, where "time takes on flesh" (Thornton, 2008: 17). Places situate time and space by setting human bodies in a local habitat; these settings constitute meaningful experiences, knowledges and feelings, derived through perception, emotion and imagination. The body, as an ultimate 'arbiter' of human interaction with the environment, takes on ecological consciousness based on sensuous experience. The body continually takes one into place; it is an agent and vehicle, articulator and witness of being-in-place (Thornton, 2008). Living, moving, practicing bodies structure and configure senses of place.

Land, from an ecological account of citizenship does not surround bodies; rather, bodies embody surroundings through sights, sounds and smells, which constitute a

specific ambiance. This embodied, ecological conception of citizenship depends on the activities of local inhabitants. Following Ingold: “it is from this relational context of people’s engagement with the world in the business of dwelling, that each place draws its unique significance”, thus, certain places will be interpreted differently (Ingold, 2000: 192). Chemical Valley, for example, connotes different images and feelings for corporations, tourists and citizens of Aamjiwnaang. Human experiences produce profound attachments. Places are not an object, or geographic given. They are a “set of phenomenal and cultural processes, including space, time and experience” (Thornton, 2008: 34). As webs of interconnections, relationships and orientations, places shape individual and collective identities. Counter to space, they draw into focus character and nuance. As individuals invest meaning into portions of space, they become attached to it (Cresswell, 2004: 10). This process of meaning-making is a form of place-formation, a way of understanding, and ultimately, being.

Place-making is a contested practice, invested with power. It is a way of seeing, knowing and understanding the world (Cresswell, 2004: 11). As such, place has ontological and epistemological features. It is not just a ‘thing’ but a way of looking at the world. Looking at the world involves defining what ‘is’ that which we call the world – ontology – and a particular way of knowing and seeing the world – epistemology (Cresswell, 2004: 15). Place is relational and co-constituted by people and specific geographic sites. It is central to “being alive” (Ingold, 2011). Places are sites of belonging, attachment and affective ties.

Place as Embodied Practice

Identity is central to the practice of place. According to Alfred & Corntassel, being Indigenous is a “place-based existence” (2005: 597). Cultural survival in a settler-colonial world stems from heritage rooted in attachment to land. Leanne Simpson articulates this deep-rooted connection: “I stand up anytime our nation’s land base is threatened because everything we have of meaning comes from the land – our political systems, our intellectual systems, our health care, food security, language and our spiritual sustenance and our moral fortitude” (2012). ‘Being Indigenous’ contains psychic

and cultural dimensions. Maintaining an inherent connection to land is central to being Indigenous and the crux of Indigeneity. The spirit of Indigenous nationhood and Indigeneity entails a connection to a distinct existence, connection to each other, territories, communities, ceremonies, languages and histories (Alfred & Corntassel, 2005: 599). Continuing to practice a connection to place, thus, presents a starting point for cultural resurgence in the face of encroaching colonialism and subjugation. Sustaining this connectivity is an inherent feature of a radically different conception of ecological citizenship than environmental governmentality or biopolitical subjectivity.

In contrast to a Western, liberal worldview of ecological citizenship, which in Newtonian-Cartesian fashion treats land as distinct from human action, where the land is to be managed and cared for, as individuals cultivate the environment as responsible stewards, an Indigenous worldview articulates a radically different connection to place, land and the environment. As Alfred & Corntassel depict, Indigenous peoples conceptualize that all entities of “nature” – plants, animals, stones, trees, mountains, rivers, lakes and a host of other living entities – represent “embodied” relationships that are to be honoured (2005: 609). “Land is life” (Alfred & Corntassel, 2005: 613). This dynamic and interconnected respect for land, as ‘Mother Earth’ is a central tenet of Anishinaabe ontology, which considers earth as an animate living being, where everything has a heartbeat.

Throughout my interactions with community-members in Aamjiwnaang, I was reminded that nature is not something ‘for’ us; it is ‘part’ of us. No one can own his or her mother, or the earth in the present and in the future (Johnston, 2005: 25). This illuminates some tensions between Eurocentric notions of property, equal entitlement and private ownership. An Anishinaabe approach to land and the environment considers individual beings as part of the ecosystem. We might think of this close relationship with the land not as a plotted ‘territory’, but rather as an interpretive ‘place’. From this perspective, the natural world is not merely a compilation of inanimate objects. For example, a tree is never merely a tree; it could be someone’s grandfather (Bryan, 2000: 27). The non-human world cannot be pinned to a series of inanimate, mere objects.

The concept of property speaks to the core of tensions between an individual approach to citizenship and an ecological or Anishinabek approach. Property ownership

is a fundamental principle of Western liberal citizenship. This comes into tension with a notion of land as something to be cared for, cultivated and as central to the core of 'being'. Following Bryan, property is not merely a legal concept, but is "inherently socio-cultural and philosophical" (2000: 26). It is a social practice that enframes our relationship with the environment. As such, it tells us something about agency, and how we interact and behave in the environment. Property as a concept reveals social relations, describes set practices, illuminates knowledge of particular territories, entitlements, land use, and so on (Bryan, 2000). There are many regimes of agency, which may be community-specific, varying from community to community and from one First Nation to another. Such variability contends with liberal notions of property and citizenship which 'pin' and enframe the structure of daily life.

The ontological structure of Western property and nature is rooted in a technological view of society and citizenship. Following German philosopher Martin Heidegger, Bryan states that technology enforces a singular way of relating to ourselves, others and nature (2000: 16). We come to understand ourselves through technology; nature becomes 'enframed', ordered, and available for use. Western approaches pin and enframe the structure of daily life, which constrain the fluidity of everyday 'being'. A technological view transfers practices into 'consumable things'. Property, as a complex metaphor for relational activities, becomes some 'thing', turned into a consumable object through a technological view of the world, where the individual operates as atomistic transaction-maker (Bryan, 2000: 15). Such a technological view of society positions humans as distinct and removed from the non-human world.

From a liberal Western viewpoint, land has and continues to be considered as 'barren' until dominated, developed or conquered. To be 'productive' required taming and subjection. Through hard physical labour, 'wild' land could be transformed into something of value. As Bryan states, property law speaks to this relationship to how we see our relationship to the natural world, as does contract law for trespass and remedy (Bryan, 2000). The individual in this transactional arrangement enters into binding agreements to manipulate the world of objects, according to 'consent'. This diverges greatly from Anishinaabe ontology.

An Indigenous or more specifically, Anishinaabe approach to land, knowledge and citizenship cannot be described in a singular fashion. We must think about it as a place-based practice. With singularity, concepts become ‘enforceable’; sophisticated metaphysical and social visions become over-simplified (Bryan, 2000). Historically, Western approaches to ‘Aboriginal life’ have done just that, and tended to be overly simplistic, romantic, singular and unified. Thus, in attempting to carve out space for alternative modes of believing, thinking and being in the contemporary world, it is imperative for the privileged academic to make every effort to avoid constructing ‘Aboriginal reality’ in simplistic and general terms. Such simplifications go against the grain of Anishinaabe ontology.

Counter to a technological view of society that constructs a sharp dividing line between humans and non-humans, according to Anishinaabe thought, these relationships are mediated through a matrix of relationships. Humans connect to an animate non-human world in flesh and spirit. This includes the corporeal and the incorporeal, and an articulation of being that illuminates a deep respect for plants, animals, people and the spirit world. It connotes respect for Mother Earth and Father Sun. Though Anishinaabe teachings discuss the principle that ‘all are related’ and emphasizes interconnectivity, there are four main orders within creation: the physical, plant, animal, and human world (Johnston, 2005). Each intertwine and make up the richness of life’s whole existence. With less than the four orders or realms, life and being are incomplete and unintelligible. No one portion is self-sufficient or complete; each derives its meaning from and fulfils its function and purpose within the context of the whole creation (Johnston, 2005: 21). The place, sphere and existence of each order is predetermined by great physical laws for harmony. Through the relationships of the four orders, the world generates sense and meaning. The articulation of this Anishinaabe approach to life, thus, depicts a radically different notion of embodied and placed citizenship than offered by Western liberalism.

Conclusion

This chapter both offered a critical approach to citizenship in Canada and traced various approaches within Canadian politics in order to assess the promises and perils of an

ecological account for this body of scholarship. To discuss ecological citizenship's 'double-edge', I outlined how citizen practices are simultaneously embedded within disciplinary biopolitical power, while simultaneously offering a radical way of thinking about embedded, emplaced and territorialized citizenship, rooted and specific to an Anishinaabe approach to the treatment of land and life. While debates within Canadian politics, citizenship studies and green theory overemphasize liberal state theory, my analysis offered an interpretive and post-positivist orientation to discuss the ontological tensions at stake in contending worldviews of citizenship. I drew into focus how diverse forms of citizenship are formed and enacted. Aligned with Kersty Hobson, I sought to expose green governmentality's "blind spots in prevailing environmental citizenship frameworks" (2013: 56). While Aamjiwnaang citizens enact and practice disciplinary techniques, they are not mere 'green citizens'.

Interpreting the practices and resistances in Aamjiwnaang prompt citizenship scholars to think differently about agency and mobilization. These struggles for environmental and reproductive justice raise significant questions about how citizens understand their relationships to each other and to the non-human world. Lived-experience in Aamjiwnaang illuminates the embedded socio-political landscapes shaping and constraining behaviour. While activities occur in the context of a hollowed out era of state rule, this dissertation connects citizen action to discursive and structural power ensembles that both shape and constrain agency in ongoing struggles. This dissertation demonstrates some of the ways in which these struggles for environmental and reproductive justice are endemic to the configurations of the state itself. Focusing on how citizen practices are enacted and performed, I discussed disciplinary techniques of biopolitical appropriation and also accounted for the radical significance of the ground itself. In the next chapter, I contend that a more just approach to citizenship and social justice will account for place to re-frame subjectivity and belonging in these struggles.

Chapter 7

**Shelter-in-place?
Immune no More and Idle no More**



Photograph by: Laurence Butet-Roch, December 2012

Idle No More

Movement, agency and justice are core concepts that speak to the heart of where I will conclude my discussion of environmental and reproductive justice. This dissertation moved from citizen experiences, to struggles for knowledge and confrontations with ensembles of biopower. Examining environmental and reproductive justice concerns in Aamjiwnaang are just the tip of the iceberg for challenges facing Indigenous peoples in Canada. Following my formal phase of field-work, in the Fall of 2012 and spilling over into the Winter of 2013, a wide-spread Idle No More movement, which began as a Twitter meme and Facebook page, emerged as a loosely knit political movement including blockages, rallies and flashmobs to protest Omnibus Bills C-38 and C-45. As University of Winnipeg Director for Indigenous Inclusion Wab Kinew states, Idle No More is “not just an Indian thing”; it is about engaging youth, finding meaning, rights, the environment and democracy (Kinew, 2012). Idle No More began with four Saskatchewan-based female lawyers frustrated by the lack of consultation to broad-sweeping legislative changes affecting Federally protected waterways, natural resources and Indigenous rights. While no sole leader emerged with a concrete list of demands on behalf of the movement, the considerable momentum across the country and beyond demonstrated the loud, chaotic and messy features of democracy.¹³³ The daily lived-reality for Indigenous communities across the country exploded onto the public arena.

Similar to Idle No More, Chief Teresa Spence’s high-profile hunger strike reveals the contemporary biopolitical stakes for Indigenous peoples in Canada. The hunger strike took place because she could no longer be idle; her body could no longer be immune to the persistent corporeal practices of Canadian colonialism. On December 11 2012, as a form of protest, Chief Spence began a hunger strike, undergoing considerable physical, mental and emotional duress to raise awareness about the dire straights facing Indigenous

¹³³ As Ingold notes, aligned with Deleuze & Guattari, through movement, “organisms emerge as a peculiar disturbance to interrupt linear flow” (2011: 13). Such interruptions demonstrate agency and challenge the contours and confines of modern democracy to create “lines of flight”, and ultimately, alternative ways of thinking differently about politics and political life. As organisms engage in meshworks and assemblages, they spring to life, and open up, rather than foreclose, what constitutes the political.

communities across Canada.¹³⁴ Subsisting on tea and broth, for 44 days, she sought recognition of a nation-to-nation relationship for her peoples and with the Crown.¹³⁵ Her body became a symbol of sacrifice, and a mirror of the bare life for the livelihoods of the communities she represented. Following journalist Alice Klein, this act “crashes against the unconscious non-Indigenous Canadian certainties and political calculations. It demands that we recall instead the actual history of our country and how it still lives in the unrelentingly colonized amongst us” (Klein, 2013). Frustrated with the perpetual need to fight for physical and cultural survival, due to the past and present manifestations of Canada’s colonial legacy, Chief Spence put her body on the line – a fine line between bare and political life – as a symbolic gesture for Canada, and the world, to see. Forging herself into the spotlight of Canada’s body politic made her body visible, thus, charged with biopolitical meaning.

This is not the first time Indigenous peoples mobilized their bodies to draw attention to their lived-experiences. Many Indigenous communities across Canada and the world live in a constant state of insecurity due to their perpetual corporeal exposure to contamination. The Aamjiwnaang First Nation is one such community. Here, individuals reside in a risky environment, where uncertainty reframes the conditions for one’s life, being and citizenship. While trans-border exposure to environmental harm is indicative of a globalized, de-territorialized threat, this dissertation argued that community practices of resistance prompt a different kind of thinking about citizenship, and re-territorializes our focus. With respect to Aamjiwnaang in particular, and Anishinaabe thought generally, ‘place’ is a core feature of Indigenous citizenship, which challenges biopower’s insidious and sometimes explicit hold on Indigenous life. While the everyday experiences of Indigenous citizens underscore biopolitical concerns, the activities of these Indigenous citizens demonstrate how citizenship is simultaneously embodied, rooted and territorial. These practices evoke a new way of thinking about ecological citizenship.

¹³⁴ Recall that a year prior, her home community of Attawapiskat declared a ‘state of emergency’ due to poor housing conditions. See: <http://www.huffingtonpost.ca/news/attawapiskat/3> Accessed January 31 2013.

¹³⁵ Leanne Simpson highlights the significance of fish broth as symbolic of hardship and sacrifice on her blogpost: “Fish Broth & Fasting” from January 16 2013. <http://dividednomore.ca/2013/01/16/fish-broth-fasting/> Accessed February 22 2013.

Being 'Idle No More' has a particular resonance in Aamjiwnaang. In solidarity with Spence's hunger strike, citizens of the Aamjiwnaang First Nation blocked the Canadian National (CN) railway line leading into Chemical Valley (Wright, 2013). Under the leadership of Chief Plain, and blockade spokesperson Ron Plain, the community sought to grab Ottawa's attention. CN responded with a court injunction on December 21st 2012 to remove the blockade; however, the protesters remained in place a full week later.¹³⁶ Imperial Oil and Nova Chemicals, among other nearby facilities, reported reduced production in the area (Wright, 2013). Finally by mid-January, Justice John Desotti ordered the blockade to clear; while injunctions were issued, Sarnia police remained hesitant to make arrests in fear of escalated violence. As citizens of this community blocked the railways with their bodies on the line, camped out in tents for weeks on end in the dead of winter, their mobilization caused neighbouring industry to sit back and await a more peaceful solution. Citizens of all ages began to take action, demonstrating this community's agency.

As discussed in the Introduction of this dissertation, the Aamjiwnaang Binoojiinyag Kino Maagewgamgoons day care took to the streets on Wednesday, January 16th 2013 to demand the right to a cleaner environment for the community's children. Framed as an Idle No More demonstration, concerned citizens frustrated with the incessant spills, leaks and accidents demanded answers from their industrial neighbours. The long-term health impacts of such spills and accidental releases are unknown. As mentioned, this march is but one form of activism among a lengthy history of many others, ranging from fasting to rail blockades, to bio-monitoring studies, bucket brigades, door-to-door health surveys, and body-mapping. In the midst of life's opacity here, what becomes clear, to cite Banu Bargu, as a "theoretical register", is the prominence of the body as a conduit for agency (2011). As such, the body makes a statement on life itself. Returning to Chief Spence's hunger strike, this act illuminates how life, reduced to bare life, may not be worth living without recognition of a radically different kind of politics. For the hunger strike, and everyday life in Aamjiwnaang alike, life itself is both an object and subject for political action. In this way, bodies are crucial conduits for social justice.

¹³⁶ See APTN coverage here over the impacts of the court injunction on Ron Plain: <http://aptn.ca/pages/news/2013/03/14/idle-no-more-activist-faced-death-threats-fighting-goliath-in-court/> Accessed March 14 2013.

Justice

An interpretive view of struggles for environmental and reproductive justice must couple citizen action or behavior with the structural configurations of injustice to work towards substantive change in the deliberative realm of political life. While I have focused on the body and corporeal experience in this dissertation, conventionally associated with the private realm, this project's commitment to social justice would be incomplete without consideration of the public arena, and relations between the two. As Kymlicka suggests:

There are many aspects of economic, social and environmental policy that can only be effectively dealt with at the federal level. Too much decentralization of power may result, not in the empowering of communities, but simply in leaving everyone powerless in the face of global economic and political trends (2001: 143).

This highlights how decentralization does not necessarily reconcile claims for justice. Devolution in this regard redistributes the regulatory burden downwards towards communities. What is clear, following Kymlicka, is that we need to re-conceptualize social justice that is sensitive to the needs of, but does not offload to, community (2001: 151). Thus, we need to think critically in equal measure about discursive and distributive justice. Justice, in my view, and aligned with Schlosberg, is a discursive term that entails more than the distribution of 'bad' social ills, it is also about the language, rhetoric, meanings and processes involved that shape, constrain and enable citizen opportunities for policy change (2013). As Chapter 4 highlighted with respect to the Lambton Community Health Study, there are procedural dimensions to environmental and reproductive justice. While outside the formal arena of institutional politics, this health study's deliberative structure demonstrated some of the challenges for equitable democratic participation. I discussed some of the ways in which marginalization occurs in the decision-making process and citizens struggle for recognition of their corporeal concerns while trying to confront an elite model of scientific expertise and knowledge. A more collaborative and substantive approach to public health and environmental policy and planning will account for Aamjiwnaang's unique cultural place, health and experience in public deliberations. As such, working towards justice thus requires retooling of deliberative democracy to account for situated knowledges.

A place-centric focus is essential to substantively address environmental and reproductive justice. As stated in Chapter 1, this place orientation will draw out an extension of environmental and reproductive justice discourse to communities and “to the human relationship with the non-human world” (Schlosberg, 2013: 38). To do so, accounting for corporeal and ecological claims is crucial for deliberative justice. Following Gabrielson & Parady, linking citizenship to environmental and reproductive justice cannot be “body blind”; our deliberative processes must integrate axes of race, class, gender and place (2010: 379). Green theory, green governmentality and Canadian citizenship studies have conventionally been ‘body blind’. As Adkin notes, much of this literature focuses on the rational, ‘normative’ or ‘procedural’ dimensions for the cultivation of active ecological citizens (2009: 5). Aligned with her call for a critical citizenship theory that integrates social justice and ecological reform, my aim to work towards a more equitable society involves not only consideration of the corporeal experiences of biopolitical engagement in the private realm, but also an interrogation and reconfiguration of the discursive and structural features of our democracy. Aligned with Gabrielson & Parady, I share the goal of working towards a “fleshier democracy” (2010). A fleshier democracy requires a focus on the body – as bodies enact citizenship – and also locates bodies within larger networks. This conception corresponds with Laurie Adkin’s turn away from a discursive emphasis on ‘sustainable development’ towards ‘ecological democracy’ (2009: xii). I wish to be clear that it is not enough to examine autonomous practices of citizen action to work towards justice. As both a feminist and environmentalist initiative, the ecological approach to citizenship developed in this dissertation fuses corporeal with environmental citizenship in the making of, and theorizing about ecological citizenship as a radical form of being and belonging.

Social justice requires new thinking about citizenship. Drawing from feminist theorist Elizabeth Grosz, Gabrielson & Parady accentuate the ways in which bodies counter rationality and ‘naturalist’ accounts of politics; they are socially and culturally inscribed and embody difference (2010: 380). Western liberal philosophy has tended to relegate the body as something with passions and appetites to control. By bringing the body forward and making corporeality a prominent feature of politics, we can begin to retool citizenship toward socially just ends. Furthermore, centering upon the agency of

bodies, and countering predominant citizenship accounts of ‘rational’ citizens managing ‘responsible lifestyle practices’, we can contemplate a more practiced, embedded and embodied approach to citizenship that counters a rational, liberal, Eurocentric worldview.

The vibrant human body is connected to a non-passive world. Bodies are resilient; they move, regenerate, and reproduce. As Gabrielson & Parady suggest, corporeal citizenship forces us to re-imagine individualist accounts of civic duty, and to quash such instrumentalization of the body and environment with a more embodied account (2010: 381, 387). Rather than separating citizens from their environments as instrumental stewards to care ‘for’ the environment, a corporeal and further ecological approach emplaces and locates individuals as embedded within their non-human environments. Counter to classic, modern and liberal accounts of citizenship, an ecological approach to citizenship as I present it here does not position human life as superior to the non-human world. Human subjectivity, from an ecological citizenship lens, begins from an embedded rather than hierarchical account of human/non-human relationships.

Environmental and reproductive injustices in Aamjiwnaang reveal some of the ways bodies are sites of harm. As such, human bodies are porous, vulnerable and susceptible to toxic encroachment. By situating my concern with biopolitical subjectivity in the context of current struggles for environmental and reproductive justice, this dissertation sought to both highlight harm and the possibilities for agency. In addition to being vulnerable sites, bodies also intersect with cultural, social, political and environmental forces. Such an intersectional approach to the body opens up possibilities for justice claims within a framework of a radically different conception of citizenship, which may lead to a more socially and environmentally just account of democracy.

A more inclusive, democratic conception of citizenship accounts for corporeality and place. Such an ontological shift troubles the hierarchical binary between human/nature, mind/body, individual/environment to situate bodies within socially constructed human and non-human contexts. Counter to much of green theory, green governmentality and liberal state theory, an ecological account of citizenship, as Gabrielson & Parady suggest, “recognizes the centrality of the environment to human subjectivity by acknowledging the variety of places that bodies inhabit and the diversity of human relations with the natural world” (2010: 387). This ecological account of

human subjectivity takes into consideration that claims for corporeal recognition are entangled with questions of social justice, and makes some attempts to flesh out a more socially just form of belonging in our modern democratic society.

On the Contours of Modern Democracy

Struggles for environmental and reproductive justice uncover implications for democratic politics. As Adkin attests, examining these struggles points towards new directions regarding the potential to democratize ecological knowledge in Canada (2009). By examining citizenship from an interpretive lens, this dissertation grounded a theory of ecological citizenship in the discourses, practices and structural constraints shaping political action. This analysis highlighted the multiple social dimensions of these struggles and argues that the social justice aims of ecological citizens cannot be achieved without radical transformation of the existing liberal, democratic norms and institutions.

A fleshier democracy makes space for ecological citizens and cultivates the conditions for meaningful citizen participation. The claims of ecological citizens demand a more complex articulation of corporeal and environmental concerns in order to work towards social justice and participatory democracy. According to Adkin, “when citizens become involved in environmental struggles, they very quickly find themselves enmeshed in a much broader web of relationships and issues” (2009: 298). These webs can be understood as ensembles, or regimes of power. Following Chantal Mouffe, counter to purely instrumentalist terms for liberal democratic theory, we can think of modern democracy as a “regime” (2005b: 18). This political form of society considers the wider context for democratic life, including the symbolic ordering of social relations. It is much more than the formal institutions of government. Mouffe underscores antagonism and pluralism as inherent features of contemporary politics. Her notion of modern democracy commits to an anti-essentialist account yet advocates for a positive consideration of difference as a kind of pluralism that questions ideal notions of unanimity and homogeneity. Difference is thus a celebrated feature of anti-essentialist democracy.

To envisage democratic politics from an anti-essentialist perspective, no one form of political life maintains a privileged foundational position over another. This treatment of democracy fundamentally challenges the subtle violences implicit within ‘rationality’, or ‘neutrality’ assumed by objective liberal philosophy. Mouffe contends with John Rawls’ work on how to establish peaceful coexistence among people with different notions of ‘the good life’. She critiques the Rawlsian paradigm for its presupposition of value-neutral procedural democracy. Of particular interest, she contests the objective to achieve “consensus on political fundamentals”, which is fundamentally at odds with a pluralistic society (Mouffe, 2005b: 23). Rawls’ concern for political justice requires fair terms of social co-operation between free and equal citizens by underscoring ‘reasonable pluralism’. As Mouffe draws out, any claim to ‘reasonable pluralism’ over-emphasizes a deliberative democratic life that seeks to erase difference, an impossible and violent feat. Such an account assumes that citizens appropriate the terms set by a rational liberal approach. It also demarcates between ‘reasonable’ and ‘unreasonable’ citizens. This provokes the question: so what of those who reject the reasonable parameters set out by a rational liberal order?

In contrast to an approach that begins from a vision of a well-ordered society, from an original position with a ‘veil of ignorance’, the aforementioned ‘fleshier democracy’ aligns with Mouffe to endorse a democracy of difference. Following Mouffe’s suggestion that a post-structural project of radical and plural democracy acknowledges difference, the limitations of the deliberative arena come to light. Taking the Lambton Community Health Study (LCHS) as an example, the limitations of rational participatory democracy come into the fore for marginalized groups. Noting that ‘consensus’ is a conceptual impossibility, Mouffe argues that this does not put the democratic ideal in jeopardy, rather, it “protects pluralist democracy against any attempts at closure” (2005b: 33). At the time of writing, the LCHS had moved away from the difference-based, fleshier dimensions of Aamjiwnaang’s corporeal concerns and continued to seek “closure” by opening up the scale of their injustices to the broader County and subsequently Province, this act forecloses the possibility for social justice. In occluding the distinct placed-based articulations of harm or injury, this participatory process failed to account for Aamjiwnaang’s experiential and consequently subjugated

knowledges. Rather than trying to “erase the traces of power and exclusion”, as the LCHS sought to do with their widening of scale, a fleshier democratic politics brings these injustices into the fore “to make them visible so that they can enter the terrain of contestation” (Mouffe, 2005b: 33-34). Making environmental and reproductive justices visible and distinctly accounted for in the participatory and deliberative health study would offer a much more transformative and socially just approach to Aamjiwnaang’s embodied, corporeal and ecological concerns.

Finally, a fleshier democracy re-configures the boundaries of citizenship. Several contemporary political theorists contend that “in an age of globalization” citizenship cannot be confined to the boundaries of a nation-state and must be “transnational” (Mouffe, citing Held and Falk, among others, 2005b: 37). Concerned with Held’s notion of ‘cosmopolitan citizenship’, and Falk’s notion of ‘citizen pilgrims’ with shifting loyalties to an “invisible political community of their hopes and dreams”, Mouffe gestures towards a new kind of citizenship unhitched to this seeming boundlessness (2005b: 37). Whether or not the ‘nation-state’ *should* be the key arbiter of citizenship claims is not my focus here. Instead, this dissertation focused on the particular places where citizenship is embodied and enacted. With respect to the lived-experiences and articulations in Aamjiwnaang, I argued that citizenship cannot be deterritorialized. The ecological formation of citizenship I advanced in this dissertation contends with liberal, rational accounts of deliberative democracy to make space for a messier, fleshier, more corporeal version of citizenship that counters the liberal primacy of mind over matter, and brings a multiplicity of voices, bodies and experiences into the fore.

Reflecting on ‘Anatomies of Place’

The persistent struggles for environmental and reproductive justice in Aamjiwnaang prompt a new, place-based thinking about biopolitics, subjectivity and citizenship. I refer to this as ‘ecological citizenship’. By examining the ‘anatomy of place’ in Aamjiwnaang, focusing on citizens’ corporeal struggles on the ground, rooted in a very specific location, I brought in discursive and experiential dimensions of citizenship to construct a new way of thinking about ‘ecological citizenship’ that contends with rationalist accounts of biological and environmental citizens as stewards for their bodies and land. This builds

from Rose and Petryna on ‘biological citizenship’, to intervene with the conception of ‘place’. As such, the theoretical orientation in this dissertation aims to confront biopolitics with place, in order to best examine the emergence of citizen practices and struggles for environmental and reproductive justice on the ground.

Drawing on lessons learned in the classroom, laboratory and archives, this dissertation moved into the field to examine struggles for environmental and reproductive justice in Canada’s Chemical Valley. As vital as the theoretical insights gained through more academic fields, I decided to turn towards the empirical site of Aamjiwnaang. This turn was crucial as I sought to develop an in-depth understanding of the experiential concerns facing the Aamjiwnaang First Nation. Intersecting an interpretive, post-positivist oriented study of biopolitics and governmentality with political ethnography, my location enabled me to develop relationships and conduct qualitative research with policy-makers and community-members to examine people, knowledge and power in a personal and intimate setting. In so doing, this dissertation located political analysis beyond purely institutional parameters. That is not to say that my study operates ‘outside’ these parameters – indeed such an escape is neither possible nor desirable – yet it stretches such parameters, revealing that grounded fields demand careful attention. In my treatment of this terrain, the state is but one site of governance taken up by political inquiry. Seeking to decentre political science’s grip on the state as a primary axiom of analysis, I examined multiple modalities of power, authority and rule, moving away from the nation and into the field – literally and figuratively – to investigate discursive and structural power relations shaping and constraining citizen action in a specific locale.

As a political place imbued with meaning, Aamjiwnaang’s location represents a unique, geographical site, mediated through the daily activities of the local citizenry. Theoretically, empirically and methodologically, it is a core assertion of this dissertation that an examination of the political construction of “place” paves the way for a more localized and situated understanding of on the ground public policy concerns (Alfred & Corntassel, 2005; Cresswell, 2004; Ingold, 2000, 2011, Thornton, 2008; Tuan, 1975). By twinning ‘environmental’ with ‘reproductive’ justice and policy in this dissertation, my analysis sought to move away from simplistic models of public health care that frame individuals as ‘at fault’ or to blame for their adverse health outcomes. Bringing in ‘place’

as an analytical category to address ongoing and persistent environmental health concerns on a First Nations reserve provides an alternative way to think through emergent reproductive and environmental justice concerns in a Canadian context, and may open the door to new forms of place-based public health and environmental health policy.

This dissertation demonstrated how anatomy is at the forefront of social justice struggles; bodies are uniquely situated at the frontlines. This is especially the case with respect to struggles for reproductive justice, revealed most aptly in contestations over knowledge and scientific expertise. Moreover, by hitching the body to a particular place, I presented a theory about the body as interconnected to environments, with implications for citizenship. As the previous section discussed, these intersections mark the boundaries of deliberative democracy and political life itself. Calling for the integration of ‘place’ into how we conceptualize citizenship, this dissertation critiques the current status of contemporary Canadian politics in the colonial present and provides some alternative directions for thinking about policy, political ecology and citizenship in Canada.

Contributing to Ecological Citizenship

The central theoretical manoeuvre in this dissertation is to challenge biopolitics and theorize the meaning of ‘ecological citizenship’ in Canada. This discussion builds from experiential knowledge, including interview findings, media accounts and participatory involvement in the community, in addition to relevant literature in citizenship and environmental studies. As such, I sought to develop a theory of ecological citizenship that brings ‘place’ into contemporary debates about citizenship in Canada. By drawing from voices in the field, through an empirical and qualitative investigation of the situated concerns expressed by citizens of the Aamjiwnaang First Nation, I sought to challenge or contend with the predominant Eurocentric Western notions of citizenship in Canada – in theory and practice – that discursively and structurally centre upon the rational “I”ndividual considered to be distinct from one’s location, situation or environment. As such, my investigation is one of citizenship from below, it is an examination of practices of citizenship that are experienced and expressed by individuals situated within relations of power. As my research takes place on and adjacent to an Anishinaabe First Nations

reserve, my aim was to develop an understanding of the Anishinaabe approach to ecological citizenship and to radically rethink the meaning and ontology of citizenship itself.

Discussing an Anishinaabe approach to ‘ecological citizenship’ informs my intent to share voice and knowledge about struggles for justice as they confront an opaque, biopolitical policy ensemble in order to work towards better avenues for addressing reproductive and environmental justice concerns in Canada. By including a discussion of Anishinaabe views on ecological citizenship, I brought forward an alternative way of conceptualizing human/non-human relationships and offered some suggestions for political scientists interested in engaging with the ontological and epistemological foundations for how we construct our relationships, to ourselves, each other and environments, by drawing attention to experiential knowledge. Chapter 2 presented an analytical overview of how I approached struggles for environmental and reproductive justice using an interpretive lens, seeking to draw into focus a discussion of Anishinaabe views on what I refer to as a radically different kind of ecological citizenship. As discussed in Chapter 5, the body has always been tied to the manifestation of ‘Indian citizenship’ in Canada. By analyzing Canada’s historical biopolitical treatment of Indigenous citizenship, I uncovered some of the inadequacies of this policy ensemble and correlate impacts on citizen struggles. These impacts produce effects, which affect communities enacting practices of citizenship. Practices I argued, operate as a ‘double-edge’, on the one hand revealing of disciplinary biopower as citizens take up the charge to self-manage their land and life; however, these practices on the ground delve deeper and reveal integrated relationships between health and environmental concerns, constituting place-based ‘ecological citizenship’. An ‘ecological citizenship’ approach to political science thus situates individuals within the context of their ongoing material and discursive struggles, with their bodies on the line, while rooted in place.

Though this dissertation calls for an integration of the body into how we think about contemporary political life, it is insufficient to consider the body as a single site where our political investigation ends. The body, and correlative health indicators serve as a beacon that may guide the engaged scholar into a deeper consideration of the interplay between organisms and environments. By examining this interplay through field

immersion, a combination of ethnographic methods and interpretive public policy analysis, including conversations with First Nations community members directly affected by daily exposure to Chemical Valley, this analysis did more than simply categorize voices in the field. By situating myself as a researcher, friend, and community-member in this place – surveying local media, connecting to emergency management alert notification systems, experiencing spills, accidents and releases on an ongoing basis and participating in and observing a variety of community events – my examination drew from these practices to gain as complete a picture as possible, given the short timespan, to develop an understanding and appreciation for the ongoing concerns.

Engaging in such a political investigation of experiential knowledge generated by lived-experience enabled me to examine emergent practices ‘on the ground’ in a much more in-depth way than through solely examining archival materials, public policy reports or media accounts. As such, examining and participating in practices ‘on the ground’ holds more than symbolic purchase in my study. The story constructed in the form of a doctoral dissertation that I present offers a consideration of the ‘ground’ itself: the meanings, interpretations, activities and articulations as expressed and enacted by those situated in the study area. Following Ingold, my analysis examines not a “formal authorized kind of transmissible knowledge beyond contexts outside those of practical application”: on the contrary, “it is based in feeling, consisting in the skills, sensitivities and orientations that have developed through long experience of conducting one’s life in a particular environment” (2000: 29). Thus, my interpretive analysis sheds light on an array of vantage points, revealing of differing practices, activities, worldviews and knowledges generated within this community based on emotions, intuition and perception. As a “sentient ecology”, and “poetics of dwelling”, this dissertation drew from citizen experiences in a particular place to illuminate their ongoing struggles for environmental and reproductive justice (Ingold, 2000: 26). Such experiential knowledge is not inferior to reason but crucial to justice, substantive policy and a fleshier democracy.

Theoretical Contributions

Conceptualizing ‘ecological citizenship’ in this dissertation moves away from a ‘biopolitical’ analysis of contemporary political life, beyond ‘biological citizenship’

towards social justice by situating bodies in place. In doing so, my analysis confronts biopolitics' endpoint on individual subjectivity with an embedded and intersectional treatment of the individual in place. This discussion moves away from consideration of political life as a condition of possibility for existence and examines instead how the conditions of possibility shape and inform articulations and expressions of political life.

Citizenship is more than a rule or status; it is an enacted practice. Chapters 1, 2 and 6 discussed conventional approaches to citizenship, by treating it as a 'status' or 'category' for citizens to receive. Thus, it was a passive object for citizens to attain. Being a citizen as such is relative to the rule of law under which one is subject. The attainment of modern citizenship has been as a category for those deserving of this status. This dissertation moves away from thinking about citizenship in terms of the granting of civil, political or social rights towards an examination of citizenship as a set of ongoing practices and responsibilities in relationship to one's livelihood and environment. The approach to citizenship that I advance extends from thinking about citizenship as a historical progression, project or initiative, beyond thinking about the inclusion or exclusion of citizens in society; rather, it examines the ongoing activities and engagements citizens enact in their daily lives.

The formation and expression of 'ecological citizenship' takes on particular meaning in a First Nations context, and is even further complicated by communities facing reproductive and environmental degradation. In light of the ongoing practices in Aamjiwnaang, where citizens are hailed into governmental processes – health studies, calling a 'Spills Action Centre', or following shelter-in-place protocols – the links between participatory democracy and social justice emerge. Citizens mobilize and struggle for knowledge, science and expertise to mitigate their corporeal and ecological concerns. The treatment of these concerns in administrative and deliberative processes reveals the boundaries of Canadian society and highlights relationships between institutional configurations of power ensembles and experience on the ground.

Citizenship, thus, is an analytical concept that extends beyond the narrow focus on the role of the state and its extension into the citizenry. In contrast to thinking about the composition of citizens as a category of meaning imposed from hierarchical authority above, the approach to 'ecological citizenship' that I advance in this dissertation builds

from the ground up. As a radically different place-based ontology of citizenship, it focuses on the feelings, attachments, sentiments and aspirations spoken and enacted by citizens who voice a concern regarding their bodies and environments. To examine and interpret these ontological tensions, my approach to citizenship included four core components: an examination of the discursive conditions; conceptualizing citizenship as an enacted practice; highlighting embodied knowledge in citizen claims; and, fusing corporeal with ecological citizenship.

A discursive, interpretive and post-positivist approach to political analysis coincides with a critique of positivist modes of inquiry. Aligned with Foucault's notion of governmentality, my discussion of citizenship extended beyond the formal, institutional, hierarchical realm of politics to examine broader citizen encounters with ensembles of power. In contrast to focusing solely on 'government' as a hierarchical, centralized institution, set of institutions or groups; a governmentality approach hones in on political analysis as an examination of the outcomes of thoughts and practices that shape assumptions about what government is, how it should be exercised, by who and what purposes (Murray, 2007). In this view, language, speech and communication carry and transmit power relations. Consequently, the freedom, agency or mobility of actors is constrained by the material and discursive contexts in which citizens are embedded. The agency of citizens in Aamjiwnaang to mitigate their health and environmental risks are at once bound up in uneven power relations, yet also reveal a radical form of belonging. For this reason, any solution, or gesture towards 'justice' requires a focus on the structural and discursive constraints impeding agency, rather than a critique, or expectation that citizens must change their individual behaviour. Changes to citizen action alone leave the unjust policy and procedural configurations in tact.

By engaging with community members, on the ground and in their own terms, my dissertation sought to open up some possibilities for thinking differently about political organization, values and beliefs. My aim in bringing out conversations between a Eurocentric, Enlightenment-refined approach to citizenship vis-à-vis Anishinaabe ontology is to in some way articulate and revisit a different way of thinking about collective forms of political life. Following Davis, with the onset of Western science, individual citizens, were in a sense, 'liberated' from faith-based or collective ways of life

(2011). Such freedom can be understood as a mixed-blessing. In so far as it de-animated the earth, the human desire for citizenship, civilization and modernity also brought forward alienation, isolation and cosmic loneliness as humans sought to dominate the ‘natural world’.

As my research and conversations with community-members revealed, despite the modern maneuver to separate ‘humans’ from ‘nature’, natural elements are central to our existence. This ontological portrayal of an animate view of the earth and non-human world was most clearly articulated by Elders and traditional knowledge carriers of the Aamjiwnaang First Nation. This approach comes into direct tension with the possessive, rational, liberal ontology that political scientists most often adhere to in their analytical pursuits. Theoretically, methodologically and empirically, my dissertation sheds light on these divergent worldviews to challenge a strict separation between human life and the non-human world and wedge in some room within the field of political science for other ways of thinking about what constitutes political life.

Methodological Contributions

Through the practice of complementing a Foucauldian-inspired interpretive approach to political science with ethnographic methods, this dissertation examined how citizens confront, encounter and enact power relations. This interpretive lens focuses on both what is visible and what is obscured in our society. Moreover, it investigates what techniques enable certain forms of power to emerge, while marginalizing others. Furthermore, this investigation examines identity, and the implications of citizen encounters with power ensembles for the parameters of belonging (Hobson, 2013). As a political scientist committed to engaged and empirically-grounded research, the political science approach advanced in this research examined multiple views about ‘the world’ in which citizens of Canada’s Chemical Valley, and Aamjiwnaang in particular, voice and articulate. The intent of this approach seeks to render visible microscopic and marginalized aspects of our societies that frequently remain silent yet are inexorably linked to broader socio-political forces, outside the purview of mainstream society. I employed an interpretive policy analysis that integrated critical policy analysis, political

ethnography and a community-placed methodology to share voice and raise awareness about struggles for reproductive and environmental justice in Aamjiwnaang and Canada.

The theory of ‘ecological citizenship’ presented in this dissertation cannot be separated from lived-experience. Standing apart from ‘formal’ or conventional standard social science models of inquiry, my research generated theoretical findings about ‘ecological citizenship’s double-edge’ through engagement with the messy contextuality of life experience. This ‘messiness’ stems from an acknowledgement that politics extends beyond the realm of institutions to include its apparatuses, administration and citizenship, revealing power relations through the practices of the extension of the state’s tentacles into the spaces and micropractices of everyday life. This view rejects the notion that ‘government’ is coterminous with formal or official institutions of power, known as ‘the state’; rather, ‘government’, encompasses a multitude of processes and practices within and outside the state, that shape individuals and communities towards desired ends.

As this dissertation adopts a Foucauldian-inspired and interpretive lens, my research examines what governments do, their rationale and how public policy subjects and objects of governance are neither obvious nor static. In contrast to citizenship approaches that centre upon the ‘State’, or the ‘individual’ as a core axiom for analysis, Foucault’s governmentality approach begins with regimes – ensembles – or relations of power, shaped through discursive fields. How one speaks about an issue is inherently tied to questions about what is defined as ‘the political’ (Foucault, 1994). From this approach, the art of government twins two poles: hierarchical modes of governance on one hand, and the internal power relations among citizens themselves. Thus, citizens act as agents, as active carriers and producers of knowledge. Humans – citizens – are not simply ‘objects’, but rather agents who actively and collaboratively construct, and deconstruct, meaning. Agency, thus, from a governmentality lens, is at once repressive and productive. Freedom, broadly defined, is inherently hitched to power relations, not excused from it. In this respect, citizen action is double-edged.

The interpretive approach put forward here seeks to ‘open up’ space within the parameters of political science to access and create avenues for multiple voices and perspectives to come to the fore. As such, this mode begins from an understanding that citizens and researchers alike live in a world of complex and dynamic intersubjective

social realities. Thus, knowledge and the generation of ‘data’ are co-produced between researchers and those situated within the site of inquiry. Data generation and analysis are intertwined, continuously taking place. While the initial analysis of ‘sense-making’ commonly begins before field research, and during project design, from an interpretive approach, it is understood that ‘sense-making’ continues after fieldwork is completed.

Building, maintaining and sustaining relationships was an important part of my research methodology that cannot be understated. As the location of my research site takes place on a First Nations reserve, I have and continue to be committed to an interpretive and ethnographic approach motivated by a commitment to decolonizing methodology (Smith, 1999). In my view, this means that the principles of respect, reciprocity and relationship-building are central to the project’s ethics, engagement and success long after the project’s completion (Native Women’s Association of Canada, 2009). An approach to data collection that seeks to infuse interpretive political analysis with a commitment to decolonizing methodology incorporates to the best of one’s abilities, a collaborative, participatory, community-placed model. Conducting engaged, participatory research connects research with ongoing practice by sharing knowledge, voice and authority about the research project’s design, development and results with the community by inviting their involvement in all stages of the process.

Evidently, an underlying normative element, or impetus exists in this dissertation. It is my aim that by producing an interpretive investigation of both official and unofficial discourse, my findings about citizen struggles for knowledge, science and expertise will contribute to a shared pursuit of creating spaces for concrete policy change, alternative ways of thinking, being and articulation. This motivation aligns with a commitment to social justice and informs my larger commitment to the enhancement of substantive deliberative dialogue about environmental and reproductive justice. As such, the normative motivation in this dissertation seeks to expand the limits of knowledge production in pursuit of a more just society. Overall, my interpretive approach paired with a commitment to community-engagement as a decolonizing methodology aims towards concrete social change. While committed to support social action and political mobilization, I maintain the view that the most appropriate way to conceptualize and engage with participatory research is as a committed and passionate supporter, without

trying to guide or steer activism within the community in question. I contend that the iterative process of knowledge exchange itself is a productive enterprise, which has the potential to address tangible public policy gaps and call into question dominant discourses and practices that marginalize communities on the ground.

Empirical Contributions

This dissertation examined peoples' ongoing struggles for environmental and reproductive justice as struggles by citizens over knowledge and power. Chapter 3 drew out citizens' embodied, emotional, felt struggles through grounded narratives regarding community views on living perpetually on alert in a 'sacrifice zone' (Lerner, 2010). In this zone, I argued that their bodies are at the frontlines as they mobilize for change to protect their physical and cultural survival. My findings reveal that citizens at once become active environmental stewards over their land and life, while many express a radically different ontological stance about their home, place and cultural survival. As such, Chapter 3 draws out the dilemma of ecological citizenship's double-edge, where citizens struggle to survive physically and culturally.

The subsequent Chapter 4 moved its lens from the community into the public arena by focusing on encounters within the ongoing LCHS. This chapter illuminated contenting bodies of knowledge: experiential, external and engaged. I assessed how Aamjiwnaang's experiential concerns became lost in this County-wide study due to the politics of science, scale, lifestyle blame and jurisdictional ambiguity. Moreover, Chapter 4 discussed the difficulty in seeking redress while mobilizing engaged knowledge through resource and time-intensive processes such as consultation and partnerships, with some regulatory advances, albeit limited systemic change. Chapter 5 expanded this discussion of systemic constraints to seeking justice.

Moreover, the multiple layers to Canada's legislative and policy arrangements for on-reserve environmental health demonstrate a policy failure for environmental and reproductive justice. The ensemble of these configurations entails citizenship, health and environmental policy, which distinctly impact Indigenous citizens vis-à-vis Canadians at large. Indigenous peoples in Canada are regulated by the *Indian Act*, Canada's primary

vehicle to define what it means to be an ‘Indian’. As Chapter 5 explains, Canada has and continues to regulate, govern and surveil the ‘bodies’ of Indian citizens. This coupling of population-based and bodily governance as a form of biopower impacts Indigenous peoples Canada-wide and within local communities such as Aamjiwnaang.

Biological management continues to be a part of state-making practices in Canada. By examining Canada’s Constitutional design, this dissertation exposes some challenges that our jurisdictional matrix poses for Indigenous communities concerned with on-reserve environmental health. I argue that this biopolitical ‘policy ensemble’ for on-reserve environmental health appears as a ‘wicked policy’ problem (Kreuter, Rosa, Howze, & Baldwin, 2004). In terms of policy development, and public administration, there exists a lack of clarity on Canada’s jurisdictional composition and responsibility for Indigenous health and further, environmental health. As a result, services are often poorly defined; there is overall confusion about the requirements for adequate Federal funding. While for most Canadian citizens, the direct provision of health care services is a Provincial responsibility, the Federal government provides services directly to reserves in areas that fall under Provincial jurisdiction.

These Constitutional configurations produce public policy gaps, illuminating a messy and dense ‘ensemble’. Citizens confronting this policy ensemble pick up the pieces for ongoing corporeal and ecological concerns. As Chapters 4 and 5 discuss, citizens and policy-makers interpret the problem, science, expertise and appropriate solutions differently for these emergent concerns. By uncovering and discussing the apparent policy configurations for on-reserve environmental health, my aim in this dissertation is to twin environmental and reproductive justice together for more substantive public policy development. Normatively and empirically, my dissertation aims to speak to public policy gaps with the intent of making this policy issue less opaque. As a result, I seek to contribute to a broader, more serious and in-depth conversation about environmental and reproductive justice in Canada.

Thinking critically about gaps signals the importance of space in these ongoing struggles, and prompts a reorientation to place. A geographic focus is crucial to understanding struggles for environmental and reproductive justice as it offers a glimpse into how, as Canadian citizens, our identities are formed in relation to the lands,

environments and resources we continuously appropriate, inherit and exploit. As Shaw articulates, the contemporary situation for Canada's Indigenous peoples is revealing of the profound violences inflicted by our own privileged and settled modes of life: the definition and composition of 'our' space is inherently tied to and implicated in the definition and delineation of 'their' space (Shaw, 2008: 5). These demarcations are highly charged with political meaning.

The contested terrain for environmental and reproductive justice reveals the disputed conditions for action, knowledge and power. These disputes are corporeal, discursive and structural. The body, at the node, or fulcrum of these struggles takes on discursive and material meanings as a 'site of contamination' (Scott, 2009). Discursively, an analysis of reproduction, and the politics of reproductive justice simultaneously highlights Foucault's discussion of the genesis of the role of the state, and the ways in which power today operates through the productive forces, the "reproduction of relations of production", and the ways in which citizens become governmentalized (Foucault, 1994: 244). As bodies mobilize, they generate and regenerate forceful meaning.

Citizen concerns, articulations and enactments in Aamjiwnaang connect ongoing struggles to place. As Chapter 3 reveals, active and responsible citizen engagement, and encounters within a confusing policy ensemble provide limited recourse. Specifically, Chapter 4 exposes and discusses the limits of deliberative health processes for communities with experiential, corporeal concerns. I focused on some of the ways in which citizens' lived-experiences become occluded by a bureaucratic and administrative structure that centres upon epidemiological expertise without consideration for the particular place-based concerns derived in Aamjiwnaang's ongoing struggles for reproductive justice.

The occlusion of Aamjiwnaang's unique concerns raises important questions about the role local knowledge should play in such deliberative processes. There is often lack of clarity around who or what constitutes expertise. Further, ideas about 'evidence' or 'science' underscore the "primacy of rationality" (Adkin, 2009: 306). As LCHS deliberations demonstrate, scientific and epidemiological data provide partial knowledge, and present an incomplete picture for the reproductive concerns in Aamjiwnaang in

relation to their neighbours. Thus, there is a need for such deliberative processes to think creatively about alternative forms of iterative and non-linear knowledge.

Lay expertise and ways of knowing frequently emerge within struggles for environmental and reproductive justice in dynamic and non-linear ways. As with many forms of social mobilization, contending bodies of knowledge play out in different ways at various stages of a movement's activity. By drawing directly from interviews with citizens and stakeholders involved in the public policy process shaping Aamjiwnaang's reproductive and environmental justice concerns, my analysis presented an account of how these concerns fell along a continuum of 'embodied', 'external' and 'engaged' discursive fields as 'bodies of knowledge'. There is much more work to be done to account for alternative forms of knowledge, science and expertise that are rooted in the distinct practices of daily life. Arts-based approaches offer an avenue to access and generate new forms of knowledge in order to address injustice, with the intent of working towards a more socially just, deliberative and participatory democracy.

Trajectories for Future Research

As an attempt to share voice, knowledge and awareness about the multilayered dimensions of struggles for environmental and reproductive justice in Canada's Chemical Valley, this dissertation contributes to social justice scholarship (Agyeman, Cole, Haluza-DeLay, & O'Riley, 2009; Haluza-Delay, 2007; Kymlicka, 2001; McGregor, 2009; Schlosberg, 2013; Scott, 2008). In a Canadian context, there is a dearth of 'environmental justice' framing on the ground and in the academic literature (Haluza-Delay, 2007: 1). This is also the case with respect to reproductive justice policy and scholarship.

Comparative research about the public-policy making context for environmental justice between Canada and other countries will advance thinking in this field. The U.S. provides a good starting point for this kind of study. Despite the strength of various policy frameworks pertaining to environmental justice in the U.S., and although Canada is not exempt from environmental in/justice issues, there is no formal overarching framework for environmental justice in the country. Canadian scholarship on environmental and reproductive justice has been limited in theory and practice. By

examining the evolution, experience and articulation of corporeal and environmental harm in Aamjiwnaang, my research addresses a prevalent policy gap in pursuit of creating more substantive environmental and reproductive justice policies at all levels of government. This requires place-based public policy-making, to situate individuals and communities within the broader social, political, economic, legal and environmental forces shaping adverse health outcomes. A place-focused approach to community-based health studies is important for ‘low-level geography’ or ‘small sample size’ communities.

Examining and critically investigating how knowledge is used, for who and what ends is an inherent feature of environmental justice research. Within the academic, activist and public-policy making spheres, environmental justice in Canada is a transdisciplinary field with the potential to discursively re-frame social policy (Agyeman, Cole, Haluza-DeLay, & O’Riley, 2009: 4). The creation of social policies that take into consideration principles of environmental justice will seek to respect and incorporate delegitimized or discredited epistemologies and bring these approaches into substantive policy development. Environmentally-just public policy frameworks will take into account not only “documentable technical data and scientific assumptions about the world”, but also “fairness of treatment and the participatory ability of all marginalized peoples to be able to make substantive qualitative changes to the impositions of the larger society, especially those that adversely affect their rights and freedoms” (Agyeman, Cole, Haluza-DeLay, & O’Riley, 2009: 9). By discussing experiential and embodied knowledge claims, my dissertation aimed to bring forward the value and relevance of corporeal approaches to the analysis of political science and public policy in theory, practice and method. In this respect, examining the human body as both a repository of industrial toxicity and a regenerative force for knowledge production, this research considers the body, and its relationship to place, to be inherently political.

In order to investigate the manifestation of environmental injustice or degradation and its disproportionate effect on some social groups more so than others, an attunement to both the macro and micro practices of power relations is essential. For this reason, investigating ongoing struggles for environmental and reproductive justice in Canada’s Chemical Valley required both an examination of official laws, policies and institutional configurations at the macro level, as well as attention to the local concerns and voices

articulated at the individual or community scale. A substantive environmental justice public policy approach thus will hone in on each macro and micro scale to gain a multi-dimensional grasp on a complex policy issue. Furthermore, as Deborah McGregor articulates, from her perspective as an Anishnaabe woman, an Indigenous approach to environmental justice includes the concept of “all our relations”, and the understanding that relationships based on environmental justice are “not limited to relations between people but consist of those among all beings of creation” (2009). In an Indigenous context, environmental in/justice issues incorporate a concern with cultural dominance, environmental destruction and inequity in terms of how certain groups are substantively impacted by various industrial projects. It also includes respect for the interrelations between land, animals and human life.

Examining environmental and reproductive in/justice requires methodological innovation. As Chapter 3 discussed, lived or felt experience frequently constitutes the experiential knowledge and expertise shaping corporeal claims articulated by citizens seeking policy change. Communities take action themselves, with their bodies on the line, to gather knowledge about perceived problems affecting their daily lives. The manner in which these claims are articulated will differ from the conventional scientific model and may occur through a more artistic, emotive, feeling forum.

Accessing, interpreting and examining situated knowledges requires creative thinking about how to conduct environmental and reproductive justice research. In my experience as a participatory researcher, connecting with citizens of Aamjiwnaang from all ages flowed from my passion for artistic forms of expression. Initial introduction to the community through a youth ‘PhotoVoice project’ paved the way for engagement with young people and enabled me to gain an appreciation and understanding of their concerns through this medium (Flicker, 2008; Scott & Smith, 2012). Subsequently, while working with and advising the Aamjiwnaang Green Teens, young people presented their images, through photographs, paintings, collages and sketches, revelatory of their situated and ongoing concerns about the impact of pollution on their way of life. Music also, and rap in particular, provided a form of expression for these young people to speak up and out about their lived-experience. As such, future trajectories for environmental in/justice research will benefit from integrating arts-based research methodologies to access and

share voice with young people and those who may not be comfortable with traditional qualitative research methods including focus groups or interviews. Such opportunities enable researchers to connect with community members on a more profound, shared emotional level, creating intersubjective relationships that can lead to the shared practice of artistic expression and knowledge exchange.

Visuality presents an intellectual and theoretical challenge to dominant discourses when words fall short. That which is seen – visible – can lead to social awareness, critique and change. Exploring ‘art’ is a means to upset or contend with dominant narratives and discourses. It can counter “hit and run style” ethnographic research.¹³⁷ As knowledge production involves “abstraction, interpretation and representation”, by participating in a participatory and youth-driven documentary film project, I sought to engage in an interactive process to counter Western models of knowledge, which often privilege monolithic models of visualization, representation and aestheticization (Campbell, 2007: 379). As such, artistic media offers a potential avenue for resistance.

Multi-media is ‘democratic’ insofar as it can “weaken the role of the specialized producer or *auteur* by using procedures based on chance, or mechanical techniques which anyone can learn, and by being corporate or collaborative efforts” (Sontag, 1997: 149). Film has affective power, striking an emotional chord and eliciting a response. Film fleshes out bodies of knowledge when words fall short; it nets chaos, and can challenge dominant discourses and stereotypes. It can be subversive and give presence to absence. Art offers an avenue for communities to vocalize and destabilize dominant discursive paradigms. Through creative means, i.e. photography, film and music, people mobilize to speak up and act out. This suggests possibilities for resistance to the weight of biopolitical subjugation and injustice through interactive, intersubjective and emergent aesthetics. In this poetic vein, I close a chapter, for now:

¹³⁷ Comment made by an audience member regarding research, ethics and filmmaking during a fireside-chat with documentary filmmaker Alanis Obomsawin, University of British Columbia, March 7 2012. This kind of intersubjective approach draws inspiration from French curator and art critic Nicolas Bourriaud’s “Relational Aesthetics”, popularized by Hennessey Youngman’s YouTube clip “Art Thoughtz: Relational Aesthetics”: <http://www.youtube.com/watch?v=7yea4qSJMx4&feature=related>. Accessed March 8, 2012. In this respect, ‘art’ takes shape as a shared and interactive practice. The ‘audience’ is considered to be community, challenging the formation of a strict ‘viewer’/‘object’, binary. Thus, meaning from these artistic practices are formed collectively, which gesture toward a more democratic aesthetics, in contrast to the pure production of a ‘spectacle’ for consumption.

**Our Home:
Mother Earth**

Each night I look up to the Moon and Stars
And thank the Creator they yet have no scars
Not like the Earth, our home and Mother
She is being abused almost beyond repair
On sunny days I trace the sun through the haze
Who freely sends to us heat and light each day
Elders told me wildlife ran unafraid and free
Pictures of extinct ones now are just a memory
Once all the forests bloomed fresh, green leaves
Where today now stand skeletons of trees
Fishing and swimming will be a thing of before
As we see dead fish laying on polluted shores
Flowing water is known to be the veins of Earth
When her arteries stop flowing so will all of birth
At one time the water was clear, pure and free
Today we buy it cleaned and bottled as a luxury
The Old Ones say, once we could breathe fresh air
Inhale the air these days there is danger here
Nature is life, without it there is no humanity
People won't see living with all, creates harmony
Many beautiful cultures all live on this world
All have a tremendous heritage, they feel so proud
We could share our good traits and precious values
Keeping our spiritual beliefs and sacred traditions
People would all smile, laugh and live in peace
They then would see how much they are truly blessed
As I speak to the Creator with my daily prayer
Giving my respect and thanks for life here...
One day I vision all people to open their hearts
To respect and live as one...with Mother Earth...

~ To you, your children and their children
Keith Rogers, Aamjiwnaang First Nation

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Appendix 1: List of Interview Participants

Pseudonym:	Location:	Date:
Billy	Aamjiwnaang	April 26, 2011
Bob	Aamjiwnaang	June 22, 2011
Brenda	Sarnia	May 9, 2011
Bruce	Sarnia	June 7, 2011
Candace & Blair	Aamjiwnaang	June 22, 2011
Charlotte	Aamjiwnaang	April 13, 2011
Claire	Sarnia	June 6, 2011
Cora	Sarnia	September 14, 2011
Daniel	Ottawa	July 13, 2011
Daryl	Sarnia	January 19, 2012
Dawn	Sarnia	June 2, 2011
Denny	Aamjiwnaang	May 9, 2011
Diane	Aamjiwnaang	April 12, 2011
DJ	Aamjiwnaang	May 13, 2011
Edward	Aamjiwnaang	May 6, 2011
Edwin	Aamjiwnaang	May 13, 2011
Elle	Aamjiwnaang	June 15, 2011
Elliott	Sarnia	June 6, 2011
Ethan	Sarnia	July 27, 2011
Evelyn	Aamjiwnaang	April 14, 2011
Frank	Aamjiwnaang	May 13, 2011
Gerry	Toronto	June 1, 2011
Glen	Sarnia	June 2, 2011
Heidi	Aamjiwnaang	June 13, 2011
Henry	Sarnia	June 7, 2011
Jake	Ottawa	November 10, 2011
John	Sarnia	June 8, 2011
Kier	Sarina	June 13, 2011
Ken	Aamjiwnaang	May 12, 2011
Kimberly	Aamjiwnaang	June 14, 2011
Kirk	Aamjiwnaang	June 10, 2011
Kory & Tammy	Aamjiwnaang	April 19, 2011
Kurt	Sarnia	May 11, 2011
Larry & Sonja	Aamjiwnaang	April 14, 2011
Lily	Aamjiwnaang	April 12, 2011
Lloyd	Sarnia	June 2, 2011
Mike & Tracy	Aamjiwnaang	April 15, 2011
Molly	Sarnia	July 19, 2011
Nancy & Bella	Aamjiwnaang	June 15, 2011
Nathan	Aamjiwnaang	July 28, 2011
Ned	Aamjiwnaang	June 10, 2011
Oliver	Sarnia	April 21, 2011
Olivia	Sarnia	September 14, 2011

[Appendix 1: List of Interview Participants - Continued]

Pseudonym:	Location:	Date:
Quinn	Aamjiwnaang	June 9, 2011
Sally	Sarnia	April 14, 2011
Sam	Aamjiwnaang	May 12, 2011
Sonny	Aamjiwnaang	November 22, 2011
Steve	Sarnia	April 19, 2011
Stew	Aamjiwnaang	April 26, 2011
Tanya	Aamjiwnaang	April 26, 2011
Tiffany	Aamjiwnaang	June 15, 2011
Tina	Aamjiwnaang	April 20, 2011
Tonia	Sarnia	August 4, 2011
Wanda	Ottawa	October 13, 2012
Walter	Aamjiwnaang	April 12, 2011
Wendy	Aamjiwnaang	June 17, 2011

Appendix 2: Participant Information Letter

Name
Address
City
Postal code

Date, 2011

Dear Research Participant:

The purpose of this letter is to invite you to participate in a Research Project entitled: *Ecological Citizenship in Canada's Chemical Valley: Locating Aamjiwnaang*. The purpose of the study is to understand how various actors within the Chemical Valley understand and interpret their citizenship or rights and responsibilities in pursuit of concrete environmental health policy. Examining this study allows the researcher to explain, among other things, what factors help to explain the relative efforts of different actors in the Chemical Valley to influence environmental health policy.

Should you choose to participate in the study, I will arrange to interview you on a range of questions focusing on concerns related to your experience working or living in the Chemical Valley. The interviews will take approximately 1 hour to complete. All information obtained from individuals participating in the study will be kept strictly confidential. Responses to the questions posed will be recorded and reported to guarantee anonymity.

Within the next few days, I will be contact you to arrange a convenient time for the interview. The interviews may take place at your office, household, or any public place that is convenient to you. Interviews may be held at the meeting room of your organization or at a mutually agreed upon location that is more appropriate. A pseudonym will be used for each participant who is quoted in any published materials to ensure confidentiality.

Should you have any questions about this study please contact Sarah Wiebe at the contact information below.

Thank you in advance for your participation in this important study.

Sincerely,

Sarah Wiebe
PhD Candidate
School of Political Studies
University of Ottawa

Appendix 3: Consent Form for Research Participants

Title of study:

Ecological Citizenship in Canada's Chemical Valley: Locating Aamjiwnaang

Sarah Wiebe
PhD Candidate
School of Political Studies
University of Ottawa
55 Laurier Ave. East
Ottawa, ON K1N 6N5

Supervisor:
Michael Orsini
Associate Professor
School of Political Studies
University of Ottawa
55 Laurier Ave. East
Ottawa, ON K1N 6N5

Invitation to Participate: I have been invited to participate in the abovementioned doctoral thesis project conducted by Sarah Wiebe, which is funded by the Social Sciences and Humanities Research Council of Canada, and has received ethical approval from the University of Ottawa's Research Ethics Board.

Purpose of the Study: The purpose of the study is to understand how various actors within the Chemical Valley understand and interpret their citizenship or rights and responsibilities in pursuit of concrete environmental health policy. In particular, this study seeks to understand the Aamjiwnaang First Nation's unique environmental and health concerns. Examining this study allows the researcher to explain, among other things, what factors help to explain the relative efforts of different actors in the Chemical Valley to influence environmental health policy.

Participation: My participation will consist essentially of participating in a face-to-face interview that will last about one hour. In addition, should I so choose, I can recommend useful publications/reference material or other potential research participants to the researcher.

Risks: My participation in this study will entail that I discuss my involvements living within the Chemical Valley and any efforts made to achieve policy aims. I do not expect that my willingness to discuss these efforts will cause me any distress. However, it is

possible that I may experience some psychological or emotional discomfort during the interview when recounting my experiences. Should this occur, the interviewer/researcher will offer to terminate the interview and reschedule this at any time that is convenient for me. Alternatively, I may choose at any time to withdraw entirely from participating in the research project. I also have received assurance from the researcher that every effort will be made to minimize any adverse reaction on my part to a question or questions, including refraining entirely from posing the question/questions that I am not comfortable answering. To respect the confidentiality of participants, I will make every effort to schedule interviews in a mutually agreed upon location.

Benefits: My participation in this study will help us to understand the role of citizens in influencing policy in health-related areas that only recently have emerged on the public and policy agenda. Given their impact on people's health, it is important to gain some insight into how policies that might influence their incidence or prevalence are formulated, and the role of non-state actors in this regard.

Confidentiality and anonymity: Every attempt will be made to ensure participant anonymity; however, when interviews take place on Band Council premises, anonymity cannot be fully guaranteed. I have received assurance from the researcher that I have the option of remaining anonymous or of being fully or partly identified. I understand that the contents will be used only for the purpose of publicizing research results in the form of the doctoral dissertation, journal articles, book chapters, or books. I have been informed of the steps taken to maintain the confidentiality of information that I provide to you throughout the interview process (including keeping records of interviews in secure cabinets, identifying me on the transcribed interview through pseudonyms only, keeping the master list of pseudonyms and names in a locked cabinet, and destroying transcripts and tapes within five years of the final publication from the project) and I believe these to be appropriate.

Conservation of data: The data collected will be kept in the office of Sarah Wiebe in a locked filing cabinet. She will be the sole researcher with access to this data.

Voluntary Participation: I am under no obligation to participate and if I choose to participate, I can withdraw from the study at any time and/or refuse to answer any questions, without suffering any negative consequences. If I choose to withdraw, all data gathered until the time of withdrawal will be destroyed if that is my wish.

Acceptance: I, (*Name of participant*), agree to participate in the above PhD research study conducted by Sarah Wiebe, School of Political Studies, Faculty of Social Sciences, University of Ottawa.

With regard to the specific questions you asked me, I have answered them by completing the table below. (Please circle either "yes" or "no" to each question.)

Lila Bruyere
Aamjiwnaang First Nation Health Centre
E'Mino Bmaad-Zijig Gamig Aamjiwnaang First Nation Health Centre
1300 Tashmoo Ave
Sarnia, ON, N7T 8E5

University of Ottawa Counselling Service
100 Marie Curie (4th Floor)
Ottawa, ON K1N 6N5
Phone: (613) 562-5200
Email: couns@uottawa.ca

There are two copies of this consent form, one of which is mine to keep.

Participant's name:

Participant's signature:

Date:

Interviewers' Name:

Interviewer's Signature:

Date:

Appendix 4: Recruitment Flyer – For Aamjiwnaang Residents

**Do you have concerns about living near Chemical Valley?
Do you know your rights and responsibilities?**

Sarah Wiebe, a PhD Student from the University of Ottawa, is conducting interviews with citizens of the Aamjiwnaang First Nation about the impacts of pollution and the environment on your health and everyday life.



Participation is Voluntary

Interviews may take place at the Health Centre, a coffee shop, or your home.
You will receive a \$20.00 honorarium for the interview.

Make Your Voice Heard

Stories shared about living next to Chemical Valley will be made anonymous, and presented to the Community, Health and Environment Committee and Decision-Makers.

For more information, or to schedule an interview, contact Sarah Wiebe at the Health Centre.

Photograph by Laurence Butet-Roch

Appendix 5: Interview Instrument - Community

1. Background

- Where are you from? Were you born here? If not, when did you move here?
- Do you have children? How many? What are their ages? Do they have health concerns?
- What is your primary occupation?

2. Concerns about the Landscape

- What is your daily routine?
- How different is this place now than it use to be? What has changed?
- How do you feel about the Chemical Valley?

3. Everyday Life

- What do you enjoy most about living here?
- How has pollution affected the way of life in the community?
- Have you experienced an evacuation before? Can you describe this experience?

4. Pollution and Health

- Some say pollution from the Chemical Valley companies affects the reserve; what does health mean to you?
- Do you have any family/personal health concerns?
- What are some coping strategies?

5. Pollution and Land

- Could you describe your relationship with the Land and environment?
- Does the pollution affect the reserve? How? (i.e. land, water, health)
- Are there traditional/spiritual ways to heal an unhealthy environment/land?

6. Solutions

- What would you like to see in a community health study?
- What does the term “policy” mean to you?
- Can you think of any other solutions/actions for change?

Appendix 6: Interview Instrument – Officials

1. Background

- What is your position?
- How long have you held this position?
- Can you describe your duties and responsibilities?

2. Current Policies

- What are the current priorities of your organization?
- Can you describe how you became involved in this policy area?
- How would you describe the evolution of this policy domain?

3. Efforts

- How would you characterize your government's response to this policy area?
- Can you describe concrete efforts made to address concerns in this policy field?
- What is the least understood aspect of this policy problem?
- How would you describe this problem to someone with a limited understanding of the issues?

4. Challenges

- What factors have challenged your organization's ability to effect policy change or results?
- What have been some of the failures?
- How have these been overcome, or will they be overcome?

5. Solutions

- What successes have been made?
- How will you develop upon these successes going forward?
- Are there any other resources I could access?

Appendix 7: Birth Ratio

Source: Mackenzie, C., Keith, M., & Lockridge, A. (2005). Declining Sex Ratio in a First Nations Community. *Environmental Health Perspectives*, 113(10).

Reproduced with permission from Environmental Health Perspectives

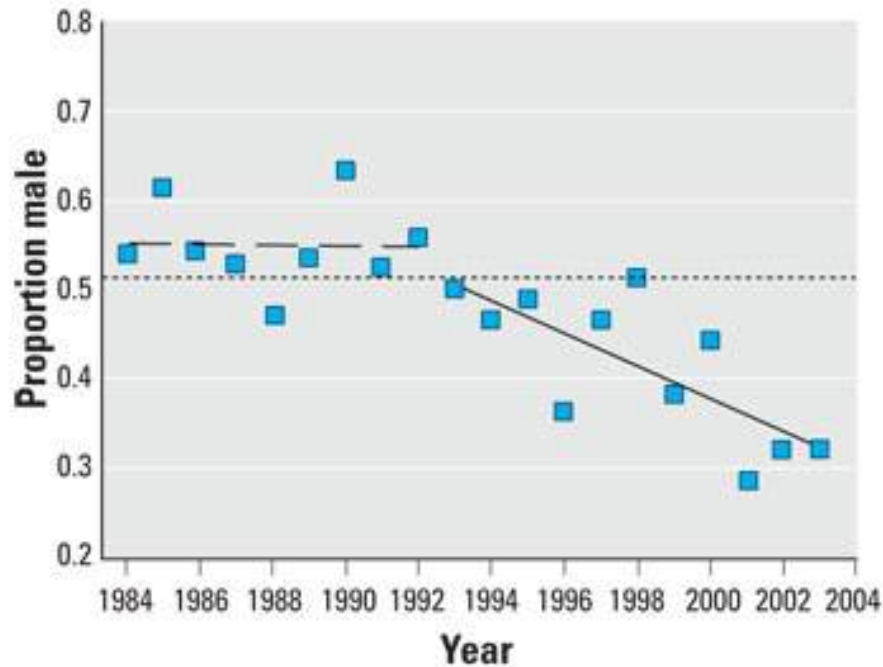


Figure 1. Proportion of live male births (male live births/total live births) for Aamjiwnaang First Nation 1984–2003. The dotted line is the expected male proportion for Canada (0.512). The dashed line is the linear regression line for the period 1984–1992; $r^2 = 0.000$; slope not significantly different from zero ($p = 0.990$). The solid line is the linear regression line for the period 1993–2003; $r^2 = 0.547$; statistically significant deviation of slope from zero ($p = 0.009$).