Copyright © 2025. University of Exeter Press. All rights reserved.

3

Survival of the Most Collaborative: Climate Justice as a Logics for Flows of Air

Sheena Wilson

Air quality, like climate change, is an issue experienced locally, but its flows do not adhere to borders. This chapter will outline, from a situated feminist and decolonial perspective, the inherent contradiction of expecting national governments around the world to enforce international agreements on climate when the *raison d'être* of states has always been to manage lands and resources, as well as the bodies, included and excluded from their territorial borders. I will situate my own personal-professional perspective within a broader history of the logics and politics that have created climate change to illustrate how the flows of air, the climate crisis, and the polycrisis of the twenty-first century demand more agile and nimbler sociopolitical infrastructures than currently exist. Survival of the fittest is a popularly misunderstood concept. It never was about the one who could kill before being killed. When they defined the concept, Charles Darwin and Herbert Spencer were referring to those among the species who were most adaptive to changing conditions; as we attempt to mitigate and adapt to climate change, it is important to remember that being agile, nimble, and flexible is critical for individual and collective survival and wellbeing. To be adaptive is to be collaborative—to be able to work well with others and coordinate our actions within the timeframes and at the scale needed to have global impact. Thinking with air as a material entity that contains the oxygen necessary to most life on this planet, as well as the medium that suspends the very greenhouse gases that are causing planetary heating, reminds us that through air we are all connected. The air I breathe, you also breathe. David Suzuki illustrates this by drawing attention to the research of Harlow Shapley, who traced the flows of argon. Shapley calculated that every breath of air contains $3x10^{18}$ argon atoms, so if you take a breath now, and you take a breath a year from now, there will be

> 15 argon atoms from that one original breath you took a year before. So Shapley calculates . . . every breath we take has argon atoms that were in the bodies of dinosaurs 65 million years ago. That every breath you take will suffuse life as far as we can see into the future. . . . We are air. Whatever we do to air we do to ourselves.[1]

Air is something we all share—at a local and global scale. It cannot be contained by geopolitical borders. Nations maintain control of land and resources within their borders. The flows of air defy the bounded state of nations. As political infrastructures, are nations sufficiently agile to govern the flows of air that disperse toxins released into the atmosphere within one bounded territory to locations around the globe? The pollutants suspended in flows of air contribute not only to global heating and climate change, but also to the erosion of human and more-than-human health and well-being. If governance is just another word for relationship, what relations need to be unbuilt and remade as part of this epochal transition in order to achieve planetary health, which is core to survival and flourishing?

Climate justice is one way to name the ongoing struggle(s) to achieve and maintain planetary health; a term that refers to the interconnection of individual, community, and multi-scalar ecosystem resilience, wellness, and thriving. My research is centered around bodies. I am also invested in political bodies. I will frame these issues around the concept of modern nations (with their origins as nation-states) as political bodies, in the context of climate change. The nation is a body that is first imagined,[2] a body constructed on the establishment of norms and that demands normativity. The

Materiality of Air, edited by Tatiana Konrad, University of Exeter Press, 2025. ProQuest Ebook Central, http://ebookcentral.proquest.com/lib/ualberta/detail.action?docID=32291701.
Created from ualberta on 2026-10-27 19:53:44.

Copyright © 2025. University of Exeter Press. All rights reserved.

nation is a body that renders killable certain forms of life: bodies declared Other—whoever that might be at different historical moments (including but not limited to the noncompliant woman's or witch's body, queer bodies, bodies of color, bodies that are politically dissident, and more).

This chapter is a transdisciplinary theoretical and personal essay that brings together my scholarly research in the energy humanities with personal experiences and reflections on current events, as well as my experiences working in policy areas, at the nexus of energy transition and planetary health, to imagine the next steps in the struggle for climate justice. This chapter is a reflection on the knowledge acquired and lessons we are learning about climate change, as we breathe air contaminated by forest fires, the burning of fossil fuels, and toxic petromodernity.[3] It is an attempt to model what I am calling for, which is attunement to our bodies and our ecosystems, as we live through these troubled times. There are lessons to be learned from listening to the places and lands where we live, to our more-than-human kin, to one another—and sharing these lessons opens up new potentialities.

Like you, I am a human living through the climate crisis and *not all* of what I know comes from my scholarly investments. For better or for worse, much of it comes from the embodied experience of *living through these troubled times*. I do most of my work on Turtle Island, in the territories now colonially referred to as Canada. As the descendant of settlers who moved away from Europe to North America at different intervals over the last 200 years and settled in Treaty 8 in Northern Alberta, I was born on neighboring Treaty 6 lands and into a complex web of settler–Indigenous relations, marked by historical and ongoing colonialism. I am not just a white settler, but I am also a cisgender woman, a mother, a person with my own claims to being an AI assisted body, and more. I was raised in Alberta, and after later living parts of my adult life around the world, my home base is once again in amiskwaciy-wâskahikan, Cree for Beaver Hills House. Also known as Edmonton, my city is situated on lands long ago stolen from Papaschase and Métis peoples, displacing them through means and methods that led to the loss of culture and lives as part of our nation's genocidal practices.[4] This fact informs all of my thinking, working, and being—particularly as it relates to my research on intersectional and decolonial climate justice and energy transition. Indeed, energy and natural resources play a starring role in this history—extracting value from the land at the cost of the wellness of ecosystems and species, displacing Indigenous nations through ongoing colonialism, and leaving all of us with the ruins of petromodernity as we transition to new energy sources, new economies, new power relations, and new ways of living.[5] This material and epistemological intersection has become the focus of my research.

Petro-Mama

In 2014, I wrote a creative non-fiction story, "Petro-Mama: Mothering in a Crude World," about my distress as I rushed my preschooler, who was having trouble breathing, to the doctor in congested traffic against the backdrop of oil refineries, with tankers and smoke stacks defining the horizon.[6] Two years later, in 2016, I released a film of the same name that took its inspiration from the short story and again explored the ways in which healthcare providers and loved ones subtly but repeatedly expressed their internalized belief that the health and well-being of my family was not only my responsibility, but within my control, and that my child's asthma might somehow be traced back to something I had or had not done.[7] In the story and the film, I reject this narrative. As I look around at the material impacts of air quality, I know that this is just one outcome of what it means to raise children in the *industrial heartland*, another moniker for these lands I call home. While the oil and industrial products extracted and processed in our region are exported around the world as part of global petroculture, we live with the toxic impacts locally. Seven years and two weeks after the events in that story took place, I would hover on the precipice between life and death. These embodied experiences of living and dying on this planet inform my research.

Climate Change Is a Symptom

Materiality of Air, edited by Tatiana Konrad, University of Exeter Press, 2025. ProQuest Ebook Central, http://ebookcentral.proquest.com/lib/ualberta/detail.action?docID=32291701.
Created from ualberta on 2026-10-27 19:53:44.

Copyright © 2025. University of Exeter Press. All rights reserved.

Over the last several years, I have worked to explain climate change to general and specialist audiences using a number of taglines. This is one of them: *Climate change is a symptom.* When I say that climate change is a symptom, I mean that it is not the root problem we need to solve. How we define problems determines our ability to solve them. If we think the problem is climate, or more specifically, parts per million of carbon in the air leading to global heating—which is where a lot of policy and activism is focused—and all we solve for is *decarbonization*, we will have addressed merely one aspect of the current crisis. A very important one, no doubt—one that I am also devoted to—but not the root cause of the problem. Our ability to solve a problem will be limited by the narrowness of our definition, and thus the narrowness of our actions. The root causes are instead epistemic, ontological, and axiological—related to how we understand the world, how we are and act in the world, and what we value. Addressing these root causes of climate change, therefore, means that the logic driving decision-making must be remade; it means rebuilding the broken relationships caused by the alienations and violences accepted as part of business-as-usual practices and common-sense understandings of the world.[8]

For the past two decades, I have devoted myself to energy, specifically to energy transition. I care deeply about energy, and, more importantly, I have learned many lessons from my energy transition research, policy advising, and community organizing—lessons that are applicable to other areas of the climate crisis, beyond energy transition. Why the focus on energy?

1. Energy transition is an agreed upon necessary, immediate action on climate.[9]
2. Very importantly, societies are shaped by the energy systems that power them.[10] *Energy is social*, and therefore *energy is a matter of social justice*. *Energy is power*. This is not only a play on words but an etymological truth: our relationships to energy mark our relationships to power, understood as social relationships.
3. Energy transition is a *material* problem, and we can address it in steps and imagine it incrementally. In other words, it is a problem we can tackle from different perspectives, one step at a time, which helps us to get around the problem of the hyperobjectivity of climate change as an issue so large and so unwieldy that we cannot even imagine where to start.[11]

Air too is a material issue, one very different from oil and fossil fuels, but a material issue that forces a reckoning with the interconnectedness of climate issues, one that refuses compartmentalization into managerial silos. Thinking with air and its flows, which carry not only atoms like argon but pollutants, reveals the interconnection and interdependency between humans and planetary health. The materiality of air highlights the way we have placed excessive value on fossil fuels over the last 150 years, to the degree that we did not account for the deleterious impacts on planetary health produced by allowing for the release of toxins into the atmosphere. The over-focus on carbon-intensive fossil fuels has led to a focus on decarbonization. This oversimplification of the causes and solutions has created regulatory prohibitions on one type of greenhouse gas, CO_2, while failing to sufficiently monitor other gases that can increase the greenhouse effect—loopholes that are being exploited for profit. New rules as opposed to new logics—following the letter of the law rather than the spirit of the law—is going to compound the crises of this century. For example, hydrogen is being promoted as a green alternative fuel to replace natural gas and other fossil fuels, despite warnings from scientists about the impacts of methane (and other gas) leakage that occur during hydrogen production that uses methane as an input (blue hydrogen), or through the leakage of hydrogen itself, during the distribution phase (indeed, nearly all hydrogen is still produced with the help of fossil fuels, not green electricity). As the Andlinger Center for Energy + Environment at Princeton University reports, “hydrogen gas easily reacts in the atmosphere with the same molecule primarily responsible for breaking down methane, a potent greenhouse gas” and because there is a limited amount of the hydroxyl radical (OH) in the atmosphere and OH is needed to break down both hydrogen and methane, an increased amount of hydrogen in the atmosphere could lead to increased levels of methane. “If you emit some hydrogen

Materiality of Air, edited by Tatiana Konrad, University of Exeter Press, 2025. ProQuest Ebook Central, http://ebookcentral.proquest.com/lib/ualberta/detail.action?docID=32291701.
Created from ualberta on 2026-10-27 19:53:44.

Copyright © 2025. University of Exeter Press. All rights reserved.

into the atmosphere now, it will lead to a progressive build-up of methane in the following years," says (then) postdoctoral researcher Matteo Berttagni. "Managing leakage rates of hydrogen and methane will be critical . . . If you have just a small amount of methane leakage and a bit of hydrogen leakage, then the blue hydrogen that you produce really might not be much better than using fossil fuels, at least for the next 20 to 30 years."[12] The UN environment program warns that "Methane Emissions are Driving Climate Change," and methane is "80 times more potent at warming than carbon dioxide" over a twenty-year period.[13] The problem is not carbon. Fossil fuels are being fetishized as the cause of global heating, but the root cause is epistemic failure. The proposed solutions to climate change cannot succumb to the same failures of European Enlightenment rationale that caused them. Solutions must be able to nimbly integrate best practices and knowledge from multiple wisdom systems.

Over four decades ago, eco-feminist philosopher Carolyn Merchant argued in her germinal book *Death of Nature: Women, Ecology and the Scientific Revolution* that "the domination of nature,"[14] and the "devaluation of women,"[15] their knowledge, as well as the knowledge of racialized peoples, are in large part what has led to the current ecological crisis. Western (patriarchal) rationalism excludes not only women's experiential knowledge and expertise, but vast bodies of knowledge, including Indigenous and non-Western ways of knowing. Her and my (and many others') argument is that, instead of attempting to solve a problem caused by patriarchal, colonial capitalism using the same amputated Enlightenment rationale that eliminated feminist knowledge and the knowledge of people of color from decision-making, thereby excising the consideration of most of humanity as relevant to either the problem or the solution, what is needed is an intersectionally feminist decolonial rethinking of who we are in relationship to one another and the world. And here, where I live and work, on these lands we now call Canada, in these territories, that *relies* on Indigenous, settler, immigrant and refugee knowledge sharing. From this contextual relational understanding, it is my wager that while climate change exponentially gains momentum, the real work of reworlding and transition—at least where I am located and situated, for me, for us, with communities and between communities—can only happen at what Lana Whiskeyjack talks about as the conditional "pace of trust."[16] Trust that begins in understanding and respect across difference.

Our current hierarchies of knowledge have long refused the knowledges of female-identified people, queer folks, differently abled people, Indigenous peoples and people of color who make up the vast majority of the global population. This refusal then justifies other forms of exclusion, not allowing members of these groups to share power or even benefit from the full rights of citizenship. This leaves many of us, and the institutions that educate us, with a very narrow definition of reason, and an equally narrow dataset. What is reasonable and who defines it? We cannot solve the very problems caused by this epistemic failure using only the knowledges that produced it.

As Silvia Federici argued in her book *Caliban and the Witch* (2004), European women's lives were colonized through the witch hunts of the sixteenth and seventeenth centuries in Europe, which involved the torture and killing of thousands of people.[17] Federici argues that this overlooked event was a critical turning point in the transition to a capitalist society, because women who engaged in practices that had traditionally been gendered as women's work—midwifery, medicine, food foraging, and cultivation on public shared lands known as the commons—were dispossessed of their access to these lands and as a result were alienated from the intergenerational expertise (knowledges) that were Much of this knowledge was lost. What aspects remain have been rationalized into patriarchal capitalist logics and integrated into a capitalist marketplace. The majority of the world's population is now forced to participate in these normalized systems as mere waged laborers—with women-identified people, 2SLGBTQQIAA+, people of color, people from lower classes and castes, people with disabilities, and anyone identified as Other often being paid less. These practices have had impacts on people's ability to earn a living for themselves and their families, not to mention the loss of valuable knowledges and relationships to land and ecosystems. The enclosure of the commons in Europe, which led to the persecution of peoples reliant on land-based subsistence economies, was

Materiality of Air, edited by Tatiana Konrad, University of Exeter Press, 2025. ProQuest Ebook Central, http://ebookcentral.proquest.com/lib/ualberta/detail.action?docID=32291701.
Created from ualberta on 2026-10-27 19:53:44.

Copyright © 2025. University of Exeter Press. All rights reserved.

happening simultaneously with the beginning of the slave trade and the colonial take-over of territories in Canada.

A tool to justify these dispossessions and violences was the Doctrine of Discovery, which established the moral and legal superiority of Christians as a matter of religion and law and was based on a series of Papal Bulls dating back to the fifteenth century. The Doctrine of Discovery not only allowed European colonizers to enclose the lands we now call Canada, but it justified the dispossession of land from the rightful Indigenous stewards and guardians of these territories and led to the land grants of the nineteenth and twentieth centuries that distributed plots of land to settlers for the purpose of agricultural production and industrial development. In short, based on religious moral superiority, these lands were taken from communities that had thousands of years of intergenerational knowledge about how to live on them and maintain their health and were parceled out for practices that ensured the destruction of existing ecologies. These logics, and the agricultural and industrial practices that were demanded as a way to demonstrate that the land was being put to productive use (e.g., transforming forests into farmland, logging, or mining sites), are part of what has led to the radical shift in global temperatures (climate change), ecosystem toxicity (pollution) at local and global levels, and the unanticipated impacts that these imbalances are creating for the health and well-being of air, waters and lands, flora and fauna, and humans. The way that the Doctrine of Discovery was mobilized and the way the witch hunts were carried out are *just two* of many examples that demonstrate how the control of land, bodies, and ideas (i.e., knowledge systems) is made possible by ideological and political perspectives that believe the world is there for the pillage and profit of a meritorious or privileged few, and that their freedoms can be ethically built on the oppression and enclosures of other people and places. These oppressions and violences against ecosystems and whole swaths of society were necessary conditions for the emergence and maintenance of a capitalist economic system; moreover, their maintenance is spurring on planetary heating.[18] As scholars from many disciplines have articulated, the "ongoing challenge that existing international and national air pollution regimes face is that environmental concerns are grafted into a regulatory model that continually prioritizes trade and economic prosperity."[19] The problem is clear; the solutions, less so.

New logics are needed to collectively shift those of us living under these ways of thinking, doing, and being away from the existing logics that suggest any living being—human or more-than-human—is superior to another, or entitled to more than any other, based on sex, gender, skin color, religion, class, ability, and so on. We need to move away from notions of white supremacy and patriarchal privilege, to name just two outcomes of centuries of thinking and acting according to these logics of entitlement. This, at the very least, is what needs to change to even begin to address the climate crisis and the polycrisis of this century. This is why climate change is a matter of social justice and why social justice is needed to create more health and well-being, not just for the planet but for people as well. Climate change is one of the greatest teachers of this century. Climate change will humble us (if it has not already).

In this context, what is required to address the climate crisis and the many interlocking crises are *new logics* that confront, resist, and unbuild what visual culture theorist Nicholas Mirzoeff calls "White Sight," working to come to terms with the systemic violences of prevailing modern logics that have been sanitized of non-patriarchal modes of thinking and being and acting.[20] Or, to paraphrase what Canada Research Chair in Indigenous Peoples, Technoscience, and Society Kim TallBear says of whiteness: whiteness needs to be understood not as a skin color or phenotype, but an ideology.[21] Much of our inheritance as modern humans is the product of Western Enlightenment modes of relating to the world. Cartesian dualism (a concept first articulated by René Descartes in 1641 in *Meditations on First Philosophy*[22]) nurtured a worldview that separated mind from body, and human beings from nature and from one another, which resulted in racial and gender subjugation, conquest, and colonialism. Much of this justified the scientific (and pseudoscientific) notions of survival of the fittest that fed and continue to feed ideologies of economic competition between individuals, classes, and nations.

Materiality of Air, edited by Tatiana Konrad, University of Exeter Press, 2025. ProQuest Ebook Central, http://ebookcentral.proquest.com/lib/ualberta/detail.action?docID=32291701.
Created from ualberta on 2026-10-27 19:53:44.

Copyright © 2025. University of Exeter Press. All rights reserved.

In fact, as anthropologist David Graeber and archaeologist David Wengrow lay out, this evolutionary framework for history was a fear response. European explorers, missionaries, traders, and settlers in the New World encountered Indigenous critiques of European society. Indigenous critiques of European cultures were raising important questions "about money, faith, hereditary power, women's rights, and personal freedoms," which "was having an enormous influence on leading figures of the French Enlightenment." The result was "a backlash among European thinkers which produced an evolutionary framework for human history," where the white European male sits at the apex of human civilization, "that remains broadly intact today." Put into a contemporary context, the rise of white supremacy, finding virulent footing during and after the global COVID-19 pandemic, is likewise a fear response by those least able to respond nimbly to the threats posed by a changing climate, those least able to adapt their ways of doing and being. And those least nimble are those for whom our current systems are built to fit—those who are not necessarily white as a phenotype, but white in terms of their worldview. They are most threatened because they risk loss of power. Their privilege leaves them with less flexibility than those of us who, over a lifetime, have been maneuvering and adapting to systems not made for our ease or thriving—in fact, built to exclude most of us.

The backlash against this fear of doing otherwise, and the fear of change, also contributed to the promotion of the concept of "survival of the fittest"—a misunderstood notion. First, it is usually attributed to Charles Darwin. But, in fact, he took the term from Herbert Spencer, who, in his 1864 book *The Principles of Biology*, spoke with much greater nuance about the concept than what has survived as popular understanding of the term. Given the variability within species, Spencer observes:

> [A]mong all the individuals, some will be less liable than others to have their equilibria overthrown by a particular incident force, previously unexperienced. Unless the change in environment is of so violent a kind as to be universally fatal to the species, it must affect more or less differently the slightly different moving equilibria which the members of the species present. It cannot but happen that some will be more stable than others when exposed to this new or altered factor. That is to say it cannot but happen that those individuals whose functions are most out of equilibrium with the modified aggregate of external forces, will be those to die; and that those will survive whose functions happen to be most nearly in equilibrium with the modified aggregate of external forces.[24]

In other words, it is not necessarily the strongest who will survive. The most violent. The one who can kill before it is killed—as is the popularly applied use of this term. Instead, as Spencer points out, it is the one who can best adapt, in context, to new circumstances. The most flexible. The nimblest. That is what Darwin and Spencer were referring to as natural selection and survival of the fittest. The way to move forward is to recast Spencer and Darwin's concept as survival of the most adaptive. For me, adapting means moving away from the ways *survival of the fittest* has been taken up by conventional wisdom, where survival is linked to antagonistic individualism. I propose, instead, that what it means to be adaptive at this moment in time is to learn to be collaborative—*survival of the most adaptive, survival of the most collaborative*—and to work together on a scale and within a time frame never before achieved in human history, to do our utmost to address the climate crisis and the multiple converging crises that stem from the same root causes.

People keep waiting for governments to take action on climate. However, the conundrum is whether the state, as an institution and as a social infrastructure, is sufficiently agile to respond to the demands of the climate crisis. Air, its flows, and what it suspends and moves through the planetary ecosystem cannot be contained and siloed using the same governance and economic mechanisms that transport coal, crude, refined petroleum, petrochemical, and other consumer products through pipelines, on trains, on ships—bounded and contained, much like the nations that control their flows. Starting with Westphalia in 1648, *modern* humans have reproduced the nation structure: each nation equal to other nations, and thereby autonomous insofar as no state is beholden to another power (i.e.,

Materiality of Air, edited by Tatiana Konrad, University of Exeter Press, 2025. ProQuest Ebook Central, http://ebookcentral.proquest.com/lib/ualberta/detail.action?docID=32291701.
Created from ualberta on 2026-10-27 19:53:44.

Copyright © 2025. University of Exeter Press. All rights reserved.

the church) unless they choose to be, and no nation is allowed to interfere in the domestic-political affairs of another (which has given rise to diplomacy). The first philosopher to attempt to define the concept of a state was Rudolf von Ihering.[25] In *Der Zweck im Recht* (1871), von Ihering argued at length that the "second lever of social order is Coercion [*sic*]. The social organization of reward becomes trade; coercion organized makes the State and Law."[26] Post-Westphalian logics were (and continue to be) organized around control of labor forces, nature, and resources. Also called "the Peace of Westphalia," the nation-state was here seen as a means to live in peace and freedom, and John Stuart Mill saw it as a necessary infrastructure for democracy. However, the nation-state was also born of the Thirty Years' War. It was the *outcome* of conflict and, as is clear when we glance at our smartphone devices, despite seventeenth-century dreams, it has not ended conflict in the slightest.

Here in Canada, the nation falls into the tradition, much like other imperialist nations around the world over the last couple of hundred years, of Jean-Jacques Rousseau's *The Social Contract* (1762), in which the ideal of a republic is intended to allow citizens freedoms and liberty.[27] At the same time, the notion of multiple republics implies the need for nation-to-nation governance. Canada purports to be a democratic nation and children in Canadian schools are raised on a diet of Canadian multiculturalism, believing gender discrimination and racism are historical, unless of course they face it daily or even intermittently; and that human rights abuses—like the internment of Japanese-Canadians during the Second World War, or the systemic erasure of Indigenous peoples using the Residential Schools system that lasted over 100 years and ended only in 1996—are *historical* anomalies. They are not taught that the entire legal premise of the nation is based on land theft and genocide and that Canadian law, like the Doctrine of Discovery, works in the interest of protecting the monopoly on privilege and violence held by those benefitting most from the status quo. Mohawk political anthropologist Audra Simpson highlights this when she argues that the mere existence of Indigenous women is an affront to the colonial project, since they are the historical guardians of the resource- and oil-rich lands now occupied by settler Canadians.[28]

The point is that climate change is not simply the result of the carbon-intensive energy systems and emissions we have produced, so decarbonization alone will not solve the problem. Climate change results not just from an attempt to dominate the environment and other species, but is part of a larger project of domination where some people believe in their God-given superiority over those different from themselves in some way—whether that is gender, sexuality, skin color, income, class, caste, religion, disability—and exploit *those* people to secure and sustain their own profit and privilege. Here in Canada, the government parties that subsidize oil and slow down action on climate simultaneously undermine the quality of and equitable access to social services, including public education and public healthcare. Since the Second World War, people in Canada, and particularly in the province where I live, have enjoyed a relatively high standard of living, marked by access to publicly funded universal education and healthcare, old age pensions, unemployment insurance, and other social benefits often attributed to oil and natural resource wealth. However, in recent years, there has been a radical erosion of the social democratic character of Canada (and of many countries around the world). Citizens who express surprise when oil profits do not result in increased social well-being fail to understand their relationship to and positionality within power hierarchies that determine who the system exists to serve and who exists to serve the system. Whether profits are being generated through the development of natural resources, a euphemism for the destruction of ecosystem health (directly connected to human health) on the one hand, or via medical institutions profiting from illness rather than health on the other—these logics are part of the same project. This is why there will be no action on climate that does not determine future relationships of power on this planet. Climate justice can only be achieved through the reordering of power relations as we transition to new energy systems and their corresponding social, economic, and political systems. The stakes of energy transition are so much higher than choosing the right energy technologies.

There is no linear progression from one form of social organization to the next: this is one of the false metanarratives of history that sells the idea that our way of life, now in the age of oil, is the apex

Materiality of Air, edited by Tatiana Konrad, University of Exeter Press, 2025. ProQuest Ebook Central, http://ebookcentral.proquest.com/lib/ualberta/detail.action?docID=32291701.
Created from ualberta on 2026-10-27 19:53:44.

Copyright © 2025. University of Exeter Press. All rights reserved.

of civilization. On the contrary, the failings of our society are evident everywhere, most obviously in the living conditions of the most vulnerable among us. A society is only as resilient as its most vulnerable. Using this metric, petromodern cultures are precariously positioned, given rising inequities. In North America, corporate "CEO pay has skyrocketed 1,460% since 1978: CEOs were paid 399 times as much as a typical worker in 2021" while the costs of food, clothing, transportation, and shelter are rising much faster than wages. As a result of increasing inequality, the working classes (middle and lower) are struggling, and the number of unemployed and unhoused is growing.[29]

Citizen vulnerability in Canada, where income inequality is at its highest point since the turn of the millennium, is not merely theoretical, but part of everyday life.[30] The tent cities that I drive past every morning when I drop my sons at their downtown high school are expanding, and look more and more permanent despite police efforts to force them to move on. But move on to where? There are very few commons. Public spaces, in the true sense of the word, are rare in North America today. Spaces to congregate are corporately owned—malls, movie theatres, even schoolyards are owned by school districts and increasingly enclosed—and as long as property is private, the owners determine who is and is not allowed access. Even national parks, which Canadians tend to think of as shared spaces, were created through the enclosure of common lands as part of settler colonial projects and land grabs, and these lands continue to be closely monitored and policed.[31] Where is anyone able to live outside capitalist society and still thrive? What might be possible outside the restrictions of capitalist life?

To argue that Canada, or any nation is fair and equitable is to argue a contradiction. Statehood itself is the imposition of a legal order to maintain power and control over a territory through force and violence. As Graeber and Wengrow articulate, "a government is a 'state' if it lays claim to a certain stretch of land and insists that, within its borders, it is the only institution whose agents can kill people, beat them up, cut off parts of their body or lock them in cages; or, as von Ihering emphasized, that can decide who else has the right to do so on its behalf."[32] So the question I pose is not whether the nation is an institution and social infrastructure sufficiently agile to respond to the demands of the climate crisis, but rather: Is it *reasonable* or *legitimate* for nation-states to be the governing body that determines our responses to the climate crisis, if what we want is climate *justice*?

The nation as a governance system, in its current form at least—particularly given the ways that multinational corporations factor into the mix—is *not* adequate to twenty-first-century challenges. This is in part because state logics were never formulated to function cohesively on a planetary scale. They were created to control natural resources. And the control of natural resources, both oil and energy, as well as the laboring bodies doing this industrial work and the work linked to petrocultures around the world, has been organized by Enlightenment logics, by an extractivist worldview. This worldview and these logics consider humans above nature, and nature there for the taking and for the profit of those whose interests are guaranteed by the state.

The air pollution we need to manage does not respect national boundaries. Air flows carry smoke from forest fires, from industrial pollution, and even from nuclear meltdowns around the world in unpredictable ways. Local actions have global impacts. The slow violence of emitting pollution that then raises the parts per million of carbon in the air and produces extreme weather and climate events is one temporal scale by which to understand local–global relations.[33] Another is the way local pollution has immediate and direct impacts in faraway places. This was harder to conceptualize before it became relatively commonplace to experience the suffocating sensation of breathing in the toxic fumes of fires burning hundreds or thousands of kilometers away, in what is increasingly being referred to in common parlance and the mainstream media as fire season. In no uncertain terms: new logics are needed to address climate change and energy transition, new logics adequate to the experiential knowledge of living through these troubled times.

Materiality of Air, edited by Tatiana Konrad, University of Exeter Press, 2025. ProQuest Ebook Central, http://ebookcentral.proquest.com/lib/ualberta/detail.action?docID=32291701.
Created from ualberta on 2026-10-27 19:53:44.

Copyright © 2025. University of Exeter Press. All rights reserved.

At the start of this chapter, I referenced *Petro-Mama*, which was a research-creation project that brought together my work on the institution of motherhood, in particular my critique of patriarchal motherhood and womanhood, and what I have termed petrofeminism: a cisheteropatriarchal petrocapitalist definition of women's roles that aligns with and reproduces petrocultural norms.

In *Petro-Mama*, my then toddler asks, "Is this the breathing store Mama?" To which I reply, "It's the pharmacy. There isn't any such thing as a breathing store, Love." In his tiny child's raspy voice, he replies, "Too bad they don't have a breathing store Mama."[34] Of course, now, we do have breathing stores in the form of oxygen bars.[35]

In 2014, when this story was written, threats to local air quality were largely understood to be caused by petrochemical exhaust from cars and petroleum-refining processes emanating particulates into the air. In 2025, the more imminent and eerie worries that drift into our lives and settle all around us come from wildfires burning across the provinces of the Canadian nation. These fires that are so intense that they burn down whole cities like Fort McMurray (2016) and towns like Jasper (2024). They are so hot and fast-moving that they are able to skip across major lakes and waterways,[36] and deliver quick death to people and ecosystems in their path, not to mention those who quietly asphyxiate, often asthmatics or people with other pre-existing conditions, whose deaths go unreported in media or statistics on climate death. Then there are the slow(er) deaths often resulting from respiratory illness, cardiac disease, and the carcinogens contaminating our bodies through the air we breathe and the water and food we consume. Drawing a clear line between these deaths and climate change is difficult. We do, however, know much in our bodies before the science exists to back it up.

In May of 2023, wildfires were raging throughout the province of Alberta Canada, creating low visibility, with air quality index ratings at 10+ on a scale of 10, warning people to stay inside with the windows shut—assuming this is even an option, which it is not for many vulnerable populations and certainly not for the more-than-human. On one of those days, after smoke had drifted into the city overnight, that same child who asked about the breathing store a decade earlier came to tell me that he had heard on social media that if you played outside all day, it was equivalent to smoking eleven cigarettes. Where we are, in Alberta, we take these warnings seriously. On some days in May of 2023, "Alberta had the worst air quality in the entire world."[37] The impacts are everywhere. While in 2014, family and friends were baffled by why my son would have asthma, two years later the causes were obvious. In hindsight, the shift from poor air being an invisible to a visible problem had been just around the corner. Climate change impacts that we had imagined were two or three decades away were instead only two years away. After the 2016 wildfires burned much of the city of Fort McMurray in Northern Alberta to the ground, one of my other sons developed asthma—a different type of asthma from his brother. Not being a respiratory specialist, I had no idea there is more than one kind of asthma. When I commented to my family doctor that my non-smoking father had, almost simultaneously with my son's diagnosis, developed a respiratory condition that usually only appears in lifelong smokers, he said, in a knowing way, that many of his patients were suffering from respiratory conditions after the Fort McMurray fires. This was before there was science to prove it (which now exists). He already knew. We already knew.

In the late summer and early fall of 2023, "299 fires burned over four million hectares across the NWT … These fires resulted in 12 community evacuations."[38] Thousands of climate refugees from the fires in the Northwest Territories filled hotel rooms and campsites and spare bedrooms across my city and the province; they could escape the fires, but none of us could escape the smoke that followed. One night, at 2 am, my then sixteen-year-old, who had developed asthma after the Fort McMurray Fires, stood over me and my husband as we slept. He was panicking, unsure whether to wake us or not. His lungs were seizing up as he struggled to breathe. He had been awakened by the sensation of suffocation. Now, it is no longer the oil-industrial complex that is the most imminent threat to air quality and health; instead, it is the climate change consequences that *not just* this industry but *this way* of relating to the world have exponentially unleashed. This, then, is juxtaposed with news

Materiality of Air, edited by Tatiana Konrad, University of Exeter Press, 2025. ProQuest Ebook Central, http://ebookcentral.proquest.com/lib/ualberta/detail.action?docID=32291701.
Created from ualberta on 2026-10-27 19:53:44.

Copyright © 2025. University of Exeter Press. All rights reserved.

about provincial cutbacks in healthcare, serious ones that privatize what have been public health services, and a government that is reversing action on climate. These announcements, however, are not a contradiction or irony, as some people see it. They are intended outcomes. Bodies for profit. Our bodies. Now, the Canadian medical system (more in line with an American model) will increasingly exist not to promote the health of citizens, but to profit off our illnesses—all while eroding the social fabric and the environment by extracting as much profit as possible out of the land for as long as possible.

What Other Governance Logics Are Possible?

Thinking with the materiality and flows of air illustrates how when we demand government action on climate, we are not simply asking for a set of new policies, but for new logics organized around the flourishing of environments and people. These new logics and associated politics must necessarily propose a value system and associated metrics that stand in contrast with those of current economic *development*, where the destruction of nature is accounted for as net positive when calculating the gross domestic product (GDP). When we ask for action on climate, we are asking for new logics that value and produce mutual aid, (bio)diversity, and other markers of healthy ecologies and communities. This is why I argue that "*if we achieve climate justice, we will have addressed climate change. The reverse is not true*."[39]

It can feel impossible to enact new climate logics, but the alternative is to acquiesce to the direst scientific climate-model forecasts. I refuse the abdication of political agency, and instead am investing time and energy into organizing action around the concept of *survival of the most collaborative*. I work to question the role of the state while refusing to become cynical about collaborating with the infrastructures and institutions available to us. To succumb to cynicism is to believe humans are beyond the hope of changing, to relinquish any role or responsibility in and for the crises we are living through. We are all always already implicated petrosubjects. There is no existence outside this system, no one who can claim objectivity. Change from within is the only option. Nations and their institutions are the infrastructures we have to unbuild—how far is yet to be seen, maybe all the way—but there are learnings in that process of unbuilding and rebuilding.

We must each bring our skills and knowledge to bear on the present moment. This will be different for everyone. Personally, I use inside-outside strategies of mobilizing, working inside organizations (universities, local governments, etc.) and coordinating with those running outside strategies (community organizing), doing what I can to support people to recognize their roles in what I call "activist ecologies."[40] As a two-term (2018–26) advisor to mayor, council, and city administration in Edmonton as part of the Energy Transition Climate Resilience Committee, I've familiarized myself with the work of many of the people and roles within our local ecologies. For example, elected officials often feel pressure from constituents with opposing views on climate action. Municipal employees working on the climate files behind the scenes, in the shadow of elected officials, often feel misunderstood and attacked by community organizers pushing them to do more, faster, as they work within a large bureaucracy at the mercy of shifting political winds that can interrupt, delay, or reverse their work. Even when the will is there, the process can be frustrating. In this ecology, community organizers push as hard as they do because they feel left out of decision-making processes. Business leaders and lobbyists use their financial leverage to interrupt changes that threaten their profits. However, change is coming whether we work to plan for it intentionally in the interest of mitigating devastation and creating the conditions for flourishing and community well-being, or whether it is imposed on us through natural disasters or economic crises caused by our own maladaptations. I work to foster solidarities between these groups and more, across differences in generation, culture, languages, and areas of expertise, with individuals and groups that often see themselves at odds with one another. Each agent within our shared *activist ecologies* must understand their possible roles and responsibilities. The goal is to achieve climate justice. The path from here to

Materiality of Air, edited by Tatiana Konrad, University of Exeter Press, 2025. ProQuest Ebook Central, http://ebookcentral.proquest.com/lib/ualberta/detail.action?docID=32291701.
Created from ualberta on 2026-10-27 19:53:44.

Copyright © 2025. University of Exeter Press. All rights reserved.

there is not clear. However, whatever the cause – a carbon budget or a solar project or a waste management system – what is more important is the co-creation of new logics that can contribute to community acceptance and implementation of co-determined climate action. This will ultimately contribute to improved local and planetary health.[41]

Responding to climate change can either be proactive or reactive. Policy is one of the instruments we have at this time. Neither blind idealism nor a full-scale withdrawal from existing systems are agile responses. The healthy criticism of systems is a durational practice done in community. Policymaking, whatever role one plays in that process—whether as an elected official, a bureaucrat, an activist, an engaged citizen, or a technical consultant—is an avenue for organizing collective action. Scale is also important. It is easier to make change in community, adapted to local contexts. While capitalist modes of time and production want scalable, transferable solutions that grow the economy, many valuable adaptations for local communities are too culturally or ecologically specific to apply across contexts. These are the types of solutions I invest in: solutions that rebuild relationships between community members and their ecologies. I spend time and energy un/building intra- and intercommunity relationships, working in multidirectional university–community collaborations, to support members of my local ecologies to act with the understanding that *every decision is a climate decision.*[42] It will take all of us, slowing down, collaborating, sharing our knowledges, expertise and talents, while simultaneously listening to and learning from others as we attune to what actions make health and well-being possible.

Conclusion

Thinking with the materiality of air builds awareness of our interconnectedness. It can also help us think about more agile governance modes with policies organized around ecological boundary limits rather than national boundaries. Thinking with flows of air provides a model for how to coordinate climate action. In recent years, the smoke that has been carried around the world, from fires in the territories where I live to people living around the globe, has raised awareness of the fact that we all breathe the same air. While some people are much more directly impacted by the toxicity of our shared petrocultural way of life, none of us are immune. The rich might be able to frequent breathing stores, as my toddler invokes in *Petro-Mama*, but none of us wants to live in a world where not only water but air becomes a marketable commodity. If we do not want the invisible hand of the market driving extractive national policies and logics, we need to create new ways to relate to one another. Air flows and air quality indexes make evident how interconnected we are. We need to stop chasing the money and the oil, and start following the flows of air to understand that when I exhale and you inhale, we are interconnected. Air suspends and carries both the elements we need to sustain breathing and living on this planet, as well as many toxic particulates that threaten individual health, species survival, and planetary health. This is why we must all take action on climate, and that means showing up, listening to one another, and co-designing adaptation and mitigation responses that serve us all. Everyone has a right to breathe clean air as a matter of climate justice. The materiality of air teaches us that climate justice is for everyone.

Climate change is the greatest teacher of this century. What climate change teaches me is that when someone says stress kills, or they say they are working themselves to death, this is not a metaphor. When carcinogenic smoke rolls into my bedroom via an open window on a hot summer evening, or when the refineries are flaring off gases on cloudy nights because the satellites cannot easily detect it, or when I sit in traffic and exhaust comes in through the vents, I know in my body that this is not the best way to live, that the trade-offs for the creature comforts, the consumer products that sell the belief that this is the best possible life, are wrong. Climate change is teaching us all these harsh lessons, in no uncertain terms.

Responding to climate change is about healing from our social dis-eases: learning to live again, very differently from the ways that have brought about this century's polycrisis. Mother Earth, too, is

Materiality of Air, edited by Tatiana Konrad, University of Exeter Press, 2025. ProQuest Ebook Central, http://ebookcentral.proquest.com/lib/ualberta/detail.action?docID=32291701.
Created from ualberta on 2026-10-27 19:53:44.

Copyright © 2025. University of Exeter Press. All rights reserved.

having a health event. Her systems are failing. We will increasingly need not only to adjust to new climate limitations, but to face extreme weather events and climate emergencies. Knowing this, not just intellectually, but in our bodies, as humans living through crisis, starts with mourning.[43] First, we might need to put up solar panels and put out fires. Technofixes are emergency measures.[44] Interventions of that ilk are part of the urgent care we need to give our ecologies. Once the fires are out, mourning and healing can begin. We are mourning the ways of life that we are losing while healing from the unhealthy habits they engendered, not to mention the impacts of the cascading and compounding crises that have been unleashed. Mourning and healing are best done in community. They will take place over a very long period of time. Healing and its counterparts of health and well-being are ongoing processes, not end goals.

Finding a new normal even after a rupture, first for oneself and then with others at the community level, and then finding ways to rhizomatically connect these learnings at a planetary scale, is what climate crisis is demanding of us. It is demanding that we acknowledge our interconnectedness. The fact that your air is my air. That the argon I breathe out goes to you and comes back to me. So do the toxins. We are healing both from the material realities of atmospheric and air pollution, and from what Robin Wall Kimmerer, in *Braiding Sweetgrass*, talks about as the Windigo mindset. The Windigo is the monster who takes too much.[45] Rolando Vázquez says it well when he articulates the purpose of his 2020 book, *Vistas of Modernity: Decolonial Aesthesis and the End of the Contemporary*, as "an urgent call to engage with the question of healing, that is a healing beyond the confines of medical institutions, a healing that needs a transformation of our understanding and experience of the world."[46] Healing ourselves and our ecologies will happen much like climate change itself: at times incrementally, and in other moments leaping forward. It does not mean the wholesale overthrow of all fossil fuels and their derivatives. It cannot be achieved merely with technofixes that replace our fossil fuels with solar or wind. It requires that we shift our worldview and our relationships to one another and the planet. If all we do is decarbonize, it will be a failed transition. Instead, we must build new logics around climate justice. Logics that will support healing, and nurture our relationships to one another, other species, and the planet. These new logics must be invested in mutual flourishing—one decision at a time, because *every decision is a climate decision*. New logics create the possibility for agile decision-making that allows everyone to bring their knowledge(s) to bear on the issues at stake, as opposed to merely demanding regulatory compliance and enforcement. The struggle is not a trajectory from here to there, nor one of evolutionary progress to a magical paradise at a specific endpoint. It is a process—a struggle. Paulo Freire says, "Without a minimum of hope, we cannot so much as start the struggle. But without the struggle, hope, as an ontological need, dissipates, loses its bearings, and turns into hopelessness. And hopelessness can become tragic despair."[47] The struggle is where we live.

Imagine what could be possible if the invisible hand, the imagined nation as body-politic, were a loving body, an inclusive body, able, willing, agile, and aware of the strength and resilience of the whole that comes with difference. What, then, would our governance systems look like? After all, governance is really just another word for our relationships with one another, the more-than-human, and this planet we call home. This is why, in this climate, at this time, in this place, to breathe in and express the air we share, is revolutionary.

Notes

1 David Suzuki, "Everything under the Sun by David Suzuki '58—A Conversation with David Suzuki '58 and Prof. Joseph Moore," *Amherst Reads*, January 2013, https://www.amherst.edu/alumni/learn/amherstreads/pastfeatures/2013-features/january2013/interview/transcript#.

2 Giorgio Agamben, *Homo Sacer: Sovereign Power and Bare Life*, trans. Daniel Heller-Roazen (Stanford: Stanford University Press, 1998); Benedict Anderson, *Imagined Communities: Reflections on the Origin and Spread of Nationalism*, revised ed. (London: Verso, 2016).

Materiality of Air, edited by Tatiana Konrad, University of Exeter Press, 2025. ProQuest Ebook Central, http://ebookcentral.proquest.com/lib/ualberta/detail.action?docID=32291701.
Created from ualberta on 2026-10-27 19:53:44.

Copyright © 2025. University of Exeter Press. All rights reserved.

3 As my co-authors and I argue at greater length in "On Petrocultures, or Why We Need to Understand Oil to Understand Everything," oil and fossil fuels have played "a crucial role in enabling the monumental growth of human populations and of the technological innovation that we now associate with the development of modernity," hence my use of the term petromodernity. For more information see Sheena Wilson, Imre Szeman, and Adam Carlson, "On Petrocultures, or Why We Need to Understand Oil to Understand Everything," in *Petrocultures: Oil, Politics, Culture*, ed. Sheena Wilson, Adam Carlson, and Imre Szeman (Montreal: McGill-Queen's University Press, 2017), 3–20.

4 The Papaschase Band are Cree people who signed an adhesion to Treaty 6 and were granted reserve land within what is now the city of Edmonton. Over time, the Papaschase were pressured to disperse by European settlers who were uncomfortable with the proximity of the reserve and wanted their land for the growing city. Although the Canadian government sold all Papaschase lands to settlers between 1890 and 1930, descendants of the Papaschase continue to reside within Edmonton and advocate for its return. The Métis are a distinct, legally recognized Indigenous Nation made up of the descendants of unions between Indigenous women and European fur traders in northwest North America in the eighteenth century; the term Métis refers specifically to people who have a connection to a historic Métis community rather than to anyone of mixed Indigenous and European heritage.

5 Wilson, Szeman, and Carlson, "On Petrocultures," 3–20.

6 Sheena Wilson, "Petro-Mama: Mothering in a Crude World," in *Telling Truths: Storying Motherhood*, ed. Sheena Wilson and Diana Davidson (Bradford, ON: Demeter Press, 2014), 307–14.

7 Sheena Wilson, *Petro-Mama: Mothering in a Crude World*, film written and directed by Sheena Wilson, 2016, http://sheenawilson.ca/projects/petro-mama/.

8 Sheena Wilson, "Hacking the Techno-Transition: The Possibilities of Deep Energy Literacy," *Sociální studia / Social Studies* 1 (2022): 29–53.

9 Kyoto Protocol to the United Nations Framework Convention on Climate Change, Dec. 10, 1997, 2303 U.N.T. S. 162; Paris Agreement to the United Nations Framework Convention on Climate Change, Dec. 12, 2015, T. I.A.S. No. 16–1104; Sheena Wilson, "Just Powers: Climate Change and Social Justice," lecture, *Intergovernmental Panel on Climate Change (IPCC): Change for Climate Community Series*, Edmonton, Alberta, March 6, 2018.

10 Wilson, Szeman and Carlson, "On Petrocultures," 3–20.

11 Timothy Morton, *Hyperobjects: Philosophy and Ecology after the End of the World* (Minneapolis: University of Minnesota Press, 2013).

12 Colton Poore, "Switching to Hydrogen Fuel Could Prolong the Methane Problem," *Andlinger Center News*, March 13, 2023, https://acee.princeton.edu/acee-news/switching-to-hydrogen-fuel-could-prolong-the-methane-problem/.

13 UN Environment Programme, "Methane Emissions Are Driving Climate Change. Here's How to Reduce Them," August 20, 2021, https://www.unep.org/news-and-stories/story/methane-emissions-are-driving-climate-change-heres-how-reduce-them.

14 Carolyn Merchant, *The Death of Nature: Women, Ecology, and the Scientific Revolution* (New York: HarperOne, 1990).

15 Carolyn Merchant, "The Scientific Revolution and the Death of Nature," *Isis* 97 (2006): 513–33.

16 Lana Whiskeyjack, Saddle Lake First Nation, Treaty Six. Lives in Edmonton. Oral teachings at land-based learning and ceremonial events. Topic: Relational research praxis and the pace of trust, 2019.

17 Silvia Federici, *Caliban and the Witch* (New York: Autonomedia, 2004). Federici claims hundreds of thousands died in the witch hunts, but the statistics around witch hunt deaths are contested. It would seem that while all numbers are approximations given the poor recordkeeping at the time, more widely accepted death tolls range from 50,000 to 200,000 in Europe over the 200-year span of the sixteenth to seventeenth centuries. The European population at that time was still recovering from the plague that took place in the fourteenth century and is estimated to have been around 70 million. Federici's historical and art historical methods and uses of the image have also been questioned. Despite these critiques of her methodologies, Federici's work in this book made a vital intervention that then made way for very powerful work from subsequent generations of scholars; her work opened the door to Marxist feminist, psychoanalytic, and gender-nuanced understandings of the causes and impacts of capitalism, particularly through the colonization and privatization of common lands.

18 For more detail on how the climate crisis links to these historical events—the witch hunts and the enclosure of the commons, as well as the Doctrine of Discovery—see Sheena Wilson, "Trafficking in Petronormativities:

Materiality of Air, edited by Tatiana Konrad, University of Exeter Press, 2025. ProQuest Ebook Central, http://ebookcentral.proquest.com/lib/ualberta/detail.action?docID=32291701.
Created from ualberta on 2026-10-27 19:53:44.

Copyright © 2025. University of Exeter Press. All rights reserved.

At the Intersections of Petrofeminism, Petrocolonialism, and Petrocapitalism," in *Transportation and the Culture of Climate Change: Accelerating Ride to Global Crisis*, ed. Tatiana Prorokova-Konrad (Morgantown: West Virginia University Press, 2020), 227–58.

19 R. Walters, "Air Pollution and Invisible Violence," in *Invisible Crimes and Social Harms*, ed. Pamela Davies, Peter Francis, and Tanya Wyatt (London: Palgrave Macmillan, 2014), 142.

20 Nicholas Mirzoeff, *White Sight: Visual Politics and Practices of Whiteness* (Cambridge, MA: The MIT Press, 2023).

21 Kim TallBear, *Kim TallBear on Whiteness*, film, Just Powers, November 5, 2018, https://vimeo.com/299067314.

22 René Descartes, *Meditations on First Philosophy*, trans. John Cottingham (Cambridge: Cambridge University Press, 2013).

23 David Graeber and David Wengrow, *The Dawn of Everything: A New History of Humanity* (London: Allen Lane, 2021), 442.

24 Herbert Spencer, *The Principles of Biology: A System of Synthetic Philosophy* (London: Williams and Norgate, 1864), 444.

25 Graeber and Wengrow note that the definition of a state as an institution with a monopoly on violence is commonly attributed to Max Weber, despite its earlier origins in the work of von Ihering. (Von Jhering is the other variation on the spelling of his name). This is worthy of note, given that much of the scholarship in *The Dawn of Everything* is organized around tracing epistemic genealogies and identifying the outcome of cross-cultural contact, whether that led to the acceptance and proliferation of ideas, or their rejection and erasure. Graeber and Wengrow, *Dawn of Everything*, 359.

26 Rudolf von Ihering, *Law as a Means to an End*, trans. Isaac Husik (Boston: The Boston Book Company, 1914).

27 Jean-Jacques Rousseau, *The Social Contract and the First and Second Discourses*, trans. Susan Dunn (New Haven, CT: Yale University Press, 2002).

28 Audra Simpson, "The Chief's Two Bodies: Theresa Spence and the Gender of Settler Sovereignty," keynote presentation, *Unsettling Conversations, Unmaking Racisms and Colonialisms: RACE Network's 14th Annual Critical Race and Anticolonial Studies Conference*, University of Alberta, Edmonton, 2014, https://vimeo.com/110948627.

29 Josh Bivens and Jori Kandra, "CEO Pay Has Skyrocketed 1,460% since 1978," *Economic Policy Institute*, October 4, 2022, accessed June 28, 2024, https://www.epi.org/publication/ceo-pay-in-2021/.

30 In October 2024, the Canadian Broadcasting Corporation reported that according to Canada's statistics agency, "income inequality in Canada has hit the highest level ever recorded as wealth becomes increasingly concentrated in fewer hands." Darren Majors, "Income Inequality in Canada Rises to the Highest Level ever Recorded: Statistics Canada," *CBC News*, October 10, 2024, https://www.cbc.ca/news/politics/canada-highest-level-income-inequality-recorded-1.7349077.

31 For more information, see the UAlberta Libraries archive titled "Indigenous Peoples and Canada's National Parks," accessed November 23, 2024, https://guides.library.ualberta.ca/indigenous-peoples-and-canadas-national-parks.

32 Graeber and Wengrow, *Dawn of Everything*, 359.

33 Rob Nixon, *Slow Violence and the Environmentalism of the Poor* (Cambridge, MA: Harvard University Press, 2011).

34 Wilson, *Petro-Mama*, film.

35 Thank you to Tuesday Young, a student in my Interdisciplinary 225 course (2025), who pointed out that breathing stores exist in the form of oxygen bars, which has also made me more aware of so many wellness and yoga studies using oxygen in their branding, even if they are not actually pumping oxygen into their workout spaces.

36 Canadian Broadcasting Corporation, Update: "Kelowna Declares State of Emergency after Wildfire Jumps Okanagan Lake, Prompting More Evacuations," *CBC News*, August 16, 2023, https://www.cbc.ca/news/canada/british-columbia/what-you-need-to-know-about-bc-wildfires-aug-17-2023-1.6938796.

37 Robson Fletcher, "Alberta Has Endured Some of the Worst Air Quality in the World This Week due to Wildfire Smoke: Higher Levels of Airborne Fine Particulate Matter than Some of the Most Polluted Places on Earth," *Canadian Broadcasting Corporation*, May 19, 2023, https://www.cbc.ca/news/canada/calgary/alberta-air-quality-among-worst-in-the-world-wildfire-smoke-1.6848195.

Materiality of Air, edited by Tatiana Konrad, University of Exeter Press, 2025. ProQuest Ebook Central, http://ebookcentral.proquest.com/lib/ualberta/detail.action?docID=32291701.
Created from ualberta on 2026-10-27 19:53:44.

Copyright © 2025. University of Exeter Press. All rights reserved.

38 NWT is the acronym for Northwest Territories commonly used throughout Canada; Shane Thompson, "Historic 2023 Wildfire Season," Government of Northwest Territories, minister's speech, September 28, 2023, https://www.gov.nt.ca/en/newsroom/shane-thompson-historic-2023-wildfire-season.

39 Wilson, "Hacking the Techno-Transition," 32.

40 Sheena Wilson, "New Logics for the Climate Crisis," panel on "Research-Creation: Producing Needed Knowledges for the Climate Emergency," *Petrocultures 2024 LA Conference*, Los Angeles, May 18, 2024.

41 "A carbon budget is the cumulative amount of carbon dioxide (CO_2) emissions permitted over a period of time to keep within a certain temperature threshold." A carbon budget provides another value metric by which to make decisions. The City of Oslo and the City of Edmonton have both implemented carbon budgets, but both of these municipalities quickly realized upon implementation that a more comprehensive climate budget is needed, because climate decisions demand more than an accounting of parts per million of carbon in the air. For more information, see the Carbon Tracker's "Carbon Budgets Explained" blog, accessed November 23, 2024, https://carbontracker.org/carbon-budgets-explained/.

42 The slogan "every decision is a climate decision" is used by City of Edmonton's municipal government for largely internal communications, as they shift to using a carbon and climate budget. Originally part of Sheena Wilson's research, the motto "every decision is a climate decision" was adopted starting in 2023 as part of a City-University collaboration and research initiative called *Action on Just Transition: City of Edmonton Change(s) for Climate* (2024–2026) aimed at shifting workplace culture at the City of Edmonton, so that all 12000 municipal employees are able to integrate climate thinking into their daily workplace decision-making and long-term project planning.

43 Stephanie LeMenager, "Petro-Melancholia: The BP Blowout and the Arts of Grief," *Qui Parle* 19, no. 2 (Spring /Summer 2011): 25–55.

44 Technofixes include everything from radical, even fantastical, geoengineering solutions such as planetary-sized sun umbrellas, stratospheric aerosol injections, and carbon capture and storage, to much closer to home technosolutions such as wind- and solar-generated electricity.

45 Robin Wall Kimmerer, *Braiding Sweetgrass: Indigenous Wisdom, Scientific Knowledge and the Teachings of Plants*, 1st ed. (Minneapolis: Milkweed Editions, 2013).

46 Rolando Vázquez, *Vistas of Modernity: Decolonial Aesthesis and the End of the Contemporar*y (Prinzenbeek, NL: Jap Sam Books, 2020), xvi.

47 Paolo Freire, *Pedagogy of Hope: Reliving Pedagogy of the Oppressed* (London: Bloomsbury Academic, 2021), 17.

Sheena Wilson, "Survival of the Most Collaborative: Climate Justice as a Logics for Flows of Air" in: *Materiality of Air*. University of Exeter Press (2025). © Sheena Wilson. DOI: 10.47788/PPKM2225

Materiality of Air, edited by Tatiana Konrad, University of Exeter Press, 2025. ProQuest Ebook Central, http://ebookcentral.proquest.com/lib/ualberta/detail.action?docID=32291701.
Created from ualberta on 2026-10-27 19:53:44.