

Obvious but Invisible: Ways of Knowing Health, Environment, and Colonialism in a West Coast Indigenous Community

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PRELUDE I: A BIRDS-EYE VIEW

This is a story about divergent epistemologies and the politics of risk. It is a story about diverse ways of knowing a place, of sensing danger, of feeling well; a story about the production of imperception, the construction of colonial subjecthood, and the struggle for Indigenous sovereignty. In this story, an Indigenous community worked to render perceptible to the settler state apparatus its knowledge claims about pollution, health, and critically, authority. Activists initially pursued an anti-colonial, environmental justice campaign that sought to translate local, Indigenous ways of knowing into the epistemologies of environmental science and public health. This strategy earned them allies in the health science and legal professions, and activists had reason for optimism. Yet ultimately, this strategy failed. When it did, the community changed course: it now appropriated technologies of law rather than science. Where they previously mobilized knowledge verifiable with bare human senses, they now

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exploited legal technicalities within the federal Indian Act. Counterintuitively, the second strategy succeeded where the first had failed.

Solving the puzzle of why this happened exposes the calculus of risk deployed by a settler state at a moment of intersection between environmental justice and Indigenous rights movements. This intersection occurred on ground where settlers' sovereignty claims were (and remain) unsubstantiated in law. They hinged (and hinge) instead on a commonsense "feeling of givenness."¹ In this context, many things were not what they seemed. An anti-pollution campaign was an assertion of Indigenous jurisdiction; a community victory was a vehicle through which the state attempted to perfect its sovereignty.² Institutional tolerance for certain risks over others came together with technocratic authorization of particular epistemologies to obscure phenomena that were, or should have been, obvious. These phenomena included not only on-reserve pollution and health concerns, but the colonial relationship itself. These phenomena hid in plain sight; as Ralph Ellison observed of African Americans, their "high visibility" rendered them "*un*-visible."³ This paradox reveals much about where, how, and under what conditions settler states expect, and thus are able or willing, to see "Indians."⁴ It reveals the costs of being "seen" by the colonial state and dashes hopes of any simple equation between publicization of injustice and its remedy.

The environmental risks of community life were obvious to everyone. But government officials did nothing until the community produced countervailing legal and financial risks for the state. This was a victory that came with a price. When the community articulated its environmental health claims, it self-consciously did so as a self-determined political actor. But when it cited a breach of colonial rules, it found itself positioned instead as a ward of the state under Canada's capstone piece of colonial legislation. After more than two decades, the community rendered itself visible to the state, but *only* by assuming the mantle of colonized subject. This was the sole guise under which the state would recognize it.

This is a story, then, about the distinct stakes of "environmental justice" struggles on Indigenous lands; a story about the practice of slow violence on *Indigenous* ground.⁵ Despite similarities with other environmental justice

¹ Mark Rifkin, "Settler Common Sense," *Settler Colonial Studies* 3, 3–4 (2013): 322–40.

² This framing draws from Shiri Pasternak, *Grounded Authority: The Algonquins of Barriere Lake against the State* (Minneapolis: University of Minneapolis Press, 2017).

³ Ralph Ellison, *Invisible Man* (New York: Vintage International, 1980 [1947]), xv, his emphasis. Shiloh R. Krupar, *Hot Spotter's Report: Military Fables of Toxic Waste* (Minneapolis: University of Minnesota Press, 2013), 13, 276, 279.

⁴ Phillip J. Deloria, *Indians in Unexpected Places* (Lawrence: University of Kansas Press, 2004). See also Michel-Rolph Trouillot, *Silencing the Past: Power and the Production of History* (Boston: Beacon Press, 1995).

⁵ Rob Nixon, *Slow Violence and the Environmentalism of the Poor* (Cambridge: Harvard University Press, 2011), introduction. See also Nancy Langston, "Toxic Inequities: Chemical

struggles, Indigenous ones are fundamentally distinct because of Indigenous peoples' unique relationship to the polluted or damaged entity, to the state, and to capital. It is thus also a story about how settler power entrenched itself at a moment when community victory appeared to beat it back. It is a story about what the Nuu-chah-nulth scholar Johnny Mack calls the "soft imperialism" of "post-colonial liberalism."⁶ It is, in short, a story about the on-going production and maintenance of the colonial present.⁷

PRELUDE II: A GUEST'S EYE VIEW

I first saw Yuquot on a cold, grey February day in 2002. I had boarded the ferry in Vancouver the previous evening, then driven first north, then west on icy roads across Vancouver Island's mountainous spine to the village of Gold River. There, I joined a group of historians and anthropologists on a water taxi to Yuquot. Our guide was Margarita James, a Mowachaht-Muchalaht band member.⁸ Yuquot has been occupied by Nuu-chah-nulth-speaking peoples for at least 4,300 years, likely much longer.⁹ It was the site of the 1778 "first contact," between James Cook and the Mowachaht (the "Nootka" to Cook), and from 1789 to 1795, of a Spanish fort. Its location on the southern tip of Nootka Island is spectacular: the open Pacific on one side and a sheltered bay, dubbed "Friendly Cove" by Cook, on the other. Yuquot's eighteenth-century history had drawn our group together. But it was another story that caught my attention.

To summarize: in the late-1960s, Canada's federal Department of Indian Affairs (DIA) withdrew services from Indian Reserve (IR) 1, as it called

Exposures and Indigenous Communities in Canada and the United States," *Natural Resources Journal* 50, 2 (2010): 393–406; Michael Mascarenhas, "Where the Waters Divide: First Nations, Tainted Water and Environmental Justice in Canada," *Local Environment* 12, 6 (2007): 565–77; Pasternak, *Grounded Authority*; John Sandlos and Arn Keeling, "Toxic Legacies, Slow Violence, and Environmental Injustice at Giant Mine, Northwest Territories," *Northern Review* 42 (2016): 7–21; David Schlossberg and David Carruthers, "Indigenous Struggles, Environmental Justice, and Community Capabilities," *Global Environmental Politics* 10, 4 (2010): 12–35; and Sarah Marie Wiebe, *Everyday Exposure: Indigenous Mobilization and Environmental Justice in Canada's Chemical Valley* (Vancouver: University of British Columbia Press, 2016).

⁶ Johnny Mack, "Hoquotist: Reorienting through Storied Practice," in Hester Lessard, Rebecca Johnson, and Jeremy Webber, eds., *Storied Communities: Narratives of Contact and Arrival in Constituting Political Community* (Vancouver: University of British Columbia Press, 2011), 299–300.

⁷ Derek Gregory, *The Colonial Present: Afghanistan, Palestine, Iraq* (Malden: Blackwell, 2004).

⁸ "Mowachaht-Muchalaht First Nation" is a modern designation for the amalgamation of two distinct peoples: the Mowachaht and the Muchalaht. "Aht" means 'person of' or 'person from'" Umeek, E. Richard Atleo, *Principles of Tsawalk: An Indigenous Approach to Global Crisis* (Vancouver: University of British Columbia Press, 2011), 181 n2.

⁹ Mowachaht-Muchalaht First Nations, "Yuquot Agenda Paper," in Alan L. Hoover, ed., *Nuu-chah-nulth Voices, Histories, Objects & Journeys* (Victoria: Royal British Columbia Museum, 2000), 11.

Yuquot. This forced families to move up Muchalaht Inlet to IR12, sited at a place called Ahaminaquus, on Vancouver Island.¹⁰ The DIA built a subdivision on 9 acres of IR12, and leased the remaining 30 to Tahsis Company, a subsidiary of the Danish Royal Crown's East Asiatic Company. Tahsis Company opened a Kraft pulp mill there in 1968, the same year that the DIA closed Yuquot's day school. Nearly every family subsequently moved away to different locations including IR12; when I visited in 2002 just one couple remained, self-appointed caretakers of the ancestral village. At IR12, one hundred meters and a crescent of road separated residences from the mill. Crews had laid the road atop Muchalaht graves, a desecration that became the first of many grievances. For decades, the mill spewed incessant noise, air, and water pollution that residents were certain harmed their bodies, community, and environment. Residents sought remedies almost as soon as the mill opened, and continued to do so for over twenty-five years. Eventually, the community signed an agreement to relocate to a new reserve at Tsaxana (IR18), 18 kilometers inland. The DIA, in return, required band members to forever relinquish both the right to reside at Ahaminaquus and to pursue health-related claims stemming from a generation's residence there. Like well-intentioned *mamaalni* (light-skinned, non-Indigenous people) before me, I felt outrage. How unfair to force people to choose between redress and removing their children from harm's way. How painful that when the mill closed just two years after the relocation agreement, people could not return, that even in absentia the mill continued to displace. I wanted to detail these wrongs. I approached Elders and the band council for permission to conduct this research. They agreed and I began. Like earlier *mamaalni* allies, I carried a naïve belief that my professional tools would yield ready evidence of harms caused by the mill. Where lawyers, doctors, and public health officials had trusted tools acquired through their training in the law, medicine, or health sciences, I placed faith in the methods of historical enquiry that I had learned in graduate school.

My narration of the story below turns on questions about these multiple ways of knowing, the parameters of what each could and could not materialize, and why. That trip to Yuquot was my entry point for knowing something about this story. I was a guest, a *mamaalni* scholar of settler heritage committed to a politics of alliance with Indigenous peoples, and to the contemporary relevance of history. Human health, environmental pollution, and social justice were issues that caught my attention. They seemed obvious, and indeed were the axes around which community activists and councillors mobilized for decades. But ultimately I learned what community members and their allies learned before me: environmental justice and health advocacy were inadequate levers for change. This was in part because pollution of land and bodies was

¹⁰ Paige Raibmon, "Handicapped by Distance and Transportation: Indigenous Relocation, Modernity and Time-Space Expansion," *American Studies* 46 (2005): 363–90.

symptomatic of not only environmental racism, but more fundamentally of colonial duress and durability.¹¹ State bureaucracies obscured this reality with their refusal to act until the problem was reframed as one of settler law and profit. The records I inherited decades later contained silences produced by the very struggle I sought to understand. Things that were obvious could mislead as much as they could be difficult to prove. This case offers a cautionary tale about strategies for redress within the confines of present-day colonialism.

Multiple and shifting epistemologies were at play in the making and unmaking of perceptibility at IR12. These ways of knowing cannot be sorted into exclusive oppositions: sometimes they were fluid and appeared mutually intelligible; often a single individual could and did “know” something in more than one way. Yet serious failures of translation and incommensurabilities of evidence occurred. Broadly speaking, three ways of knowing interacted in the campaigns at IR12: sensory, indigenous, and scientific. Each worked to legitimate particular forms of authority.¹²

Interdisciplinary scholars working on the human senses remind us of the embodied nature of lived experience, something post-structuralism can obscure. Studies of the senses offer to restore materialist perspectives.¹³ But, if we all make sense of the world through our sensory bodies, some of us have been (trans)formed by more dramatic sensory stimuli than others. Natural disasters and war zones are two contexts brimming with sensory overload.

Sensory experience at IR12 was similarly overflowing. Visitors began to accrue sensory information upon arrival. Residents lived immersed in a sensory assault. Eyes “saw” air pollution as soon as they opened in the morning, itchy, red, and irritated. Noses smelled the mill’s emissions, while lungs inhaled them deep into the body. Ears heard the din of machinery twenty-four hours a day, seven days a week. Additional hazards were readily visible: drums and lagoons filled with toxic substances, speeding logging trucks. In a 1979 “pollution bulletin” published by the Union of BC Indian Chiefs (UBCIC), a province-wide Indigenous rights organization, one community advocate described arrival at IR12: “Every time I go to visit the Mowachaht Band, I prepare myself emotionally and physically for the shock. My ears, my eyes, my nose, my skin prepare to meet the noise, the smell, the dust in the air, the sight of the beautiful land and quiet waters mutilated by industry.”¹⁴ Words

¹¹ Ann Laura Stoler, *Duress: Imperial Durabilities in Our Times* (Durham: Duke University Press, 2016); See also Trouillot, *Silencing the Past*.

¹² Pasternak, *Grounded Authority*, 7.

¹³ Joy Parr, *Sensing Changes: Technologies, Environments, and the Everyday 1953–2003* (Vancouver: University of British Columbia Press, 2010), 2.

¹⁴ “We’ve Really Pulled Together,” *UBCIC, Pollution Bulletin #2*, week ending 5 Oct. 1979.

can only approximate such embodied experiences, which ultimately, remain archived in the body.¹⁵

The force of sensory information at IR12 could unite people across barriers of background, education, and affiliation. The phenomenological nature of sensory knowledge was an asset because it produced emotions and garnered sympathy among political organizers, doctors, and public health officials. Yet reports of what it *felt* like to be at IR12 failed to persuade decision-makers. As scholars of the senses note, the legal and scientific ways of knowing tend to reject knowledge claims that are “not manifestly comparable or readily shared.”¹⁶ The linguistically-elusive nature of sensory knowledge over-determined its disqualification by institutionalized knowledge regimes. This phenomenon was very much part of the problem of perceptibility at IR12. Sensuous, embodied knowledge crossed barriers between individuals insofar as it was obvious and available to everybody, but it failed to traverse barriers between epistemologies.

Challenges surrounding the communicability of sensory knowledge are common in contexts where citizens struggle to activate what scholars variously term “local knowledge,” “lay knowledge,” or “the everyday.”¹⁷ These ways of knowing tend to be rooted in qualitative assessments of embodied experience. Their assessments tend to be broad in terms of time, conditions, and relevant unit of analysis. But “local” Mowachaht and Muchalaht sensory knowledge of their surroundings was also *Indigenous* knowledge, embedded within and constitutive of a Nuu-chah-nulth ontology. This way of knowing is based on the principles of *čawaak*, the one-ness of everything, and *iis?ak*, sacred respect for relationships among *all* living things. People and “other-than-human” beings alike are known as *quu?as*.¹⁸

¹⁵ See Parr, *Sensing Changes*, introduction; Elaine Scarry, *The Body in Pain: The Making and Unmaking of the World* (New York: Oxford University Press, 1985).

¹⁶ Parr, *Sensing Changes*, 21.

¹⁷ Michelle Murphy, *Sick Building Syndrome and the Problem of Uncertainty* (Durham: Duke University Press, 2006); Jason Corburn, *Street Science* (Cambridge: MIT Press, 2005); Phil Brown, “Popular Epidemiology and Toxic Waste Contamination: Lay and Professional Ways of Knowing,” *Journal of Health and Social Behavior* 33, 3 (1992): 267–81; Frank Fischer, *Citizens, Experts, and the Environment* (Durham: Duke University Press, 2000).

¹⁸ Umeek, Eugene Richard Atleo, *Tsawalk: A Nuu-chah-nulth Worldview* (Vancouver: University of British Columbia Press, 2004); Umeek, *Principles of Tsawalk*; Mowachaht-Muchalaht First Nations, “Yuquot Agenda Paper.” See also: Earl Maquinna George, *Living on the Edge: Nuu-Chah-Nulth History from an Ahousesht Chief's Perspective* (Winlaw, BC: Sono Nis Press, 2005); Cliff (Kam'ayaam/Chahim'multhnii) Atleo, “Aboriginal Economic Development and Living Nuu-chah-nulth-aht,” in Elaine Coburn, ed., *More Will Sing Their Way to Freedom: Indigenous Resistance and Resurgence* (Halifax: Fernwood, 2015), 150–66; Charlotte Côté, *Spirits of Our Whaling Ancestors: Revitalizing Makah and Nuu-chah-nulth Traditions* (Seattle: University of Washington Press 2010); Mack, “Hoquotist”; and Josh Reid, *The Sea Is My Country* (New Haven: Yale University Press, 2015). On Indigenous knowledge and institutional contexts, see Paul Nadasy, *Hunters and Bureaucrats: Power, Knowledge, and Aboriginal-State Relations in the Southwest Yukon* (Vancouver: University of British Columbia Press, 2001); Julie Cruikshank,

Long before an Indian Reserve Commissioner designated “IR12” in 1881, before Tahsis Company conceived a mill, and before the DIA proposed a subdivision, the Mowachaht and Muchalaht knew that place as Ahaminaquus, a storied location rooted in the historical, relational, and spiritual context of their ancestral lands and waters. They knew Ahaminaquus as a place where families nurtured and received the life-sustaining gifts of their *hah̄uulni*, or chiefly territories. One man who grew up there in the 1950s remembered: “We lived off the land, we lived off salmon, dog salmon, bear, seal, *mowach*, and seafood. Like ‘toot-sup,’ clams, ‘*hai-ish-toop*,’ and the others I didn’t like so I’m not going to name them (laughs).”¹⁹ Ahaminaquus was a place of seasonal abundance where people fished for Chinook, sockeye, coho, and trout; where they caught crabs and prawns; hunted elk and ducks; snared mink, marten, otter, and hare; picked wild blackberries, gooseberries, salmonberries, strawberries, and crab apples; and where they gathered medicinal plants, thimbleberry shoots, cow parsnip, and swamp grass.²⁰

After displacement from Yuquot, residents experienced the transformation of “Ahaminaquus”—an ancient place—into “IR12”—a colonial postage-stamp. This experience was embodied and violent; it bestowed knowledge that sat alongside ancient teachings. Relocated families came to know Ahaminaquus as a place of *displacement*. All residents came to know it as a site where colonialism’s corrosive paternalism took form in the built environment. There, for the first time, people lived in government-issued houses and ancestors lay beneath logging trucks. There, for the first time, capitalism—in the form of the mill—loomed incessantly over everyday life. The mill transformed Ahaminaquus into IR12. It transformed the relationships among *quu?as* that constituted and were constituted by that place. The mill was a small-scale iteration of mid-twentieth-century, high modernist projects—dams and nuclear power installations among them—that united industrial and social engineering. As the historian Joy Parr notes, such technologies were “taken into the habits and practices of sensing bodies, challenging the security of individuals and the viability of their communities.”²¹ Nuuchah-nulth epistemology called

Do Glacier’s Listen? Local Knowledge, Colonial Encounters, and Social Imagination (Vancouver: University of British Columbia Press, 2005); Linda Tuhiwai Smith, *Decolonizing Methodologies: Research and Indigenous Peoples* (London: Zed Books, 1999); Rauna Kuokkanen, *Reshaping the University: Responsibility, Indigenous Epistemes, and the Logic of the Gift* (Vancouver: University of British Columbia Press, 2007).

¹⁹ Hisnit/Hoiss Interview with S. Johnson and B. Johnson, 6 Mar. 2002, Mowachaht/Muchalaht band office files (hereafter MMFN files). *Mowach* (*muwac̄*) means “deer”; *toot-sup* (*tućup*) means “sea urchin”; *hai-ish-toop* (*hajištup*) means “chiton.”

²⁰ Author interview with V. Johnson, S. Johnson Jr., and J. Johnson, 19 Apr. 2004; Campbell River Water Use Plan, Traditional Use Study, 6 Mar., 10 Apr., 12 Apr. 2001, MMFN files; “Mowachaht Pollution By-Laws,” *UBCIC Pollution Bulletin* #2, week ending 5 Oct. 1979.

²¹ Parr, *Sensing Changes*, 3.

for addressing such a threat to community survival with *he-xwa*, the struggle to restore lost balance.²²

The creation of IR12 obscured but could not erase Ahaminaquus. As the Nuu-chah-nulth scholar Umeek notes, every story in the *hahuulni* “was a story about home.”²³ Residents at IR12 knew Ahaminaquus endured as a place where they coexisted with their other-than-human relations. This ontology, often invisible to outsiders, breached the public arena in 2001 when the late hereditary chief Ambrose Maquinna returned to Nootka Sound as an orca, creating a jurisdictional standoff between the community and the Department of Oceans and Fisheries.²⁴

Conclusions drawn from sensory knowledge at IR12 seemed so obvious that many considered them commonsense. But such knowledge was *not* entirely shared in common. Sensory knowledge was accessible to everybody, but everybody did not sense place in the same way. Attentiveness to Indigenous epistemologies and ontologies demonstrates that embodied, sensory experience yields more than material knowledge; the senses also generate knowledge about spiritual and non-material beings. Moreover, material aspects of Indigenous sensory experience were likewise specific. The embodied, local experiences of colonialism entail transformative dislocations for Indigenous people because they are on the violent front lines of “primitive accumulation,” capitalism’s foundational act in Marx’s formulation.²⁵ Marlene Dick powerfully conveyed her felt sense of this process in 1979:

It hurts, me especially, because I would have loved to teach my daughter what my grandparents always taught me. What my grandmother taught me. How to keep smoked fish for the winter, winter supply. And that’s all we lived on. We weren’t looking for dollars. We went out, used our own canoes and oars to get our fish. Now what’s that pollution doing to us? Killing all our fish out here. We have nothing to dry now. We have nothing to preserve.... I remember I used to pick berries over here. Enjoying myself. Running around. Now I went out the other day, tried to look for a few berries. What did I find? Nothing. It brings tears. I tell my daughter all this.... We’ve suffered enough. White people taking away our land. What more do they want?... This is all I have to

²² Umeek, *Tsawalk*, 23.

²³ *Ibid.*

²⁴ For an overview of this episode, see “Luna (killer whale),” [https://en.wikipedia.org/w/index.php?title=Luna_\(killer_whale\)&oldid=731959564](https://en.wikipedia.org/w/index.php?title=Luna_(killer_whale)&oldid=731959564) (accessed 5 Aug. 2016). On enduring, difficult to discern ontological difference, see Stuart Kirsch, *Mining Capitalism* (Berkeley: University of California Press, 2014), 50, 81.

²⁵ Karl Marx, *Capital: Volume One*, Ben Fowkes, trans. (New York: Vintage Books, 1977 [1887]), chs. 26 and 33; Glen Sean Coulthard, *Red Skin, White Masks: Rejecting the Colonial Politics of Recognition* (Minneapolis: University of Minnesota Press, 2014); Deborah McGregor, “Honouring Our Relations: An Anishnaabe Perspective on Environmental Justice,” in Julian Agyeman, Peter Cole, and Randolph Haluza-DeLay, eds., *Speaking for Ourselves: Environmental Justice in Canada* (Vancouver: University of British Columbia Press, 2009), 1–26.

say. And I am very angry deep in my heart because I cannot teach my daughter how to dry fish because all the fish in our river has all died. Thank you."²⁶

Her sensed experiences of hurt and anger were caused by the loss of opportunity to *practice* activities such as canoeing, fishing, smoking, picking, and teaching that embodied her identity as a member of a self-sustaining, self-determining people.²⁷

The pollution's environmental destruction constituted one theft on top of another: "What *more* do they want?" It marked a new chapter in the on-going process of "accumulation by dispossession." With respect to non-Indigenous populations, the geographer David Harvey has noted the increased pace and reach of this process since the 1970s.²⁸ But for Indigenous peoples, it is centuries-old and not done yet.²⁹ In this light, the millions of *mamaalni* and other non-Indigenous people displaced globally by twentieth-century high modernist projects suffered traumas that were secondary in the sense of being subsequent to prior appropriations and displacements. That is to say: without the original accumulation by dispossession campaign against Indigenous peoples, they would have had nothing to lose. This does not negate their respective sensory maps of dislocation, grief, and trauma. But, it points up that these sensory maps do not neatly align with those of Indigenous peoples whose material and otherworldly sensed experiences are uniquely grounded in time, place, and entitlement.³⁰

Professionalized ways of knowing, in turn, were based in very different practices, assumptions, and power relations than Indigenous or other forms of lay knowledge. Where Indigenous epistemology was old—derived from millennia of occupation—professionalized knowledge was new—derived from eighteenth-century scientific developments. Where sensory knowledge used direct experience, professionalized knowledge used instruments and tests. These technologies buttressed professional practitioners' claims to objectivity and authority. In contrast to lay knowledge, professionalized knowledge privileged isolated specificity over broad context. Where Nuu-cha-nulth youth learned from Elders to consider relationships between variables in their proper contexts, medical specialists, public health officials, and environmental scientists learned from their professors to disaggregate and measure factors separately.³¹ Professionalized units of analysis were granular: an individual body,

²⁶ Audio recording of by-law hearing, Gold River, 14 Aug. 1979, UBCIC archives (hereafter "Audio"). See also Molly Dick, Audio.

²⁷ On practice, see Mack, "Hoquotist," 303–5.

²⁸ David Harvey, *The New Imperialism* (Oxford: Oxford University Press, 2003).

²⁹ Pasternak, *Grounded Authority*, 75, 296–97 n86.

³⁰ James Scott, *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed* (New Haven: Yale University Press, 1999); Parr, *Sensing Changes*; Tina Loo, "People in the Way: Modernity, Environment, and Society on the Arrow Lakes," *BC Studies* 142/143 (2004): 161–96.

³¹ Umeek, *Tsawalk*, 117–18; Umeek, *Principles of Tsawalk*, 4–5, 7, 20.

a cubic meter of air. Indigenous and other lay units of analysis were cumulative and relational: the community, the body's total stress load. This disaggregating tendency inclined professionalized knowledge holders towards higher risk tolerance. The risk posed by a single hazard often seemed tolerable. Cumulatively, however, the likelihood was high that at least one hazard would harm one or more individuals, making the risk intolerable. Moreover, lay knowledge holders typically included insiders who were in harm's way, and quite sensibly more risk averse than outsiders. Lacking certainty, community members erred towards a false positive. In contexts with high budgetary and reputational stakes, scientific practitioners avoided sounding alarm unless they had certainty; they preferred to risk a false negative.³²

These epistemologies did not exist in hermetically sealed minds or bodies. They were enacted by human beings in relationship who traversed ways of knowing in interesting ways. Community members crossed epistemological divides to produce "citizen science," thereby calling upon professionalized knowledge to validate what they knew to be true through Indigenous and/or lay epistemologies. Conversely, when doctors or scientists were "off the record," sometimes in addenda to their official reports, they drew conclusions with their senses rather than their instruments. Though they sensed what community members sensed, their professional tools proved impotent at reproducing these sensory conclusions.

Contests between professional and lay epistemologies are well-known features of environmental justice movements of non-Indigenous people. Such struggles are usually inflected with class and/or race: working-class and/or non-white communities and bodies literally become the ground onto which environmental costs of industrial projects are externalized.³³ It might be tempting to view the Mowachaht Muchalaht fight against the pulp mill in these terms: as a case that nuances—or even diversifies—our understanding of environmental justice through addition of an Indigenous example. But this additive approach to knowledge production obscures more than it illuminates.³⁴ Stories like this one can instead *transform* our understandings of the environmental justice movement because they tell us that the movement originated not in 1982 Warren County, North Carolina, nor centuries earlier in slave revolts of the plantation south.³⁵ It originated rather with the initial acts of Indigenous

³² See Brown, "Popular Epidemiology," 274; Umeek, *Principles of Tsawalk*, 20.

³³ On the environmental justice literature, see Wiebe, *Everyday Exposure*, 13.

³⁴ See Elaine Coburn and Cliff (Kam'ayaam/Chahim'multhnii) Atleo, "Not Just Another Social Movement: Indigenous Resistance and Resurgence," in William K. Carroll and Kanchan Sarker, eds., *A World to Win: Contemporary Social Movements and Counter-Hegemony* (Winnipeg: ARP Books, 2016), 176; and Rima Wilkes, "Indigenous Resistance in Comparative Perspective," in Elaine Coburn, ed., *More Will Sing Their Way to Freedom: Indigenous Resistance and Resurgence* (Halifax: Fernwood, 2015), 119–20.

³⁵ Ramzig Keucheyan, *Nature Is a Battlefield: Towards a Political Ecology* (Malden: Polity Press, 2016), 8, 34.

resistance to European primitive accumulation of their territories. Every *subsequent* instance of environmental injustice in North America has occurred on Indigenous land, literally *on top of* the ground acquired through capitalism's "original sin."³⁶ In this light, colonialism is environmental racism writ large because it so fully externalizes the costs of capitalist growth through its claims to Indigenous lands and resources.

The Mowachaht and Muchalaht environmental justice struggle, then, was one act in a larger anti-colonial play. Political actors in the community articulated their cause to nascent regional, national, and international Indigenous organizations. The 1970s and 1980s were decades of politicization for Indigenous communities globally. In Canada, Indigenous peoples successfully mobilized nation-wide in 1969 to reject a federal "White paper" that proposed to eliminate distinct "Indian" status. In 1973, the Supreme Court of Canada entrenched this activist victory with the Calder decision, which admitted the existence of Aboriginal title when the British asserted sovereignty. Simultaneously, the international Indigenous movement was nascent. In 1974, George Manuel, then chief of the National Indian Brotherhood, convened the inaugural meeting of the World Council of Indigenous Peoples in Port Alberni, a mill town in Nuu-chah-nulth territory, home by then to many relocated Mowachaht and Muchalaht. During this decade, the band council allied with the UBCIC, an organization born of anti-White Paper activism. In 1975, it changed its designation under the Indian Act from the "Nootka Band," a misnomer derived from Cook's brief visit, to an autonym, the "Mowachaht Band."³⁷

A Mowachaht woman named Mary Johnson worked closely with UBCIC. Her leadership role was indicative of changes in band governance at the time. She was the first—and still only—woman elected chief band councillor, a position she held from 1973–1975 and 1978–1982.³⁸ Previous and subsequent chief councillors were male hereditary chiefs. One of these men, Jerry Jack, was similarly activist-minded and also worked closely with UBCIC. In 1975, Jack organized a roadblock that closed the mill in protest of not only the pollution, but more fundamentally, the Province's refusal to address "the land claims issue." It had failed to obtain the legal right-of-way necessary to build the road in the first place, and had desecrated the graves that lay beneath it.³⁹ In 1978, Jack vocally supported the community decision to "close"

³⁶ Marx, *Capital*, 873; Bonita Lawrence and Enakshi Dua, "Decolonizing Antiracism," *Social Justice* 32, 4 (2005): 120–43.

³⁷ The "Nootka Band" of 1975 resulted from the 1950 amalgamation of two pre-existing bands under the Indian Act, the "Nootka Band" of Mowachaht and the "Mutchalat Band" of Muchalaht.

³⁸ "Governance History," Files of Jack Woodward, Property of Mowachaht Muchalaht First Nation (hereafter "Woodward") 1664.5.08.

³⁹ "RCMP Storm Blockade at Gold River," *Nesika*, July 1975: 2; "Indians 73, Government 0," *Nesika*, Nov./Dec. 1975: 12–14.

Yuquot to visitors in protest of provincial plans to celebrate the bi-centennial of Cook's arrival. Jack also joined an international campaign to halt patriation of the Canadian constitution. Many Indigenous activists opposed this process because of its potential to undermine their nation-to-nation relationship with the British Crown. In July 1979, Jack travelled to Europe with two destinations on his itinerary. In London, he joined the National Indian Brotherhood delegation that petitioned the Queen and Parliament to block patriation. In Copenhagen, he sought an audience with the royal owners of Tahsis company. He garnered Scandinavian media attention to publicize the Danish Crown's complicity in his community's suffering, and he connected with a Danish Indigenous rights organization of which George Manuel was president.⁴⁰

In this context, the community's anti-pollution movement was more than an assertion of the universal Canadian citizen's right to clean air and water. It was an assertion of the hereditary authority of a people over its un-ceded, ancestral territory.⁴¹ Before construction of the mill began, government and company representatives well knew that "its resultant odors et cetera"⁴² would devalue the reserve. But, community members were not forewarned and the environmental damage took them by surprise.⁴³ The anti-pollution fight soon became the community's most urgent, most visible political expression. In 1979, the band council passed pollution control by-laws more stringent than those of provincial or federal bodies. They were among the first in Canada to use section 81a of the Indian Act that enabled bands "to provide for the health of residents and to prevent the spread of contagious and infectious disease."⁴⁴ They exploited this clause to exercise jurisdiction over their land, air, and water. According to George Manuel, who became UBCIC president in 1979, with these by-laws the community became one of the first to put into practice the principles of UBCIC's 1978 "Aboriginal Rights Position Paper": self-determination, decolonization, inherent sovereignty of Indigenous nations, and conditional sovereignty of Canada.⁴⁵

This important action generated an important archive: as part of the by-law process, the band held a community hearing. Testimony from that event offers privileged opportunity to listen to how community members knew the place where they lived and raised their children. I rely extensively on this record.

⁴⁰ "Jerry Jack Protests Conditions to Danish Officials," *Ha Shilth-Sa*, 6, 5 (Oct. 1979): 5; Mowahchat Band Meeting Minutes, 26 Feb. 1979, Book B, Woodward 1664.18.00.

⁴¹ Peter Kulchyski, *Aboriginal Rights Are not Human Rights: In Defence of Indigenous Struggles* (Winnipeg: ARP Books, 2013).

⁴² W. B. Bailey to A/Indian Commissioner for BC, 17 May 1961, Woodward 1664.5.12.1960-61.

⁴³ Ambrose Maquinna and Lillian Dick, Audio.

⁴⁴ Quoted in "The By-Laws," *UBCIC, Pollution Bulletin #2*, week ending 5 Oct. 1979. Squamish and Maliseet councils did likewise. James Kenny and Bill Parenteau, "Each Year the Indians Flexed Their Muscles a Little More": The Maliseet Defence of Aboriginal Fishing Rights on the St. John River, 1945-1990," *Canadian Historical Review* 95, 2 (2014): 187-216, 205.

⁴⁵ George Manuel, "President's Message," *Indian World* 3, 6 (Sept. 1980): 9.

Saltwater pollution, contaminated drinking water, noise, and improper storage of hazardous waste were all problems. I focus here, however, on air quality. Air quality was one of the most obvious, “commonsense” problems at IR12: simple breathing was laborious. Struggles to address air quality amply illustrate how a pollutant perceptible in one framework was invisible in another.

Poor air quality and associated respiratory problems loomed large when residents talked about life by the mill. They framed their sentiments intergenerationally in ways that expressed their genealogical ties to place, ties that stretched both backward and forward in time. They understood their circumstances *as* Nuu-chah-nulth peoples. Marlene Dick invoked an Indigenous epistemology when she raged against the loss of fish that severed intergenerational transmission of ancient knowledge. Her neighbors also measured current conditions against the yardstick of their previous place-based experience. Elder August Dick: “I had lived here before, but moved away because it had affected my lungs.”⁴⁶ Elder Ambrose Howard connected past experience to future concern: “There’s a lot of fish that’s gone dead and also our breathing. Which it’s not good for our children. How are we going to live?”⁴⁷ Similarly, Josie Johnson assessed the present with reference to past and future: “We used to get fresh air when I was young. Now you can practically choke on it. I hope we get somewhere with this pollution. I’ve heard our elders have said money we don’t need. Its respect and love for each other.”⁴⁸

Johnson was typical both in her reference to the past, and in her connection between physical and social ills. She connected the need for clean air with a need for love and respect, the need for a healthy environment with the need for a healthy community. Elder Abel John spoke in his mother tongue about the future and revealed his attitude toward cause and effect, risk and uncertainty: “We do not know what kind of effect that awful smell we breath everyday will have on our children. We are breathing the same air and living on the same ground as the trees around us, all the trees around us are dead now. If we don’t do anything about that plant we will die off like the tree. We are dying a slow death living in these conditions.”⁴⁹

The uncertainty that John admitted did not undermine his conviction that conditions were dangerously unhealthy. Using direct observation of the surroundings—“the trees around us are dead now”—John connected the health of the forest to the health of the people: if air pollution killed trees, it harmed human bodies. He was sufficiently certain that the mill caused harm that he did not need to wait to learn precisely *what kind* of harm it would

⁴⁶ Pollution By-Law Hearing Minutes, 14–15 Aug. 1979 (hereafter “Hearing”), Woodward 1664.18.00.

⁴⁷ *Ibid.*

⁴⁸ *Ibid.*

⁴⁹ “Mowachaht Pollution By-Laws,” *UBCIC Pollution Bulletin* #2, week ending 5 Oct. 1979.

have. Like John, others felt they were “slowly dying.”⁵⁰ They intuitively grasped the nature of what the literary scholar Rob Nixon calls “slow violence”: its attritional nature, its ability to “displace in place,” its challenges of visibility.⁵¹ Other community members used the health of trees, roots, berries, deer, fish, ducks, and many more other-than-human lives to measure the risk to human health.⁵² Mowachaht Muchalaht residents took a deeply contextualized view of their health and safety. They brought to bear an indigenous epistemology: an interconnected and grounded way of assessing environmental and human health.

The mill produced two main forms of air pollution: gaseous emissions from smokestacks and airborne particulate matter, especially cedar dust or “fines.” The latter came from huge piles of fine-grained cedar sawdust stored outside the mill. Wind-borne fines blew onto the subdivision and coated every surface. The band complained about the fines as early as 1970 and declared them “intolerable from a health point of view” in 1974.⁵³ In 1993, community member and activist, Lillian Howard described the problem: “We’d have sawdust flying into, seeping into doors and if the windows were open you’d just see sawdust just settling in the, in the clothes, or in the wash, the couches, you know and it was just very uncomfortable. I couldn’t stand it. A lot of people have skin irritations as a result of the, the sawdust so it’s, a lot of people get cedar poisoning or they, they potentially get cedar poisoning if they’re not careful so a lot of illnesses as a result of living here for a long, a long time.”⁵⁴

The fines were immediately visible and palpable. Jim Brisebois, an organizer and researcher with the UBCIC, brought his daughter to IR12: “First thing my daughter has said ‘Where does the dust come from?’”⁵⁵ Fines accumulated along the roadside to the extent that they became tinderboxes, ignited by cigarettes tossed from passing vehicles. Verna Jack recalled: “1973—We had spent our time shutting off the fires because the sport fishermen just throw their cig. out.”⁵⁶ These fires exemplify how multiple hazards amplified risk. Fines and traffic were each a hazard. But their combined risk—flammability—was greater than the sum of its parts. Other factors amplified risk further: 40 percent of the population was school-aged; and the reserve had neither

⁵⁰ Mowachaht Band Meeting Minutes, 26 Feb. 1979, Book B, Woodward 1664.18.00.

⁵¹ Nixon, *Slow Violence*, introduction.

⁵² Hearing, Audio; “Mowachaht Pollution By-Laws”; “Community Hearing on Pulp Mill,” *UBCIC News*, 2, 4 (July 1979): 21; Author interview with Cory Howard, 19 Aug. 2004.

⁵³ Nootka Band Council Resolution, 21 Oct., 1970, Woodward 1664.5.12.1969–1973; Meeting minutes, 12 June 1974; R. J. Sparke, “Roads R/W Mowachaht,” Apr. 1969–Mar. 1979, file #5670-630-11, 974-1, Indian and Northern Affairs Canada.

⁵⁴ Nootka “Tears” transcripts, part II, SR78, 10–11, MMFN files.

⁵⁵ Hearing.

⁵⁶ *Ibid.*

firefighting equipment nor service.⁵⁷ Risk assessment must be epistemologically as well as contextually specific. The “cedar poisoning” that Howard mentioned is illustrative. Indigenous and non-Indigenous mill employees risked contracting the painful allergic skin reaction known as “cedar poisoning” from industrial exposure to sawdust from western red cedar and other trees, and to the liverworts and lichens on bark.⁵⁸ But reserve residents also faced this risk involuntarily in their own homes. From one angle, cedar poisoning demonstrates how industrial risk colonized indigenous domestic spaces. But, the “social life” of cedar was not universal.⁵⁹ Among Nuu-chah-nulth-aht, cedar is a medicinal, spiritual substance associated with healing and cleansing. People with this epistemology knew that a world in which cedar “poisoned” friends and family was one where something had gone very wrong, where the relationship between human and other-than-human life was *wikiis ča?miihta*, seriously out of balance.⁶⁰ How could a professional epistemology measure this sort of risk?

Emissions from the mill’s stacks affected residents too. They knew these emissions through multiple senses: sight, smell, touch, and even sound. They smelled the tell-tale rotten-egg odor familiar to anyone who has approached a pulp mill. With implicit reference to his prior occupation of the land, Elder Maurus McLean said: “The air is heavier. Day & night we smell it.”⁶¹ Jim Brisebois likewise highlighted the olfactory impact in the UBCIC newsletter: “[We] were sitting in [Mary Johnson’s] home drinking coffee the first day I visited there. The wind changed direction and the whole house began to stink from the fumes. I couldn’t believe it. Mary says it happens every day.”⁶² People also felt the emissions in their body. Maurus McLean described the air as “heavier.” Josie Johnson said “you can practically choke on it.”⁶³ Residents could even “hear” emissions. Mary Johnson: “We have smoke alarms going off because of the smog coming down.”⁶⁴ The smog was plain to see; ominous, omnipresent evidence of harm. Brisebois created a dramatic image of the gaseous plumes for readers of a socialist periodical:

⁵⁷ N. A. Duval to D. Clegg, Director, 9 July 1981, Woodward 1664.5.12.1977–present.

⁵⁸ E. Bleumink, J. C. Mitchell, and J. P. Nater, “Allergic Contact Dermatitis from Cedar Wood (*Thuja plicata*),” *British Journal of Dermatology* 88, 5 (1973): 499–504, 499; K. S. Tan, and J. C. Mitchell, “Patch and Photopatch Tests in Contact Dermatitis and Photodermatitis: A Preliminary Report of Investigation of 150 Patients, with Special Reference to “Cedar-Poisoning,” *Canadian Medical Association Journal* 98, 5 (1968): 252–55, 252. Work Safe Alberta, “Health Effects from Exposure to Wood Dust, *Workplace Health and Safety Bulletin* (Oct. 2004): 7, <http://www.hpva.org/sites/default/files/Alberta%20Canada%20WD%20Profile.pdf> (accessed 5 Feb. 2015). “Cedar asthma” can persist after exposure has ceased.

⁵⁹ Arjun Appadurai, *The Social Life of Things* (Cambridge: Cambridge University Press, 1986).

⁶⁰ Umeek, *Principles of Tsawalk*, ch. 1.

⁶¹ Hearing.

⁶² Jim Brisebois, “Pollution at Nootka,” *UBCIC News* 1, 3 (July 1978): 26.

⁶³ Hearing.

⁶⁴ Hearing.

Our eyes are drawn to the partly illuminated cone of greyish gas that is being emitted from the recovery stack of the mill.... There is a change in the air. Suddenly it is a little cooler and the breeze seems to have altered direction, now coming straight at us from the pulp mill. The plume from the recovery stack has collapsed and is falling straight to the ground below. Like some malevolent thing, the cloud of gas turns its face across the pile of chips and onto the roadway that separates us. Within seconds we are surrounded. Choking and gagging we watch the cloud move among the houses.⁶⁵

Brisebois' account was purposefully melodramatic, written to enlist left-wing solidarity. Community members also relied on powerful visual similes when they described emissions. Ray Williams, one of Yuquot's remaining residents, invoked the twentieth century's darkest image to describe his view of the plume from home: "Where I live is thirty-six miles away. On a nice clear day I can see when that pulp mill shoots out one big shot of smoke up into the air I can see that thirty-six miles away. And it looks like a mushroom. It looks like somebody dropping that atomic bomb on Gold River. That's the way it looks from way back there."⁶⁶

Community members feared especially for their children. Mike Maquinna: "We are going to be dying soon. I probably won't live to be as old as my father or my daughter won't live to be as old as I am."⁶⁷ Residents were certain about the cause of their children's symptoms. Connie Mark and Eveline Savey: "The kids get infection in their eyes because of the sawdust."⁶⁸ And Verna Jack: "We've often wondered if we're going to see our grandchildren. What worries me is the health of our people. One teacher had mention to the council 'why our kids are always sleeping in school.' ... A lot of our kids who were born 1971–1974 had a lot of rashes."⁶⁹

Off-reserve neighbors noticed the problem. One band councillor reported that teachers "notice[d] our kids were different from the kids who lived up town by their way of breathing."⁷⁰ Children exhibited labored breathing, difficulty staying awake, hard-to-shake colds even in summer, rashes that became open sores, and itchy, runny, infected eyes. Town and reserve residents alike connected these symptoms to the mill. Indigenous and sensory epistemologies led them to a common conclusion. Jim Brisebois: "Everyone believes these problems are caused by the pollution from the Mill."⁷¹

There was nothing subtle about the airborne particulate and gaseous matter at IR12. Human senses easily detected them. Nuu-chah-nulth

⁶⁵ Jim Brisebois, "Sweet Smell of Money Really Stinks," *Leftwords* 1, 5 (Oct. 1979): 7.

⁶⁶ Audio.

⁶⁷ Hearing.

⁶⁸ Ibid.

⁶⁹ Ibid. Excessive sleepiness is a common asthma symptom. "Asthma—Children," Medline Plus. <https://medlineplus.gov/ency/article/000990.htm> (accessed 10 Aug. 2016).

⁷⁰ Mowachaht Band Meeting Minutes, 31 July 1978, Book J, Woodward 1664.18.00; Minutes of Mary Johnson meeting with Louise Mandell, 16 Aug. 1978, Woodward 1664.18.00.

⁷¹ Brisebois, "Pollution at Nootka," 26.

epistemology validated trust in sensory knowledge, and community members interpreted their senses within a historically and relationally entrenched sense of time and place. But one did not need to be privy to an Indigenous epistemology to notice the problem. Even short-term visitors without a historical relationship to place could see, smell, and hear it.

The 1979 by-law hearing capped a decade of anti-pollution efforts. During this period, the council withheld approval of the periodic Tahsis lease renewals and of provincial right-of-way applications until company or government employees promised environmental improvements. Each time, little to no change ensued. Like indigenous and environmental justice activists elsewhere, IR12 residents struggled to gain attention outside their community.⁷²

They turned to a politics of visibility. One advantage of the by-law process was its public nature. The council invited all Gold River residents to attend. The hearing and its dramatic coverage in UBCIC publications became a sort of publicly-broadcast community survey. Surveys were useful to activists who, in the words of feminist STS scholar Michelle Murphy, “needed a tool that could gather into a single event an unwieldy constellation of health effects, a tool that was affordable and easy to use without experts, a tool, . . . that could transport their controversial vision of . . . health beyond themselves to persuade others.”⁷³ Mowachah Muchalaht community members hoped that public airing of their collective concerns would produce a remedy.

The community’s publicity efforts followed fortuitously on the heels of national media coverage about the health of mill employees. In 1978, the *Globe and Mail* reported several “gassing” incidents when mill workers were “hit in the face with concentrations of dangerous gases that leave the victim gasping, choked and panicky.”⁷⁴ The piece cited three experts: Theodor Sterling, a computational epidemiologist from Simon Fraser University; Bryan Garson, Gold River’s only medical doctor; and Cortlandt Mackenzie, chairman of British Columbia’s Pollution Control Board and head of the University of British Columbia’s department of epidemiology. All three agreed that exposure to sulfur gases was harmful. Garson saw several workers each week with tell-tale symptoms of gas exposure: “Headache, sore throat, and foul taste in the back of the mouth and pains in the chest.”⁷⁵ Sterling’s research showed that “17 percent of Gold River pulp mill workers suffered from work-related lung damage, believed to be connected to sulfur gases inside the mill.”⁷⁶ And Mackenzie stated “there are potential long-term problems from exposure to sulfur

⁷² Murphy, *Sick Building Syndrome*, 59; Brown, “Popular Epidemiology.”

⁷³ Murphy, *Sick Building Syndrome*, 71.

⁷⁴ “Gold River Worries about Pollution by Mill,” *Globe and Mail*, 22 July 1978: 4.

⁷⁵ *Ibid.*

⁷⁶ *Ibid.*

dioxide, even without the acute inhalation suffered here [by workers]—the kinds of conditions you see are permanent deterioration of the lung function.”⁷⁷ It was a short leap from these public statements by scientific authorities to the conclusion that residents, who did not punch out at day’s end, had reason to worry.

Mary Johnson’s husband Jack made this leap: “We live here 24 hours, the others live only 8. We got 365 days a year.”⁷⁸ So did expert and lay observers. Bob Woollard, M.D. and chair of the Environmental Health Committee of the British Columbia Medical Association: “The[re] are health costs for every individual.... It has now become apparent to anyone that there are health costs associated with the kinds of industrial development.”⁷⁹ After the hearing, the Nuu-chah-nulth Tribal Council’s (NTC) newspaper, the *Ha-Shilth-Sa*, enlisted Sterling and Mackenzie as allies of the band by reprinting their comments from the *Globe and Mail*.⁸⁰ A few months later, the band’s lawyer explained to the council and a DIA employee that “doctors were nervous” about the cedar poisonings and roadside fires.⁸¹

The community hearing/survey successfully earned the community support from media and public health professionals. Shortly after the by-law was enacted, Health Canada agreed to monitor air quality, and Woollard arranged medical examinations of band members.⁸² Securing these commitments from medical experts in positions of authority was a victory. Now that experts had *seen* them, residents reasonably hoped that professional investigations would reproduce their self-assessments.

Band councillors and members consulted with legal counsel and discussed the demands they anticipated being able to make. The resulting list underscores just how much more than clean air was at stake. They wanted restitution for the litany of colonial wrongs. They wanted restored access to the commercial fishery: an “A-licence,” fifteen trawlers, fifteen gillnetters, five seiners, and ten bunts, along with a machine shop, net loft, logs for a float, tools, a tackle shop, a power station, and a water system. They planned for renewal of Yuquot: houses equipped with wind-powered electricity, sewer, and water; a health center; a band office; fencing for the cemetery; a community center with swimming pool; and a museum with an arts-and-crafts shop. The school would reopen. All this would facilitate cultural and political resurgence: artifacts would be repatriated; Tahsis Company would donate cedar so youth could learn to carve; families would return to their chiefly properties.⁸³ They

⁷⁷ Ibid.

⁷⁸ Audio.

⁷⁹ Hearing; “Mowachaht Pollution By-Law Hearing,” *UBCIC News*, Aug. 1979: 6.

⁸⁰ “Mowachahts Fight for Tahsis Company over Pollution,” *Ha Shilth-Sa* 6, 5 (Oct. 1979): 1.

⁸¹ Mowachaht Band Meeting, 23 Jan. 1980, Minutes, Book E, Woodward 1664.18.00.

⁸² Ibid.

⁸³ Ibid., 15 Aug. 1979.

had issued many of these demands in 1978 when the province proposed a celebration of Cook's bi-centennial at Yuquot. The government's counter-offer then consisted of \$200,000 to build a longhouse. As one member said, "\$200,000 is not going to repay for what we've lost.... It's an insult to us!"⁸⁴ Throughout the 1970s, members understood their struggles with governments, highways, hydro, and the mill as part of a whole: their assertion of rights as a *people*. Mary Johnson: "The most important thing is our aboriginal rights. We should ask for it back. THAT WE THE MOWACHAHT BAND WE NEED AND STILL WANT AND HAVE OUR ABORIGINAL RIGHTS BACK."⁸⁵ *This* was the position from which the band mobilized when it passed pollution by-laws.

Health Canada monitored airborne hydrogen sulphide, mercaptans, and sulfur dioxide from October 1979 until December 1980.⁸⁶ Doctors conducted medical examinations of residents in 1980 and 1981.⁸⁷ The conclusion of this lengthy process must have shocked residents. Hazards easily perceptible via lay epistemologies, Indigenous epistemology, and commonsense alike, were imperceptible, and thus innocuous, to professionalized ways of knowing. Expert epistemology rendered highly visible conditions "invisible."

Federal and provincial safety thresholds for dustfall and airborne particulates that should have safeguarded residents functioned instead as technologies of erasure. Mary Habgood, Vancouver Island's director for Health and Welfare Canada, wrote to Chief Mike Maquinna in 1982: "Suspended particulates (i.e., in the air) had exceeded the Band by-laws about 50% of the time tested. However, the amount only exceeded the Provincial and Federal standards on 11 days out of 161 tested. The dust fall exceeded the Band By-law standard of 5 tons per square mile per month and sometimes the Provincial standard of 15 tons per square mile per month. The Federal standard is 50 tons per square mile per month and this was not exceeded."⁸⁸ Habgood, a federal employee, privileged federal standards and in so doing erased measurable amounts of particulate matter. She treated any amount below the federal threshold as safe, and the specific amount as irrelevant. Maquinna knew only that it fell within the large range between 5 and 50 tons per square mile per month. Habgood's observation that sawdust comprised half of the particulate matter, likewise obscured as much as it revealed, since it left the other half unidentified.⁸⁹ Airborne dust and particulate matter could be seen, touched, tasted,

⁸⁴ *Ibid.*, 4 Mar. 1978, Book D, Woodward 1664.18.00.

⁸⁵ *Ibid.*, 13 Dec. 1977, original emphasis.

⁸⁶ Mary Habgood to Miriam Webber, 27 Dec. 1990, file #151-5-1-28, Nootka—Mowachaht, 1979–1993, Branch, Health & Welfare Canada, Victoria, British Columbia (hereafter "Health Canada file").

⁸⁷ *Ibid.*

⁸⁸ Mary Habgood to Mike Maquinna, 8 Dec. 1982, Health Canada file.

⁸⁹ *Ibid.*

and even heard (via smoke alarms). But the common scientific use of thresholds to generate gross judgements—“safe” or “unsafe”—rendered the sensed amount insignificant and imperceptible in the professionalized register.

Health Canada’s measurement of sulfur gases produced imperceptibility in a slightly different manner. Air samples from June, July, and August 1981 contained neither hydrogen sulphide nor sulfur dioxide, though every human nose in the vicinity knew otherwise.⁹⁰ In this instance, gases disappeared through a combination of poor planning and poor judgment. Poor planning because the air monitoring station was positioned between the mill and the village of Gold River, rather than between the mill and the subdivision—that is, upwind, rather than downwind from the mill’s stacks—and poor judgment because technicians failed to perceive that the nil results were incongruous with their sensory experiences on-reserve. Faith in scientific techniques of knowledge production overrode commonsense application of their human senses. Had they treated this incongruity as a knowledge source, they might have questioned the lab results and reviewed the site for methodological issues. Had they noticed the improper placement of the station, they might have reached the conclusion drawn a decade later by a University of British Columbia epidemiologist, that samples from this station were irrelevant for assessing risks to reserve residents.⁹¹

Habgood, however, confidently reported that hydrogen sulphide and sulfur dioxide were “well within the levels considered safe by regulatory agencies.”⁹² Community members who were sensibly disinclined to override their senses could not have been reassured. They continued to look to everyday experience. When they saw mill employees park beneath awnings installed to protect their vehicles from rust and paint damage caused by sulfur dioxide, they reasonably asked what the gas did to their own bodies and how they could protect themselves.⁹³

The results of medical examinations were similarly incompatible with community knowledge. Residents’ lived experience told them that their health difficulties, particularly eye, skin, and respiratory issues, were caused by poor air quality. They knew multiple medical doctors had publically shared similar views. Yet Dr. S. Drabitt reported that the “general health of the settlement was very good,” that he “did not see any chronic long range harmful effects on the lungs or skin.”⁹⁴ Habgood forwarded Drabitt’s report to the community:

⁹⁰ J. Kirkbride to Denis Hayes, 2 Sept. 1981, Water Inspection/Health Reports, MMFN files.

⁹¹ C. van Netten to Rodney Thur, 27 Mar. 1991, Health Canada file.

⁹² Habgood to Maquinna, 8 Dec. 1982, MMFN files.

⁹³ Brett Lowther, “Moving the Village,” *Monday Magazine* (Victoria, BC) 50 (9–15 Dec. 1993).

⁹⁴ “Gold River Air Pollution Investigation, by Dr. S. Drabitt,” enclosed in Habgood to Maquinna, 8 Dec. 1982, MMFN files.

The medical findings showed no evidence of skin, eye or ear, nose or throat irritation based on data collected in December, although there were complaints of irritation in the spring–summer season. Chest examination and spirometry provided no evidence of respiratory problems.⁹⁵ Habgood was dismissive of self-reported “complaints of irritation,” and as with the threshold limits for air quality, assumed that if tests did not show harm, then harm did not exist. “In summary,” she wrote,

very extensive monitoring of conditions on the reserve was carried out in 1980 and 1981. There was some excess dustfall and suspended particulates at times. The chemicals tested were all within acceptable levels. Noise exceeded your by law but was not found to be at levels which cause ear damage. The medical examinations and tests show no evidence at the time of examination of the diseases that might result from exposure to pulp mill chemicals, dust or noise. The people in Kyuquot were studied for comparison and rather more health problems showed up there than on your reserve.⁹⁶

Far from a smoking gun, these results were the means by which Health Canada denied the legitimacy of the knowledge that residents acquired from their sensed, embodied experiences of the relationship between themselves and their environment. After offering their bodies as evidence, residents faced the indignity of being told that that what they knew about themselves was incorrect. The professional way of knowing proved incapable of representing what community members knew was true.

These results did not derive from simple personality or bias. Habgood herself may have meant well: I interviewed a candid Health Canada employee who remembered her positively.⁹⁷ Or she may not: in 1979, a frustrated hereditary chief called Habgood “real useless” and urged the band find a different doctor.⁹⁸ Either way, both Habgood and Drabbit necessarily relied upon and deferred to professionally-sanctioned technologies of testing and standards of evidence. These technologies and standards fell short. Drabbit sensed as much. At the bottom of his summary of medical results, he added this lay observation: “It is unfortunate that the settlement is found next to the pulp mill, and as far as I can see only two solutions are possible, you either move the settlement to another location or you move the pulp mill.”⁹⁹ Drabbit reached *this* conclusion with his bare senses rather than his spirometer. This aligned him with the people’s knowledge. But in face of the mill—a colonial capitalist nexus—it also carried little weight.

The institutional culture within which professionals such as Habgood and Drabbit operated put, in the words of the STS scholar Sheila Jasanoff, “too little faith in people and too much in the objectivity of formal analysis.” In such

⁹⁵ Habgood to Maquinna, 8 Dec. 1982, MMFN files.

⁹⁶ Ibid.

⁹⁷ Author interview with Denis Hayes, 4 Feb. 2004.

⁹⁸ Mowachaht Band Meeting, Minutes, 3 Dec. 1979, Woodward 1664.18.00.

⁹⁹ Drabbit, “Gold River Air Pollution Investigation.”

situations, Jasanoff notes, “the representations of the world that policy-makers respond to can drift dangerously far from the world that their fellow citizens experience and inhabit.”¹⁰⁰ This most certainly occurred at IR12. In Jasanoff’s contexts, the gap between policy-makers and citizens poses the risk of “civic dislocation.” But, the stakes of Indigenous spaces differ. Mowachaht and Muchalaht were peoples dislocated by the inception of the state itself; civic dislocation was inherent to their colonial present. Accordingly, they struggled not to better connect with the settler state but to assert their authority as distinct from it.

Ultimately no scientist or doctor, even a sympathetic one, could use medical or environmental tests to mobilize change at IR12. Don Smith, a DIA contract researcher, noted this impasse in 1989, when he deemed additional environmental studies futile. An NTC researcher summarized Smith’s report: “[He] feels that no matter what the Band comes up with in another study, it will only be used to allow the Department/Company to defend the position that the mill is not considered a ‘health hazard.’ While he agrees that it does not take a genius to conclude that the existing village is not a healthy environment in which to live, he is doubtful that any government agency would admit to the true problem which the Mowachaht village currently faces.”¹⁰¹

Here was the crux. It did not take a genius to see the dangers. Yet dangers became imperceptible when they passed through the fire of bureaucratic and technocratic ways of knowing. They were simultaneously obvious and invisible. And so Smith suggested, “the Band should rather apply any funding towards a village relocation study with comments on the environmental conditions of the existing village. He further feels that the study should emphasize the overcrowded conditions of the Reserve (150 members living on approximately 7 acres of land).”¹⁰² That is, Smith recommended the band shift its case to socioeconomic grounds rather than obvious, but impossible to prove environmental health ones. This strategy was more likely to succeed, both because it held neither government nor corporation to account *and* because it fit the a priori expectations of settlers that Indigenous lives were deficient and in need of remediation. In late twentieth-century Canada, Indigenous families crowded onto impoverished reserves were “Indians in expected places”; those engaged in the practice of jurisdiction over their *hah̄uul̄ni* were not.

And so, other experts arrived at conclusions much like Smith’s. Denis Hayes, Health Canada’s environmental health officer from 1981–2001, was

¹⁰⁰ Sheila Jasanoff, “Civilization and Madness: The Great BSE Scare of 1996,” *Public Understanding of Science* 6 (1997): 221–32, 231.

¹⁰¹ Angela Cantryn to Chiefs and Council, Mowachaht Band, 23 June 1989, Woodward 1664.18.27.

¹⁰² *Ibid.*

one. Hayes saw himself as a community ally, a soldier on the ground, and indeed he had a military background. He began work at IR12 in the anti-climactic letdown of the environmental and medical tests. Their failure to produce results meant that air quality problems worsened. Airborne fly ash and cedar dust still plagued residents and caused skin irritations and rashes.¹⁰³ Hydrogen sulphide and sulfur dioxide continued to pour from the stacks, and in 1989, the mill violated its provincial air permit.¹⁰⁴ Hayes, however, focused on drinking water. He detected coliform contamination in 1982, and worked for the rest of the decade to remedy this problem.¹⁰⁵

Additional problems arose. The mill violated its water permit and discharged vast amounts of pulp and suspended solids that contaminated Muchalaht Inlet with dioxins and furans.¹⁰⁶ The shellfish fishery, an important food source, closed.¹⁰⁷ The risk of acute toxic contamination grew: the mill dumped material dredged from its fly ash setting ponds in a landfill that was accessible to children and adjacent to the Gold River, the drinking water source;¹⁰⁸ a PCB spill occurred in 1986,¹⁰⁹ and there was a chlorine dioxide leak in 1990.¹¹⁰ As soon as Hayes tackled one problem, a different one appeared or recurred. He addressed the issues one by one, as his professional frame of reference required.

But by 1990, Hayes was so frustrated by the limitations of the claims his laboratory results permitted that he cast aside his piecemeal mandate. Of the two decades he worked at IR12, this moment stood out for him as one of tremendous risk and victory: the moment he stepped beyond the bounds of his professional epistemology. He did what Drabbit had done eight years prior, although with greater force: he recommended that the community relocate for its own safety. He based his recommendation on the paradoxical multiplicity of highly visible yet unverifiable environmental hazards. He resorted to an emotionally charged plea based upon sensory-derived, lay conclusions, to an epistemology that was readily accessible to anyone who stepped foot on the reserve, an epistemology not limited to those with expertise in public health. Turning to narrative form rather than coliform counts or turbidity scales, Hayes enumerated the hazards that collectively produced exponential risk to personal and community

¹⁰³ Stewart Bell, "Gold River Mill Worries Indians," *Vancouver Sun*, 7 Dec. 1990: B6.

¹⁰⁴ *West Coast Environmental Law Research Foundation Newsletter* 14, 4 (Spring 1990). Special Pulp Pollution Edition, MMFN files.

¹⁰⁵ See "Water Inspection/Health Reports," MMFN files, Health Canada file.

¹⁰⁶ *West Coast Environmental Law Research Foundation Newsletter* 14, 4 (Spring 1990); "Indians Angered by Water Pollution," *Times-Colonist*, 9 Dec. 1990: B12.

¹⁰⁷ S. M. Osborne to Chief Jack, 23 Nov. 1989, Health Canada file.

¹⁰⁸ R. A. Bollans to Chief Mike Maquinna, 24 Nov. 1982, "Ministry of Environment," MMFN files; Rodney Thur to John Quinn, 2 Aug. 1991, Health Canada file.

¹⁰⁹ Mary E. Habgood to Chief and Council, Mowachaht Band, 24 Oct. 1986, "Water Inspection/Health Reports," MMFN files.

¹¹⁰ Habgood to Webber, 27 Dec. 1990, Health Canada file.

health: contaminated drinking water and seawater, overcrowded homes, intolerable seasonal periods of heat, rain, and/or dust. The location on the fjord, tightly sandwiched between the inlet and the mountains, produced this poor weather and created irremediable safety concerns. A toxic leak at the mill would trap residents between the spill and the waterfront, and leave them unable to evacuate. In summary, Hayes noted, “The life quality in this village can only be described as dismal at best.”¹¹¹ Evidence for this generalization was overwhelming, yet no single definitive piece of evidence existed.

Concerned that his superiors “locked up in their little cubicles,”¹¹² would not support this lay expression, Hayes took rogue action (at least by bureaucratic standards)—he delivered his memo directly to the council at a band meeting without first informing his supervisor.¹¹³ His conscience compelled him, even though he lacked evidence of causality between environmental hazards and human illness. His act was reminiscent of public health’s foundational moment: when John Snow removed the handle of the Broad Street water pump during London’s 1854 cholera epidemic, despite absence of proof that the water caused the outbreak.¹¹⁴ Snow’s intervention has been dubbed “shoe leather epidemiology,” a term that highlights the need for public health workers to be on the ground, using their bodily senses to perceive and interpret. Hayes too was a boots-on-the-ground worker. In conversation with me after his retirement, he speculated that this unauthorized step was the reason he was never promoted in his subsequent decades with Health Canada.¹¹⁵

Hayes was neither the first nor last health professional to experience diminished faith in the change-making potential of his skills. Other professionals likewise found the lay register more aligned with their conscience and their commonsense. In February 1991, the council invited Chris van Netten, assistant professor in Health Care and Epidemiology at the University of British Columbia, to visit. Like Drabbit and Hayes, van Netten focused on the plain-to-see incompatibility between the residential and industrial purposes of IR12. Absent a causal link between pollution and bodily harm, van Netten interestingly insisted that the profound *lack* of knowledge necessitated relocation. He stressed the *unknown* impact of chronic exposure to industrial pollution on the food chain and human health. He concluded with astonishment: “From an environmental health point of view, one wonders how a situation like this could have developed.”¹¹⁶ Two years later, Michael Meckin, Gold

¹¹¹ Denis Hayes to H. J. Johnson, 22 Nov. 1990, “Water Inspection/Health Reports,” MMFN files.

¹¹² Author interview with Denis Hayes, 4 Feb. 2004.

¹¹³ Ibid.

¹¹⁴ Phil Brown, “Popular Epidemiology Revisited,” *Current Sociology* 45, 3 (1997), 137–56, 138.

¹¹⁵ Author interview with Denis Hayes, 4 Feb. 2004. See also Krupar, *Hot Spotter’s Report*, 180.

¹¹⁶ van Netten to Thur, 27 Mar. 1991, Health Canada file.

River's family physician, favored lay over professional knowledge even more starkly. In a public letter to the Minister of Indian Affairs, Meckin conceded that "the respiratory and skin problems of the band are not unusually high for a native population, that the effluent levels emitted by the mill are within standards and that lifestyle may have as much to do with health as pollution." "But all the same," he continued, "I can hardly breathe when I go down there, so ... I can't imagine it not having an effect on their health."¹¹⁷ Here, Meckin asked the Minister to disregard test results and patient records and rely instead on evidence Meckin gathered with his senses: "I can hardly breathe...." He asked him to accept a conclusion that he, like Van Netten, had reached through a logic of astonishment: "I can't imagine...."

As professionals resorted to lay terms to capture IR12's environmental health crisis, their accounts converged with community ones. In August 1991, the council declared relocation from Yuquot to Ahaminaquus "a total economic, social, environmental, and health disaster for the people ... a source of embarrassment to Canada, and a cause of misery to the Muchalaht and Mowachaht people," and demanded that the federal government relocate the community as soon as possible.¹¹⁸

At this time, the community returned to the survey as an evidence-gathering tool. Leslie Brown, assistant professor of Social Work at the University of Victoria, conducted a relocation survey and health questionnaire. Like the 1979 by-law hearing, this process sought to translate experiential community knowledge into quantifiable terms perceptible and persuasive to authorities. The rate of self-reported ailments was shocking. Forty-eight percent of residents over the age of sixteen reported skin allergies, and 23 percent hay fever or other allergies. The national rate of skin and other allergies was 8 percent.¹¹⁹ Among IR12 residents, 36 percent complained of migraine headaches compared to 4 percent nationally,¹²⁰ and somewhere between 5 and 12 percent of IR12 residents reported asthma.¹²¹ Yet the conclusions that could be drawn from these numbers were inevitably weak. Brown stated, "It is hypothesized that the number of health problems may be associated with the location of the respondents" and that "a preliminary analysis ... indicate [*sic*] that there is a correlation between location and health."¹²²

As technologies of advocacy, health surveys, and narrative pleas from health professionals shared some pros and cons. On the pro side, their holistic framing counteracted erasures produced by technologies that measured isolated

¹¹⁷ Quoted in Robert Mason Lee, "Natives Blame Mill for Ill Health, Death," *Vancouver Sun*, 16 Aug. 1993: A1.

¹¹⁸ Mowachaht and Muchalaht Band Council Resolution, 19 Aug. 1991, MMFN files.

¹¹⁹ "Mowachaht Band—Rebuilding a Community, Stage One Report", n.d., p. 2, MMFN files.

¹²⁰ *Ibid.*

¹²¹ *Ibid.*; Rudy Dick, "Nootka Environmental Project," 25 Feb. 1999, MMFN files.

¹²² "Mowachaht Band," MMFN files.

hazards. Narratives and surveys were effective technologies for rendering complex conditions perceptible. Brown's alarming statistics are one example. But, on the con side, and as Brown's relatively weak conclusions demonstrate, surveys could show only correlation, not causation. As Michelle Murphy writes, "Surveys were able to capture a phenomenon that was nonspecific and only discernable in a cluster, not in an individual.... Surveys could only materialize the contours and expression of a ... health phenomenon, not the causes behind it".¹²³ Their inability to materialize causation meant that surveys and narrative reports paradoxically carried little power to mobilize responses to the conditions they rendered perceptible. Institutionalized practices for managing risk conditioned scientific experts and bureaucratic decision-makers to privilege proven causal relationships. Decision-makers' lack of action when presented with strongly correlated phenomenon implied their acceptance of the risk posed by a given hazard. In other words, until a potential disaster became an actual disaster, they treated the risk as manageable.¹²⁴

Surveys and narrative technologies carried an additional disadvantage. The correlations these tools materialized were broad and non-specific, features that helped produce perceptibility. Paradoxically, these same features produced new erasures. Demonstrating correlation rather than causation did more than free community members and their allies from futile attempts to demonstrate scientific causality. It simultaneously undermined their attempts to demonstrate other causal relationships.

Most notably, it silenced long-standing efforts to materialize colonialism as the source of the problems at IR12. When advocates relinquished the search for causation, they inadvertently fostered depoliticized narratives of victim-blaming.¹²⁵ Meckin's public expression of concern implied Indigenous dysfunction and incapacity with its reference to "lifestyle" and generalization about morbidity for "a native population." H. J. Johnson, Hayes' superior, wielded similarly double-edged support. He backed Hayes' recommendation, but in so doing, extracted the situation from its colonial context. He wrote that medical services "feel that *the socio-economic conditions* on this reserve have a detrimental effect on the health of Band members."¹²⁶ Johnson's careful wording struck a balance that neither contradicted Hayes nor transgressed medical standards of proof. But his claim that something as amorphous as "socio-economic conditions" was the source of difficulty dealt a major blow to the community's cause. It utterly failed to represent the community as a party wronged by a government's criminal negligence, or by centuries of colonialism. Instead, it positioned the community as beneficiary of a benevolent

¹²³ Murphy, *Sick Building Syndrome*, 74.

¹²⁴ Krupar, *Hot Spotter's Report*, 10–11, 13.

¹²⁵ *Ibid.*, 207.

¹²⁶ H. J. Johnson to Chief & Council, 26 Nov. 1990, Health Canada file, my emphasis.

government there to rescue it from disaster of its own making. This narrative could readily gain purchase because it situated community members along a trajectory of familiar paternalistic assumptions and practices. From the vantage of Ahaminuquus in the 1970s, this trajectory extended back to nineteenth-century assimilationist policies common to Canada and the United States, and it anticipated twenty-first-century global, neo-liberal claims of corporate benevolence. These diverse expressions of paternalism shared a common tendency to produce dependency among the populations whom they claimed to assist.¹²⁷ A relocation campaign that turned on questions of “lifestyle” or “socio-economic conditions” materialized a very different history *and* a very different politics than one that turned on the displacements of colonial capitalism. Such a campaign obfuscated both primitive accumulation of the *hah̄uulni* and the dispossession of its people. These were on-going processes pursued through provincial and federal claims of sovereignty and jurisdiction over un-ceded lands, and through specific federal policies that outlawed hereditary governance, apprehended Mowachaht and Muchalaht children, excluded Indigenous fishers from the commercial fishery, restricted access to capital, paralyzed Indigenous-driven economic initiatives, and coerced relocation. Colonialism was the root cause of the so-called socioeconomic predicament at IR12.¹²⁸ Silencing this fact was the price government officials extracted in exchange for a safer place to live.

Community members and their allies tried for more than two decades to use lay and professional epistemologies to improve environmental and health conditions. Ultimately, these well-intentioned efforts were impotent. When change came, neither environmental nor health conditions leveraged the deal. It came when the community transformed the calculus of risk faced by government and corporation by shifting the conversation to one about legal liability. In so doing, the community was forced to speak not from its grounded position as an Indigenous people targeted by a settler state, but from the subject position of a ward wronged by its guardian.

The 1979 pollution by-laws and subsequent testing had been a watershed. In one sense nothing changed: pollution continued unabated and community members remained certain that their homes were unsafe. Yet *everything* changed because a decade’s momentum was broken. Appeals to professionalized epistemology had failed. One response to this was the increase in lay

¹²⁷ For example, see Sarah Carter, *Lost Harvests: Prairie Indian Reserve Farmers and Government Policy* (Montreal: McGill-Queen’s University Press, 1993); Robert Jarvis Brownlie, *A Fatherly Eye: Indian Agents, Government Power, and Aboriginal Resistance in Ontario, 1918–1939* (Don Mills, ON: Oxford University Press, 2003); Kirsch, *Mining Capitalism*; Krupar, *Hot Spotter’s Report*.

¹²⁸ Coburn and Atleo, “Not Just another Social Movement,” 191.

formulations of health and environment that I discuss above. But community members did more than reiterate environmental and health issues. Everything changed because the community changed course.

In 1982, the band installed a new chief and council comprised of male representatives of four chiefly lines.¹²⁹ The new council shifted away from UBCIC and strengthened its association with NTC, the regional representative body for Nuu-chah-nulth-speaking peoples on the west coast of Vancouver Island. The council also retained new counsel: Jack Woodward. Woodward had previously helped draft the clause that entrenched Aboriginal rights in the *Constitution Act* (1982), a process that Jerry Jack and the UBCIC vociferously opposed.

With their new legal team, the council evolved a strategy that hinged on infractions of the federal Indian Act. The community had long known such breaches existed.¹³⁰ These now became their strategic focus. The most significant pertained to the original lease of IR12 to Tahsis Company. An Indian Act stipulation that required band members meet and vote to surrender the reserve for the purposes of a lease had not been followed. No meeting was ever held; signatures on the surrender document were fraudulent. The band filed suit over this matter in 1986.¹³¹

With trial set for April 1994, the band worked with Woodward and George Watts of NTC to reach an out-of-court settlement that included relocation in August 1993.¹³² The agreement was a victory: families could look to a clean environment in which to live and raise their children. But it was also an erasure of the health and environmental traumas. As John Watson, British Columbia's regional director general for Indian Affairs told a reporter, "The decision to resettle the band members did not arise from any documented health problems."¹³³

Government's over-due willingness to relocate the community betrayed its variable relationship to risk. When it came to the health of community members, state actors rejected precautionary principles and risked a false negative: lacking quantifiable, certain, causal evidence of pulp-mill-related illnesses, they did nothing. They acted as though absence of evidence constituted evidence of absence. But when it came to the legality of the lease, to the legality of the capitalist enterprise at IR12, they blinked. Although the community had not proven its position regarding the lease, government now took precautionary action based upon the possibility, albeit uncertain, that the band might offer proof at trial.

¹²⁹ "Governance History," Woodward 1664.5.08.

¹³⁰ Mowachaht Band Council Resolution, 22 Jan. 1979, Woodward 1664.5.12.1977–present.

¹³¹ Lowther, "Moving the Village."

¹³² Lee, "Natives Blame Mill."

¹³³ Quoted in Robert Mason Lee, "Pollution-Free Property Sought for Indian Band," *Vancouver Sun*, 19 Aug. 1993: n.p.

The calculus behind these differential approaches to risk was callous and eminently colonial. Government employees took a cavalier gamble when it came to Indigenous lives, many of them children's lives. Once compromised, health cannot necessarily be restored and money provides only surrogate restitution. Indian Affairs officials readily accepted this harm to people. They acted only when it became necessary to silence potential questions about the legitimacy of a multi-national company extracting resources from improperly acquired lands. Silences can be diagnostic. Through the decades of struggle, state and company actors took for granted the mill's right to operate at IR12. They could envision and engineer the relocation of an entire community not just once, but twice, but they never seriously considered relocation or closure of the mill.

State collaboration with multi-national corporations and the privileging of profits over people feature in many environmental justice struggles. But the struggle at IR12 was anti-colonial. The community argued not simply that pollution made them sick; they declared that colonialism did. Community members suffered more than a breach of human rights, they suffered a breach of their rights as an Indigenous people. They challenged the foundations of state legitimacy when they connected the dots between pollution, socioeconomic conditions, and colonialism. In this context, corrective bureaucratic action was doubly disincentivized: Indigenous assertions of self-determination took aim at the dual superiority narratives of capitalism and liberal democracy. These narratives did not need to rise to the level of an individual's conscious intention to play a powerful role. Their logic inhered in the convergence of capitalist and colonial structures that constituted the Canadian state.

Government and corporate actors externalized the costs of this logic onto the bodies of community members. In a number of dramatic pieces published in the wake of the relocation settlement in 1993, journalists described the physical deterioration of people's bodies and widespread skin and respiratory ailments particularly in children.¹³⁴ By this time, a generation had grown up beside the mill and begun families of its own. Media accounts provided a litany of loss: stillbirth, SIDS, and an unprecedented, premature loss of Elders.¹³⁵ Journalists represented the lived experience of residents who were as certain as ever of the mill's responsibility. On the question of skin conditions, one resident said, "If we had clean, solid air this wouldn't happen.... If we go away for a week or two, all the skin rashes clear up. Then we come home and it starts again."¹³⁶ With respect to the tragic loss of infant life, one young father saw it this way: "All those babies were from ladies who grew up here. It gets

¹³⁴ Lee, "Natives Blame Mill."

¹³⁵ Ibid.; Lowther, "Moving the Village."

¹³⁶ Quoted in Lee, "Natives Blame Mill."

pretty suspicious.”¹³⁷ These journalistic sources reveal accumulations of physical ailments, particularly on the bodies of the very young and very old.¹³⁸ But with headlines like “Hellhole,” they also played the familiar politics of spectacle.¹³⁹ The hyper-visibility of tragedy and trauma in these reports functioned as an invisibility cloak for what lay beneath and before. Severed from the anti-colonial protests of a decade earlier, these accounts rendered residents abject victims of an apparently intractable “socioeconomic” crisis, the sort of crisis that non-Indigenous readers associated with on-reserve “lifestyles.” Here were Indians in a very expected place.

Less visible than the physical conditions described by journalists were the social and emotional costs that the mill extracted. Terry Williams, who along with her husband Ray still lives at Yuquot, offered perhaps the most poignant and most damning testimony of the mill’s impact. In a 1993 interview, Terry said that she never wanted to move to IR12 because the mill “can damage your mind” and give you “some kind of a disease where you end up hating each other. You don’t even want to be close to your next door neighbor. That’s what kind of damage it does to you if you live right close to a mill like that.”¹⁴⁰ Here, Williams described her personal experience of what Umeek calls “the immediate effect of the erosion of the value of *iis?ak* ... a corresponding erosion of the ancient practice of being kind to friends, neighbors, strangers, and relatives.”¹⁴¹ Like those who spoke fourteen years earlier at the by-law hearing, Williams knew that social and physical illnesses were

¹³⁷ Ibid.

¹³⁸ See also Bell, “Gold River Mill”; Interview with Hayes. Exposure to airborne particulate matter, sulfur dioxide, and hydrogen sulphide are linked to pre-term birth, low birth weight, increased rates of pregnancy loss, and other reproductive issues. P. S. Shah and T. Balkhair, “Air Pollution and Birth Outcomes,” *Environment International* 37, 2 (2011): 498–516; Davaasambuu. Enkhmaa et al., “Seasonal Ambient Air Pollution Correlates Strongly with Spontaneous Abortion in Mongolia,” *BMC Pregnancy and Childbirth* 14 (2014): 146; K. Hemminki and M. L. Niemi, “Community Study of Spontaneous Abortions: Relation to Occupation and Air Pollution by Sulfur Dioxide, Hydrogen Sulfide, and Darbon Disulfide,” *International Archives of Occupational and Environmental Health* 51, 1 (1982): 55–63; M. Bobak, “Outdoor Air Pollution, Low Birth Weight, and Prematurity,” *Environmental Health Perspectives* 108, 2 (2000): 173–76; Rose Dugandzic et al., “The Association between Low Level Exposures to Ambient Air Pollution and Term Low Birth Weight: A Retrospective Cohort Study,” *Environmental Health* 5, 3 (2006); Xiping Xu, Hui Ding, and Xiaobin Wang, “Acute Effects of Total Suspended Particulates and Sulfur Dioxides on Pre-Term Delivery,” *Archives of Environmental Health* 50, 6 (1995), 407–15; Shiliang Liu et al., “Association between Gaseous Ambient Air Pollutants and Adverse Pregnancy Outcomes,” *Environmental Health Perspectives* 111, 14 (2003): 1773–78; Wieslaw Jedrychowski et al., “Estimated Risk for Altered Fetal Growth Resulting from Exposure to Fine Particles during Pregnancy: An Epidemiologic Prospective Cohort Study in Poland,” *Environmental Health Perspectives* 112, 14 (2004): 1398–402. See also Wiebe, *Everyday Exposure*, 22.

¹³⁹ Lee, “Natives Blame Mill,” also ran as “Hellhole: The Air over the Mowachaht Indian Reserve Is so Fouled by Smoke from a Neighbouring Pulp Mill that It Sometimes Sets off Smoke Alarms,” *Edmonton Journal*, 29 Aug. 1993: D5.

¹⁴⁰ Nootka “Tears” Transcripts, part I, SR41, 12, MMFN files.

¹⁴¹ Umeek, *Principles of Tsawalk*, 108.

interconnected, traumatic forms of unwellness caused by the mill. Like many at the by-law hearing, Williams related past to present to reach her conclusions: “When they moved to Gold River it really changed, like I said before. They don’t seem to notice that they changed compared to when they were out here.”¹⁴² Although not rent asunder, the community’s social fabric was tremendously strained by life next to the mill. This was another of the terrible prices that community members paid for the generation spent beneath the smokestacks. The marks of stress and strain on the people living there were vast and immeasurable, obvious yet invisible, much like the airborne substances that they inhaled everyday.

In one of my first interviews for this project, the participant told me that graves lay beneath the ribbon of highway that separated community and mill. He told me IR12 was a “spooky” place to live: once, he and his wife heard babies crying under their house; and they were not the only ones. During road construction, engineers and supervisors failed to tell workers that their labor disturbed the dead and one Lummi worker walked off the job when he found out. It took me a long time to understand why this was the first story about IR12 that this participant shared. It took me a long time to see how profoundly this desecration prefigured what was to come. When crews broke ground for the road, the graves of loved ones, once plainly visible to descendants and clearly marked on survey maps, disappeared. They were deemed irrelevant, rendered invisible. The treatment that the dead received when Ahaminaquus became IR12 foreshadowed the erasures that the living subsequently endured.

The colonial past, too, became buried: rendered imperceptible by the politics of knowledge, evidence, risk, and uncertainty that played out on and around people’s bodies at IR12. This outcome was reached, not inevitably, but through the callous logic of the settler colonial architecture that supported the capitalist, neo-liberal state. One of the ancestors laid to rest at Ahaminaquus was Herbert Francis, a Muchalaht man who translated the testimony of his chiefs to the McKenna-McBride Royal Commission in 1914. The Commission was itself a province-wide survey and translation effort: chiefs movingly expressed the extent of their authority over unceded lands and waters, while commissioners reiterated their colonial mandate’s narrow frame of reference to shuffle postage-stamp reserve allocations.¹⁴³ Half a century later, Francis’ Muchalaht descendants and their Mowachaht relatives and neighbors reprised the efforts of chiefs and translators before them. They, too, attempted to gain the ear of those in authority across chasms of knowledge and power. They, too, attempted to translate, not from their mother tongue to English, but from one

¹⁴² Ibid., 12–13.

¹⁴³ See West Coast Agency Testimony, 151, 160, McKenna-McBride Royal Commission, 1914.

way of knowing to another. When community members pursued their urgent need for environmental and health justice, they simultaneously continued earlier conversations about hereditary authority over ancestral lands and waters. Just as road crews paved over Francis' grave, government decision-makers tried to bury the conversation about colonialism when they reached a relocation agreement with the community.

Although the government extracted its pound of flesh, the relocation agreement was and remains an accomplishment of which the community can rightfully be proud. With it, they gave themselves and future generations a fresh start. And if government officials and bureaucrats of the day believed they put Mowachaht and Muchalaht assertions of self-determination in the ground once and for all, they would have been wrong. Community members used the fresh start to energize a renewed battle over the right to control activities, particularly fishing, in their *hahuulni*, rights that remain familiarly obvious and at the same time invisible in the context of the present-day settler state.¹⁴⁴ Community members today continue their translation efforts as they try yet again to render their knowledge and their authority perceptible, this time to the common law, another of colonialism's ways of knowing.

¹⁴⁴ See, for example, "Nuu-chah-nulth Nations Applaud BC Appeal Court Decision," *Ha Shilth Sa*, 2 July 2013.

Abstract: This paper interrogates the specific workings and stakes of slow violence on *Indigenous* ground. It argues that despite similarities with other environmental justice struggles, Indigenous ones are fundamentally distinct because of Indigenous peoples' unique relationship to the polluted or damaged entity, to the state, and to capital. It draws from Indigenous studies, history, anthropology, geography, sensory studies, and STS, to present results from research with the Mowachht Muchalaht First Nation, an Indigenous people on the west coast of British Columbia. Throughout the 1970s and 1980s, this community used successive strategies to try to render its knowledge about health, environment, and authority visible to the settler state. Each strategy entailed particular configurations of risk, perceptibility, and uncertainty; each involved translation between epistemologies; and each implicated a distinct subject position for Indigenous peoples vis-à-vis the state. The community's initial anti-colonial, environmental justice campaign attempted to translate local, Indigenous ways of knowing into the epistemologies of environmental science and public health. After this strategy failed, community leaders launched another that leveraged the state's legal epistemology. This second strategy shifted the balance of risk and uncertainty such that state actors felt compelled to act. The community achieved victory, but at a price. Where the first strategy positioned the community as a self-determined, sovereign actor; the second positioned it as a ward of the state. This outcome illustrates the costs that modern states extract from Indigenous peoples who seek remedial action, and more generally, the mechanisms through which the colonial present is (re)produced.

Key words: Indigenous peoples, sovereignty, settler colonialism, risk, health, lay epistemologies, STS, environmental justice, sensory studies, Northwest Coast