

Riftwalking: The Dissolution of Socio-Ecological Resilience and the Role of Resilience  
Thinking in Metabolic Rifts

by

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Bachelor of Arts Honours, Queen's University, 2015

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## **Supervisory Committee**

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### **Supervisory Committee**

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## Abstract

This thesis asks what effects concepts of resilience may have on political action and the ongoing ecological crises we see developing throughout the world. Specifically, it addresses disruptions in wild salmon migration, spawning, and fisheries brought about by industrial aquaculture in the so-called Broughton Archipelago in unceded Kwakwaka'wakw territories on the north east coast of Vancouver Island. These disruptions will be looked at as examples of resilience thinking in action. Through this example this thesis will examine the relationship between manifestations of resilience thinking and the emergence of metabolic rifts between nature and society that bring with them ecological crises. This thesis will begin by tracing the genealogy of resilience thinking from its origins in systems ecology to its depoliticizing formation in political-economic development. Through this it will show where resilience has been split from its origins as a socio-ecological concept, into purely social and ecological formations that interact in a zero-sum relationship. As a depoliticizing force, resilience works through the aforementioned cleavage to atomize individuals and distance them from their connections to socio-ecological communities, favouring instead marketized relations that reinforce capitalism, colonialism, and the state form. Following this, this thesis will argue that this cleavage and resilience thinking more broadly also generate sites of metabolic rifts within and between nature and society and are factors in their reproduction and geographic spread. Resilience however need not be a fully depoliticizing force. Taking up from the work of Roberto Esposito on relational community and immunization, this thesis ends with an exploration of how resilience thinking can return to its socio-ecological roots and be used in emancipatory, decolonial, and ecologically sound ways that will help in the reconstituting of the metabolic cycles within and between nature and society disrupted by rifts. Understanding how resilience thinking plays a role in depoliticization and the generation and reproduction of metabolic rifts makes space for turning this mentality on its head. Reconstructing a more holistic socio-ecological form of resilience helps to provide the necessary political tools to challenge underlying structures of domination and exploitation that put our socio-ecosystems at risk.

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## Acknowledgments

Before continuing on to the bulk of this project I wish to acknowledge that I live, research, and write on the unceded territory of the Lekwungen speaking peoples, the Songhees and Esquimalt, and the W̱SÁNEĆ peoples while research has focussed on the territories of the Kwakwaka'wakw peoples. Colonialism, capitalism, and the settler state of Canada have historically disrupted and harmed these communities and the effects continue to this day; so too, however, do the intimate relations they have with this territory and all its human and other-than-human communities. I firmly believe that research ought to inform action and that that political action ought to strive to be emancipatory and decolonial. In that spirit I made no effort to hide my personal politics in this project but rather seek to demonstrate how careful analytical understanding of the topic at hand is necessary to construct effective political action.

## Introduction

### Fear, Catastrophe, and Resilience

“You’re just going to have to learn to live with it.” I have heard this very phrase, or variations on it, from the mouths of countless parents and outdoor group leaders. I have worked for several years in outdoor education, outdoor adventure guiding, and leadership development for children and youth and, though every person does not speak in this manner, those who care for the participants I am facilitating programming for do so consistently. Be it that the campers are cold, do not like the food we have with us, dislike paddling a kayak all day, or take issue with the responsibilities they must take on in order to have a successful camping trip, the phrase is ubiquitous. You have to live with the hardship. You have to deal with it. You need to toughen up. You need to be *resilient*. For several years at work in this field I had similar feelings; to a certain extent, when confronted with a challenging situation, you need to push yourself out of a comfort zone and rise to the task at hand, which may take no small degree of resilience to accomplish. Material factors influence what we can and cannot do in the outdoors, but we can impact our success through practice, perseverance, and resilience. Cultivating resilience is no small part of the goal of many outdoor education and leadership programs.<sup>1</sup>

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<sup>1</sup> Kurt Hahn, founder of Outward Bound, cites the program as a response to the deaths of young merchant mariners while older experienced men survived journeys. He aimed to instill ‘grit’ in the younger mariners and remedy what he saw as flaws in society through outdoor experience. Importantly however, the Hahnian and neo-Hahnian modes of outdoor education have been critically re-evaluated and identified as conveniently vague in their approach to what ‘resilience’ or ‘character’ is, and even the ability to change behaviours through outdoor experience. See for example Andrew Brooks, “A critique of neo-Hahnian outdoor education theory. Part one: Challenges to the concept of ‘character building,’” *Journal of Adventure Education and Outdoor Learning*, (2003), Vol. 3, no. 1 and “A critique of neo-Hahnian outdoor education theory. Part two: “The fundamental attribution error” in contemporary outdoor education

What has begun to shift, however, is how outdoor programmers, guides, and leaders go about doing the work of resilience building. Rather than push participants off the deep end and drive them to ‘toughen up,’ the resources are provided for participants to create their own experience and internally develop resilience rather than have it forced upon them from without.

Over time as I grew in my capacity as a leader and learned from guides and instructors I admire and respect, I found that this mentality of ‘toughing it out’ was not always conducive to a participant’s learning or development. It did not engender an internal love of the activity, it did not facilitate a positive connection with other people, with their natural environment, or with themselves. Rather than toughening up or getting resilient because they were told to, participants tended to withdraw and reject spending time in the outdoors and reject the idea of challenging themselves in activities as a worthwhile experience in and of itself. Resilience, it appeared, could not be successfully imposed. While I still find that a certain degree of what we may want to call personal resilience to adversity and uncertainty is necessary when engaging in a challenging activity in order to ensure that one perseveres, I also believe that it has a particularly nefarious effect on people when left unexamined and allowed to permeate the manner in which one engages in social and political life in particular. The factors one must be resilient to outdoors are natural-material factors: the weather, the topography, the physical conditions of the activity. While interacting with these factors is indeed mediated by social relations (access to particular kinds of clothing, transportation, etc...), they are distinct from factors not experienced in outdoor pursuits. Outside of these kinds

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discourse,” *Journal of Adventure Education and Outdoor Learning*, (2003), Vol. 3, no. 2.

of situations, the factors that impact one's life may indeed be material, but they are also mediated by where one lives (for example in an urban or rural location), or by the necessities of one's daily work. They are influenced by power flows in a different way from those experienced in outdoor activities.

Resilient individuals may well be able to weather seas in a kayak, they may be able to confront and overcome material conditions that work against them in any given activity, but they may also fail to see that their individual success against any particular material situation is predicated on the connections they forge with themselves, with others, and with their natural environment. Though not immediately obvious, there are certain ways in which the logic of resilience can be applied that, intentionally or not, obscure and eventually sever a sense of relationality with others and the environment. In its place is left an atomized world-view. The field of outdoor education is complex and has a history of perpetuating colonial mentalities about one's relation to land, the nature of property and land ownership, of the relationship that Indigenous communities of so-called North America have to land, and of the relations between Indigenous and non-Indigenous communities, as well as heteropatriarchal, ableist, and white supremacist narratives of conquest.

These issues must be and are being addressed, but that will not be the focus of this particular project. What I am addressing that does relate to the field of outdoor education is this notion of individual resilience. Transferred to a more socio-economic-political setting, resilience can hide underlying flows of power that structure political relations. These flows of power organize and govern life in particular ways and set up particular relationships between individuals, communities. Resilience, we are told, is an essential

trait for communities, cities, regions, countries, systems, and individuals.<sup>2</sup> In order to weather the storms, risks, and dangers currently before us, we as citizens and consumers must be resilient to the coming changes.

Our contemporary situation is framed by ecological crises. Natural scientific investigations repeatedly show that climate change is moving faster than previously predicted.<sup>3</sup> Not only can scientists document the massive and accelerating increase in the concentration of greenhouse gasses in our atmosphere, but tropical storms, the intensity of wildfires, and the melting of permafrost are accelerating as well, resulting in feedback loops releasing even more greenhouse gasses previously trapped under the planet's surface.<sup>4</sup> Alongside this general trend in climate change itself, accelerating ecological crises both directly and indirectly related to climate change are turning up. The die-off of

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<sup>2</sup> The OECD for example has a framework for what makes up a resilient city. Organization for Economic Co-operation and Development. *Resilient Cities*. <https://www.oecd.org/cfe/regional-policy/resilient-cities.htm> (accessed October 22, 2018). This framework focusses on capitalist market-based forms of resilience including ensuring the ability to grow gross domestic product and manage commodity exchange. Similarly, the United Nations Development Program uses the language of resilience to talk about responding to (non)natural disasters. Helen Clark, *Building resilience: The importance of disaster risk reduction*. August 15, 2012. <http://www.undp.org/content/undp/en/home/ourperspective/ourperspectivearticles/2012/08/15/building-resilience-the-importance-of-disaster-risk-reduction.html> (accessed October 22, 2018).

<sup>3</sup> Myles Allen, et al. *Global Warming of 1.5 °C: an IPCC special report on the impacts of global warming of 1.5 °C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty*. Intergovernmental Panel on Climate Change. October 6, 2018. pg. 5

<sup>4</sup> While linking the causation of storms to climate change is difficult and has yet to be done, there are distinct links between climate change and the size and intensity of storms. Carolyn Gramling, "Here's how climate change is fueling Hurricane Florence." *ScienceNews*. September 13, 2018. URL: <https://www.sciencenews.org/article/how-climate-change-fueling-hurricane-florence>. Despite the lack of meaningful action, Natural Resources Canada argues that the increase in forest fires in British Columbia is related to the ongoing climate crisis. "Climate change and fire." Natural Resources Canada. URL: <https://www.nrcan.gc.ca/forests/fire-insects-disturbances/fire/13155> (accessed October 22, 2018). Recently, research in the process of "abrupt thawing" wherein thermokarst lakes (areas where melted permafrost has created a kind of underground 'lake') facilitate the increased rate of thawing of soil around them. This process occurs much faster than the gradual thaw of permafrost and has not been extensively accounted for in climate change models. Ellen Gray. "Unexpected future boost of methane possible from Arctic permafrost." NASA Global Climate Change. August 20, 2018. URL: <https://climate.nasa.gov/news/2785/unexpected-future-boost-of-methane-possible-from-arctic-permafrost/> (accessed October 22, 2018).

species at a rate not seen since the last mass extinction event 66 million years ago, the proliferation of pollutants and plastics in our oceans, the pollution and devastation of fresh water bodies and river estuaries: the list goes on like a catastrophic end-times roll call.<sup>5</sup> In 2009 Johan Rockström et al. demonstrated that there are nine hard limits or “planetary boundaries” that “define the safe operating space for humanity with respect to the Earth system and are associated with the planet’s biophysical subsystems or processes.”<sup>6</sup> Rockström’s boundaries include climate change, the rate of biodiversity loss, human-influenced change in the nitrogen and phosphorous cycles, the depletion of the ozone layer, continued ocean acidification, increasing global freshwater consumption, increasing global land use, the increasing particulate concentration of aerosols in our atmosphere, and chemical pollution including heavy metals, plastics, nuclear and industrial waste products, and organic waste products.<sup>7</sup> Three of these boundaries – climate change as represented by concentration of carbon dioxide in the atmosphere, the rate of biodiversity loss, and the disruption of the nitrogen cycle as represented by the amount of nitrogen removed for human use per year – have currently been passed, representing a substantial deviation from the biophysical norm on this planet for the past

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<sup>5</sup> Though our current period is not experiencing the levels of extinction seen during the previous events as of yet, the rate of extinction has caught up to meet the rates previously seen. We may not see rats and cockroaches die out yet, but we cannot tell where the point of no return is. Telmo Pievani. “The sixth mass extinction: Anthropocene and the human impact on biodiversity.” *Rendiconti Lincei*. Vol. 25, no. 1. (2014) pg. 85 - 93; Gerardo Ceballos and Paul R. Ehrlich, “The misunderstood sixth mass extinction.” *Science*. Vol. 360, Issue 6393. (2018) pg. 1080 – 1081. Thanks to ocean currents plastics and other pollutants concentrate in gyres, whirlpool like ocean regions, along with planktons and organic matter. Helen Briggs, “Plastic patch in Pacific Ocean growing rapidly, study shows.” *BBC News*. March 22, 2018. URL: <https://www.bbc.com/news/science-environment-43490235>. (accessed October 22, 2018). C. J. Vörösmarty and P. B. McIntyre, et. al “Global threats to human water security and river biodiversity.” *Nature*. Vol 467. (2010) pg. 555 – 561.

<sup>6</sup> Johan Rockström et al. “A safe operating space for humanity.” *Nature*. Vol. 461, no. 24. (2009) pg. 472

<sup>7</sup> Ibid. pg. 473

several thousand years.<sup>8</sup> The 2007 Intergovernmental Panel on Climate Change likewise reports a dire situation specifically with reference to climate change: it has found that the planet's biophysical systems are bound to experience greater change than previously predicted, as feedback loops from the continuous concentration of greenhouse gas emissions lead to the degradation of the very factors that counterbalance their effects, such as land and sea ice albedo.<sup>9</sup>

As countless – perhaps horrifying depending on your humour going into the experience – Hollywood disaster films will tell us, when dealing with a catastrophic environmental situation, a technological fix will supposedly come along and save humanity. This fix will of course be delivered by a scientist-hero of some kind, perhaps a young underappreciated and underfunded graduate student, perhaps a daring, gruff adventurer. The technological solutions to our ecological crises, we are told? Geoengineering projects. Major proposals include seeding the atmosphere with sulphur compounds in order to increase the atmospheric albedo which proponents think will encourage the cooling of global temperatures in response to climate change and global warming.<sup>10</sup>

Geoengineering is but one part of the wide array of solutions on offer. The language of risk management and sustainability is also prolific amongst those who purport to challenge climate change and ecological crises. Risk management solutions tend to take the form of contingency- and disaster-preparedness from the global and state

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<sup>8</sup> Rockström et al. "A safe operating space." pg. 472

<sup>9</sup> Lenny Bernstein et al, *Climate Change 2007 Synthesis Report*, Intergovernmental Panel on Climate Change, 2008. pg. 38

<sup>10</sup> Paul Crutzen, "Albedo Enhancement by Stratospheric Sulfur Injections: A Contribution to Resolve a Policy Dilemma?" *Climate Change*, (2006), Vol. 77, pg. 211 – 219

to regional, community, and individual levels. Cities build higher sea walls and better drainage systems (historically focussing on areas of relative wealth, power, and whiteness) and encourage greater disaster preparedness on the individual's part.<sup>11</sup> Meanwhile it is repeatedly stated that the actions we can take to fight climate change include such hard-hitting and radical solutions as buying an electric car, vegetarian alternatives, or efficient lightbulbs and appliances.<sup>12</sup> The irony here can not be stressed enough. Our possibilities are increasingly restricted to consumerist faux-choices between one or another 'green' products. Each and every one of these solutions, from the simplest consumer choice to the grandest geoengineering mega-project, share a common set of assumptions. Far from being essentially bad things in and of themselves (there may in fact be legitimate reasons to use particular commodities over others and certain geoengineering projects may indeed be necessary for mitigation of, and adaptation to, unavoidable climactic changes) these solutions rest on and maintain ecologically dangerous, exploitative, and oppressive social relations.

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<sup>11</sup> Racialized disaster responses are quite common. One recent example of this is in Houston, Texas after Hurricane Harvey. See Alexander Kaufman, "Houston Flooding Always Hits Poor, Non-White Neighborhoods Hardest," *Huffington Post*, August 29, 2017, URL: [https://www.huffingtonpost.ca/entry/houston-harvey-environmental-justice\\_n\\_59a41c90e4b06d67e3390993](https://www.huffingtonpost.ca/entry/houston-harvey-environmental-justice_n_59a41c90e4b06d67e3390993) (date accessed May 17, 2019).

<sup>12</sup> Considering the fact that just one hundred large companies can be pinpointed as the cause of 71% of global emissions as per Tess Riley, "Just 100 companies responsible for 71% of global emissions, study says," *The Guardian*, July 10, 2017, URL: <https://www.theguardian.com/sustainable-business/2017/jul/10/100-fossil-fuel-companies-investors-responsible-71-global-emissions-cdp-study-climate-change> (accessed October 23, 2018), then the encouragement of individual consumer responsibility for climate change and the obfuscation of the true sources of emissions amounts to journalistic malpractice at best and outright lying in defense of corporate overlords at worst as per Eliza Mackintosh, "What the new report on climate change expects from you," *CNN*, October 8, 2018, URL: [https://www.cnn.com/2018/10/08/world/ipcc-climate-change-consumer-actions-intl/index.html?utm\\_content=2018-10-09T04%3A01%3A04&utm\\_source=twCNN&utm\\_medium=social&utm\\_term=image](https://www.cnn.com/2018/10/08/world/ipcc-climate-change-consumer-actions-intl/index.html?utm_content=2018-10-09T04%3A01%3A04&utm_source=twCNN&utm_medium=social&utm_term=image) (accessed October 23, 2018).

The solutions to the ecological crises that we are facing as proposed above are problematic, but I by no means want to insinuate that they should not in and of themselves be investigated, studied, experimented with, or pursued. I do in fact think that individual actions, as micropolitical acts, can have a meaningful impact in our social circles, which in turn can reverberate in a kind of refrain through other social circles. Likewise, the simple act of taking the challenge of ecological crises upon oneself can be incredibly empowering and actually necessary for individuals and communities to reframe the way they conceive of their own power, the ways in which they can be political actors, the values they hold, and the conception of how they relate to other individuals and communities both human and non-human. Geoengineering and risk management or contingency strategies aimed at adapting to the effects of ecological crises can be useful and may indeed be necessary considering the assured changes we can expect within the coming years. We will have to deal with changed precipitation patterns resulting in massive agricultural damages, we will have to deal with intense storms being regular occurrences, we will have to deal with wildfires and rising sea levels, even if all fossil fuel use stopped this very day, because the changes are already taking place. But these adaptations will not stop ecological crises from cropping up nor will they reverse the damage done. The problem with this is that they do not challenge the underlying structures that encourage the very actions that bring about ecological crises. They do not, in short, address the presuppositions of capitalism, of colonialism, of the state, or of the myriad of oppressive hierarchical structures that permeate our lives.<sup>13</sup>

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<sup>13</sup> This will be further elaborated in a following chapter which focusses on the relationship that the structures of capitalism, the state-form, and colonialism have with and within the natural environment.

By their strategic silences, these solutions all maintain the underlying logics and interrelations of capitalism, hierarchical state-based power structures, colonialism, and other oppressive formations. Because of this these adaptations, mitigating solutions, or quick fixes do not actually confront the prime drivers of climate change and ecological crises. While material solutions are absolutely necessary, and indeed the strategies and suggestions as discussed could be used to a socio-ecological benefit, they can not adequately address our problems under the domination of these prime drivers. Rather than challenge these drivers, the solutions as presented push us further to trust and embrace these drivers. The pretext is either that doing so will allow these institutions to solve the crises for us, or in the event that despite all effort they are unable to, that they will provide us with the means to continue particular lifestyles regardless of the social and ecological consequences. Resilience is all that is required.

In this vision of the future, challenges and risks may appear, but faith in the socio-economic-political systems we currently live within will see us through. If the wild fish die out, the farmed ones will still be there, a hope that fully ignores that the farmed fish are a major reason why the wild ones died. If traditional ways of being are threatened then, through a great transformation, new market-orientated ways will be made available. From the perspective of these prime drivers, through them our selves and our communities will be made resilient enough to maintain them. You're just going to have to learn to live with it.

Bidding Farewell to the Holocene

Paul Crutzen and Eugene Stoermer were among the first to coin the term the Anthropocene.<sup>14</sup> The premise of the concept of the Anthropocene is deceptively simple. We, as a broad human species, have developed our technological prowess to the point that our living on this planet, our very material existence, can alter the biophysical and biogeological dynamics of the Earth – indeed, we have become the primary thing that alters these forces. The Holocene, Crutzen and Stoermer would have us think, the previous ten thousand plus years of relatively stable geological and climatic time on Earth, is now over, and the time of the Anthropos, humanity writ large, is nigh.

The narrative of the Anthropocene is one of an abstract humanity and of human exceptionalism. In a typical version of this story, humanity in the abstract has collectively done the damage and as such we are collectively responsible for picking up the pieces of our damaged environment and fixing it as best we can. This rosy picture of group responsibility and humanity coming together to solve existential threats is popular, and scholars such as Jason Moore and others have termed it, appropriately, the Popular Anthropocene.<sup>15</sup>

In the Popular Anthropocene narrative, ecological crises are derived from human use of natural resources in an unsustainable way and the proper solutions involve individualized lifestyle change, an act of what Michael Maniates has called the

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<sup>14</sup> Paul Crutzen and Eugene F. Stoermer. “The Anthropocene.” *Global Change News Letter*. No. 41 (2000) pg. 17 - 18

<sup>15</sup> Jason Moore. “The Capitalocene Part II: accumulation by appropriation and the centrality of unpaid work/energy” *The Journal of Peasant Studies*. Vol. 45, no. 2 (2018) pg. 237 – 279; Andreas Malm, *Fossil Capital: The Rise of Steam Power and the Roots of Global Warming*, (London, Verso Books, 2016). Note, the Anthropocene can also be used to describe the geological age we are in as something distinct from the Holocene. This definition looks at the ways in which human activity manifests in geological layers. While I think that this use of the term has some merit, it still necessitates an abstract humanity to be its primary actor and does not interrogate the ways in which effects on geological layers can occur through the actions of particular classes, regions, or states.

“individualization of responsibility” leaving no room to challenge institutions or power structures.<sup>16</sup> This narrative is problematic in two ways. First, the Popular Anthropocene promotes a particularly seductive form of “neo-Malthusian” politics that conveniently erases the ever-present flows of capital, power and domination, and material nature that facilitate ecological crises to begin with. Stemming from the theories of English cleric and political economist Thomas Malthus on the positive relationship between population growth (particularly of the poor) and resource depletion, neo-Malthusianism associates simplistic readings of population and resource use to prop up collective responsibility arguments for ecological crises without addressing the inequality of resource, access, ownership extraction, (re)production, use and consumption, and waste.<sup>17</sup> Two points in the neo-Malthusian argument, though contested, do gesture towards real problems. Brian Napoletano argues that the tautological claim that a finite amount of resources can only support a finite population and that population growth leads to environmental change, while being expanded upon to incorporate relative resource use by the global north, still lack an understanding of the ways in which capitalism constantly needs to expand through the realization of material natures as exploitable resources regardless of population size.<sup>18</sup> Embracing these neo-Malthusian concepts without critically examining them in their socio-economic-political context is a part of the central conceit of the Popular Anthropocene narrative.

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<sup>16</sup> Michael Maniates, “Individualization: Plant a Tree, Buy a Bike, Save the World?” in *Confronting Consumption*, ed. Thomas Princen et al, (Cambridge, The MIT Press, 2002) pg. 45

<sup>17</sup> John Bellamy Foster, *Marx's Ecology: materialism and nature*, (New York, Monthly Review Press, 2000) pg. 88 – 89

<sup>18</sup> Brian Napoletano, “Ecological Marxism vs. environmental-neo Malthusianism: An old debate continues.” *Climate and Capitalism*. URL:<https://climateandcapitalism.com/2018/04/30/ecological-marxism-vs-environmental-neo-malthusianism/> (accessed October 10, 2018).

The second major problem with the Popular Anthropocene narrative is a lack of understanding of the impact of the history and ongoing processes of colonialism upon the bodies and communities of Indigenous peoples and upon the natural environments that colonial states operate within, control, and extract from. In a sense, this is a problem of dating. The Popular Anthropocene tends to date itself to the European Industrial Revolution and ignores the ways in which the long development of capitalism has transformed and harmed communities and environments through exploitation and appropriation, centering instead a colonial, Euro-American history that abstracts the impacts of ecological crises to a point where they seem caused by an abstract humanity and affect an abstract humanity. This ignores the very specific instances of harm that hits particular communities more than others, and the very specific groups that cause this harm. Violence to the bodies and communities of Indigenous peoples is intimately linked to the violence perpetrated upon the land by colonial and capitalist forces of extraction and domination. The environmental violence done to land and non-human nature always spawns tendrils of violence that reach out and impact human communities, disproportionately so Indigenous communities and communities of people of colour.<sup>19</sup> The Popular Anthropocene tends to present its advent sometime in the 18<sup>th</sup> or 19<sup>th</sup> centuries, usually between 1750 and 1850 around the time of the English Industrial Revolution. Without denying the significance of those processes, this date is deeply problematic for several reasons. First as Jason Moore and others have pointed out, to date the Anthropocene here necessarily ignores the long historical and geographical

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<sup>19</sup> *Violence on the Land, Violence on Our Bodies: Building an Indigenous Response to Environmental Violence*. Women's Earth Alliance and Native Youth Sexual Health Network, Toronto, 2016. (Accessed October 4, 2018).

processes emanating from early modern Europe and European colonialism that gave rise to the conditions, patterns, power flows, social relations and technologies that make contemporary capitalism and as such ecological crises possible.<sup>20</sup> Additionally, however, dating the Anthropocene within the Industrial Revolution (or even more recently, as Steffen et al. argue, in the mid 20<sup>th</sup> century when measurable geological strata began to show the impact of activities associated with abstract humanity) relies on a universalizing worldview.<sup>21</sup> This view of the Anthropocene assumes that the only valid experience of catastrophic ecological change and destruction is that experienced now by Euro-American, often settler, societies and fails to take into account the ways that specific socio-political arrangements have visited catastrophic ecological change on colonized peoples for centuries if not millennia.<sup>22</sup> As Heather Davis and Zoe Todd argue, the narrative of the Popular Anthropocene abstracts humanity and ignores the flows of power (like capital and white supremacy) that particular groups are able to control to dominate others by instituting Eurocentric, capitalist, colonial, and statist assumptions and narratives as neutral.<sup>23</sup> By making these narratives the assumed normal and essentially invisible, hierarchies and oppressions are likewise hidden and the decisions by particular individuals, communities, and companies with historical links to colonialism and the development of capitalism that actually brought about the conditions of the Anthropocene

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<sup>20</sup> Jason Moore “The Capitalocene Part I: on the nature and origins of our ecological crisis” *The Journal of Peasant Studies*. Vol 44, no 3 (2017) pg. 594 – 630.

<sup>21</sup> Will Steffen, et al. “The trajectory of the Anthropocene: The Great Acceleration.” *The Anthropocene Review*. (2015) Vol. 2, no. 1. pg. 81 – 98.

<sup>22</sup> Kyle Whyte, “Indigenous science (fiction) for the Anthropocene: Ancestral dystopias and fantasies of climate change crises,” *Environment and Planning E: Nature and Space*, Vol. 1, no. 1 – 2, (2018).

<sup>23</sup> Heather Davis and Zoe Todd. “On the Importance of a Date, Or Decolonizing the Anthropocene.” *ACME: An International Journal of Critical Geographies*. Vol 16, no. 4 (2016) pg. 763

are erased.<sup>24</sup> Connecting the origins of the Anthropocene to colonialism allows us to show that the imperatives of settler colonialism to erase Indigenous peoples and ways of being and replace them with settlers and Eurocentric ways of being constitute both biophysical and geological, and socio-economic-political forces. It also specifically connects changing social relations to biophysical systems and shows how they have been historically responsible for instances of ecological change and climate change.<sup>25</sup> To properly understand the ecological crises we are facing we must understand them within the historical, geographic, and colonial contexts of capitalism and the state, and how it is these social relations and individuals, communities, states, and companies in positions of power and domination in them, that cause these crises. For this reason, for the time being, I opt to refer to our age of massive, human caused and influenced, biophysical violence not as the Anthropocene, but as the Capitalocene.<sup>26</sup> Doing so accepts the nebulousness of an origin date, recognizing that capitalist and proto-capitalist social relations are both complicit in facilitating ecological crises, and de-emphasizes specific technologies and their use in the abstract as the cause. This also makes space for analyzing ecological crises as consequence of the contradictions of capitalism and as consequences of the settler-colonial project.

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<sup>24</sup> Davis and Todd, “On the Importance of a Date.” pg. 767 – 769

<sup>25</sup> As a biophysical and geological force colonialism and the genocide of the pre-Columbian Indigenous populations of the Americas has been tied to a substantial reduction in greenhouse gasses (the Orbis Spike) in in the 15<sup>th</sup> and 16<sup>th</sup> centuries as uncultivated plant matter regrew in previously inhabited and cultivated areas. Ibid. pg. 764

<sup>26</sup> This is of course not the only neologism that could be used here but for brevity and a more all-encompassing character of the use of the term capitalism which can include the process and relations of production and its connection to historical and contemporary colonial expansion and appropriation I will stick with Capitalocene. For a broad view of the terms associated with criticisms of the Popular Anthropocene see Christophe Bonneuil and Jean-Baptiste Fressoz. *The Shock of the Anthropocene: The Earth, History, and Us*. trans. David Fernbach. (Verso Books, London, 2016); Donna Haraway et al. “Anthropologists Are Talking – About the Anthropocene.” *Ethnos*. Vol. 81, no. 3 (2016).

### Capitalism, Colonialism, the State, and Nature: The Making(s) of Resilience

It is apparent that the narrative of the Popular Anthropocene can do us no services and will not provide the proper analytical nor material perspective necessary to generate long lasting, just, emancipatory, and ecologically sound solutions to the burgeoning ecological and climactic crises we are dealing with and will continue to deal with for the coming generations. In saying so however we should be careful not to discount the concept of the Anthropocene for geological dating, though we should be critical of how, even when it comes to geological strata, assigning responsibility to abstract humanity carries problems. Understanding our current situation as residing within the Capitalocene (using the most inclusive meaning of the term) is the best starting point for discovering the strategies and goals we need to set for ourselves in order to counter the disastrous consequences of ecological destruction. The Capitalocene shows us that we can not dive into technological fixes without challenging the very logics of accumulation and valuation that come from capitalism itself or the ways in which colonialism, through the tools of the settler-state provides the security, support, justification, and method to it. Otherwise the fixes we propose and implement will be nothing more than decorative band-aids over the gaping wounds in our socio-economic-political systems.

Protecting these systems from groups and forces that express the rallying cry of ‘system change not climate change’ (not to only focus on climate change as the spirit of the cry goes with all ecological crises), is resilience. Capitalism, colonialism, and the state are all resilient structures and institutions in addition to being systems that produce a

particular resilience within those that actively subscribe to them. Pertinent questions to ask then revolve around questioning how the construction of resilience within the subjects of capitalism, colonialism, and the state is connected to the processes that facilitate ecological crises.

This project is part of a broad line of questioning and searching I have had about how to find solutions to the myriad ecological crises the world is experiencing that are simultaneously anti-capitalist, decolonial, and emancipatory. Driving this project forward are the following questions. How is the construction of the resilient subject (and consequently subjects that are put in peril due to their lack thereof) and the relationship of nature and society within the capitalist, colonial, and state system context connected? Where is the origin of resilience found and how does it facilitate ongoing ecological crises? Can we alter these conceptions of resiliency to challenge the very structures that try to imbue people with those concepts in order to make people indeed resilient, but resilient to the destructive forces of capitalism, colonialism, and the state in such a way that it breaks the power of those forces? Are the material and social forces associated with the cause of the ecological crises we are facing related to the formation of particular resilient subjectivities?

These questions are important to ask in our current situation. Resilience is touted as a vital characteristic of a good citizen, yet it distracts from the destruction of social services and the alienation of community members from each other. Individualized resilience, by facilitating the kind of atomized relationships that capitalism requires, can be used to further entrench the power of capital at a time when it is at high risk of losing sway over subjects. If we are to fight against the triumvirate of ecological destruction –

capitalism, colonialism, and the state – we must not only challenge them materially, but also tear apart the subjectivities they impose upon us. The main argument of this project is that the resilient subject is forged in the metabolic rift between society and nature. Capitalism is not the only force to disrupt the nominally ‘normal’ metabolic functioning of society and nature; the state and colonialism contribute in intersecting ways as well. Rather than just exploitation, domination (of land, of material, of human and non-human natures and relations) must be understood as a key social relationship that breaks the sustainable connections between nature and society. Through this understanding we can look to see how resilience thinking can be pushed past its position as a buttress for neoliberal capitalism and colonialism, and into a holistic, socio-ecological thinking that can challenge existing power relations.

Research into the social relations underpinning ecological crises bears with it the challenge of studying the interplay of social forces and natural forces and the hardship of linking these in a meaningful way. It is imperative therefore to represent both these interconnected spheres and recognize two essential things. First, natural forces are real and have impact regardless of the human and social interaction with them. The burning of coal only becomes the burning of a ‘fossil fuel’ in a particular relation, but regardless of the reason for its burning (as fuel or by some fluke fire) it will still emit carbon into the atmosphere. It is only as a ‘fossil fuel’ that particular social relations of exploitation and domination are connected to its carbon emission. It is even within the realm of imagination, if just shy of the far side of impossible, that a substantial enough natural event could cause a similar level of carbon emissions to the level emitted by the capitalist

mode of production.<sup>27</sup> The physical effect of the burning of coal or other carbon sources is a rise in carbon emissions in the atmosphere regardless of the causation and regardless of how we may come to know or not know it. It is objectively real.<sup>28</sup> Second, despite the above stated factor, in our current situation it is only through the mediation of social relations that natural forces become forces of ecological destruction as wrecked by capitalism, colonialism, and the state. It is therefore imperative to make visible and understand the underlying internal relations of these forces and material flows.

My method will be predominantly two-fold, keeping in mind that the factors of studying the interaction of social forces and natural forces can occur in ways that are not mediated socially. I will begin with theoretical engagement with a variety of works on the making of resilience in order to work out on an abstract level what resilience is, how it may affect people, how it may be used, and how it may be critically challenged.

From here, I will use a combination of autoethnographic reflection and critical discourse analysis of the fight against fish farms in Kwakwaka'wakw territory (Broughton Archipelago) to explore the underlying social relationships of resilience, capital, colonialism, and the state to salmon farming. I take my varied methods of critical discourse analysis, theoretical engagement, and autoethnographic reflection as an expression of methodological pluralism. Jeff Ferrell argues that field research is perhaps the best method for properly engaging, meaningful, passionate, and effective work, but that regardless, a disruption of methodological authority is necessary to free research

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<sup>27</sup> Andreas Malm effectively highlights the problems with fetishizing coal as a polluter rather than identifying the underlying social relations that make coal a fossil fuel. Malm, *Fossil Capital*.

<sup>28</sup> Here I reference the idea of objectivity as understood to the 'depth realism' ontological position as Roy Bhaskar uses it. Andrew Collier, *Critical Realism: An Introduction to Roy Bhaskar's Philosophy*, (London, Verso Books, 1994) pg. 6

from the baggage of predetermined outcomes.<sup>29</sup> Methodological decisions carry with them ontological and epistemological assumptions that may discount vital knowledge, sources, or experiences. These contribute to the dominance of particular ontological or epistemological positions that serve the interests of those with power under the current capitalist and settler-colonial state paradigm. While I am not engaged in direct sustained field research, my own experience working to prevent the further destruction of wild salmon ecosystems inherently informs my ongoing research, and personal emotional connection to the matters at hand. I believe this contributes to a necessary methodological pluralism. For this reason, I have chosen the kinds of articles and reports as well as public communications based on obtaining a wide range of vantage points. As Bertell Ollman has argued, in order to understand interaction we must break down the whole - in this case ecological crises though the specificity of salmon farming - to mentally digestible parts through the process of abstraction.<sup>30</sup> Through the following chapters I aim to do just this by starting from a broad theoretical conception of resilience, and proceed to pull it apart in examples to find its origin and connection to ecological crises and the metabolic relationship between nature and society.

The first chapter of this piece will address the concept of resilience, beginning with what it means and therefore what being resilient means in the Capitalocene. It will begin by tracing a genealogy of the concept of resilience from its origins in systems ecology, through to its use in politics. It should be noted, however, that the word

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<sup>29</sup> Jeff Ferrell, "Against method, against authority... for anarchy." in *Contemporary Anarchist Studies: An Introductory Anthology of Anarchy in the Academy*, edited by Randall Amster, et al, pg. 73 – 81, New York, Routledge, 2009.

<sup>30</sup> Bertell Ollman, *Dance of the Dialectic: Steps in Marx's Method*, (Chicago, University of Illinois Press, 2003), pg. 59 - 61

resilience does not necessarily crop up in discourse as a call for specifically resilient developments or characteristics; rather, as will be explained in this chapter, it is a way through which particular arrangements of power are made possible and manifested. Resilience, by operating as the main kind of reaction to challenging social and material conditions is responsible for the creation of the resilient subject as a necessity for capitalism's reproduction within the Capitalocene and our situation of continually developing ecological crises. Because of this, it is imperative that capitalism tie its material processes with processes of social and cultural reproduction in order to inculcate the resilient ideal. This chapter will interrogate the idea of resilience and put it in its place as a concept that can be and has been used to depoliticize individuals and communities. It will then make the argument that resilience has both a performative characteristic and a material characteristic to it, and that its production is tied to material socio-ecological relations between communities or individuals, and their broader social and environmental position.

The literature surrounding the concept of resilience has quite effectively articulated the ways in which the concept has permeated decision making but fails to grapple with how it influences material conditions through both structural means and the actions of individual and community agents. It also accurately reflects a kind of mentality or general affectual condition that crops up amongst subjects in the Capitalocene who not only are dealing with the alienation and domination brought about by capitalism, the state, and colonialism, but all the more are dealing with an existential threat from climate change. What it needs to address however is how resilience thinking not only forces these affectual conditions and technocratic 'solutions' that end up

replicating ecological crises, it must analyze how resilience is a force that itself is a part of the creation of ecological crises. It is as much a part of production as of reproduction of them. To address this, we must turn to the second chapter.

The second, and most substantive, chapter will focus on the origins of the material forms of resilience. Surrounding Marx's concept of metabolism and John Bellamy Foster's iteration of the 'metabolic rift' is a large body of work dominated by the arguments of Foster and Jason Moore. While there is significant difference between the arguments of these authors the essential point they both make is that the relationship between society and nature is mediated by capitalism and that this relationship is unsustainable due to capitalism's internal workings and its imperative to continually accumulate and concentrate, disrupting the material flows between society and nature in destructive ways.

This chapter will begin by outlining the literature around the metabolic rift and providing some criticisms showing where resilience must fit in. Following this, this chapter will explore the metabolic rift as the site of alienation and making-resilient in the Capitalocene. In order to highlight how colonialism and the state are intimately tied to the formation of the metabolic rift I will explore the struggles surrounding the devastation of wild Pacific salmon stocks and the fight against Atlantic salmon farming along the coast of so-called British Columbia, Canada. In particular I will engage with the struggles as predominantly lead by the Kwakwaka'wakw communities of the 'Namgis and Musgamagw Dzawada'enuxw in and around the Broughton Archipelago. This study aims to connect the ecological crises caused by a metabolic rift to the formation of

resilience in order to show a portion of how capitalism, colonialism, and the state are able to maintain their own reproduction during catastrophic situations.

Metabolic rift theories offer a useful account of how nature and society interact and are co-constituted. However, there is a gap when it comes to understanding how these rifts that they speak of are reproduced once communities identify the source of their socio-ecological crises. Neither Moore nor Foster effectively offer a substantive argument for what maintains rifts other than the momentum of the structural forces that created them. I find this explanation lacking an adequate account of the very real effects that individuals and communities can have on these structural forces (and vice versa) in changing their particular socio-ecological context. They also neglect how specific, situated rifts can have cascading effects throughout trophic levels and the geographic range of socio-ecosystems. Through the application of resilience theories, metabolic rift theories expand their purview and create an opening for more robust accounts of socio-ecological crises and how we may combat them.

By way of a third chapter, I will connect the notion of resilience to the work of Roberto Esposito and his concepts of *immunitas* and *communitas* to highlight how the construction of resilient subjects both alienates people from a human *communitas* but also from non-human *communitas*. Similarly, as the resilient subject is immunized from community, the systems of capitalism, colonialism, and the state are themselves immunized from the threat of the resilient subject. This multipolar and multidirectional understanding of the dynamic dialectic of *communitas-immunitas* is revealing of more complex forms of the creation of dominant socio-economic-political systems. From here, this chapter will engage with literature on Indigenous resurgence to push resilience

thinking through the *immunitas-communitas* dialectic to see how it may provide a kind of thinking that re-unifies severed conceptions of the social and ecological as a socio-ecological whole.

Incorporating Esposito provides a much-needed intervention in the relational ontology that metabolic rift theories are based on and that resilience thinking tends to eschew. Stemming from Jean Luc Nancy, as will be shown, Esposito conceives of community as made of broad co-constitutive relations as well as being a relation itself. This expands the limited Marxist relational ontology that focusses narrowly on relations of production and reproduction, and the development of class conflict. The subject of communities, for Esposito, is produced as a singular plurality, always already incorporating the other-than-self. As such, Esposito provides a bridge between the relational ontology of Marxism to that scholars like Leanne Simpson or Glen Coulthard who incorporate the other-than-human as well as the other-than-self.

In conclusion, this project will look towards where this reinvigorated socio-ecological resilience thinking may be applied to fight for a more socially and environmentally just future and construct a politics that expands to other social realms such as that of education, rather than one that continually shrinks the realm of the possible. Through these chapters the main point I argue is that resilience can be used for dramatically depoliticizing actions that have system-maintaining effects in order to prop up the forces of capitalism, the state, and colonialism. Additionally, resilience mediates and helps create the conditions necessary for the production and reproduction of metabolic rifts and ecological crises. Without resilient subjects the momentum that the culpable forces have in maintaining ecological crises for their benefit would waver. In

order to effectively combat the accelerating socio-ecological crises we face we must understand the role that resilience plays in maintaining metabolic rifts and, through reconceptualizing our communities, capture and change the ways resilience can be used.

## Chapter 1

At first glance the concept of resilience seems like a good idea. How could one think that the ability of an ecosystem, a community, an institution, a state, or even an individual to absorb a shock from the material or social worlds, survive it, adjust to the troubles, and get back on track is a bad thing? It seems like common sense that we ought to want things to be resilient, to weather the storm with a stiff upper lip, to keep calm and carry on. I aim to challenge this general perception in this chapter. Resilience can indeed be a meaningful and useful tool for muddling through shocks, adapting, and transforming, but it can also be used in quintessentially conservative ways in order to prevent the change of social relations that are being stressed by ecological crises. In order to do so we must look for the connections between social and ecological relations. Ways of thinking or promoting resilience, or ways of acting resiliently are conditioned by the ways in which social and ecological relations are thought and experienced. For this reason, it is important to understand how ways of social integration with the natural environment and society have been conceptualized. Murray Bookchin has sought to distinguish between the concept of environment and the concept of ecology. For Bookchin, understanding society-nature relations in the vein of environmentalism refers to the “mechanistic, instrumental outlook that sees nature as a passive habitat composed of ‘objects’... that must merely be rendered more serviceable for human use.”<sup>31</sup> Contrary to this concept of environmentalism and perceiving nature through its lens is the view of nature as ecology. Bookchin, following Ernst Haeckel the originator of the term, views ecology as dealing

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<sup>31</sup> Murray Bookchin, *The Ecology of Freedom: The Emergence and Dissolution of Hierarchy*, (Oakland, AK Press, 2005 [1982]), pg. 85

“with the dynamic balance of nature, with the interdependence of living and nonliving things.”<sup>32</sup> Consequently, an ecological view necessitates incorporating the human and thus social world with the natural world holistically, in contrast to environmental view, which manages to recognize human connection to the natural environment, but conceives of it as a form of mastery rather than interrelation.

The distinction between the ideas of environmentalism and ecology as two forms of viewing the relationship of society and nature has important consequences for understanding the origins of the idea of resilience and how it is used for political projects. Contemporary environmentalism thinking (in the sense of internalizing externalities such as pollution or greenhouse gasses, in the language of environmental economics and green capitalism) manages to continue the very processes that alienate society from nature and facilitate ecological crises because of its reliance on what Theodore Adorno and Max Horkheimer termed “instrumental rationality.”<sup>33</sup> Instrumental rationality influences how the idea of resilience is conceived and shapes the goals of resilience making projects. As Horkheimer puts it, as individuals are stripped of the mythologies of objective truth in modern social contexts the idea of nature loses its form as an ‘end’ and is turned into nothing but a ‘means.’

As the end result of the process, we have on the one hand the self, the abstract ego emptied of all substance except its attempt to transform everything in heaven and on earth into means for its preservation, and on the other hand an empty nature degraded to mere material, mere stuff to be dominated, without any other purpose than that of this very domination.<sup>34</sup>

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<sup>32</sup> Bookchin, *The Ecology of Freedom*, pg. 86

<sup>33</sup> Max Horkheimer and Theodore Adorno, *The Dialectic of Enlightenment*, (Stanford, Stanford University Press, 2002 [1947]) ed. Gunzelin Schmid Noerr, trans. Edmund Jephcott.

<sup>34</sup> Max Horkheimer, *Eclipse of Reason*, (London, Continuum, 2004 [1947]) pg. 66 - 67

Horkheimer's argument here shows that the dominance of instrumental rationality – the subjective, individualized rationalization of means to particular goals such as the destruction of ecosystems for profit accumulation – jeopardizes the continuity and viability of socio-ecological systems. Within the domain of instrumental rationality, resilience becomes an absolute necessity in order to preserve oneself against the changes and shocks caused by those with access to material and social power pursuing those goals. Resilience itself is a tool of the instrumental rationality of subjects whose goal is survival within a world where, as Horkheimer also argues, “Economic and social forces take on the character of blind natural powers that man, in order to preserve himself, must dominate by adjusting himself to them” while simultaneously justifying the rationality of those relations at best, and masking or denying its existence at worst.<sup>35</sup>

In this chapter I will argue that resilience is indeed not only a characteristic of systems, institutions, communities, or actors, nor just a project, ideology, or mode of governance, but that to be resilient is a subject position that can be held in relationship to power. I will begin by tracing out the concept of resilience in the field of systems ecology as a way to describe how complex ecological systems interact with change and destructive events. From here, the concept has drifted into the social sciences as a means of describing how complex social systems weather shocks seen as exogenous to them. Resilience thinking has spread to permeate disaster management, psychology and social work, and political theory. I will argue that resilience is an articulation of particular power arrangements under neoliberal and colonial capitalism. While resilience ought to be seen in a socio-ecological context, the ways in which resilience thinking is used and

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<sup>35</sup> Horkheimer, *Eclipse of Reason*, pg. 66

manifests result in a separation of the social and ecological. This forces those who must 'be resilient' in some way to address only their more immediate social needs often at the expense of broader socio-ecological needs. Following this, I will argue that the three forces of capitalism, the state, and colonialism all require a degree of resilience to reproduce themselves in the face of building material and social conditions that exploit and dominate different populations. In addition to this, these three forces are responsible for the creation of resilient subjects that allow them to uphold their systemic resilience.

### From the Ecological and the Social...

The concept of resilience initially comes from the field of systems ecology. Historically, systems ecology has focussed on theoretically stable and relatively self-contained ecosystems in order to analyze populations, predator-prey relationships, the effects of contagion (be they disease vectors or the relative concentration of predation on one species), and so on. Reality however, is not so stable, and even relatively self-contained ecosystems such as fresh water lakes are substantially more complex and interrelated to other factors than theoretically formulated. Since first being introduced by Crawford Holling in the 1970s, the concepts of resilience and stability have become a primary framework within many contemporary ecological studies and theories of ecological systems.<sup>36</sup> Rather than accepting a view of ecosystems that rests within a static paradigm, Holling proposed conceptualizing systems in a continually changing

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<sup>36</sup> For example, see Lance Gunderson et al, "Water RATs (Resilience, Adaptability, and Transformability) in Lake and Wetland Social-Ecological Systems," *Ecology and Society*, Vol. 11, no. 1, (2006); Charles Perrings and Brian Walker, "Biodiversity, resilience and the control of ecological-economic systems: the case of fire driven rangelands," *Ecological Economics*, Vol. 22, (1997); Garry Peterson et al, "Ecological Resilience, Biodiversity, and Scale," *Ecosystems*, Vol. 1, no. 1, (1997).

state that embraces the occurrence of random events and presupposes that the observed continuity or changes of populations is in part related to the already present adaptations of these ecosystems to endure challenging or destructive events.<sup>37</sup> This conceptual framework provided better tools for understanding change and the dynamism of ecosystems in relation to other ecosystems or material factors such as natural disasters, and consequently lends itself to better understanding the effects of socially induced changes to ecosystems such as the potential negative effects of introduced species or the impacts of altering the chemical compositions of soil or water through fertilizers and pollutants.

Holling specifies two concepts for this view of ecological systems: resilience and stability. For Holling, resilience “determines the persistence of relationships within a system and is a measure of the ability of these systems to absorb changes of state variables, driving variables, and parameters, and still persist.”<sup>38</sup> Stability in contrast is “the ability of a system to return to an equilibrium state after a temporary disturbance. The more rapidly it returns, and with the least fluctuation, the more stable it is.”<sup>39</sup> Both of these characteristics are a part of understanding how complex ecological systems are able to withstand shocks and either incorporate them or muddle through them. Some conifer trees for example require forest fires in order to successfully reproduce, a potentially random event if it is one that can be influenced by other human or non-human factors such as seasonal droughts up to climate change. These conifer forests have

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<sup>37</sup> C. S. Holling, “Resilience and stability of ecological systems,” *Annual Review of Ecological Systems*, Vol. 4, no. 1, (1973).

<sup>38</sup> Holling, “Resilience and stability,” pg. 17

<sup>39</sup> *Ibid.* pg. 17

adapted over centuries to be intimately tied with forest fire patterns and as such developed a high degree of resilience to forest fires within the range of frequency and intensity they are used to. The stability of these forests within this range is also high as they are able to return to working ecological relations fairly quickly after a blaze. Since Holling's work opens space for analyzing the stability and resiliency of systems in relation to social factors as well, we can also see how the effects of socially induced shocks can challenge the resiliency and stability of any given system. For example, due to the effects of climate change including the increased average temperature, increased length of seasonal drought and decreased annual rainfall, and the expansion of mountain pine beetle and the greater consequent numbers of dry dead pine trees in forests, forest fires in the interior of so-called British Columbia have dramatically increased in frequency and intensity. The conifer forest ecosystems that developed necessary relationships with forest fire patterns are now being challenged by a massive shift in the quantity and quality of forest fires and consequently, their resilience and stability are being put at risk.

Resilience and stability, it appears, are not only features of natural systems, but they are dialectically related to each other and to a multiplicity of social, ecological, and material forces that interact with any given system. Holling himself has since developed the concept of resilience to incorporate the interaction between environmental and social forces and the resiliency and stability of social institutions that are relatively autonomous from environmental forces. Holling argues that social systems, like ecosystems, work their way continually through adaptive cycles of growth and change, wherein the potential for new social apparatuses and the resilience of existing ones both follow

trajectories based on the relative stability of multiple social forces.<sup>40</sup> For Holling, these adaptive cycles are continual and nesting in the sense that they grow upon one another and feed into each other. There are distinct phases within the cycles as well, “as if two separate objectives are functioning, but in sequence. The first maximizes production and accumulation; the second maximizes invention and re assortment... The adaptive cycle therefore embraces two opposites: growth and stability on the one hand, change and variety on the other.”<sup>41</sup> This metaphor utilizes the concept of capital to represent accumulation and growth (particularly the accumulation and growth of rigidities in the system), and as such it is not perfect. A key part does not readily translate to social structures without a critical understanding of ‘capital’, as Holling uses the term, as social relations within social structures. As Holling argues, contrary to the capacity of actors within social systems to take different courses and contrary to the immanent character actors or assemblages (that is that their actions are relationally conditioned internally rather than externally) “the two objectives [as mentioned above] cannot be maximized simultaneously but only occur sequentially. And the success in achieving one inexorably sets the stage for its opposite.”<sup>42</sup> The adaptive cycle and its relationship to the resiliency or stability of any given social system is conceptually useful, but this shows it does not match in a one-to-one ratio.

A better interpretation of the adaptive cycle in social systems would replace the metaphor of capital accumulation with a more direct understanding of the accumulation

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<sup>40</sup> C.S. Holling, “Understanding the Complexity of Economic, Ecological, and Social Systems,” *Ecosystems*, Vol. 4, no. 5, (2001), pg. 394

<sup>41</sup> Holling, “Understand the complexity,” pg. 395

<sup>42</sup> *Ibid.* 395

of potential for change. Resilience then, when it comes to complex social systems, is the relative ability of those systems to maintain themselves in the face of that potential for change brought on by the accumulated rigidities of the system. What is incomplete in Holling's account is that this resilience is not merely a passive characteristic of any given social system as it is, at least as it is somewhat more so, in ecological systems. Rather, it is actively pursued, bolstered, managed, challenged, diminished, and changed by actors within these systems depending on their relative power relationships. Complicating this dichotomy of ecological systems and their resilience, and social systems and the use of the concept of resilience to understand their own specific ways in which they muddle through shocks is the understanding that social and ecological systems are never completely separate. As mentioned above, social systems (and likewise, though in a distinct manner, ecological systems) have emergent properties, characteristics that are present in the system but not amongst individual members, and vice versa. Dovetailing with the emergent and immanent character of social and ecological systems is their co-produced and co-reproduced aspects. Social and ecological systems are intimately linked, affecting each others' processes by engaging in relations of power, building now tighter, now looser emotional and interpersonal bonds, mediating relationships, and influencing material change.

... to the Socio-ecological

Deriving from Holling's initial theories of resiliency are theories of panarchy.<sup>43</sup>

The crux of the theory of panarchy is that the above-discussed adaptive cycles are nested hierarchically. (Hierarchically, not in the sense of relative power but rather in the sense of hierarchies of energy, biomass, population size, etc... This is better articulated as: interrelations wherein certain cycles are necessary for other cycles to function thus forming a hierarchical structure in the sense of bases for other cycles to rest on and nest in).<sup>44</sup> The nesting of these cycles highlights how each cycle of change and reorganization affects each other cycle based on its scalar relationship with others. Panarchical orderings of adaptive cycles clarify the way in which resilience translates into social systems, and more importantly, how the functioning and resilience of social systems are distinct, but not separate from the functioning and resilience of ecological systems. It does this by means of showing that resilience can operate amongst relatively autonomous cycles that interact with each other much like social systems, instead of being confined to a static ecological conception. Panarchical orderings are therefore able to focus on the internal adaptive capacities of not only social or ecological systems, but socio-ecological systems. Through "emphasis on feedback dynamics between social and ecological systems", panarchical orderings and the framework of socio-ecological systems show how social and ecological systems "cannot be conceived in isolation, as human systems are a component of, and in turn shape, ecological ones."<sup>45</sup> This emphasis on change and dynamic interaction between interconnected, interrelated, and co-(re)produced ecological

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<sup>43</sup> Of these theories, Holling's own contribution is found in Lance Gunderson and C.S. Holling, *Panarchy: Understanding Transformations in Human and Natural Systems* (Washington, Island Press, 2002).

<sup>44</sup> Craig Allen et al, "Panarchy: Theory and Application," *Ecosystems*, Vol. 17, (2014), pg. 580

<sup>45</sup> Muriel Cote and Andrea Nightingale, "Resilience thinking meets social theory: Situating social change in socio-ecological systems (SES) research," *Progress in Human Geography*, Vol. 36, no. 4, (2012), pg. 477.

and social realms has encouraged the development of fields of research focussing on socio-ecological resilience which investigate the ability of social systems (be they communities, states, institutions, markets, etc...) to work themselves through shocks considered exogenous to them.<sup>46</sup>

For W. Neil Adger, the concept of social resilience is linked to the concept of ecological resilience in the sense that social systems are materially dependent on ecological systems for their livelihoods and resources.<sup>47</sup> If the ecological basis of a community's livelihoods is more resilient (or indeed more stable as well), then it would follow that the community would be more resilient. From Adger's view, it seems that rather than a community suffering economic deprivation because of a forest fire or stress on fish stocks, a community's resilient ecosystem would bring about the ability of communities to weather shocks because their material base would be flexible enough to weather them too. Mediating this resilience for Adger are social institutions that allow for the governance of resources and ecological systems in favour of the social systems they operate within.<sup>48</sup> Through these institutions, the vulnerability of communities exposed to shocks that are seen as exogenous to themselves (the communities) is diminished. Seen here as incidental, not structural, vulnerability is a problem that well-functioning and well-meaning social institutions are seeking to eliminate, rather than a

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<sup>46</sup> W. Neil Adger, "Social and ecological resilience: are they related?" *Progress in Human Geography*, Vol. 24, no. 3, (2000); Simin Davoudi et al, "Evolutionary Resilience and Strategies for Climate Adaptation," *Planning Practice and Research*, Vol. 28, (2013), no. 3.

<sup>47</sup> Adger, "Social and ecological resilience," pg. 351.

<sup>48</sup> Emma Tompkins and W. Neil Adger, "Does adaptive management of natural resources enhance resilience to climate change?" *Ecology and Society*, Vol. 9, (2004), no. 2, pg. 6 URL: <http://www.ecologyandsociety.org/vol9/iss2/art10>

necessary factor to their operation.<sup>49</sup> Problematically, however, this focus on governance of natural resources within socio-ecological systems in order to maximise resilience necessarily ignores vital questions, such as which segments of various communities benefit from this governance and which are disadvantaged or further imperiled by it.

Resilience, it appears, is a much fuzzier concept than first envisioned. Raven Cretney highlights the need that Cote and Nightingale emphasize, namely to ask for whom resilience functions and for what purpose.<sup>50</sup> Cretney argues that the term ‘resilience’ can be grafted upon any number of political projects. Indeed, it has been appropriated by both governmental actors and activist circles, to describe both policies and opposition to those same policies.<sup>51</sup> Rather than simply a characteristic of social, ecological, and socio-ecological systems, resilience is a more complicated project. The outcomes of that project are themselves not pre-ordained either, but are socio-ecologically determined by the actors engaging in making-resilient. Predominantly, the goal of contemporary resilience projects is that of ‘bouncing back’ after a shock deemed exogenous to the community, institution, state, etc... Often times, the source of any given shock is indeed exogenous.<sup>52</sup> This is, however, not necessarily the case, as will be addressed below. According to Cretney and Sophie Bond the bounce-back, an outcome of the adaptive capacity of resilient systems, focusses more on the adaptation and

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<sup>49</sup> Nick Brooks et al, “The determinants of vulnerability and adaptive capacity at the national level and the implications for adaptation,” *Global Environmental Change*, Vol. 15, (2005), pg. 160 – 161

<sup>50</sup> Cote and Nightingale, “Resilience thinking meets social theory” pg. 479

<sup>51</sup> One such example will be highlighted in the following chapter, namely the proliferation of fish farms in the coast of so-called British Columbia. Raven Cretney, “Resilience of what, for whom?” *Geography Compass*, Vol. 8, no. 9, (2014), pg. 631

<sup>52</sup> The cause of earthquakes (though not the effects) for example are for the most part not mediated by social relations, though current research in to the geological effects of fracking has raised questions about the relationship to that process and local seismic activity. William Ellsworth, “Injection-induced earthquakes,” *Science*, Vol. 341, no. 6142, (2013).

maintenance of previous conditions rather than on the transformative capacity of any given system.<sup>53</sup> It is in the transformative capacity of socio-ecological systems that allows for changing the social relations that permeate these systems. However, given that the goals of resiliency projects are for the most part bound to an instrumental rationality predicated on the current capitalist, colonial, and state-based socio-ecological relations, they will seek to re-stabilize the socio-ecological system at its previous, relatively static, state.

Despite being consistently challenged by activists and other communities, the term resilience has been claimed by states and capitalist interests to describe projects that ostensibly build broad community capacity to respond to change and shocks through buzzwords like innovation. But in reality, these projects solidify the hold of a narrow range of options based on neoliberal market principles, the privatization and commodification of commons, and the destabilizing of non-capitalist and non-state forms of organization, relations, and metabolism with the natural environment. Resilience has consequently been characterized as a “counter-revolutionary” concept by Sara Holiday Nelson and others, echoing autonomist Marxist Paolo Virno.<sup>54</sup> Rather than embrace the ability of its conception of the adaptive cycle to construct new social relations after the more passive destabilization and collapse of a given form of them, or further yet, aim actively to destabilize and change social relations, resilience thinking has joined forces with conservative status-quo politics aiming to prevent destabilization and encourage “a

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<sup>53</sup> Raven Cretney and Sophie Bond “‘Bouncing back’ to capitalism? Grass-roots autonomous activism in shaping discourses of resilience and transformation following disaster.” *Resilience* Vol. 2, no. 1 (2014) pg. 21 - 22

<sup>54</sup> Sara Holiday Nelson, “Resilience and the neoliberal counter-revolution: from ecologies of control to production of the common,” *Resilience*, Vol. 2, no. 1, (2014) pg. 5; Paolo Virno, “Do You Remember Counterrevolution?” in *Radical Thought in Italy: A Potential Politics*, ed. Paolo Virno and Michael Hardt (Minneapolis: University of Minnesota Press, 1996)

fetishistic vision of the world as the self-reproduction of capital.” In that vision, resilience to social change gets primacy over resilience to natural material impacts that may necessitate changing social relations.<sup>55</sup> As such, potentially disruptive conceptions of the adaptive cycle and the nested panarchy of social groups and forces (the panarchy perhaps better characterized as a web of interdependent cycles and relations) has been crystalized as an attempt to maintain hierarchical and oppressive forms of socio-ecological domination.

### Resilience, or How to Succeed in the Capitalocene Without Really Trying

Considering the eminently socio-ecological purview of resilience, what then does it mean to be resilient? Following Cote and Nightingale, what are these projects attempting to build resilience to, for whom, and for what purposes? I will focus on approaching these questions from two key vantage points: the vantage point of social forces, such as the state, capitalism, and colonialism, and the vantage point of the socio-ecological communities these forces interact with, are intimately co-(re)produced by and within, and express their domination over. Within the paradigm of the Capitalocene there are certain features of the resilient individual, community, or system that are necessary for their survival. These, however, are not uniform and are contingent on their particular relationship to different institutions, material resources, expression of power, and hierarchies. For example, just as capitalism must continue to expand to survive, disregarding the material effects of ecological relations in order to maintain particular social relations, individuals and communities must reorient and reorganize themselves to

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<sup>55</sup> Nelson, “Resilience and the neoliberal counter-revolution,” pg. 5

work within particular capitalist social relations at the expense of ecological relations or the effects their actions may have on their ecologies. In a world where capitalism is the primary driving force behind earth-system change and degradation (climate change, disruption of natural cycles, pollution, etc...) a resilient individual, community, or system seemingly ought to prioritize ecological survival in order to maintain social relations, but the inverse is what is promoted. The immediate impacts of the social can harm the material conditions of a subject long before the impacts of the ecological can.

Contemporary resilience thinking focusses predominantly on the individual and the community without addressing the need of particular systems of domination and exploitation to also be resilient. As such, as Jonathan Joseph argues, resilience thinking manages to ‘embed neoliberalism’ by pairing itself with neoliberal governmentality.<sup>56</sup>

From the socio-ecologically connected individual and socio-ecological community vantage point, the characteristics of resilience within the Capitalocene are, at least on the level of appearances, unproblematic. Common personal or community features include competitiveness, innovativeness, entrepreneurialism, and a ‘freedom’ to take responsibility for one’s own conditions rather than relying on any relationship especially that of the relation between the individual to the community. Joseph argues that resilience thinking, combined with Michel Foucault’s conception of (neo)liberal governmentality, “encourages the idea of active citizenship, whereby people, rather than relying on the state, take responsibility for their own social and economic well-being. In particular, it focuses on the risk and security aspects of this by encouraging preparedness

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<sup>56</sup> Jonathan Joseph, “Resilience as embedded neoliberalism: a governmentality approach” *Resilience*, Vol. 1, no. 1, (2013)

and awareness.”<sup>57</sup> What, then, do these features of the resilient individual within a neoliberal and Capitalocene paradigm look like? Disaster preparedness and the ability to weather through sudden or ongoing ecological crises are the main ways in which individual and community resilience is displayed which remains well within the camp of resilience as a conservative, ‘bounce back’ based trait and tool. A key example of this is the United Nations Office for Disaster Risk Reduction’s (UNISDR) 100 Resilient Cities project and the plethora of individualized disaster preparedness plans that proliferate throughout communities.<sup>58</sup> To be very clear I am not arguing that disaster preparedness is some kind of insidious scheme that we should not take part in, as doing so can truly help in times where access to food, water, or shelter due to a disaster or ecological crisis is limited. But it does reflect a particular form of governmentality that encourages self- and market-based reliance in times of disaster, rather than a public reliance through aspects of a state or, different still, communal non-state-based relations.

The broad mainstream narrative of resilience is present in all aspects of one’s social life within the Capitalocene. People are expected to cultivate mental and personal emotional resilience in order to deal with the stresses that accumulate in working life and social interaction, to be prepared for natural disasters as individuals or families (rather than as communities) through market based initiatives (rather than building solidarity and mutual aid), and to expect to need to adapt to any given number of social, ecological, or political and economic crises which are presumed to be a given in everyday life.<sup>59</sup> On a

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<sup>57</sup> Joseph, “Resilience as embedded neoliberalism,” pg. 42

<sup>58</sup> “100 Resilient Cities Project,” United Nations Office for Disaster Risk Reduction, URL: <https://www.unisdr.org/we/inform/publications/49458> (accessed October 19, 2018).

<sup>59</sup> A key illustration of this is the prevalence of marketized self-care. Self-care, in itself innocuous and seemingly good just like resilience, turns the tables in mental health. Rather than linking it to a societal issue, self-care thinking puts the onus of responsibility for mental health on the individual to the extent that it is perceived as

larger scale, individuals and communities are expected to be resilient and to be able to adapt to ecological crises that threaten entire regions and ecosystems such as massive scale drought or the collapse of food webs or agricultural systems, and to be able to adapt to changing security dynamics on a local and global level from climate change, to the potential for nuclear war, to the structural problems and inequalities of global capitalism. The unifying factors of these preparedness schemes, these drives for resilience, are that the responsibility is collapsed on to the individual, and that they all presume the impossibility of actual security and rather embrace a world wherein adaptation and learning from disaster in order to ‘just live with it’ is the normal position of one living in it.

Foucault identifies a key feature of liberal governmentality and the liberal political world in the drive to “live dangerously.”<sup>60</sup> In a liberal, and indeed a neoliberal, paradigm, “individuals are constantly exposed to danger, or rather, they are conditioned to experience their situation, their life, their present, and their future as containing danger.”<sup>61</sup> Foucault’s argument highlights that at the very center of life in a (neo)liberal world is constant hazard, danger, risk, and vulnerability, while permeating it all is the presumption that we cannot do anything to remedy this seriously and permanently by

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entirely their own fault if they have mental health challenges. This blinds those with mental health challenges and their communities and support networks from seeing the material and political forces that may contribute to these challenges. I do not mean to disparage the concept of self-care in itself. These activities can be meaningful and helpful to individuals. I mean to point to a necessary criticism that follows the criticisms of the concept of resilience, namely the depoliticizing potential of self-care thinking. See for example Ella Myers, “Resisting Foucauldian Ethics: Associative Politics and the Limits of the Care of the Self,” *Contemporary Political Theory*, Vol. 7, (2008), pg. 140 – 142. See also a more self-deprecatingly humorous criticism of the concept of self-care, Aisling McCrea, “Self-Care Won’t Save Us,” *Current Affairs*, November 26, 2018, (accessed November 28, 2018) URL: <https://www.currentaffairs.org/2018/11/self-care-wont-save-us>

<sup>60</sup> Michel Foucault, *The Birth of Biopolitics: Lectures at the Collège de France 1978 -1979*, (Hampshire, Palgrave MacMillan, 2008) ed. Michel Senellart, trans. Graham Burchell, pg. 66

<sup>61</sup> Foucault, *The Birth of Biopolitics*, pg. 66

building any form of security, care, or refuge and respite from it. Resilience, then, in the form of the ability to adapt to, and weather, danger and changes, presupposes some form of vulnerability as a core characteristic of individuals, communities, institutions, or systems. As Brad Evans and Julian Reid argue, “the underlying ontology of resilience, therefore, is actually vulnerability. To be able to become resilient, one must first accept that one is fundamentally vulnerable.”<sup>62</sup> The relationship of vulnerability to resilience at first seems quite clear cut. When one is vulnerable, one should act in ways to increase one’s own resilience, as a result the vulnerabilities you have will not affect you as negatively, will not impede you as much as they would have, or perhaps will not even be experienced in the same problematic and insecure ways.

This paradoxical denial of social relations while accepting particular marketized relations in order to disavow the ability to secure oneself permanently marks the beginning of what Evans and Reid identify as a process of the “deliberate disabling of political habits, tendencies, and capacities of people and replacing them with adaptive ones.”<sup>63</sup> Building up the concept of resilience as the be-all and end-all of weathering disastrous, catastrophic, or turbulent changes means that the focus of our actions as resilient individuals and communities is on maintaining the structures, relations, and material situations as they are rather than challenging the forces that perpetuate vulnerability in the first place. Taking the lead again from Evans and Reid, the disavowal of the ability to secure oneself permanently amounts to a disavowal of resistance in

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<sup>62</sup> Brad Evans and Julian Reid, “Dangerously exposed: the life and death of the resilient subject,” *Resilience*, Vol. 1, no. 2, (2013) pg. 84

<sup>63</sup> *Ibid.* pg. 86

favour of resilience.<sup>64</sup> Instead of seeking to change the politics that lead to any given situation of vulnerability the resilient individual is made into the resilient subject. In the words of Julian Reid, the latter is a “subject for whom bearing the disaster is a required practice without which he or she cannot grow and prosper in the world. The human here is conceived as resilient in so far as it adapts to rather than resists the conditions of its suffering in the world. To be resilient is to forego the very ability to resist and possibility of resistance itself.”<sup>65</sup>

Importantly, this challenges the assertion by Judith Butler that “each of us is constituted politically in part by the social vulnerability of our bodies” by arguing that vulnerability is in fact what provides the space for social forces to depoliticize subjects completely.<sup>66</sup> But Butler’s contention should not be tossed aside as easily as Evans and Reid make to do. The resilient subject may indeed be depoliticized by their vulnerability, but not all resilient individuals need become resilient subjects. In fact, the vulnerability embraced by the resilient individuals who seek to maintain themselves, and yet recognize and challenge the political arrangements that give rise to their vulnerability, is actually the source of a radical form of politicization. This is just what Butler argues. Following Butler’s notion that the vulnerable and therefore resilient subject is a performative subject, Aranda et al. argue that resilience is never ‘finished,’ but is an on-going process of things subjects do.<sup>67</sup> For Evans and Reid, in contrast, the resilient subject, though

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<sup>64</sup> Ibid. pg. 85

<sup>65</sup> Julian Reid, “The Disastrously and Politically Debased Subject of Resilience,” *Development Dialogue*, no. 58, (2012) pg. 76

<sup>66</sup> Judith Butler, *Precarious Life: The Powers of Mourning and Violence*, (London, Verso, 2006), pg. 20

<sup>67</sup> Kay Aranda et al, “The resilient subject: Exploring subjectivity, identity and the body in narratives of resilience,” *Health*, Vol. 16, no. 5, (2012), pg. 555

dynamic and changing, is finished in the sense that they are resilient as an inherent character trait that means they can adapt without consequence or toll to themselves as subjects, rather than continually performing resilient acts which involve adaptation to exogenous factors but take a toll on one's capacity to continue these acts. However, this closes off the capacity to turn resilience against itself.

A resilient subject must perform their resilience in a variety of situations and, due to the severance of social life from the socio-ecological that occurs through metabolic rifts (as discussed in the following chapter), must perform it in a variety of ways. Butler speaks to gender, but conceptually, performance fits for resilience as well. As per Butler, like the gendered body, the resilient "body acts its part in a culturally restricted corporeal space and enacts interpretations within the confines of already existing directives."<sup>68</sup> Within the confines of what is considered a resilient action, resilient subjects must do particular acts in order to further themselves in that space. The immediacy of social life with its material consequences on one's livelihood as compared to the seemingly distanced socio-ecological world (where consequences for actions are displaced temporally for many communities) results in resilience being performed with just social life in mind, regardless of the fact that social life is ecologically characterized. The form of resilience that it is necessary to perform in order to maintain some semblance of material safety and continuity on the socio-ecological level is necessarily overruled by the purely social form. Prioritizing one form of resilience over the other has the consequence of restricting the kind of political actions that can be imagined and performed themselves. Through this prioritization, what is socio-ecological is removed

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<sup>68</sup> Judith Butler, "Performative Acts and Gender Constitution: An Essay in Phenomenology and Feminist Theory," *Theatre Journal*, Vol. 40, no. 4, (1988), pg. 526.

from the realm of political action through a constant performance of political acts within particular confines (e.g. the confines of market-based relations, or individual preparedness and constant adaptation for disaster). The oppositional character of the social and socio-ecological forms of resilience means that performing resilience for one realm can have negative impacts on one's ability to perform resilience for the other. This split is brought about by the material conditions that permeate the socio-ecological realm through structures like capitalism, colonialism, and the state and force subjects to react to them without regards for the ecological consequences of social actions. In performing this social resilience, the resilient subject continually reconstitutes itself and continually limits the range of possible political actions it has available to itself. Likewise, this furthers the separation of a distinct social realm from the actually existing socio-ecological wherein a social resilience can be performed separately from a socio-ecological resilience. Performance of resilience then concretizes itself in this separation and, as will be explored in the following chapter, is a part of the maintenance of metabolic rifts between nature and society.

The debasing of the human as a political subject and the formation of the resilient subject underlie the projects of resilience as framed by neoliberal and conservative 'bounce-back' style politics and goals. When storms bring flooding that destroy homes in predominantly minority neighbourhoods, repair and reconstruction are left to the residents or are privatized off to construction companies. This does nothing to address the underlying reasons why people of colour or Indigenous people are the main recipients of the ill effects of disasters. The entrenched institutional and structural formations of capitalism, colonialism, and the state take precedence over the livelihoods and lives of

those at risk, because those with power in these structures do not want to change the arrangements that gave it to them. Evans and Reid provide an account of how neoliberal governance manages to create the resilient subject. But they do not focus on the connection of that governance to the construction of particular socio-ecological material relations, and how this subject formation influences and makes possible the reproduction of capital and capitalism (and the state, and colonialism). All this happens, not just ideologically, but materially. Quite successfully, Evans and Reid highlight the importance of resilience thinking through the sustainable development narrative as the response of (neo)liberal governmentality to a confrontation with finitude.<sup>69</sup> Rather than focus on the security of states and human populations, the sustainable development doctrine focusses on economic development as a part of building the capacities of all life in the biosphere and recognizes the interactions between different social and ecological aspects of it (though with only slight recognition of socio-ecological factors).<sup>70</sup> Thus, in sustainable development, economic development can reconcile itself with the finite character of the planet in the form of natural resources.

The concept of resilience comes into play in sustainable development and other related resilience projects in order to help construct and maintain particular orders of power, and through this is able to act in a somewhat Bonapartist manner. As Marx argued, the French emperor Louis Bonaparte co-opted popular and revolutionary tracts of the proletariat and peasant masses – and the goals of the bourgeoisie as well – in order to stifle revolution. Bonaparte did so by appearing to rise above class distinction while

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<sup>69</sup> Brad Evans and Julian Reid, *Resilient Life: The Art of Living Dangerously*, (Cambridge, Polity Press, 2014), pg. 33 – 37

<sup>70</sup> Evans and Reid, *Resilient Life*, pg. 33

maintaining bourgeois economic dominance at the expense of the latter's direct political dominance. Just so, resilience manages to appear to be bringing solutions to ecological crises and hide the "insecuritization" of masses by touting sustainable development, green growth, or other empty but seemingly progressive and ecologically minded platitudes. It does so by depoliticization through the mask of atomistic self-reliance and socio-ecological development along market lines.<sup>71</sup> This maintains the same capitalist economic dominance, as Bonaparte did, but at the expense of remedying the conditions that bring about ecological crises to begin with.<sup>72</sup>

Before addressing resilience thinking's place in the material (re)production of capitalism, the state, and colonialism, as well as its ideological and material place in causing ecological crises, I must address resilience more directly as a feature of these systems of domination and hierarchy themselves and how resilient subjects are necessary for their contemporary functioning. I must also address the parallel subject to the resilient subject that must be created in order to maintain the project of resilience making, namely the imperiled subject. Interwoven in a complex web of relationships, material flows, power dynamics, and hierarchies of domination, the state, colonialism, and

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<sup>71</sup> Here I wish to take a moment to explain the term 'insecuritization.' The Copenhagen School of security studies has worked extensively with the concept of securitization – the bringing of a policy area or segment of social life in the realm of security – and with desecuritization – the inverse of this process through the removal of a segment from the realm of security, all through a process of articulation of security by a state actor. Within the realm of security, a thing can be addressed by whatever means deemed necessary and thereby made secure. Insecuritization as I use it is different to securitization or desecuritization. There is no attempt to make a thing secure in this case, rather a thing is made insecure and more vulnerable despite, and because of, the processes that seemingly seek to make it secure. See Lene Hansen, "Reconstructing desecuritisation: the normative-political in the Copenhagen School and directions for how to apply it," *Review of International Studies*, Vol. 38, (2012); Ole Wæver, 'Securitization and Desecuritization', in *On Security*, edited by Ronnie D. Lipschutz, (New York, Columbia University Press, 1995) pg. 46–86; Holger Stritzel, "Towards a theory of securitization: Copenhagen and beyond," *European Journal of International Relations*, Vol. 13, no. 3, (2007).

<sup>72</sup> Karl Marx, *The Civil War in France*, <https://www.marxists.org/archive/marx/works/1871/civil-war-france/ch05.htm>, (accessed November 10, 2018).

capitalism buffer and support each other and ensure their continual reproduction. Each system acts in a resilient manner, aids in the production of the resilient subject, and is upheld in part by the depoliticization of individuals and communities through the making of the resilient subject. Not only does the resilient subject lose the ability to act in a meaningful political manner, but consciously or not they ensure that other individuals and communities are depoliticized as well in the name of defending their own resilience. For this reason, it is vital to challenge Evans and Reid's singular definition of the resilient subject and understand this subjectivity as being scalar, inconsistent, asymmetrical, and related to any given individual or community's place in relation to flows and positions of power, material resources, institutions, and economic capacities.

### The Resilient Triumvirate of Ecological Degradation

Going forward, to frame this discussion of resilience, I wish to briefly highlight the ways in which capitalism, the state, and colonialism are all subject to resilience thinking, embed resilience thinking in individuals and communities, form resilient subjects, and as such contribute to the separation of a form of social resilience from the broader socio-ecological whole. Far from being an all-encompassing theory of capitalism, the state, and colonialism, this section seeks to show that these structures are integral to conditioning the ways in which resilience is manifested in relation to metabolic rifts, acts as a force of depoliticization, and can be used to support oppressive systems. The argument of the following chapter must be understood within the context of these structures in order to see how metabolic rifts do not stand as the consequence of accumulation alone, but have multiple factors that inform how they come to be.

Resilience is key to their formation, but it must also be understood as contingent on particular socio-ecological arrangements and broader societal structures that influence the material conditions subjects must deal with.

### Capitalism

Perhaps the feature of capitalism most valuable to some, and most infuriating to others, is its ability to change, shift, transform, move, and adapt to constant change that it both experiences and is responsible for. This has been seen historically through accumulation by dispossession via David Harvey's "spatial fix" of continuous geographic expansion and reconfiguration.<sup>73</sup> The flexibility of capitalism to adapt to the ongoing shifts in socio-ecological systems has been essential for it as well. As Karl Polanyi argues, capitalist development relies on an intentional disruption of pre-existing social relations in order to give primacy to market relations and embed those pre-existing social relations within them.<sup>74</sup> As Polanyi argues, labour does not come about within a commodity-based system of production and exchange but rather is integral to ensuring that system functions. As such it must be forced into the role of commodity.<sup>75</sup> Labour, then, is a fictitious commodity as it exists independently from any given economic order and remains, as Joy Paton highlights, embodied in the body of the labourer rather than being something that can be fully commodified and treated as a pure economic category.<sup>76</sup> It is the fictional character of labour as a commodity that allows it to be only

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<sup>73</sup> David Harvey, "The Spatial Fix – Hegel, Von Thunen, and Marx." *Antipode*, Vol. 13, no. 3, (1981).

<sup>74</sup> Karl Polanyi, *The Great Transformation: The Political and Economic Origins of Our Time*, (Boston, Beacon Press, 2001 [1944]) pg. 57

<sup>75</sup> Polanyi, *The Great Transformation*, pg. 75 – 76

<sup>76</sup> Joy Paton, "Labour as a (Fictitious) Commodity: Polanyi and the Capitalist Market Economy," *The Economic and Labour Relations Review*, Vol. 21, no. 1, (2010), pg. 82

partially commodified, never fully. As such it never fully escapes its place as a non-market based social relation which is why it is resistant to the ongoing attempts of capitalism as a project to subjugate it and a part of why it generates spontaneous class interests in conflict with those of the capitalist class.

The uncertainty of market demands and the uncertainty of social conditions allowing for new appropriations and marketization of social relations such as famine, drought, and natural disasters, as well as the exhaustion of natural resources for its processes, mean that capitalism has had to adapt in order to expand.<sup>77</sup> Considering also that the project and processes of capitalism are maintained by a particular set of capitalist-class interests and that confrontation with competing working-class interests (as such interests are self discovered by labour's treatment as a fictitious commodity) could lead to systemic disruption and transformation, capitalism as a project had to adapt to weather the challenges posed to it by those it dominated and exploited. As such, it has had to develop its own form of resilience to change and it has done so by subsuming the very thing that would give rise to challenges in the first place, dissent. In order to ensure that the underlying assumptions that allow for the capitalist socio-economic system are maintained and not challenged in ways beyond its reach of commodification, capitalism must engage in the creation of the resilient subject.<sup>78</sup> Max Horkheimer and Theodore

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<sup>77</sup> For a further discussion of this see for example Naomi Klein, *The Shock Doctrine: The Rise of Disaster Capitalism*, (New York, Metropolitan Books/Henry Holt, 2007).

<sup>78</sup> Dissent and disobedience to the accepted norms of capitalism can and have been commodified in their own right, even to the extent of the co-optation of revolutionary anti-capitalist symbols, images, methods, and politics. One need only see the ubiquitous image of Che Guevara's face on t-shirts and, notable for being the death of irony itself, tattered jackets with so-called 'anarchist' slogans selling for hundreds of dollars. Emily Zanotti, "Barneys New York Debuts \$375 'Antifa Jacket,'" *The Daily Wire*, November 5, 2017, (accessed November 28, 2018) URL: <https://www.dailywire.com/news/23177/barneys-new-york-debuts-375-antifa-jacket-emily-zanotti>

Adorno argue that capitalism functions in part due to the domination of a “culture industry” which is able to co-opt forces that may challenge its pre-eminence.<sup>79</sup> As Thomas Frank expressed it, “the countercultural idea has become capitalist orthodoxy, its hunger for transgression upon transgression, change for the sake of change, now perfectly suited to an economic-cultural regime that runs on ever-faster cyclings of the new.”<sup>80</sup> The rate of cultural change primes subjects for the material changes brought about by their political situation and encourages an individualized response in a world presumed to ‘naturally’ be this chaotic, not a political response to the forces that are causing the chaos. This industry changes cultural expressions into commodities and in turn is able to heavily guide what kinds of cultural desires people will have, pre-empting their consumption.<sup>81</sup> Cultural expression can then become an aspect of depoliticization by redirecting political energies into pre-approved cultural commodity forms.

### The State

The second member of this triumvirate is the state, conceived here as a social relation per Bob Jessop’s argument for a strategic-relations view of the state and state power. Marxist (and some non-Marxist) accounts of the state have tended to focus on a few particular features of state formations and power. Jessop highlights Poulantzian state centric theories as focussing on the relative autonomy of the state from other sites of social relations where the “ensemble of institutions” that make it up are contingent on a variety of social relations.<sup>82</sup>

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<sup>79</sup> Max Horkheimer and Theodore Adorno, *Dialectic of Enlightenment*, pg. 100 – 101

<sup>80</sup> Thomas Frank, “Dark Age: Why Johnny Can’t Dissent,” *The Baffler*, no. 6, (1998), pg. 15.

<sup>81</sup> *Ibid.* pg. 115 – 116

<sup>82</sup> Bob Jessop, *State Theory: Putting Capitalist States in Their Place*, (Pennsylvania State University Press, State College, 1990), pg. 91 – 93.

Jessop argues that the character of the state is actually one of a social relation, much like how Marx describes the character of capitalism itself. According to Jessop's strategic-relational conception of the state, each particular instance of the development of a state's "institutional ensemble is crucially dependent on the emergence of the concept of the sovereign state," doubly constituted by material and discursive factors.<sup>83</sup> Because of the historical development of the state-ensemble institutions and state discourse as part and parcel of different specific projects and goals then "the state is a strategically selective terrain which can never be neutral among all social forces and political projects; but any bias is always tendential and can be undermined or reinforced by appropriate strategies."<sup>84</sup> These interests, projects, or goals, however, can not be equally represented by the state because as one group manages to control this apparatus others are immediately excluded from it. As a social relation that is subject to the ever-present possibility of a change of goal or project as well as the ongoing potential for radical and possibly violent shifts in the dominant group controlling the state apparatus, the abstract form of the state itself must be resilient. In order to withstand the repetitious barrage of shifting projects it must be able to streamline these projects and interests into ones that more or less maintain the double constitutive structure of the institutional ensemble and discursive conception of the state. As such the controlling forces behind the state must use it to forward the development of resilient subjects that will withstand the changes on the state's terrain without questioning the underlying political arrangements that allow for particular groups to have such institutionalized power in the first place.

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<sup>83</sup> Jessop, *State Theory*, pg. 349

<sup>84</sup> *Ibid.* pg. 353

The resilience of the state does not stem however from a desire for its continuation completely separate from class interests. Contrary to class deterministic arguments, Marx's own early analysis of the state as nothing more than an 'executive committee' for the controlling class, and some anarchist perspectives, the state is not a blunt instrument of entirely its own desires, but a subtle one conditioned by the historical control of certain class, individual, community, and longstanding institutional and bureaucratic interests as well as by historical material flows which have constituted the above interests.<sup>85</sup> The state is less what it is, and more what it does as a source of domination. Historically conditioned by these forces, the state gains momentum in a direction that favours the interests of the class(es) that have tended to be able to utilize its instruments and control its institutional ensemble. State resilience is therefore not merely a characteristic of a relatively flexible institutional apparatus that maintains itself through shifts in controlling interests, but it is a vector along which the state travels. Momentum pushes the state towards particular arrangements of domination. It solidifies particular class interests but is always at risk of changing and as such, the dominant classes and interests capable of utilizing the state apparatus must engage in the creation of resilient subjects in order to offset at least some of the growing potential for a radical shift in who can control the mechanisms of the state.

### Colonialism

The final member of our triumvirate is the force of colonialism. The particular brand of colonialism in British Columbia has ongoing characteristics reminiscent of both

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<sup>85</sup> Karl Marx, "The Manifesto of the Communist Party" in Marx Engels Selected Works Volume One, (Mosow, Progress Publishers, 1969 [1848]) pg. 15; Saul Newman, "Anarchism, Marxism, and the Bonapartist State," *Anarchist Studies*, Vol. 12, no. 1, (2004), pg. 5

the high stage of European imperialism such as the continued dispossession of Indigenous bodies from land and the remnants of blood quantum standards for Indigeneity, as well as of the deterritorialized ‘empire’ of Michael Hardt and Antonio Negri.<sup>86</sup> Hardt and Negri argue that contemporary imperialism and colonialism, along with power previously concentrated in the instruments of a sovereign state have been dispersed into widespread and diverse forms of state and private capital actors. For Hardt and Negri, imperialism as practiced in the 18<sup>th</sup> through 20<sup>th</sup> centuries limited the ability for global capitalism to create a truly global market.<sup>87</sup> This shows that the forms that colonialism takes have changed in order to accommodate and encourage further capitalist integration at a global level. Their understanding of ‘empire’ and political power however does not accurately account for the eminently grounded-in-territory character of anti-colonial, anti-capitalist, and anti-state Indigenous lead struggles in Canada. Thus, according to Adam Barker, Canada’s colonial situation is a hybrid “between old imperial conquest of land and resources and new imperial conquest of social reality.”<sup>88</sup> Consequently, this is a colonialism where the state and capitalism in Canada simultaneously aim to dispossess the land as a natural resource from Indigenous peoples while also dispersing power in a way that justifies Canada the settler state as the dominant society and disqualifies other ways of being, governing, and relating to ones environment from being legitimate.

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<sup>86</sup> Adam Barker, “The Contemporary Reality of Canadian Imperialism: Settler Colonialism and the Hybrid Colonial State,” *American Indian Quarterly*, Vol. 33, no. 3, (2009), pg. 337. It should also be noted that colonial anti-Indigenous racism does not stand alone in Canada. An imperially derived white supremacy also racializes settler subjects in a variety of ways and to different advantages and disadvantages, but a full fleshed out discussion of this is beyond the scope of this project.

<sup>87</sup> Michael Hardt and Antonio Negri, *Empire*, (London, Cambridge University Press, 2000) pg. 332 – 333

<sup>88</sup> Barker, “Canadian Imperialism,” pg. 336

Hybrid as it is, this conjuncture allows for the forces of colonialism in Canada to contribute to constructing a uniquely colonially informed resilient subject. Through a mixture of the physical colonialization of land and the domination of social reality, the forces of colonialism in Canada produce a strong and often violent form of Bookchin's understanding of 'environmental' thinking. Colonialism then incorporates the very bodies of Indigenous peoples into its conception of what is 'natural.' As Taiaiake Alfred and Jeff Corntassel argue, to be Indigenous is to occupy an "oppositional, place-based existence" in conflict with the colonizing group.<sup>89</sup> For Alfred and Corntassel this position is one that is created through its relation with those in the settler position and shows that Indigenous peoples are made as a 'natural' part of the colonized land. It is in part through this relationship that colonialism is resilient, makes resilience, and necessitates resilient subjects. Colonialism can shift and adapt just as well as capitalism can to changing contexts and, like the state-form, is a relation that can be used for different interests that converge in the general goals of the colonial project. A part of what assists colonialism in doing this is the creation of the resilient subject amongst predominantly white settlers through the off setting of the impacts of ecological crises on to Indigenous communities. This allows for the colonial state to facilitating the crises themselves, through settler workers, while presenting itself as sustainably managing resources or protecting the environment. As will be more fully examined in the following chapter, the collapse of wild Pacific salmon stocks on the coast of Vancouver Island has predominantly affected Indigenous communities while the Atlantic salmon

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<sup>89</sup> Taiaiake Alfred and Jeff Corntassel, "Being Indigenous: Resurgence Against Contemporary Colonialism," *Government and Opposition*, Vol. 40, no. 4, (2005), pg. 597

farms in part responsible have benefited (to the extent they can be said to benefit in the short term) predominantly white settlers in those areas. Attempting to erase the histories of Indigenous communities tied to salmon by creating a 'rational' management system for fish farming masks the colonial origins and imperatives of fish farming. Atlantic salmon farms cease to be the apparent cause of ecological crises, but rather are presented as the solution to save the fisheries sector through the erasure of Indigenous relationships to salmon. The resilient subject is prepared to defend the continuation of ecological degradation and colonial exploitation and domination in the name of stopping those very things.

## Conclusion

This chapter has argued that the concept of resilience has, over time, drifted from the field of systems ecology into the social sciences, in particular into political theory that deals with nature-society relations, capitalism, the state, and colonialism. The resilient subject has become one of the primary defining subject positions that people, predominantly white settlers in the places I am focusing on, can hold in relation to capitalism, the state, and colonialism. Resilience has been presented as a vital characteristic of individuals and communities today as it helps them to adapt and recover from ongoing and increasing challenges and crises such as natural disasters. Underneath this innocuous appearance, resilience thinking and resilience practices actually reinforce the very structures that cause crises in the first place and make people vulnerable to them. In order to be resilient, one must accept that they are vulnerable. From here resilience thinking encourages self responsibility and commodified forms of protection that operate

at the expense of community and even long-term individual safety or sustainability. Conditioning the ways in which, and the extent to which, resilience thinking seeps into individuals and communities are the underlying structures of capitalism, the state, and colonialism. Each structure reinforces the others and exudes a particular need for resilient subjects lest their dominance be more readily challenged. These structures also are integral in facilitating a separation in the kind of resilience is perceived as necessary. They are responsible for a social realm that is so immediate in its consequences for subjects that it obfuscates the eminently socio-ecological relations that actually exist in the world. Severing the ecological from the social, these structures rely on the resilience of populations to survive in the ever changing, chaotic series of social relations they structure.

Resilience facilitates a ‘bounce back’ to the very social relations that perpetuate the apparent need for resilience in the first place. When salmon stocks are failing rather than addressing one of the root causes in virus ridden fish farms, resilience would have us double down on farms so as to ensure the continuation of the fisheries industry over responsible relations with the socio-ecological system communities are a part of. Thus, resilience thinking can be conceived of as integral to processes of maintenance of particular capitalist nature-society relations. The following chapter will address this connection directly and explore how resilience is made through the development of particular socio-ecological material relations and in turn feeds back into perpetuating these relations. It will also investigate how resilience influences nature-society relations and is vital in instituting, perpetuating, and widening the general metabolic rift between

nature and society and creating particular rifts within certain natures and certain segments of society.

## Chapter 2

*“If you decide that you’re gonna eat salmon... you’ve got to know how to keep the cycle going.” – Black Spruce Bog<sup>90</sup>*

We have seen resilience as both a feature of complex socio-ecological systems, as a characteristic that is encouraged and imparted in individuals living in these contexts, and as a subject position that individuals can fill in relation to the structures that condition their socio-ecological situation. The idea is called on when ecological crises bring their effects down upon communities as a way to weather the shocks and challenges, and to ‘bounce back’ to the state of affairs as they were before the crisis hit. On the surface this seems like a perfectly sensible way to think and act, but what happens when the very crises we are tasked with ‘bouncing back’ from are caused by our previous state of affairs? How long can this pattern be kept up without disastrous consequences?

Of paramount importance to these troubling questions is knowing whether or not the resilience that is developed is itself a part of the cause of these crises and if so, how, why, and in what ways. If this is indeed the case then there must be some kind of material force that is generated or put in motion by the supremacy of resilience thinking. The kind of resilience we may see in any given socio-ecological system or as a subject position depends entirely on the form of nature-society relations it operates within and through. In our conjuncture nature-society relations are, in large part, dramatically conditioned by the triumvirate of ecological degradation: the expansive behemoth of

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<sup>90</sup> Black Spruce Bog, “You Could Be A Salmon,” track 2 on *The Hatchery Session*, self-release, 2016

global capitalism, the ubiquity of the state form as a mode of organization of power, and the legacy and ongoing project of colonialism (where I am concerned, settler colonialism in particular). These factors underpin the ways in which resilience is generated and spread through the manipulation of nature-society relations in ways that structurally favour those already in positions of relative power within these systems. In order to fully see how resilience can be and is used to facilitate complacency in the face of ecological crises, we must uncover where resilience as a subjectivity and as a necessary characteristic of both socio-ecological systems and individuals develops and how it is materially made necessary.

In the Capitalocene, where the forces of capitalism and its allies, the state and colonialism, facilitate ecological destruction, nature-society relations are torn asunder. Society and nature are deemed fully separate spheres. Following Murray Bookchin, the natural world is popularly seen in an “environmental” manner, as a stockpile of resources that can be exploited for society’s use.<sup>91</sup> The alienation of labour from its interrelation with environment that accompanies a metabolic rift between nature and society under the dominance of the capitalist mode of production cordons off ‘nature’ in the abstract. This gives credence to the view of nature that Bookchin criticizes. Following the material impacts of metabolic rifts comes a severance of socio-ecological resilience giving primacy to the social resilience of atomized subjects at the expense of their surrounding ecosystem. This specific form of resilience is there to prop up the forces that caused this rupture and to help spread them temporally and geographically by actively working to diminish the capacity for resistance.

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<sup>91</sup> Bookchin, *The Ecology of Freedom*, pg. 85 – 86

In this chapter I will argue that resilience thinking and, because of this the resilient subject, have their origins tied up in a complex relationship with a metabolic rift between nature and society that capitalism, the state, and colonialism are all a part of opening up. Resilience thinking and the resilient subject are then also a part of the widening of a rift, and the opening of new kinds of rifts in different geographic and temporal locations as previous rifts close or ‘shift.’ The plurality of rifts is an essential point here. Ecological disturbances and crises will have varying degrees of geographic, temporal, and material effects depending on what the kind of crisis occurs. This in turn denotes a plurality of ways communities and individuals will be affected by and respond to them. The rift that erupts from fossil fuel use is very different than the rift that forms through the disruption of salmon migration routes. I will also argue that a metabolic rift itself is not so simple as to represent a clear-cut distinction between nature and society; rather, it must be understood within a complex and interconnected socio-ecological whole that encompasses human and non-human subjects which may or may not be resilient or act in resilient ways. Likewise, it must be understood as a process that cleaves a rift between the social and ecological aspects of socio-ecological resilience in order to perpetuate capitalist economic relations thereby widening the metabolic rifts that made this cleavage possible.

I will begin this chapter with an overview of Marx’s metabolic rift thesis and the expansions on this thesis by John Bellamy Foster, Jason Moore, and other ecological Marxists and theorists. The work of Foster and Moore is integral to understanding how the metabolic rift has developed historically, geographically, in the context of colonialism, and how it has vital biopolitical, racialized, and gendered characteristics to it

in our contemporary conjuncture. Following this discussion, I will highlight my own position on the metabolic rift and attempt to bridge some of the conflict between the Foster camp and the Moore camp, while showing that neither collection of theorists fully grasps the integral role that the development of the resilient subject has played the development of these rifts. I will then briefly trace the history of Atlantic salmon farming on the coast of so-called British Columbia, with particular attention paid to the farming in the (so-called) Broughton Archipelago. This history and the contemporary struggle against Atlantic salmon farming on the Pacific coast are a key example that highlights the interplay between the state, colonialism, and capitalism as forces that bring about ecological crises and of resilience as a factor in the maintenance of such a crisis. The metabolic rift that appears in the crises of the wild Pacific salmon ecosystem is a particularly good example of the power of resilience thinking to maintain socio-ecological relations that have cascading effects throughout a socio-ecosystem while asserting them as the very solution to these problems.

### Marx's Metabolic Rift

Contemporary eco-socialist thought, leftist environmental activism, and a burgeoning literature of ecological science are heavily indebted to two fundamental concepts: socio-ecological metabolism, and the metabolic rift. In its simplest iteration, the socio-ecological metabolism can be defined as the relationships through which humans interact with their natural environment and transform it through labour. This involves an input of resources into human society, transformations of some kind, and an output of waste products. In this regard, Marx looked initially at the fertility of soil for

agricultural production.<sup>92</sup> A well functioning agricultural socio-ecological metabolism is one where humans grow food by interacting with their environment, transform the environment into food products, and the waste product is returned to the soil through readily absorbed types and rates of fertilization. Prior to the dominance of the capitalist mode of production, the production and consumption of agricultural products was predominantly local, allowing for a healthy sustainability in production. Food and livestock raised in an area would be, for the most part, consumed in that area, and the waste products returned to the land as fertilizer. Export of surplus production happened, of course, but not at the expense of local labour or local soils, nor at the scale at which it occurs under capitalism. Socio-ecological metabolism then represents the balanced functioning of labour on land and balanced use of the surrounding natural environment as a resource.

A rift is an analytical means of articulating the interruption of this balanced metabolism. For Marx, this started through the process of primitive accumulation and the development of industrial capitalism. The process of primitive accumulation is the accumulation of wealth and material in the hands of dominant classes through plunder and murder, before capitalism achieves social primacy as mode of production and accumulation.<sup>93</sup> This process disrupted two relationships, one social and one material/physical. The social relationship disrupted was the relationship of labour to land. As capitalism developed, labour was continually alienated from the land and (in the

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<sup>92</sup> Karl Marx, *Capital: A Critique of Political Economy Volume 3*, trans. David Fernbach, (London, Penguin Books, 1991 [1894]), pg. 949 – 950

<sup>93</sup> Karl Marx, *Capital: A Critique of Political Economy Volume 1*, trans. Ben Fowkes, (London, Penguin Books, 1990 [1867]) pg. 874

European and other cases) heavily relocated to urban centers for work in industrial factories for the purposes of commodity production. This is a part of the first capitalist agricultural revolution, which saw the enclosure of common lands into private property, the development of new agricultural techniques requiring less physical labour, and the dispossession of the agricultural labourers from that land. The second relationship disrupted was the balanced physical and material metabolic relationship between humans and the land on which they worked. As labour concentrated in urban centers for the purposes of commodity production, so too did the products of ongoing agricultural production. Now spatially separate from the land on which agricultural goods were produced, the waste product that previously went to fertilizing the land and maintaining a balanced metabolism no longer did so. In outlining this process, Marx refers regularly to German agricultural chemist Justus von Liebig to show how the capitalist mode of production has continually stripped the soil of its fertility as a consequence of this disruption.

It is worth quoting at length Marx's own explanation of the rift that appears in socio-ecological metabolism through the capitalist mode of production.

Capitalist production collects the population together in great centres, and causes the urban population to achieve an ever-growing preponderance. This has two results. On the one hand it concentrates the historical motive force of society; on the other hand, it disturbs the metabolic interaction between man and the earth, i.e. it prevents the return to the soil of its constituent elements consumed by man in the form of food and clothing; hence it hinders the operation of the eternal natural condition for the lasting fertility of the soil. Thus it destroys at the same time the physical health of the urban worker, and the intellectual life of the rural worker. But by destroying the circumstances surrounding that metabolism, which originated in a merely natural and spontaneous fashion, it compels its systematic restoration as a regulative law of social production, and in a form adequate to the full development of the human race...Moreover, all progress in capitalist agriculture is a progress in the art, not only of

robbing the worker, but of robbing the soil; all progress in increasing the fertility of the soil for a given time is a progress toward ruining the more long-lasting sources of that fertility...Capitalist production, therefore, only develops the techniques and the degree of combination of the social process of production by simultaneously undermining the original sources of all wealth – the soil and the worker.<sup>94</sup>

As Marx argues, it is the capitalist mode of production itself that facilitates the opening and widening of a rift between the consumption of agricultural products, and the production and reproduction of those products, together with the natural conditions necessary for them. This is not limited to agriculture and could be analyzed in mines, fossil fuel extraction, or other forms of resource extraction and production, however, and rifts can open wherever the natural metabolism is disrupted by the capitalist mode of production. For Marx the chief contradiction here is the contradiction between the town and the country, where the wealth extracted from labour and soil is consumed versus where it is produced and ought to be reproduced through a balanced natural metabolism. Expanding upon this theme in volume three of *Capital*, Marx argues that

large landed property reduces the agricultural population to an ever decreasing minimum and confronts it with an ever-growing industrial population crammed together in large towns; in this way it produces conditions that provoke an irreparable rift in the interdependent process of social metabolism, a metabolism prescribed by the natural laws of life itself. The result of this is a squandering of the vitality of the soil, which is carried by trade far beyond the bounds of a single country.<sup>95</sup>

Thus, for Marx a rationally managed common agriculture would free individuals not only from their alienation from the fruits of their labour, but from their alienation from the land itself. This then is what John Bellamy Foster highlights in pointing out that for Marx it was the alienation of the worker from the land that was integral to the process of

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<sup>94</sup> Karl Marx, *Capital Vol. 1*, pg. 637 – 638

<sup>95</sup> Karl Marx, *Capital Vol. 3*, pg. 949 – 950

early capitalist development, so much so that he conceived of it as central to the process of primitive accumulation.<sup>96</sup>

Foster argues that Marx's conceptual framework of the metabolism between society and nature allowed him to connect "the analysis of the extraction of surplus product from the direct producer; the related theory of capitalist ground rent; and the Malthusian theory of population."<sup>97</sup> Through the metabolic framework each of these criticisms is intimately tied to each other. The extraction of surplus product from the direct producer is, according to Foster, seen in capitalism's inability to operate in a rationally 'sustainable' manner. Capitalism, completely oriented around maximum extraction of profit, cannot comprehend the necessity of certain natural cycles not being exhausted and being lived with instead in a way that allows for their natural regeneration.<sup>98</sup> James O'Conner also addresses this in his discussion of the first and second contradictions of capitalism. For O'Conner, the first contradiction of capitalism relates to the extraction of surplus value from waged labour, expressing the drive for capitalism to exploit as much as possible as fast as possible forcing massive accumulation of wealth on the one hand, and massive human misery and dispossession on the other.<sup>99</sup> The second contradiction is that as capitalism fulfills the first, and as wealth and power concentrate at one pole, waste and the degradation of the environment concentrate at another.<sup>100</sup> Foster argues that Marx's understanding of ground rent stemmed from James

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<sup>96</sup> Foster, *Marx's Ecology*, pg. 170

<sup>97</sup> Ibid. pg. 141

<sup>98</sup> Ibid. pg. 164

<sup>99</sup> James O'Conner, "On the two contradictions of capitalism," *Capitalism, Nature, Socialism*, Vol.2, no. 3, (1991)

<sup>100</sup> O'Conner, "Two contradictions,"

Anderson's theories of rent in agriculture based on the relative fertility of soil. For Anderson and Marx, soil fertility and therefore the rent charged for its use must be historicized.<sup>101</sup> In this view, the rent is seen to be a part of capitalist agriculture's relations to the soil, charged based on the relative fertility of the soil, not on its natural fertility. The extraction of higher levels of rent was not based on the given condition, but on its relationship to the ability of the least fertile soil to recuperate the costs of production.<sup>102</sup> Finally, Marx's criticism of Malthusian population theories unites these two previous criticisms within the metabolism framework. Malthus's conception of overpopulation fully ignored the social characteristics of human reproduction and as such ignored that overpopulation in capitalism was predicated on the necessity of surplus population for capitalism.<sup>103</sup>

Tied together under the metabolism framework, we see that it is the disruption of the natural metabolism between nature and society that allows for the extraction of surplus product from the land, and therefore from labour by dispossessing it of its relationship to land. This dispossessed labour, now free from ties to the soil, must move to urban centers in order to sell its labour power for industrial capitalism. The overpopulation that Malthus saw is then revealed to be a part of the disrupted metabolism. Workers in urban centers must consume to reproduce their labour power, but the disrupted metabolism does not allow for the waste product to return to the soil that produced their food making it appear as though the population level is at fault for the loss of soil fertility. Here, as Foster argues, is the most concrete manifestation of Marx's

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<sup>101</sup> Foster, *Marx's Ecology*, pg. 146

<sup>102</sup> Ibid. pg. 144

<sup>103</sup> Ibid. pg. 143

conception of alienation of labour from land, “it is the real historic process that creates a *social-material separation* between the inorganic conditions of human existence and the active existence of human beings, a separation that is fully realized only within bourgeois society. The philosophy of nature, which in its Hegelian form turns on the relation between organic and inorganic, was thus transformed by Marx into a question of human alienation and freedom as historical, material, and social products.”<sup>104</sup>

For Foster, socio-ecological metabolism “constitutes the basis on which life is sustained and growth and reproduction become possible.”<sup>105</sup> Capitalism, he argues following Marx, through the creation of rifts in socio-ecological metabolism by its drive for infinite accumulation, is necessarily unsustainable.<sup>106</sup> While Foster has focussed primarily on Marx’s own analysis of capitalist agriculture and capitalist industrial production of commodities, together with the consequent guano trade in 19<sup>th</sup> century Peru, as forming the core of the metabolic rift, scholars Brett Clark and Richard York have argued that the metabolic rift can be generalized to other ecological crises.<sup>107</sup> Clark and York argue that the metabolic rift describes more generally “an ecological rupture in the metabolism of a system. The natural processes and cycles (such as the soil nutrient cycle) are interrupted... [entailing] the division of nature, which is tied to the division of

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<sup>104</sup> John Bellamy Foster and Paul Burkett, “The Dialectic of Organic/Inorganic Relations: Marx and the Hegelian Philosophy of Nature,” *Organization and Environment*, Vol 13, no. 4, (2000), pg. 417

<sup>105</sup> John Bellamy Foster, *The Ecological Revolution*, (New York, Monthly Review Press, 2009), pg. 180

<sup>106</sup> Foster, *The Ecological Revolution*, pg. 183

<sup>107</sup> For coverage of the guano and nitrate trade in Peru by imperial powers in the 19<sup>th</sup> century and its facilitation of a metabolic rift see Brett Clark and John Bellamy Foster, “Ecological Imperialism and the Global Metabolic Rift: Unequal Exchange and the Guano/Nitrates Trade,” *International Journal of Comparative Sociology*, Vol. 50, no. 3 – 4, (2009).

labor, as the world is subdivided to enhance the accumulation of capital.”<sup>108</sup> Clark and York’s formulation of the metabolic rift theory allows them to analyze the ways in which the accumulation of carbon in the atmosphere is the result of a rift instigated by fossil fuel extraction and use under a capitalist mode of production. This general formulation is useful, as is Foster’s work with Clark and York, but it encounters problems when placed in the context of colonialism and when the rift occurs in a wholly biotic part of the natural environment such as salmon habitats rather than the abiotic sections of carbon cycle.<sup>109</sup>

Before addressing the specific situation of the metabolic rift in the colonial context surrounding the ‘resource’ of salmon, I wish to highlight another view of the metabolic rift as put forward by Jason Moore. In addition to arguing for better historicization and centering of geography in understanding metabolic rifts, Moore offers two main criticisms of what he terms the ‘Oregon school’ of metabolic rift theory, the first on what he claims is a dualism inherent in its theory of metabolism, the second on what he terms the pivot on which rifts occur. Moore’s early work sought to expand the understanding of the metabolic rift by situating it in a world-historical framework which understood the development of global ecological crises in the 21<sup>st</sup> century to be a part of the trajectory of smaller localized ecological crises during the development of capitalism from the 15<sup>th</sup> century onwards.<sup>110</sup> Following Giovanni Arrighi’s thesis that capitalism

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<sup>108</sup> Brett Clark and Richard York, “Carbon metabolism: Global capitalism, climate change, and the biospheric rift,” *Theory and Society*, Vol. 34, no. 4, (2005), pg. 400

<sup>109</sup> See John Bellamy Foster, Brett Clark, and Richard York, *The Ecological Rift: Capitalism’s War on the Earth*, (New York, Monthly Review Press, 2010), pg. 401 – 406

<sup>110</sup> Jason Moore, “Environmental Crises and the Metabolic Rift in World-Historical Perspective,” *Organization and Environment*, Vol. 13, no. 2, (2000), pg. 129 – 130

develops historically through systemic cycles of accumulation wherein the organization of means of extraction and production, hegemonic world powers, and class structures shift to adapt to the changing socio-ecological conditions, Moore argues that capitalism transforms through agro-ecological transformations (which can be generalized to transformation through environment-making) that restructure the metabolism between town and country in the urban-rural sense, and country and country in the state-state sense.<sup>111</sup>

Moore's historicization of the metabolic rift over the long development of capitalism from the 15<sup>th</sup> century onward has led him to argue that Foster's conception of the rift does not account for the intimacy of human social development and nature. Rather, Moore contends, Foster and scholars like Clark and York have run into a dualism within their conception of the metabolic rift.<sup>112</sup> Moore argues that the main account of the metabolic rift looks at the addition of a social metabolism to a natural metabolism that causes a disruption and separation leading to ecological crises.<sup>113</sup> The natural cycle, in this view, is altered by the socially necessary cycle (necessary, that is, within the context of the capitalist mode of production) that is applied to it in order to exploit the environment as a natural resource and accumulate material wealth for use in capitalist production. Resources are extracted at one pole, used through a system, and waste is produced at another pole, disrupting the natural flow of nutrients, chemicals, biotic material, and so on. In this paradigm there are two cycles: a society of humans without

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<sup>111</sup> Moore, "Environmental Crises and the Metabolic Rift," pg. 138; Jason Moore, *Capitalism in the Web of Life: Ecology and the Accumulation of Capital*, (London, Verso, 2015)

<sup>112</sup> Moore, *Capitalism in the Web of Life*, pg. 78 – 79

<sup>113</sup> Jason Moore, "Metabolic rift or metabolic shift? dialectics, nature, and the world-historical method," *Theory and Society*, Vol. 46, no. 4, (2017), pg. 292

nature, and a nature without society that interact and disturb each other, but are not co-productive, co-determined, and co-dependent.<sup>114</sup> Moore argues that this is flawed both analytically and empirically. For Moore, this version of the metabolic rift theory sees capital-N Nature (signifying human natures like reproductive labour, the work of animals, and the work of natural cycles) and capital-S Society (encompassing the processes of capitalism, etc...) as distinct and separate rather than distinct but internally related.<sup>115</sup> To this end Moore suggests a singular metabolism ought to be utilized rather than the dualistic metabolism that Foster promotes, one that unifies Nature and Society as co-productive instead of consequential to each other.<sup>116</sup>

Moore's perspective is that metabolic rift theory has not gone far enough. As he argues, metabolic rift theory needs to encompass humans and society-in-nature and nature-in-society so to understand how apparently separate social phenomena such as financialization, housing crises, and other accumulation crises are just as ecological as the "earth-moving" of mining and fossil fuel extraction and that "to stop there, and to treat the accumulation of capital and capitalism's remaking of human natures as exogenous, is to miss the greatest promise of the metabolic rift perspective - the transition from environmental histories of [capitalism], to capitalism as environmental history."<sup>117</sup> To this end, Moore's singular metabolism unifies society and nature as co-productive and conditioned in a way that changes its characteristics historically. The advantage of the

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<sup>114</sup> Moore "Metabolic rift or metabolic shift?" pg. 290

<sup>115</sup> Ibid. pg. 287

<sup>116</sup> Jason Moore, "Transcending the metabolic rift: a theory of crises in the capitalist world-ecology," *The Journal of Peasant Studies*, vol. 38, no. 1, (2011) pg. 8 – 10; Moore, *Capitalism in the Web of Life*, pg. 75 – 78

<sup>117</sup> Jason Moore, "Ecology, Capital, and the Nature of Our Times: Accumulation and Crisis in the Capitalist World-Ecology," *Journal of World-Systems Research*, Vol. 17, no. 1, (2011), pg. 116

singular metabolism then, is that it makes the space for an encompassing of the concepts of power, production, capital, and nature among others within what Moore calls the “web of life” and showing how they are all bundled together co-(re)producing nature and society.<sup>118</sup> Moore argues that the singular metabolism (as made up of distinct metabolisms of power, capital, etc...) shows that rather than separation and the creation of a rift, metabolic interactions *shift* over time, that this is grounded in changes in value-relations, and that it is value-relations that show how exactly the interactions of capitalism-in-nature and nature-in-capitalism actually work.<sup>119</sup>

Value in the capitalist mode of production is predicated on the rate of exploitation of labour. The more productivity any individual capitalist can extract from labour, the more value that capitalist can accumulate and therefore (other things being equal) the more wealth in the money form of abstract labour. Moore argues that though “the substance of value in historical capitalism is abstract social labor, understood as necessary labor-time, the relations that make this possible reach beyond the point of commodity production, and into the reproduction of labor-power and the appropriation of extra-human natures.”<sup>120</sup> It is apparent then that the creation of surplus value through the exploitation of wage work and the continual drive to increase the productivity of labour and decrease the costs of labour’s reproduction rest entirely on consistent appropriation of unpaid work of human and extra-human natures.<sup>121</sup> One of Foster’s main mistakes, Moore contends, is that the dualistic framework relies on the assumption that there is no

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<sup>118</sup> Moore, *Capitalism and the Web of Life*, pg. 86

<sup>119</sup> Ibid. pg. 80, 83

<sup>120</sup> Jason Moore, “The Value of Everything? Work, Capital, and Historical Nature in the Capitalist World-Ecology,” *Review (Fernand Braudel Center)*, Vol. 37, no. 3 – 4, (2014), pg. 249

<sup>121</sup> Moore, “The Value of Everything?” pg. 252

feedback mechanism between the two metabolisms meaning that capitalist accumulation as project and process will continue unabated until there is a crashing halt when the biospheric limits are reached and the viability of life, let alone the viability of capitalism falls apart.<sup>122</sup> From this perspective, shifts in value-relations show that, despite the tenacity of capitalism, a feedback between natural cycles and a singular socio-economic metabolism does in fact exist and when natural or political actions challenge the appropriation of the unpaid work of different natures then capitalism will struggle to maintain itself.

Foster of course does not leave these criticisms unaddressed, and rightly so. Foster argues first, that Moore's singular metabolism has the object of erasing the "real nature-society antagonism of the capitalist alienation of nature" and second, that it misinterprets the distinction between social and natural metabolisms as completely separate rather than what they really are: unique and analytically distinct forms, nonetheless unified within a universal socio-ecological metabolism.<sup>123</sup> Foster's latter point is certainly valid as Moore's insistence on the 'Cartesian' dualism of metabolic rift theory is at best worthy of investigation in order to find where multiplicitous kinds of rifts may be excluded from analysis through intense focus on a one-size-fits-all model, but at worst is nothing more than a semantic objection with little to no analytical use. The first criticism, however, confuses Moore's argument. Foster asserts that Moore fully ignores the material realities of biospheric limits on capitalism through his conception that capitalism, society, nature, and the like are bundled together; however, Moore

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<sup>122</sup> Ibid. pg. 84, Foster, *The Ecological Revolution*, pg. 206

<sup>123</sup> John Bellamy Foster, "Marxism in the Anthropocene: Dialectical Rifts on the Left," *International Critical Thought*, Vol. 6, no. 3, (2016), pg. 404

explicitly states that biospheric limits obviously exist in any socio-ecological system.<sup>124</sup> Moore does, however, confusingly contend that these limits should not be fetishized: we should not attribute to them power over capitalism that it can not surmount. Yet he also argues that shifts in value-relations create feedback mechanisms through the socio-ecological metabolism that will disrupt the functioning of capitalism long before these biospheric limits are reached.<sup>125</sup> Here Foster again misinterprets what Moore is saying. Moore does not deny that biophysical limits exist, nor is he saying that we need not worry about capitalism surpassing any limit. His argument is actually that historically limits have been superseded by capitalism's ability to find a new frontier and that it would be naïve to think of biospheric limits as an absolute limit on capitalism's adaptability, though for those of us without access to immense wealth and the protections it affords its owners in some speculative ecologically apocalyptic future, surpassing these biospheric limits certainly would mean our end.<sup>126</sup> Foster's assertion that in this paradigm "there is no longer an ontology of nature (or an ontology of being); there is only the ontology of the market" misses the point that Moore is trying to make, that a world-ecology perspective decenters a market as much as it decenters the concept of a pristine empty 'Nature', in favour of a more complicated view that shows them as co-developed through intentional, often violent, projects and processes.<sup>127</sup>

Metabolic rift/shift theory has proven itself a delicate path to tread, full of conceptual potholes that can stymie analysis of nature-society relations, concepts of

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<sup>124</sup> Moore, *Capitalism in the Web of Life*, pg. 79 – 80

<sup>125</sup> Ibid. pg. 80 – 81

<sup>126</sup> Moore, *Capitalism in the Web of Life*, pg. 79 – 80.

<sup>127</sup> Foster, "Marxism in the Anthropocene," pg. 405

property, and the role of both the state and forces of colonialism in creating and exacerbating socio-ecological crises. Both Moore and Foster's conceptualizations of the metabolic rift/shift provide useful tools for exploring how socio-ecological crises are made to work and what the effects of them are respectively.

Problematically, however, neither theorist fully demonstrates the causes of a rift or shift, due to their lack of theorization of how and why individuals and communities may *let* them occur. If a *rift* is the separation of land and society through the process of material alienation resulting in unsustainable and destructive outcomes on the environment, then do communities fight back against this, and if so, how? Does something stop them from doing so, and if so, what? And if the *shift* is the changing in value-relations through the appropriation of new frontiers of unpaid work from human and extra-human natures that restructure the ways capitalism organizes nature, how are those appropriations made to seem rational and even necessary?

In this latter regard, Karl Polanyi leads us to expect that any project of privatization, of enclosure, or of dissolving social relations in favour of market relations will provoke an opposing movement to challenge it.<sup>128</sup> If this is so, then there must be a force or forces – depending on the context of changing relations we look at – that contributes to diminishing both feelings that resistance is necessary, and the amount and ferocity of that potential resistance itself. I contend that this force can be the specific social resilience, severed from its socio-ecological whole, and that it is co-produced through the development of socio-ecological metabolisms and the rifts and shifts that appear through them. The following segment of this chapter will sketch the history of

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<sup>128</sup> Polanyi, *The Great Transformation*, pg. 138 – 139

fish farming in the Broughton Archipelago. It will then begin to re-conceptualize the theories of metabolic rift/shift with the concept of socio-ecological resilience by way of the socio-ecological relations of fish farms in the Broughton Archipelago. It will do this by outlining how resilience is a part of the material and symbolic/ideological formation and perpetuation of metabolic rifts and shifts. This will aim to allow us to more robustly understand the ways that metabolic relations appear, function, and are disrupted and changed when they involve living beings in both the ‘natural’ and ‘social’ poles of the relationship.

#### Resilience, Fish Farms, and the Specificity of the Broughton Rift

On December 14<sup>th</sup>, 2018, the government of British Columbia announced that it would be phasing out seventeen different open net Atlantic salmon fish farms in the Broughton Archipelago.<sup>129</sup> This reflected a substantially new policy direction for fish farming under the New Democratic Party premier John Horgan, supported by the BC Green Party. These farms currently sit in the channels throughout the Broughton Archipelago that wild Pacific salmon and other fish (like Steelhead trout) use as their primary migratory routes in the area. Fish farm operations have been running in the Broughton Archipelago since the 1980s, and have been contentious since then. That has been especially true regarding the relations between fish farm operators, in this case Marine Harvest Canada and Cermaq Canada, two Canadian operations of the worlds largest multinational fish farming companies, and those engaged in traditional

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<sup>129</sup> Megan Thomas, “17 fish farms could all be phased out under new agreement between B.C. government, First Nations,” *CBC News*, December 14, 2018, URL: <https://www.cbc.ca/news/canada/british-columbia/bc-fish-farms-broughton-archipelago-1.4946570> (Date accessed: December 27, 2018)

commercial fisheries work.<sup>130</sup> In addition to the phase-out plan for the seventeen fish farms on major salmon migration routes by 2023, the agreement that the provincial government reached on December 14<sup>th</sup> claims to ensure that future fish farm plans will have Indigenous lead inspections and monitoring, and that there will be greater consultation between the province, companies, and Indigenous groups. Despite the phase-out, Marine Harvest and Cermaq are allowed to continue to negotiate continued operations with Indigenous communities in the area and there is uncertainty that all seventeen fish farms will actually be shut down, regardless of consultation.<sup>131</sup>

Recent years have seen dramatic protest and demonstrations of water, land, and salmon protection from local Indigenous communities and non-Indigenous allies, environmental activist, commercial fishers, and marine tourism workers against the continued operations of fish farms in the archipelago.<sup>132</sup> The long-awaited response from the provincial government has been heard positively and people involved in activism around this issue have for the most part considered this a step in the right direction. Ernest Alfred, hereditary ‘Namgis chief and head organizer of the Swanson Island

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<sup>130</sup> Marine Harvest was formerly known as Mowi and has recently rebranded itself as Mowi once again. I will refer to it as Marine Harvest here because not all of the branding has changed over as of the writing of this and because most of the recent history, media coverage, activism, and policy has made reference to the company as Marine Harvest.

<sup>131</sup> Randy Shore, “First Nations fish farm deal sets the table for aquaculture expansion,” *Vancouver Sun*, December 14, 2018, URL: <https://vancouversun.com/news/local-news/broughton-area-first-nations-reach-deal-with-b-c-government-on-fish-farms> (date accessed February 24, 2018)

<sup>132</sup> See for example Brennan Clarke, “Protestors bring anti-fish farm message to Victoria,” *The Globe and Mail*, May 8, 2010, URL: <https://www.theglobeandmail.com/news/british-columbia/protesters-bring-anti-fish-farm-message-to-victoria/article1322105/> (date accessed December 27, 2018), Amy Smart, “Fish farms in B.C.: Occupied by protestors,” *Victoria Times Colonist*, December 4, 2017, URL: <https://vancouversun.com/news/local-news/fish-farms-in-bc-occupied-by-protesters> (date accessed December 27, 2018), The Canadian Press, “Indigenous protestors ordered to leave B.C. fish farm,” *The Toronto Star*, May 18, 2018, URL: <https://www.thestar.com/news/canada/2018/05/18/Indigenous-protesters-ordered-to-leave-bc-fish-farm.html> (date accessed December 27, 2018), CBC News, “6 protestors arrested after anti-fish farm demonstrations in Victoria,” *CBC News*, September 5, 2018, URL: <https://www.cbc.ca/news/canada/british-columbia/victoria-orca-chief-protest-1.4811848> (date accessed December 28, 2018).

occupation, as well as independent marine biologist Alexandra Morton have both praised it as a starting point, but have pointed out that it is absolutely not enough to protect wild salmon.<sup>133</sup> In five years time, when seventeen – or at least ten, considering the potential for allowing seven to continue operations past 2023 – of these fish farms are phased out, wild Pacific salmon could be reaching the brink of extinction.<sup>134</sup> Alexandra Morton has expressed this on multiple occasions and again after the release of the phase out plan. The fish farms throughout British Columbia, but in particular those operating in the Broughton Archipelago, are a flashpoint for socio-ecological crisis.

The historical development of fish farms also shows a key point about the embedding of resilience thinking in communities. Resilience itself need not be present in broad discourse as a specific word or goal of particular projects. Resilience is in fact the motivating and mobilizing concept for organizing power. A nebulous definition of resilience is imperative for companies like Marine Harvest so they can use it to justify their actions as resilience building. For this reason, we do not see a substantial number of occurrences of any variation of phrases incorporating resilience. Implicitly, resilience thinking frames the ways Marine Harvest operates. It permeates the very conception of disrupting the socio-ecological relations between communities and salmon and replacing them with market-based commodity-agriculture relations in the name of sustainability. In order to maintain yourselves in this community, so sayeth Marine Harvest, you must

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<sup>133</sup> Andrew Nikiforuk, “Plan to Close Fish Farms on Salmon Migration Routes a ‘Step in the Right Direction,’” *The Tyee*, December 16, 2018, URL: <https://thetyee.ca/News/2018/12/16/Salmon-Farms-to-Close/> (date accessed January 6, 2019)

<sup>134</sup> Nikiforuk, “Plan to Close Fish Farms”

follow the resilient thinking we put forward and deny the ecological consequences of our metabolic restructuring and pretend that these methods save this socio-ecosystem.

### A Brief Socio-Ecological History of Fish Farming in the Broughton Archipelago

Aquaculture has a long history in the Broughton Archipelago, though its contemporary iteration under the capitalist mode of production and through the facilitation of a settler colonial state is quite new. The most prominent form of aquaculture prior to colonization was clam bed management. Kwakwaka'wakw territories are littered with the remains of barrier walls along the bays of islands that protected intertidal zones from rough conditions and upheld ideal conditions for the harvesting of a variety of clams. This practice is thousands of years old and is maintained in traditional knowledge today, despite active attempts by the colonial government to disrupt these relationships.<sup>135</sup> Aquaculture practices like clam farming are not limited to Kwakwaka'wakw territories, nor are they limited to shellfish. Indigenous communities have practiced them throughout so-called British Columbia, including in W̱SÁNEĆ territories near the University of Victoria. Beyond shellfish, salmon are the most important food source in the Broughton Archipelago, and are intimately tied to the socio-ecological and cultural lives of the Indigenous communities there. After initial contact and colonization in Kwakwaka'wakw territories, colonial salmon fishing and farming developed in a very different direction.

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<sup>135</sup> Douglas Deur et al, "Kwakwaka'wakw 'Clam Gardens' – Motive and Agency in Traditional Northwest Mariculture," *Human Ecology*, Vol. 43, (2015).

The first salmon farms in Canada started operations on the east coast near Halifax in the 1960s. For this project, I will begin our discussion of salmon fisheries at this date.<sup>136</sup> Over this decade fish farming slowly grew but remained relatively small-scale compared to traditional decentralized and independent fisher communities. Prior to the real advent of fish farming on the west coast, the fisheries industry was undergoing a different transformation that disproportionately affected Indigenous communities. Through the 1960s the governments of Canada and British Columbia aimed to consolidate fishing fleets and standardize and regulate fishing so that fish processing and canning would be more effective and efficient, with a greater capital yield. The Davis Plan, named after Jack Davis, economist and Federal Minister of Fisheries and Forests, began implementation in 1968. The Plan's aim, claimed Davis, was to limit the number of vessels used in commercial fishing in order to increase the earning power of remaining fishers.<sup>137</sup> In four phases, the Davis plan would aim to freeze the size of the commercial fishing fleet by implementing a licencing system.<sup>138</sup> While this initially succeeded in limiting fleet size, its end result was a consolidation of commercial fishing boats in the

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<sup>136</sup> The purview of this project remains in this period of fisheries history. However, it must be noted that fisheries policies prior to the 1960s rested on explicitly white supremacist and colonial practices that dispossessed substantial numbers of fishing vessels and rights to fisheries from Japanese-Canadians in order to consolidate power in the hands of white fishermen. This legacy threads its way throughout fisheries policy decisions to this day, specifically in the ways that the Davis Plan aimed to consolidate the fleets without addressing the needs of particular communities or looking to understand who may be more adversely affected and lose out on their livelihoods from these moves.

<sup>137</sup> Douglas M. Swenerton, *A History of Pacific Fisheries Policy*, (Program Planning and Economics Branch of the Department of Fisheries and Oceans, Pacific Region, 1993) pg. 52

<sup>138</sup> It should be noted that an additional licence to the two discussed in this section existed. The 'N' licence was specifically put in place to be used by the Northern Native Fishing Corporation (NNFC) for sale to individual Indigenous fishers. In order to do this however, the NNFC has to relinquish its 'A' licences. Additionally, it should be noted that the Mifflin Plan of the 1990s allowed for licences to be 'stacked' which allowed individual 'A' licenced boats to use multiple different kinds of gear and fish in different regions instead of operators having to rely on multiple boats with different licences conditions. See Privy Council Office, Canada, "Policy and Practice Report Commercial Salmon Fishing: Licensing, Allocation, and Related Issues" (Government of Canada, Ottawa, 2010), pg. 7

hands of fewer and fewer processing companies and limiting the ability of independent fishers from breaking into the fisheries, in particular new fishers from Indigenous communities which had been left out of consultation processes for this plan. The licencing system was broken into two types, 'A' and 'B'. The 'A' license was permanent and aimed at vessels with large capacity, while the 'B' licence was to be phased out and aimed at those with less capacity. Once the latter licences were phased out, those fishers would not be able to fish for salmon commercially, and so they could enter phase two of the David plan, a buy back. The government would offer to buy back licences and vessels so as to reduce the overall fleet size and eliminate the 'B' licence fleet entirely. The end effect of this disproportionately affected Indigenous communities, but also hit rural and northern fishing communities hard in general. Because of the size of vessels and funds that rural, independent fishers had, maintaining licences that were skyrocketing in value became incredibly difficult.<sup>139</sup> Accordingly, the licence and buy-back systems of the Davis plan succeeded in concentrating the power of fisheries and the material means of production in the hands of a few, urban-based fishing operations and of those who were lucky enough to have the capacity to maintain larger vessels already.<sup>140</sup> This left rural fishers and Indigenous communities out to dry, with little capacity to enter into the fisheries under the new regulations; it also siphoned power towards large fish processing companies who now had the ability to influence the fleet size and supply.<sup>141</sup>

The third and fourth phases of the Davis Plan implemented new regulations on safety, gear, vessel standards, and product standards, while creating future plans for the

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<sup>139</sup> Swenerton, *A History of Pacific Fisheries Policy*, pg. 53

<sup>140</sup> Ibid. pg. 53

<sup>141</sup> Ibid. pg. 54

development of the fisheries.<sup>142</sup> Through the Davis Plan, salmonid fish farms began to show up throughout coastal British Columbia. The first fish farm on the British Columbia coast was installed in 1971 by lumber giant Crown Zellerbach; this was likely to provide fish to its own pulp operations at Ocean Falls on the north coast near Bella Coola.<sup>143</sup> Crown Zellerbach was importing smolts to raise at its farm from an unknown hatchery in the northwest United States, and when the Department of Fisheries and Oceans (DFO) discovered the plan, it ordered Crown Zellerbach to deport the fish back to the United States.<sup>144</sup> Following the DFO intervention, a new licencing system was put into effect, despite calls for patience from marine scientists. The latter argued that there not nearly enough research had been done on the potential effects of fish farming on the BC coast.<sup>145</sup> In 1972 the first commercial fish farm licence was granted for operations in the Sechelt Inlet and farms spread from there.<sup>146</sup> By 1977 the sixth licence in British Columbia was granted to Dan Gillis to construct a fish farm for use by the ‘Namgis First Nation in Alert Bay; however, after two years of experimental operation, project assessors deemed it not to be commercially viable.<sup>147</sup> At the same time, the British Columbia government was searching for way to combat the decline of wild salmon stocks already underway. The reasons for this decline are debated, but the proposed solutions included the British Columbia Salmonid Enhancement Program (SEP). The

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<sup>142</sup> Ibid. pg. 55

<sup>143</sup> Stephen Hume, et al. *A Stain Upon the Sea: West Coast Salmon Farming*, (Harbour Publishing, Madeira Park, 2004), pg. 83

<sup>144</sup> Hume, et al. *A Stain Upon the Sea*, pg. 83.

<sup>145</sup> Ibid. pg. 83

<sup>146</sup> Betty Keller and Rosella Leslie, *Sea-Silver: Inside British Columbia's Salmon-Farming Industry*, (Horsdal and Schubart Publishers, Victoria, 1996), pg. 12

<sup>147</sup> Hume, et al, *A Stain Upon the Sea*, pg. 86

SEP included “both the construction of hatchery facilities as well as a variety of other habitat enhancement projects such as spawning channels, incubation boxes and lake enrichment” in order to encourage the growth of salmon runs.<sup>148</sup> Consequently, however, the concentration of hatcheries and attempted management of wild stocks put wild runs at greater risk. As a Pacific Fisheries Resource Conservation Council review found, “declines in numerous wild-salmon populations, concurrent with increases in production from a few large hatcheries, tend to create a situation in which salmon abundance is attributable to ever-fewer stocks. This places the salmon resource at an increasingly greater risk of random, catastrophic disruption.”<sup>149</sup>

Alexandra Morton recalls that the first fish farms she encountered in the Broughton Archipelago floated by her home in Echo Bay in 1987.<sup>150</sup> At first, the coming farms seemed to promise a beneficial impact on the rural community of fishers and tourism workers. As Morton recounts, “at that time, Echo Bay was a micro-community of only about 100 people, continually threatened with the loss of our school, loss of the post office, loss of the community itself. We are so fragile a group that if one family leaves, we could float away, as all our once-neighbouring communities have done.”<sup>151</sup>

Proponents of the farm hoped that fish farming would bring work to the communities and encourage more people to move to the area, encouraging government services to stay and

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<sup>148</sup> Gunnar Knapp, Cathy Roheim, and James Anderson, *The Great Salmon Run: Competition Between Wild and Farmed Salmon*, (World Wildlife Fund, Washington, 2007), pg. 53

<sup>149</sup> Pacific Fisheries Resource Conservation Council, *Final Report on Consultations for the Wild Salmon Policy Discussion Paper and the Salmonid Enhancement Program*, June, 2000, pg. 2, URL: [https://www.psf.ca/sites/default/files/WildSalmonPolicy\\_2000\\_0\\_Complete.pdf](https://www.psf.ca/sites/default/files/WildSalmonPolicy_2000_0_Complete.pdf)

<sup>150</sup> Alexandra Morton, *Listening to Whales: What the Orcas Have Taught Us*. (New York: Ballantine Books, 2002)

<sup>151</sup> Hume, et al. *A Stain Upon the Sea*, pg. 198

bringing in new ones. The response to the incoming farms from commercial and independent fishers was quick and generally negative, as was the response from the local Indigenous communities. But the British Columbia government did offer to engage with the local communities to find the best places for these farms. Officials from the Federal DFO and the government of British Columbia held open houses and community meetings to find out which areas within the Broughton Archipelago were sensitive ecological areas and which spots were vital for Pacific salmon migration routes, what places whales and other large sea life frequented, where sensitive shellfish beds were, and which areas were of particular important to Indigenous communities as sites of traditional food sources. Whole swathes of the Broughton Archipelago were highlighted in red on maps meaning ‘do not put fish farms here.’ However, as Bob Chamberlain, elected chief of the Kwicksutaineuk Ah-Kwa-Mish First Nation of the Musgamagw-Tsawataineuk peoples, says, “[the British Columbia government] mapped the areas that they said were not good for fish farms, based on tidal flows and the physical attributes of our territory. Those places were consistent with the ones my uncle Peter had identified as sensitive areas. He had engaged with government at the very start of this mapping exercise, saying “don’t put them here or here or here,” in order to respect our traditional food sources. Lo and behold, those were exactly the places where the fish farms were put.”<sup>152</sup> Throughout the 1980s and 1990s fish farms continued to enter into the Broughton Archipelago in exactly the places that local communities had highlighted as no-go zones.

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<sup>152</sup> Bob Chamberlain, “Delay, Deny, and Distract: Musgamagw-Tsawataineuk Experience with the Aquaculture Industry,” *Rachel Carson Center Perspectives*, no. 4, 2012, pg. 30

Ignoring the concerns of the local communities that rely on wild salmon, aquaculture companies and the provincial and federal governments tossed blame back and forth for what they called a mistake. The British Columbia Ministry of Fisheries offered licences, but the DFO approved anchoring rights, and back and forth the buck was passed. Meanwhile, evidence began to accumulate that cascading negative effects were likely developing around the ill-placed fish farms. Alexandra Morton spent her time prior to the arrival of fish farms as a whale biologist studying in particular the language patterns of orca pods in the Broughton Archipelago, how they relate to each other, and how they relate to different areas of the coast as both ecological habitats, and as social places of interaction with other pods. As fish farm infrastructure developed however, she noticed that the whales began to avoid particular locations around salmon farms and soon were nearly disappearing from the archipelago as a whole.<sup>153</sup> Alongside this disappearance came reports from commercial fishers of catching Atlantic salmon with more and more frequency. Local fish farms consistently denied that they had any escapees, but it was revealed that there had in fact been substantial breaches in the pens and thousands of Atlantic salmon had escaped and begun to mix with the wild Pacific salmon population.<sup>154</sup>

Mart Gross writes that it is fruitful to think of the wild Atlantic salmon (*salmo salar*) and the farmed Atlantic salmon as one species with two distinct biologies, almost to the point that the farmed Atlantic salmon perhaps ought to be referred to as *salmo domesticus*. Gross argues that “farmed salmon may eventually become obligate

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<sup>153</sup> Morton, *Listening to Whales*.

<sup>154</sup> Hume, et al. *Stain Upon the Sea*, pg. 210 – 211

parasites, entirely dependent upon humans for survival; already humans shoot their predators, apply medicines to fight their diseases and parasites, provide special foods, and flush the niche with clean water to remove wastes, etc.”<sup>155</sup> As such, though they may not be a distinct species, they should be considered an “exotic” species when they escape the aquaculture niche, even in its own natural habitat and especially in habitats where it is introduced for farming.<sup>156</sup> Exotic species, introduced into ecological niches that are foreign to them, despite having a seemingly low rate of establishment, are almost uniformly responsible for some form of radical disruption of longstanding ecological systems and more often than not bring with them disastrous consequences for local species and dramatically change features of the ecosystem.<sup>157</sup> Morton, refocussing her work from whales to salmon, and specifically farmed salmon, began investigating the appearance of Atlantic salmon in wild catches and through study of stomach contents found that they were ingesting local species, a major hurdle that species must overcome to establish itself in a new habitat.<sup>158</sup> Atlantic salmon from fish farms were escaping and surviving well outside of the aquaculture niche.

Of course, Atlantic salmon do not ‘naturally’ enter into a new environment on the opposite side of the continent from their original habitat. Rather they are in the Broughton Archipelago because the fish farming industry brought them there. Atlantic

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<sup>155</sup> Mart Gross, “One species with two biologies: Atlantic salmon (*Salmo salar*) in the wild and in aquaculture.” *Canadian Journal of Fisheries and Aquatic Sciences*, Vol. 55, no. 1, (1998), pg. 133

<sup>156</sup> Gross, “One species with two biologies,” pg. 133

<sup>157</sup> For example, see Heather Charles and Jeffery S. Dukes, “Impacts of Invasive Species on Ecosystem Services,” in *Biological Invasions*, ed. Wolfgang Nentwig, (Springer, Berlin, 2008); Jeffery S. Dukes and Harold A. Mooney, “Disruption of ecosystem processes in western North America by invasive species,” *Revista Chilena de Historia Natural*, Vol. 77, (2004).

<sup>158</sup> Hume, et al. *Stain Upon the Sea*, pg. 218 – 219

salmon have characteristics that are much easier to handle as a commercial resource. Compared to Pacific salmon they are more docile in smaller spaces: they do not attack each other kept together in pens; they also grow substantially faster, allowing for a quicker turnover at harvest time.<sup>159</sup> Vivally, however, Atlantic salmon are also prone to diseases and parasites that Pacific salmon tend to evade due to longer time spent in freshwater sites as smolts and their long migration routes. These ills include Pacific sea lice and a variety of viruses that swell organs, causes mucus build up in gills, ‘pop’ out eyes, and causes lethargy and reduced immune capacity.<sup>160</sup> Atlantic salmon, having a history of association with these factors, have some limited natural resistance to them that wild Pacific salmon lack because they have not co-evolved with these factors. The interactions between these two species of salmon have facilitated a spread of these diseases and parasites amongst the wild Pacific salmon populations that have drastically harmed the local runs in the Broughton Archipelago and sent socio-ecological shockwaves out from this flashpoint hitting other species within this ecosystem and directly affecting the communities that depend on wild salmon. From this, we see that not only are the introduced salmon themselves causing socio-ecological problems, but the economic relations that come with them are causing their own as well.

The most vocal pusher of the ‘fish farms bring community resilience’ narrative is SeaWest News, a website and social media presence founded in December, 2017, conveniently around the time of the most visible fish farm occupations by predominantly local Indigenous activists, and water and salmon protectors, dedicated to, so it claims,

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<sup>159</sup> Gunnar, Roheim, and Anderson, *The Great Salmon Run*, pg. 67

<sup>160</sup> G. D. Marty, et al. "Piscine reovirus in wild and farmed salmonids in British Columbia, Canada: 1974–2013." *Journal of Fish Disease* 38, no. 8 (2015)

“shin[ing] a light on British Columbia’s dynamic seafood industry and its impact locally, nationally, and globally.”<sup>161</sup> SeaWest news has run a wide range of articles supporting aquaculture in the Broughton Archipelago, and specifically praising, and arguably advertising, the work of Marine Harvest all while parroting the same talking points that astroturf pro-resource groups like ResourceWorks use; foreign funded environmental non-governmental organization conspiracies, fake science and disinformation, etc... This narrative is used to bolster the idea that fish farms and aquaculture are a purely beneficial industry for the communities of the Broughton Archipelago. For examples, one article claims that fish farms bring benefits to Indigenous communities through providing jobs and agreements for farm construction.<sup>162</sup> This however leaves out any historicization of the issue in the framework of the decline of traditional fisheries and does not address why Indigenous communities may feel compelled to sign on rather than feel enthusiastic about doing so. Another claims that it is through aquaculture that the formerly “transient” populations of rural British Columbia and the north of Vancouver Island were able to settle down and build communities, again ignoring the historical presence of communities centered on non-aquaculture fisheries, logging, or otherwise.<sup>163</sup> Much of their writing pivots around the idea that aquaculture is a necessary industry in order to protect communities with a fisheries history from the decline in wild salmon runs, which it refuses to connect to the diseases that are spread through open net fish farms. SeaWest

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<sup>161</sup> “About Us,” *SeaWest News*, n.d. URL: <https://www.seawestnews.com/about-us/> (date accessed March 8, 2019)

<sup>162</sup> Fabian Dawson, “First Nations communities benefit from aquaculture,” *SeaWest News*, n.d. URL: <https://www.seawestnews.com/first-nations-communities-benefit-from-aquaculture/> (date accessed March 8, 2019)

<sup>163</sup> Samantha McLeod, “Stable coastal communities because of salmon farming,” *SeaWest News*, n.d. URL: <https://www.seawestnews.com/stable-coastal-communities-because-of-salmon-farming/> (date accessed March 8, 2019)

News has demonstrated that it only engages with certain members of Indigenous communities that already support aquaculture (notably the individuals quoted most often are owners and operators of fish farms themselves) and that it refuses to accept scientific evidence showing viruses are indeed spreading from pens, instead favouring sources from the federal Department of Fisheries and Oceans which has a history of gagging marine scientists on this issue.<sup>164</sup>

SeaWest News provides a narrative that favours the aquaculture companies operating in the area, but direct evidence of business connections between the website and these companies or aquaculture lobbying organizations is not available.<sup>165</sup> Despite this, it shows how the word resilience itself does not need to be used in discourse in order to perpetuate resilience thinking. Resilience thinking here is present as a motivating force for the concretization of particular power arrangements into the conceptual and material norm. This is most obvious in Fabian Dawson's article on the lack of consensus in the science of fish farms as disease vectors for wild salmon. Here Dawson specifically targets scientists and activists who raise concerns about the diseases threatening wild salmon as foreign funded agents here to destroy the British Columbia aquaculture industry. Implicitly, Dawson is equating the aquaculture industry with the success of local communities, rather than using a healthy socio-ecological system as a metric for

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<sup>164</sup> Fabian Dawson, "Salmon virus study is about activism no science, experts," *SeaWest News*, n.d. URL: <https://www.seawestnews.com/salmon-virus-study-is-about-activism-not-science-experts/> (date accessed March 8, 2019); Fabian Dawson, "When the salmon don't return, they have a name for it," *SeaWest News*, n.d. URL: <https://www.seawestnews.com/when-the-salmon-dont-return-they-have-a-name-for-it/> (date accessed March 8, 2019)

<sup>165</sup> Domain name database searches come up with finding SeaWest News' registrant as a third-party domain service provider. This is unfortunately a dead end as NamesPro, the Vancouver based service provider, does not divulge information on their clients. Despite not finding this information, the scope of SeaWest News' reach is substantial relative to the scale of aquaculture operations in the Boughton Archipelago where it focusses much of its writing. See its social media presence for such information. "Seawestnews." Facebook Page, URL: <https://www.facebook.com/seawestnews/> (date accessed May 22, 2019).

community benefit. Likewise, he neglects repeated, and recently proven, reports that the Department of Fisheries and Oceans and the federal government are both intentionally turning a blind eye to research showing the harmful effects of aquaculture on wild salmon.<sup>166</sup> It is through this equation and intentional obfuscation that resilience thinking is brought out as the ‘reasonable’ position to take. On top of this SeaWest News does not acknowledge any structural factors in the aquaculture industry that may lead to the socio-ecological crises of declining wild salmon and paints opposition to it as trying to damn these communities to poverty.

The developments surrounding fish farms have not gone unopposed however. Led by Indigenous community members from Alert Bay, Kingcome Inlet, and throughout the Broughton Archipelago and surrounding regions, occupations and protest camps have prevented fish farm development, blockaded farm stocking vessels, and taken over empty Marine Harvest buildings to repurpose them for monitoring the farms.<sup>167</sup>

### Resilient Rifts

The socio-ecological relationships between wild Pacific salmon and farmed Atlantic salmon in the Broughton Archipelago highlights a few key problems in the prevailing metabolic rift/shift theories. Foster, alongside Burkett, York and Clark, and to a lesser extent Moore, tend to analyze nature-society relations in relation to what could be

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<sup>166</sup> Ainslie Cruickshank and Wanyee Li, “Scientists are split on whether a virus is killing B.C.’s salmon, but an inside look shows Ottawa chose sides long ago,” *Toronto Star*, April 6, 2019, (date accessed: April 11, 2019), URL: <https://www.thestar.com/vancouver/2019/04/06/is-this-the-cod-collapse-all-over-again-bc-scientists-and-first-nation-fight-dfo-to-save-salmon.html>

<sup>167</sup> Ernest Alfred, a hereditary chief of the ‘Namgis First Nation, has documented much of the actions against Marine Harvest in the Broughton Archipelago on his personal social media pages as well as on the Swanson Occupation Facebook page. “Swanson Occupation,” Facebook Page, URL: <https://www.facebook.com/GETTHEFISHFARMSOUT/> (date accessed March 8, 2019).

termed ‘dead’ nature such as fossil fuels and its effects on the biosphere, though their analysis has origins in agriculture. Alternatively, they limit their discussion of ‘living’ nature before they investigate ways in which the forces of colonialism and the state have bundled certain human natures with extra-human natures in effect denying the humanity of certain groups of people. For example, Foster and Clark breeze by the ways in which Indigenous lives were and remain delegated to the realm of ‘natural’ externalities to capitalist development in, predominantly, extractive industries.<sup>168</sup> Foster’s discussion of the guano extraction industry focusses on the ways in which it transferred the productive power of Peru to the fields of Europe but does not come to terms with the biopolitical base of this transfer, that is the colonization of the Indigenous peoples of what is now Peru, the appropriation of their long-standing relationship with their land and its extra-human natures, and the creation of structures to facilitate the guano trade through violent, colonial means. Conversely, Moore severely understates the important point that biophysical consequences of climate change or other ecological crises are real and do not constitute a neutral historical change; instead, they can uproot, disrupt, destroy, radically changing the trajectory of historical value-relations and their effects on the co-production of society and nature. In the context of understanding the socio-ecological relationships surrounding wild and farmed salmon we must meld our understanding of metabolism, rift, and shift with the concept of resilience. This should happen by taking into account the way by which particular metabolic relationships reproduce resilience of a particular sort. These modes of resilience offer ways for capitalism, the state, and colonialism to

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<sup>168</sup> John Bellamy Foster and Brett Clark, “Ecological Imperialism: The Curse of Capitalism,” *Socialist Register*, Vol. 40, (2004).

maintain themselves in the face of socio-ecological crises. Further, this accounting for metabolic reproduction of resilience should account for how this triumvirate causes those crises. It must also be able to address the specific situations and contradictions that come out of the interactions between salmon socio-ecosystems and the state, colonialism, and the projects and processes of capitalism.

Firstly, we must do away with the fight between either the rift or the shift being the single form of disruption within a metabolic relationship.<sup>169</sup> Rifts -- the disruption through a breakage of ties, through alienation of labour from land, through a separation of social and natural cycles -- lead to the unsustainable consequences we see in the form of the accumulation of carbon in the atmosphere, the spoliation of soil in one area for the benefit of another, or the degradation of the living conditions in any given ecosystem. They therefore lead to the degradation of living conditions in the social setting in that ecosystem. The key example of the rift in the Broughton Archipelago is distinct from the transference of material resources as Foster describes in that the 'resource,' salmon, when wild, are mobile and autonomous creatures. In aquaculture, it is not just the disruption of localized metabolic relations that we must be concerned with, but the disruption of geographically disparate metabolic relations that occur because of the change in the mobility, quality, and quantity of wild salmon runs. Salmon aquaculture in the archipelago focusses on Atlantic salmon for the reasons stated above, not on the native Pacific salmon species. It is through this focus, and consequently the escape of Atlantic salmon into the runs of wild Pacific salmon, that the rift is facilitated. When these

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<sup>169</sup> For shorthand I will however mostly refer to these two using the term rift. It should be understood that they are distinct material transformation but always linked and appearing together.

species meet and conflict, as they are wont to do (Atlantic salmon have been shown to be much more aggressive with other fish species than with each other), runs are put in danger and diseases are spread.<sup>170</sup> Threats to Pacific salmon, however, do not stop with the direct impacts of those salmon: they cascade throughout the socio-ecosystems of coastal and interior British Columbia. Salmon are a keystone species throughout coastal and riparian British Columbia: they feed communities both human and non-human, and they play a vital role in bringing nutrients to riparian ecosystems where their spawning grounds are located. When these runs are disrupted, reduced, diseased, or lost completely, then bears and eagles lose a main portion of their diet, forests lose important sources of nitrogen that come from decaying salmon bodies either left on shorelines or carried deeper into the forests by other animals. Collapsing keystone species leads inexorably to crises in the interconnected network of socio-ecosystems they link to. This rift is therefore more than a mere separation of resources from place and disruption of local cycles; it is an expanding and pulsating tear whose effects travel along the routes of what it has disrupted (in this case the migration routes of wild salmon), instigating new rifts in new places over time.<sup>171</sup>

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<sup>170</sup> Alaska Department of Fish and Game. *Atlantic Salmon Impacts - Alaska Invasive Species*. [http://www.adfg.alaska.gov/index.cfm?adfg=invasiveprofiles.atlanticsalmon\\_impacts](http://www.adfg.alaska.gov/index.cfm?adfg=invasiveprofiles.atlanticsalmon_impacts) (accessed December 29, 2018).

<sup>171</sup> For example bears and eagles rely on salmon making their way up rivers on their runs for food. From their consumption of salmon important nutrients are brought in to the forests away from water sources. See Bethany Lindsay, "Poor salmon run could have 'devastating' effects on B.C. wildlife," *Vancouver Sun*, August 6, 2015, URL <http://www.vancouversun.com/news/metro/poor+salmon+could+have+devastating+effects+wildlife/11268898/story.html> (date accessed May 17, 2019).

Significant research has been done on the position of fish farm sites as dangerous disease and parasite vectors, particularly for *piscine orthoreovirus* (PRV) and sea lice.<sup>172</sup> The complex of rifts that erupt from fish farms circle around the disease vector characteristic of the pens. But it is not only the pens that cause concern. In 2017, photographer Tavish Campbell discovered a visceral image, bloody effluent discharging from farmed salmon processing plants in Campbell River.<sup>173</sup> The dumping proved to contain substantial traces of PRV, and was flowing directly into the migration routes of wild Pacific salmon. These vector sites, pens and processing plants disperse the ecological effects of the rift brought about by fish farming over a large geographic area. The key point here is that rifts have specific geographies and temporalities, but are not necessarily limited to them. Far reaching effects highlight how the disruption of wild salmon cycles is more than just a rift, but a shift too. Following Moore, fish farming relies on an appropriation of the unpaid work of a myriad of ecosystems that salmon venture through in their lifetime which themselves may be threatened by capitalist development.<sup>174</sup> The natural metabolism *shifts* to focus on the disruptive cycle that includes the fish farming industry and in doing so causes the rifts that have more visible consequences. What remains unseen by the focus on a *rift*, however, is that it is all only possible through the appropriation of future potential human work and the maintenance of a specific non-human nature that is actually threatened by the very capitalist relations

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<sup>172</sup> See for example Martin Krkošek, et al. "Declining Wild Salmon Populations in Relation to Parasites from Farm Salmon." *Science* 318, no. 5857 (2007).

<sup>173</sup> Megan Thomas, "Bloody effluent still spewing from B.C. fish processing plant, photographer finds," *CBC News*, December 20, 2018, URL: <https://www.cbc.ca/news/canada/british-columbia/fish-processing-effluent-1.4953322> (date accessed December 28, 2018). Campbell also discovered the same practices at other farmed salmon processing plants in Clayoquot Sound.

<sup>174</sup> Salmon spawning grounds for example are constantly under threat due to riparian erosion from logging, or by the ubiquitous pipeline expansion for oil and gas.

in place. The consequences brought to the riparian spawning grounds of wild salmon threaten the livelihoods of other animals and the health of the forests, thereby damaging the socio-ecological relations present in those places.

The ecological effects of the disruption of wild salmon runs do not stand alone, however; there are massive social consequences to this disruption as well. Since the introduction of salmon aquaculture in Canada there has been a staggering decline in the global commodity prices of both wild and farmed salmon. As John Volpe and Kara Shaw show, the development of economies of scale in regards to fish farms have not only disrupted wild salmon ecology, but the financial viability of commercial salmon fisheries.<sup>175</sup> Marine Harvest and Cermaq claim that new jobs are always being created and that aquaculture creates secondary and supplementary service jobs in rural communities, but the Department of Fisheries and Oceans reports that over the last few years, the number of aquaculture jobs in British Columbia has actually gone down.<sup>176</sup> This decrease has occurred in conjunction with the large scale development of aquaculture in the Broughton Archipelago leading to a relative decrease in jobs compared to the number of farms existing. Similar to what Marx showed regarding the alienation of labour from land and its subsequent reliance on selling its labour power in urban centers, fish farms also rely on alienated labour, but importantly this labour is in part not from the areas in which the farms operate. Marine Harvest and Cermaq both argue that

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<sup>175</sup> John Volpe and Kara Shaw, “Fish Farms and Neoliberalism: Salmon aquaculture in British Columbia” in *Environmental Challenges & Opportunities: Local-Global Perspectives on Canadian Issues*, (Edmond Montgomery, Toronto, 2008) ed. Christopher Gore and Peter Stoett, pg. 136 – 137

<sup>176</sup> As Alexandra Morton showed few jobs go to local communities. Morton, *Listening to Whales*, pg 259. The Canadian Department of Fisheries and Oceans also shows that the growth of aquaculture jobs in recent years is quite limited, while the loss of traditional commercial fish harvesting jobs has been substantial. Fisheries and Oceans Canada. *Employment*. March 1, 2018. <http://www.dfo-mpo.gc.ca/stats/cfs-spc/tab/cfs-spc-tab2-eng.htm>

they provide work for rural communities in British Columbia but reports on the aquaculture industry have shown that a substantial number of those employed on fish farms actually come from larger urban and semi-urban centers like Nanaimo and Campbell River, and even as far as Vancouver.<sup>177</sup> Additionally, Campbell River hosts the Canadian headquarters of both Marine Harvest and Cermaq, distancing administration from the on-water farm operations.<sup>178</sup> Though Marine Harvest proclaims that it supports nearly 7000 jobs in British Columbia, it in effect actually employs roughly 600 people, 461 of which are directly involved in the farming activities as of December 2018.<sup>179</sup> Of this roughly 461 employees, it can be reasoned that the segment of non-local employees today is comparable to the 140 non-local employees as of 2011.<sup>180</sup> This is compounded by the dispersal of the commodity chain along geographic lines.

I myself have spent time on Swanson Island in the Broughton Archipelago, the site of one of the most prominent salmon farms owned by Marine Harvest, for the purposes of monitoring the operations and reporting to local Indigenous lead anti-fish farm movements. There, I encountered just this phenomenon of distance workers. While monitoring radio conversations and tracking boats transporting workers to shifts on fish farms through their satellite-based automatic identification systems (mandatory GPS tracking on commercial vessels), it became apparent that the many workers are indeed

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<sup>177</sup> GSGislason & Associates Ltd, *The Marine Economy & the Regional District of Mt. Waddington in BC*, prepared for Living Oceans Society and Regional District of Mt. Waddington (Vancouver, 2011) pg. 17

<sup>178</sup> GSGislason & Associates Ltd, *The Marine Economy & the Regional District of Mt. Waddington in BC*, pg. 17

<sup>179</sup> Jeremy Dunn, *Marine Harvest Canada – Fast Facts*, (2018), URL: <http://marineharvest.ca/globalassets/canada/news-pdf/2018/mhc-broughton-decision-factsheet-dec14-2018.pdf>

<sup>180</sup> GSGislason & Associates Ltd, *The Marine Economy & the Regional District of Mt. Waddington in BC*, pg. 17 Unfortunately at this point in time data is not available on the current number of local versus non-local employees.

based out of Campbell River, Nanaimo, or the Comox Valley area. Conversation between vessels and fish farms talked about dropping employees off at home in Campbell River or elsewhere, and picking up the next shift in those same places. Local alienated workers may have some opportunity to remain on those waters and work in the aquaculture industry, but a significant portion of labour is brought in from outside these communities. Adding labour itself to the list of production requirements that are shipped in from elsewhere adds to the already alienating character of the workings of fish farms. Not only does a worker become alienated from place through the labour, but large segments of workers are physically alienated from the socio-ecosystem upon which this kind of production has an impact. Being integrated in a long spanning commodity chain, fish farms demonstrate how the rift is not simply the separation of rural and urban areas and the concentration of profit at one pole and ill effects at another. The transportation of labour from urban and semi-urban centers to the Broughton Archipelago focusses the negative impacts of fish farming on those waters, which then cycle them through a range of socio-ecosystems due to the migratory character of salmon as a species. Wages are then brought to urban centers instead of local communities, creating one pole in this stretching of relations. The other poles are where net-profit and product are shipped, to Norway and predominantly the United States respectively.<sup>181</sup>

Here we cannot lose sight of a shift in value relations occurring alongside the rift that forms in part through these shifts. Under the labour theory of value, the productive forces (technology and machinery, resources, etc...) are used to extract value from labour

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<sup>181</sup> Fisheries and Oceans Canada, *International Trade*, <http://www.dfo-mpo.gc.ca/stats/commercial/cfs/2012/section3-eng.htm> (date accessed December 28, 2018)

and concretize it into a commodity. Stephen Bunker argues that in economies of extraction instead of production, the relationship between labour and land (or water, or in this particular case salmon) has inverted and that here labour becomes a ‘productive force’ separate from the factor that is exploited for profit.<sup>182</sup> Following from this, Zehra Taşdemir Yaşın argues that “in extraction rather than the abstraction of social labor, the social abstraction and objectification of nature in the commodity form becomes value-forming, while labor assumes a relation of ‘productive force’. Or, rather, we can argue that the simultaneity and relationality of these two processes characterize capitalist production historically, with varying degrees depending on the historical-geographical context.”<sup>183</sup> Yaşın’s second point is vital here as it cuts back at Bunker for seemingly denying the integral part labour has to play in generating surplus-value. The simultaneity of value formation from both labour and salmon parallels Kwakwaka’wakw understanding of the relationship between salmon and human communities as one of reciprocal obligation. In Kwakwaka’wakw tradition the salmon are other nations that do work which can then be caught by people.<sup>184</sup> The reciprocal obligation then becomes to maintain the cycles of salmon migration and to protect the waters in which they swim. This is especially noteworthy considering our understanding of salmon cycles as vital for riparian ecosystem growth and the importance of salmon to the habitats of bears and

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<sup>182</sup> Stephen Bunker, “Natural values and the physical inevitability of uneven development under capitalism,” in *Rethinking environmental history: World-system history and global environmental change*, ed. Alf Hornborg, J. R. McNeill, and Joan Martinez-Alier, (Lanham, AltaMira Press, 2007) pg. 252 - 253

<sup>183</sup> Zehra Taşdemir Yaşın, “The adventure of capital with nature: from the metabolic rift to the value theory of nature,” *The Journal of Peasant Studies*, Vol. 44, no. 2, (2017), pg. 392

<sup>184</sup> Zig Zag (Gord Hill), “Fish Farm Protest Camp in Victoria by Kwakwaka’wakw Grandmother,” *Warrior Publications*, October 18, 2017, URL: <https://warriorpublications.wordpress.com/2017/10/18/fish-farm-protest-camp-in-victoria-by-kwakwakawakw-grandmother/> (date accessed March 8, 2019).

eagles not just as animals worthy of similar relations (though surely this is enough of a reason), but also as vital parts of the tourism industry and as interconnected aspects of a range of socio-ecosystems. When transferred to a fish farm, the reciprocal obligations are broken and labour is forced to act without a more-than-production based relation to salmon. Wild salmon harvesting through traditional commercial fisheries does not operate this way because the control over wild salmon runs can not be regulated the same way that aquaculture can be and so the model of extraction, like the extraction of coal or other fossil fuels, cannot be replicated with it. Aquaculture is a necessary transformation for this method of accumulation to be possible. The success of aquaculture relies then on a complex restructuring of socio-ecological relations, not the least of which is the severing, however unintentionally, the ties between communities and the natural cycles of wild salmon runs. Salmon farms therefore represent an example of the how rift and shift are not mutually exclusive ways to define a change in socio-ecological metabolic relations. The transition from commercial fisheries to fish farms simultaneously rips essential components of the natural metabolism salmon cycles away in order to satisfy the interests of capital (namely through the disruption of wild stocks via the introduction of disease vectors) and shifts the existing socio-ecological metabolism towards fish farms through its ability to make nearly impossible any alternative socio-ecological formations.

The concept of resilience enters into this formation as the transformation of fisheries into aquaculture continues. In the 1980s when the aquaculture industry was developing in British Columbia, then-Prime Minister Brian Mulroney gutted foreign investment regulations allowing foreign companies to come in and remain foreign-

owned.<sup>185</sup> This has been a part the development of what Philip McMichael calls a neo-liberal, corporate food regime, characterized by “a relatively stable set of relationships privileging corporate agriculture, in the service of capital accumulation on a world scale and at the expense of smallholder agriculture and local ecologies.”<sup>186</sup> In this case of fish farms, it also operates to the detriment of Indigenous communities, small fisherpersons, and other human and non-human groups whose livelihoods depend upon the, now threatened, ecosystems. As this food regime concentrates ownership of aquaculture into the hands of fewer companies and generates harder conditions for small-time fishers to continue to operate it becomes akin to a system with no alternative. This food regime imposes itself upon communities and creates the conditions necessary to continually generate vulnerability by limiting these community’s ability to create alternatives for themselves. This imposition happens both through financial power (such as raising start up prices, a continuation of the effects of the Davis Plan) and physically (adversely effecting ecosystems through the perpetuation of the conditions that generate metabolic rifts). Motivating the expansions of this regime, resilience thinking embeds the idea that there is no alternative and that any and all political action is limited to self-preservation under this regime rather than change to this regime.

Marine Harvest, Cermaq, and indeed the government of British Columbia have all been party to the construction of a particular narrative of necessity, sustainability, adaptability, and resilience surrounding fish farms. This is shown in the ways in which

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<sup>185</sup> Specifically, Mulroney replaced the Foreign Investment Review Act with the Investment Canada Act which removed the requirements that Canadian registered companies be majority Canadian owned. Volpe and Shaw, “Fish Farms and Neoliberalism,” pg. 135

<sup>186</sup> Phillip McMichael, "A food regime analysis of the 'world food crisis'." *Agriculture and Human Values* 26 (2009) pg. 289 DOI 10.1007/s10460-009-9218-5

fish farms are portrayed as the necessary development in fisheries organization in order to provide for a global market for salmon.<sup>187</sup> The international demand seemingly must be met before the needs of the local communities in which these farms operate. The provincial governments support for aquaculture, and their resistance to the demands of Indigenous groups to rescind licenses and remove the pens is characteristic of the interrelatedness of our triumvirate (capitalism, the state, and colonialism). Government inaction on these issues is a part of the colonial project. It serves the state of Canada and the government of British Columbia's interests to have greater control over salmon stocks through rational, corporate, profit-driven, private management. As Isabel Altamirano-Jimenez argues "through this process, people's relationships with place are emptied of meaning and transformed into isolated culture practices and quasi hobbies, and the nonhuman world is broken down into units of value within the economic realm."<sup>188</sup> By facilitating the transition of traditional fisheries to fish farms, salmon are better converted into the commodity necessary for both capitalist accumulation and the transformation of the landscape and waters into 'pristine' abstract nature. This works to deny the claims Indigenous people have to this nature, while simultaneously relegating Indigenous communities to being a 'part' of nature, rather than society.<sup>189</sup> Through this process, resilience thinking aids neoliberalisation by building up cultural confines within which exploration of alternatives is restricted to a specific set of permissible types. The vulnerability that communities face due to the rifts opened up by these processes

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<sup>187</sup> Volpe and Shaw, "Fish Farms and Neoliberalism," pg. 134 – 135

<sup>188</sup> Isabel Altamirano-Jimenez, *Indigenous Encounters with Neoliberalism: Place, Women, and the Environment in Canada and Mexico*, (UBC Press, Vancouver, 2013), pg. 72

<sup>189</sup> David Rossiter, "The nature of protest: constructing the spaces of British Columbia's rainforests," *Cultural Geographies*, Vol. 11, no. 2, (2004) pg. 153

becomes the defining feature of peoples' lives, and thus they must react to it. The imperative to react is greater than the imperative to challenge the political factors that underlie that vulnerability. Metabolic rifts rely on resilience as a component of their existence, just as they are necessary to create socio-ecological conditions for which one has to be resilient.

### Metabolism and the Rift Between Social and Socio-Ecological Resilience

Rift and resilience dance in a cyclical relationship with one another, each feeding into the other the conditions necessary for mutual reproduction and maintenance, expansion and transformation, and consequences. Rift and resilience are co-produced *for* and *within* the forces of capitalism, the state, and colonialism, which themselves are intertwined. Importantly, however, kinds of resilience must be distinguished from each other and the way in which they interact with and co-produce metabolic rifts. The distinction that I make here is between social and socio-ecological resilience. Under the capitalist mode of production and within a colonial settler-state, the idea and expression of resilience is removed from its socio-ecological character and partitioned into separate boxes of social- and ecological resilience. Cleaved apart, social resilience becomes a series of actions of people in society while ecological resilience becomes a passive characteristic of ecosystems seen (though not in actuality) as independent of society, if effected by it. This conceptual separation is essential for ideas of resilience to become an “epistemology of rule” in the sense mentioned earlier in this chapter. As Murray Bookchin explains, epistemologies of rule are the concretizations of ideological and conceptual understandings and practices of domination into social relationships that are

not sharply separable from their material incarnations.<sup>190</sup> Resilience functions as an epistemological tool for domination through its depoliticization process and in its neoliberal formation, through prioritizing individualization of solutions for problems that structural and institutional actors cause.

Perhaps the clearest example of this is the idea of transitional fuels in order to combat climate change. In resilience thinking, the argument that liquified natural gas (LNG, or better known as fracking) is a bridge fuel that will help wean economics off of oil and coal.<sup>191</sup> Preparing for a transition to LNG is seen as resilient for its acknowledgement that the oil sector will have to be left behind in the name of action to lessen the effects of climate change. What this does not do, however, is show how further entrenching fossil fuel extraction will actually help transition to a green economy or slow climate change. Indeed, it is the case that the opposite will be true, because the powers behind fracking natural gas are largely identical to the powers behind the oil industry in terms of ownership, and certainly identical in terms of interest. Put in a position where it is ever more challenging to object to political arrangements that benefit fossil fuel companies, people often and understandably think of their own material livelihoods first.<sup>192</sup> This is not to say that individuals are without agency in this situation: one can always act on more radical political goals and projects. But the material reality of these situations is a compelling draw to resilience thinking, to protecting one's own

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<sup>190</sup> Bookchin, *The Ecology of Freedom*, pg. 159 – 160

<sup>191</sup> Anthony E. Ladd, "Meet the New Boss, Same as the Old Boss: The Continuing Hegemony of Fossil Fuels and Hydraulic Fracking in the Third Carbon Era." *Humanity and Society* 41, no. 1 (2017) pg. 21 – 22

<sup>192</sup> Emily Eaton and Abby Kinchy. "Quiet voices in the fracking debate: Ambivalence, nonmobilization, and individual action in two extractive communities (Saskatchewan and Pennsylvania)." *Energy Research and Social Science* 20 (2016) pg. 27

tenuous and immediate social position at the expense of the broader ecological and thus socio-ecological consequences.

The ontological atomization and vulnerability of individuals under resilience thinking is an attempt to separate the kind of social resilience that one *does* from socio-ecological resilience. In fact, this process goes one step further and conceives of society as, for all intents and purposes, fully independent from its surrounding ecological situation. Through this, the resilience of the natural ecosystem (its ability to withstand changes and shocks to its natural cycles), as analytically distinct from the social part of it, can be made expendable for the sake of social resilience and social reproduction. Following Marx's initial formulation of the process of socio-ecological metabolism, prior to capitalist economic and social relations we can say that social and ecological resilience were more unified than the ways in which they are united today. This is to say that socio-ecological relations were not mediated by the capitalist mode of production or by a profit motive. As such extraction or development of resources was much more so than today for use rather than exchange and profit. Today social and ecological resilience are unified in the sense that the resilience of any given ecological system is tied to that of a social system due to their interconnection. Shocks to the ecological system reverberate in the social system and vice versa. What is distinct about social resilience, however, is its performative characteristic. Rather than just something that an individual or community passively *is* through whatever transcendental means of inherent stock or character, resilience is something that an individual or community must actively *do*, through acts that are conditioned by what the prevailing vision of a resilient individual or community is. These actions may help set up a passive characteristic of resilience, but are not

reducible to preparatory acts or acts of institutionalization. It is only after the appearance of a metabolic rift that these two forms of resilience begin to separate. This leads the necessary actions for social resilience (actions like performing individualization, connecting with others through market relations, selling one's labour for survival, etc...) to be at odds with the necessary actions for socio-ecological resilience while maintaining their interconnection.

Moore's historicization of the metabolic rift has shown us that not only capitalist exploitation is responsible for this separation of resiliencies. Colonial appropriations and the delegation of Indigenous bodies to the realm of a conceptually different and separate Nature also work to separate the performative social and ecological resiliencies. When Indigenous bodies are relegated to nature the social resilience of settler groups can be 'rationally' separated from the well-being of Indigenous communities and made more important. Indigenous social resilience gets lumped into the realm of ecological resilience, a passive characteristic, not something that must continually be done. This resilience has historically been in an antagonistic relationship with the form that settler social resilience is conditioned to take. The ability of Indigenous communities to adapt to and come out on top with regards to social change within the forces of capitalism and the settler colonial state is actively degraded because the ultimate project of these forces is the erasure and genocide of Indigenous peoples.<sup>193</sup>

The separation of performative social resilience from a more holistic socio-ecological resilience has two main consequences that reinforce the consequences of any

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<sup>193</sup> This theme will be returned to in the third chapter with a discussion of how community can be grounded in place in order to reconnect the severed social and ecological forms of resilience.

given metabolic rift leading to this separation in the first place. The first consequence concerns resilience, the second concerns individuals and communities that are relegated to the realm of Nature and not Society and their surrounding socio-ecology. First, the separation of resiliencies detaches the resilient subject from being able to act effectively with their holistic socio-ecological resilience in mind. This is not to say that they cannot at all, but that the conditions imposed upon them restrict their ability to realize this kind of action. They are to some extent confined to the realm of social resilience. One must focus on being able to buy food, afford rent, maintain sustaining social and economic relations; considering the needs of broader and more radically necessary socio-ecological resilience is largely put on the backburner. Secondly, on ideological, structural, and institutional levels this separation concretizes an epistemological distinction not just of resiliencies, but of Nature and Society more broadly.

Let us now examine how this has occurred in the case of the Broughton Archipelago fish farms, and how resilience has been necessary for the creation of metabolic rifts to continue to work *for* capitalism, and how these rifts in turn create the necessary conditions for subjects to need to be and act resiliently *within* capitalism. As Marx, Foster, Moore, and others have shown time and again, metabolic rifts are in large part caused by the alienation of labour from land and territory, and they proliferate as more parcels of land are privatized and as more labour concentrates. Wherever the labour force concentrates, they must consume products, but their contribution to the sustainability of natural cycles is interrupted. Pollution and waste concentrate in landfills for example and that waste which could be turned into nutrients for soil is often prevented from doing so. Or similarly the use of commodities made from the extraction

of mineral or petroleum resources comes to the concentration of their use and disposal in ways that increase emissions or toxic waste build up. In effect, the unique distance-labour of fish farms is still in a position where it is alienated from the waters it operates on, because after shifts end, labour returns home to Nanaimo or Campbell River. Their social resilience is conditioned by their access to particular jobs at the expense of the ecological and socio-ecological situation in the Broughton Archipelago and surrounding areas. Local labour in the meantime gets structured into a situation of competition with labour from other regions or urban and semi-urban centers and the traditional commercial fisheries suffer from increased cost of operation, decreased sale prices for fish, and the damage done to wild stocks by fish farms. Notably, commercial fishers have consistently been catching escaped Atlantic salmon which they are unable to sell, forcing them to dump their catch and work longer for less haul.<sup>194</sup> The concentration of fish farm power into the hands of Marine Harvest and Cermaq has consistently made competition harder and harder between commercial fishers, and between commercial fishers and fish farms. Being so it has been a factor in the ongoing concentration of vessel and quota ownership in British Columbia. Since material situations condition the political actions that labour can take, individuals and communities are placed into positions of dependency. In these positions the livelihood available to them is prescribed by the powerful fish farm corporations, as if it were what the community wanted. They do not face choices that can be organically developed through their socio-ecological relationships with the surrounding ecosystem and other human and non-human communities.<sup>195</sup>

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<sup>194</sup> Hume, et al. *Stain Upon the Sea*, pg. 210 – 211

<sup>195</sup> Resilience operates in a parallel manner to the culture industry as understood by Horkheimer and Adorno. They outline the concept of the ‘culture industry’ as a process in capitalism where cultural commodities are created, marketed, and sold in such a way that the commodity form begins to determine the desire for

Inadvertently or not, metabolic rifts have provided the space for capitalist accumulation through the dispossession of smaller participants in commercial fishing fleets and their concentration into the hands of those with the capital to maintain fleets in the face of diminishing salmon runs. Harry Braverman has argued that capitalist accumulation and the desire for continually increasing rates of accumulation has led to a deskilling of workers as automation and management techniques have changed even minute aspects of the labour process in different industries.<sup>196</sup> More accurately, however, production methods or economic bases are transformed, during which certain skills are valued and others not.<sup>197</sup> The skills that are not valued for the continued accumulation of capital can indeed become antagonistic to capital's interests as it concentrates within particular industries. Such is the case in fish farming on the British Columbia coast when it comes to the skills necessary to operate non-aquaculture commercial fishing, or the skills to maintain sound socio-ecological relations with salmon that come at the expense of the capitalist profit motive. Those who are resilient are those who can reskill; they are able to adapt to the new power arrangements. Those who for whatever reason cannot or will not adapt to these changes (presented as natural changes, though far from it) can be left behind. Regardless of the rhetoric of Marine Harvest and Cermaq, who claim to

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commodities themselves, rather than desire determining the commodities made. Advertisement, indeed also the narrative and discourse surrounding a commodity, transforms the desire for a particular affect or thing into a desire for the commodity form as determined by whatever capitalist industry is producing it. In this way the desire for meaningful social interaction can be transformed into the desire for a particular kind of beer, the desire for respect into the desire for a specific car. The desire and in fact *need* for things like security, income, and stability within a capitalist society can be transformed, in our example, into the desire for maintaining the supremacy of fish farms despite ecological harm. Resilience manages to create a similar situation mediated by dependency rather than trickery. Horkheimer and Adorno, *Dialectic of Enlightenment*, pg. 98, 131 – 132

<sup>196</sup> Harry Braverman, *Labor and Monopoly Capital: The Degradation of Work in the Twentieth Century*, (Monthly Review Press, New York, 1974)

<sup>197</sup> Roger Penn and Hilda Scattergood, "Deskilling or Enskilling? An Empirical Investigation of Recent Theories of the Labour Process," *The British Journal of Sociology*, (1985), Vol. 36, no. 4, pg. 615 – 616

support jobs in local communities, the work force that they deploy is frequently located elsewhere, where, seemingly, access large pools of labour and secondary services is easier. Andreas Malm argues that during the Industrial Revolution, industrial capitalists were attracted to burning coal for steam power rather than water mill power because it allows them to go where labour is readily available rather than bring labour to the factory.<sup>198</sup> Interestingly with fish farms, a good amount of labour does need to be brought into meet the needs of any given farm, potentially at the expense of local labour, though this cannot be said for certain.<sup>199</sup> The rate of change at which capitalist development occurs in this field (development of new farms, concentration of ownership, speed of product turnover, etc...) is in part responsible for the growth in the need for a separate social resilience which can adapt quickly to these changes. Instilling the capacity to adapt to quickly changing material conditions in a piecemeal manner through fast-acting social resilience is the method through which fish farms are able to take advantage of the metabolic rift that damages the socio-ecological relationships necessary for commercial net fishing.

As an epistemology of rule, resilience has been made necessary for capitalism's functioning in a world riddled with metabolic rifts. Contemporary resistance and

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<sup>198</sup> Malm, *Fossil Capital*, pg. 123

<sup>199</sup> While unemployment rates remain higher than average in places like Alert Bay and Port Hardy (Port McNeill being an exception with a lower than average unemployment rate) work on fish farms continues to be taken by non-local individuals. This may be due to the unprofitability for Marine Harvest or others of providing training for workers in these rural areas or may be incidental. Regardless, this puts a hole in Marine Harvest's claim that it is providing rural jobs. See Port McNeill Unemployment Statistics, *Area Score*, URL: [http://areascore.ca/area/port-mcneill\\_bc/employment-unemployment-statistics](http://areascore.ca/area/port-mcneill_bc/employment-unemployment-statistics) (date accessed March 2, 2019); Alert Bay Unemployment Statistics, *Area Score*, URL: [http://areascore.ca/area/alert-bay\\_bc/employment-unemployment-statistics](http://areascore.ca/area/alert-bay_bc/employment-unemployment-statistics) (date accessed March 2, 2019); Port Hardy Unemployment Statistics, *Area Score*, URL: [http://areascore.ca/area/port-hardy\\_bc/employment-unemployment-statistics](http://areascore.ca/area/port-hardy_bc/employment-unemployment-statistics) (date accessed March 2, 2019); Aquaculture Careers, *Mowi*, URL: <http://marineharvest.ca/about/in-brief/> (date accessed March 2, 2019).

challenge to the domination of Marine Harvest and Cermaq in the Broughton Archipelago has been an important illustration of this. Occupations on Swanson Island and Midsummer Island fish farm sites as well as legal cases being brought against these companies and the provincial government led by local Indigenous communities are the leading forms of a resistance that centers sound socio-ecological relationships over a split resilience that gives primacy to the social aspects of it at the expense of ecological health.<sup>200</sup> The rifts damage the relationship between wild salmon and the communities that interact with and rely upon them. Those rifts lead people to challenge the underpinning capitalist mode of salmon farming which disregards socio-ecological relationships that maintain the distinct, but interrelated, co-dependent, and co-produced human and non-human communities, and colonial practices of appropriation and displacement that facilitate the encroachment of these farms. This can be seen in activism predicated on the need to protect longstanding relationships between Indigenous communities (and non-Indigenous communities) and salmon.<sup>201</sup> A messy process has instilled resilience thinking amongst some locals in the Broughton Archipelago, the labour force that is brought into work the farms, and those who are well-meaning in their concern for people's livelihoods but misguided in their understanding of the science of salmon preservation. Metabolic rifts have created the conditions within which resilience

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<sup>200</sup> Emily Gilpin, "The Dżawada'enuxw First Nation files lawsuit against Canada on fish farms dispute," *National Observer*, January 10, 2019, URL: <https://www.nationalobserver.com/2019/01/10/news/dżawadaenuxw-first-nation-files-lawsuit-against-canada-fish-farms-dispute> (accessed January 10, 2019).

<sup>201</sup> Chad Pawson, "'Stand with us:' B.C. First Nations meet cabinet ministers in bid to move fish farms out," *CBC News*, January 30, 2018, <https://www.cbc.ca/news/canada/british-columbia/stand-with-us-b-c-first-nations-meet-cabinet-ministers-in-bid-to-move-fish-farms-out-1.4510961> (accessed January 12, 2019)

thinking can take root. Resilience thinking grows and in its own turn feeds back into the conditions that perpetuate the metabolic rifts it seeks to survive.

### Conclusion

The historical development of the Broughton Archipelago fish farms and the ongoing conflict between the both provincial government and Marine Harvest with Indigenous lead anti-fish farm movements highlights the interpenetrative and co-produced character of concepts of resilience made material and metabolic rifts. The cleavage these rifts produce between the performative aspects of social and ecological resilience (of what was previously a socio-ecological resilience) makes space for the perpetuation of the logics that cause rifts in the first place. Focus on social resilience, which appears to be the more immediate need, conditions individuals and communities to see no possibility of tying their social resilience back to ecological resilience, if the two types of resilience appear to be at odds. Fish farms as a response to the devastation of wild salmon runs becomes the rational option even though these farms themselves are a part of causing that ecological crisis and spreading it further afield.

The following chapter will investigate how the creation of the resilient subject in the specific context of the Broughton Archipelago fish farms has contributed to both the support for and opposition to their operation. The resilient subject is simultaneously an imperiled subject which constantly walks a fine line between embracing resilience thinking wholeheartedly and rejecting entirely and fighting against the political conditions that lead to the necessity of resilience. This delicate balance must be maintained by capital, the state, and the forces of colonialism in order to perpetuate their

systemic and systematic application of rule. Counterintuitively though, the resilient subject also holds power in this relationship in ways that have the potential to disrupt the ways metabolic rifts work for capitalism, colonialism, and the state, and may in fact help to reseal them.

### Chapter 3

Resilience can take social, ecological, or socio-ecological forms, but only the separate social and ecological forms of resilience are able to work for the forces of capitalism, colonialism, and the state. The socio-ecological form does not work with the social cycles that perpetuate these systems. As metabolic rifts open up between communities and their surrounding ecosystems, and between human society in the abstract and the biosphere, resilience becomes more and more necessary for people living within capitalism. Because of the immediacy of people's social needs and the need to reproduce their livelihoods, alienated as they are from the natural metabolism of their local ecosystems, the socio-ecological resilience complex is disrupted. This in turn compounds the already present metabolic ruptures that cause ecological crises. The cyclical relationship between resilience and metabolic rifts feeds the crises that mount up against individuals and communities. Simultaneously, the actions these individuals or communities can take to protect themselves reinforce the power of those who actively prevent these crisis conditions from changing, such as Marine Harvest and interests of international capital, the provincial government of British Columbia and its project of colonial control, and 'pro-resource' lobby groups.

The material forces of capitalism may separate the apparent need for socio-ecological resilience into the social and the ecological, but this does not explain why certain groups of people latch onto this separation and see it as positive or at least inevitable, and why others reject it and fight against the processes that drive this separation. Relinking socio-ecological resilience to the times and places in which it is cultivated and actively implemented, may actually resist the material forces of capitalism,

colonialism, and the state that seek to degrade and marketize socio-ecological relations. What is it, then, that stimulates the particular kinds of resilience that facilitate metabolic rifts? I propose that the key stimulants are the processes of the immunitary paradigm as theorized by Roberto Esposito. This third and final chapter will argue that resilience is often an ‘immunizing’ force and that it deterritorializes its subjects from the always already socio-ecological community in which they have relations, making space for the degradation both of the surrounding ecosystem, and of human/human and human/other-than-human relationships. This new immunized resilient subject may be geographically static, but unlike dynamic socio-ecological relations is not grounded in place. This is to say the subject may be physically in one place, but has its relationship to that place and the human and other-than-human communities of it severely limited, generally to one of purely material resource use. This chapter will end by looking at how the logic of immunization, if applied to a socio-ecological community, not just the kind of community constructed in a purely social manner, may, instead of atomizing and depoliticizing, lead to a politics that can repair the metabolic rifts we see.

### The Resilient Subject and Its Immunization

Under the triumvirate of ecological degradation – capitalism, the state, and colonialism – the art of living is forcibly divided into life in the social and in the ecological realms. In order to survive in the social realm one must, to an extent, act in accordance with the prescribed needs of that social world. Often enough, this is in contradiction with the material conditions that must be maintained for the survival of the ecological world. Individuals and communities must become resilient in order to

withstand the ongoing processes of change and disruption they face that are taken as a given in their socio-ecological world. The causes of these changes and disruptions are seemingly out of reach for any individual or community to confront and challenge, tantalizing as it may be to strive for it. Muddling through these storms is the course they must set. In this sense, they must become resilient subjects under the triumvirate's ordering of the world, able to withstand the disruption and to bounce back to the 'normal' state of affairs. This particular idea of normalcy, however, is always already predicated on metabolic disruptions of natural cycles through the domination and exploitation of the natural environment by processes of colonialism, state governance, and the capitalist mode of production.

To recap briefly, as Evans and Reid argue, the resilient subject is a depoliticized agent. This subject is one that seeks to perpetuate itself in a world where challenge, disruption, disaster, and change are unavoidable and their vulnerability is their ontological core.<sup>202</sup> Importantly, however, the resilient subject is only resilient within their explicitly social relations, and resilient in the face of the ecological crises that may challenge those social relations. They are not resilient, nor are they contributing to the development of resilience in a more holistic socio-ecological sense. The resilient subject is constructed through a process of limiting what is considered appropriate and possible political action, in order to confine individuals and communities both materially and ideologically in their choices of action in response to ecological crises. Thus limited, the resilient subject's course of action is nudged towards maintaining the political status quo, even though this may be the driving force behind the very material conditions of their

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<sup>202</sup> Evans and Reid, *Resilient Life*, pg. 84

initial vulnerability. Resilience as a defining feature of a subject is not, however, all consuming and fully depoliticizing in most practical experiences. There are degrees to which a subject may act resiliently on any given day and in any given situation. This is illustrated clearly in the struggle against fish farms in the Broughton Archipelago, where we can see the variation in levels of resilience exhibited by different members of the communities affected by these farms. The individuals and communities most affected by fish farms will have to make decisions that may align with resilience thinking, but notably do not make the same choices at all times.<sup>203</sup> There are those like Ernest Alfred, Tsastiqualas Umbas, Alex Morton, non-farm commercial fishers, and members of the ‘Namgis and Musgamagw Dzawada’enuxw First Nations who have staunchly opposed fish farm operations, and those that have supported the latter, such as the individuals and communities who do see work coming their way from the farms.

Support for a resilience narrative also shows up in different ways. For example, Stewart Muir, executive director of the industry-sponsored pro-resource development group Resource Works, writes about the need for salmon farming because it is the most sustainable way to meet global product demands.<sup>204</sup> Muir argues that it is not fish farms, but rather habitat destruction, overfishing, and natural predation that is causing the decline of salmon stocks. While he is not incorrect in his assertion that overfishing and

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<sup>203</sup> This may seem like an obvious statement, people choose and act differently from one another with some commonality when working together in a community, but it needs to be said clearly. Resilience is not necessarily a homogenizing force, but it is a depoliticizing one.

<sup>204</sup> Stewart Muir, “Salmon farming has a key role to play in protecting wild fish,” *The Province*, May 29, 2018, URL: <https://theprovince.com/opinion/op-ed/stewart-muir-salmon-farming-has-a-key-role-to-play-in-protecting-wild-fish> (date accessed: February 10, 2019). Resource Works is an astroturf group, meaning that it presents itself as a grassroots organization when in fact its funding is shadowy and linked to the extractive industries that its board members are deeply connected to, and former Premier Christy Clark of the BC Liberal Party as Muir in particular is cozy with. See Donald Gutstein, “Resource Works: Two Cheers for Natural Resources?” *The Narwhal*, August 7, 2015, URL: <https://thenarwhal.ca/resource-works-two-cheers-natural-resources/> (date accessed February 10, 2019).

habitat degradation have contributed to the decline in wild salmon stocks over several decades, his argument is silent on the socio-ecological relations between salmon populations and aquaculture in the Broughton Archipelago (or furthermore, the effects forestry or oil and gas work has on spawning rivers). Muir's argument grants primacy to the social relation of salmon as a commodity on a market, but not the socio-ecological relations of salmon ecosystems. Consequently, he tacitly encourages inaction on fixing the socio-ecological problems of declining wild salmon stocks in favour of a farming system that is sustainable in appearance only. Farming Atlantic salmon in this way may be 'sustainable' in terms of getting a commodity to market but as shown above, actually adds to the stresses on wild salmon populations and makes them more vulnerable to the other factors linked to their decline. This dissonance is jarring between the social relations surrounding salmon as a commodity within a global capitalist system and the socio-ecological relations that are affected by changes in wild salmon stocks and farmed salmon.

Metabolic rifts bring about a divide in manifestations of socio-ecological resilience, separating out the aspects of social and ecological resilience: in the presence of a metabolic rift, doing one becomes part and parcel of reducing the other. As explored in the previous chapters, social resilience focusses heavily on maintaining the subject under the threats of the ever changing and chaotic social world. Financial disasters, job loss, threats to the status of one's citizenship are all much more socially immediate for many people than their surrounding ecosystem. Ecological resilience, the ability of the ecosystem to withstand shocks and its capacity to transform in order to adapt to new conditions, is deemed separate and expendable in the face of necessary social resilience

and reproduction. Though these are materially connected, in that one's ability to be socially resilient is tied to the continuation of a series of relatively stable ecological factors from one point in time to another, the material realities of reproducing one's livelihood in a social setting tend to hit harder and faster for one's everyday life than do the realities of socio-ecological connections and comparatively slow moving ecological crises that may crop up. Metabolic rifts thereby begin to generate the material conditions necessary for the (re)production of capitalist social relations with and within nature, creating the basic pre-conditions necessary for acting resiliently. If, however, social resilience and ecological resilience are always inescapably linked materially in a socio-ecological form, what is it that sparks the zero-sum relationship between the social and ecological? Material conditions and power relations between classes and between settler and Indigenous subject positions contribute to the creation of a zero-sum relationship, but I do not think these are sufficient to explain the divide.<sup>205</sup> Considering that the metabolic rift is a major factor in the development of resilience and that in turn resilience facilitates the perpetuation of metabolic rifts (as examined in the previous chapter), we ought to seriously consider how resilience interacts with this cleavage between the social and ecological forms of resilience.

As expressed in a series of activities that one can participate in or ways in which one can interact with others and socio-ecosystems, resilience, I would argue, is an immunizing force in the way that Italian political philosopher Roberto Esposito understands immunization. Resilience conditions communities and individuals to forget

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<sup>205</sup> Moore begins to effectively address these forces as contributors to metabolic rifts. Moore, *Capitalism and the Web of Life*.

or forsake any meaningful connection to their socio-ecosystem by constructing around them the appearance that their social condition is fully atomized and separate from others through this process. Immunization, however, does not necessarily lend itself only to cordoning individuals and communities off from their material connection to the natural environment. Indeed, it can also be a process of *tightening* the connections individuals and communities have to their natural environment. The following section will explore the concept of immunization as Esposito presents it, alongside his understanding of community. From this exploration, we will be better able to situate resilience as a force that may encourage the separation of the social from the ecological, and at the same time provide tools for repairing this conceptual cleavage and the material metabolic rifts underpinning socio-ecological crises.

### *Immunitas, Communitas, and Resilience*

Roberto Esposito seeks to address a variety of concepts and events that at first glance might seem to be unrelated to the problems of resilience and metabolic rift, such as community belonging, citizenship, security etc... but are surprisingly interrelated and perhaps even have common solutions. For Esposito, the shared analytical category to interpret these with is through the immunitary paradigm. Terrorism, epidemics, infrastructural risk, and of course ecological crises all are sources of risk that disrupt the regular ways of going about daily life. All of these risks seemingly “rupture a previous equilibrium and [result in] the consequent need for its reconstitution.”<sup>206</sup> From the

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<sup>206</sup> Roberto Esposito, *Immunitas: The Protection and Negation of Life*, trans. Zakiya Hanafi (Cambridge, Polity Press, 2011 [2002]), pg. 2

biomedical understanding of immunity and immunization, we know immunity as a sometimes natural, sometimes medically facilitated way in which a body defends itself from an external threat through antibodies, vaccination, medication, and so on. Likewise, as the threat to the body increases in scope, “the immune defense becomes increasingly intensive.”<sup>207</sup> The world in which we live then is operating within an immunitary paradigm. The immunitary paradigm is a specific political situation where immunization from threat rather than removal of the underlying causes of a threat is the primary mode of political action. In this paradigm resilience thinking is brought to the fore as common sense.

According to Esposito, the immunitary paradigm has permeated our contemporary political landscape. Risk, vulnerability, threat, and crises must all be managed by building some kind of social immunization to these conditions and occurrences, both in general and in specific instances. The immunitary paradigm, as Esposito articulates it, reacts to such risks, vulnerabilities, threats, and crises.<sup>208</sup> It can never act in a prefigurative manner however because the paradigm presupposes that threats and risk exist outside of any given body worthy of defense. For the immunitary paradigm, exterior threats have no connection to the interior of the body politic. Problematically, this paradigm hides any and all structural understandings of crises. For example, the threat of transnational terrorism is purely external to the body politic and no interrogation of imperialist practices by Euro-American powers is necessary to address this concern. The response instead is that the body politic must incorporate some aspect of those things

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<sup>207</sup> Esposito, *Immunitas*, pg. 5

<sup>208</sup> *Ibid.* pg. 8

that threaten it in order to prevent them, without jeopardizing what might be called the body's defense-worthiness. It is a form of exclusion through inclusion. To prevent terroristic violence, to use Esposito's metaphor, the state sees itself as needing to implement terroristic violence.<sup>209</sup> To prevent ecological crises within the salmon ecosystem, the only immunitary response is to cut out the very thing at risk, wild salmon, and change the ecosystem to a monolithic, curated, system of aquaculture that it can control directly. In a sense facilitating an ecological crisis in the name of saving an ecosystem *for* the body politic.

Esposito argues that the idea of immunization is simultaneously ancient and part of the construction of the idea of modernity. Immunization and immunity stem from the Latin *immunitas*. Esposito begins his analysis of this concept through an etymological reading of the word, finding that *immunitas* derives its full meaning from that which it negates. In Latin this is the *munus*, "referring to an office – task, obligation, duty (also in the sense of a gift to be repaid)."<sup>210</sup> If *munus* is an office or obligation, the *immunis* means one who has no obligation and serves no office. Esposito argues that this understanding of immunization in the social sense is not complete however. To be exempted from an office is one thing, but are not many individuals exempted from some office or other either through lack of interest, qualification, geographic distance, or through any other number of innocuous factors that do not trouble social relations? What sets *immunitas* apart from any simple exemption from some kind of duty is that the duty it negates is an eminently social duty and only those privileged enough could be

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<sup>209</sup> Ibid. pg. 8

<sup>210</sup> Ibid. pg. 5

exempted. “Immunity,” Esposito argues, is only *immunitas*, when it is “an exception to a rule that everybody else must follow.”<sup>211</sup> Importantly though, immunity in the sense that the Roman legal system understood it was not a pure benefit for its recipients. Esposito highlights how an immune individual may be exempt from certain taxes, but they were also unable to hold particular offices that would grant high honour to their holder.<sup>212</sup>

Put into conversation with the metabolic rift, immunity has two distinct effects. First, it can be seen as a thing that makes space for the start of a metabolic rift. Immunizing oneself, a company, a state, or a conception of humanity from nature means that the cycles of nature are seen as separate from the social cycles of society. A part of the ‘naturalness’ of the surrounding ecosystems is internalized in the social system granting to these structures an appearance of ‘naturalness’ themselves. When the power of social cycles then interacts with and disrupt natural cycles, a rift opens. Second, through the first effect, the socio-ecological immunity of any given actor brings deleterious effects on others that are inherent to the immunity, rather than stem from specific acts the immune actor may commit. When an actor is deemed to be immune from a natural law such as the amount of carbon that can safely be emitted to the atmosphere, or the make-up of a longstanding ecosystem as in the case of wild Pacific salmon in the Broughton Archipelago, their actions can disrupt these cycles and cause cascading effects throughout socio-ecosystems.

The immunization paradigm is also modern for Esposito, as he traces its genealogy back to Hobbes and his articulation of incorporating into the body politic the

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<sup>211</sup> Ibid. pg. 6

<sup>212</sup> Ibid. pg. 18 – 20

very violence he believed existed in an anarchic form without a sovereign.<sup>213</sup> This claim requires some background explication. Esposito argues that there are three main conceptual underpinnings to the modern immunization paradigm: sovereignty, property, and liberty.

Sovereignty, Esposito argues drawing from Thomas Hobbes, is a vital form of immunization because of the inherent ability of life to destroy itself, particularly for humans to kill one another because of their fundamental equality. Therefore, since Hobbes saw this fundamental human equality in the capacity to commit violence against one another as primary, the sovereign became the first way that immunization was instituted by “[stepping] out from itself (life) and constitut[ing] a transcendental point from which it receive[d] orders and shelter.”<sup>214</sup> This transcendent character of sovereignty allowed life to maintain itself through an immunitary self-limiting of its horizon. The sovereign, with the power to make decisions for the body politic and limit the freedoms of individual members, immunizes these individuals by beginning a breaking of the social relations between individuals and replacing these direct connections with mediated forms. Through the sovereign there can be instituted a standard immunitary response to incursions like violence or other crises. The sovereign allows individuals to maintain themselves and their lack of obligation to others in the face of challenges that require collection and relational action, whether or not the sovereign is actually capable of addressing the crises.

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<sup>213</sup> Roberto Esposito, *Bios: Biopolitics and Philosophy*, trans. Timothy Campbell, (Minneapolis, University of Minnesota Press, 2008 [2004]), pg. 46; Thomas Hobbes, *Leviathan*, ed. C.B. MacPherson, (Harmondsworth, Penguin Books, 1968 [1651]).

<sup>214</sup> Esposito, *Bios*, pg. 58

Property, the second underpinning theme of the immunization paradigm, is an “adherent” form of immunization rather than a “transcendent” one like sovereignty, because it “remains within the confines of their (individuals) bodies,” whereas the transcendent, sovereignty, is present beyond any one individual and yet, represents the general will of the body politic, of the collection of individuals.<sup>215</sup> This is to say that property, being by definition ‘one’s own’ and not of another, is tied to an individual, rather than being separate from them like the sovereign. Esposito follows John Locke’s reasoning that lays out the concept of self-ownership to its end that property outside the self comes from a mixture of the self (labour) with materials in their ‘natural’ condition.<sup>216</sup> By making things proper to an individual, that individual is able to immunize themselves from any responsibility to others that may be associated with the thing they claim as property. This conception of property aims to sever the social relations of material things to individuals in a community thereby immunizing the property holder.

The third aspect of the modern immunitary paradigm is liberty. Liberty, argues Esposito, has transitioned, in the modern context, away from its original positive meaning of freedom *to*, towards the negative meaning of freedom *from*.<sup>217</sup> This transition allows for liberty to be siphoned away from a characteristic of the commons and changed into a characteristic of the private individual guaranteed by the transcendental sovereign. No longer being seen as a characteristic of individuals or communities, liberty is transformed into a granted and mediated relation. This is to say that the immunized individual is free

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<sup>215</sup> Ibid. pg. 63

<sup>216</sup> Ibid. pg. 65

<sup>217</sup> Ibid. pg. 70 - 71

not because of some inherent right, but because of the mediation of their relationships with others via the sovereign. The burden of having to engage in complex, challenging, interpersonal interactions is lessened and even removed in some cases, by the sovereign taking on this responsibility. This mediated relation of liberty takes on a dimension of security and protects the individual from the freedom of the common.

The common or the community is vital to Esposito's understanding of immunization and the immunitary paradigm. According to Esposito, immunity "is always 'proper,' in the specific sense of 'belonging to someone' and therefore 'un-common' or 'non-communal.'"<sup>218</sup> The rule that everybody else must follow is *communitas*. *Communitas*, the Latin origin of our word 'community' has a very different etymological meaning than one would think at first. Like *immunitas*, *communitas* has its origin in the Latin *munus*. But, instead of the negation that *immunitas* connotes, *communitas*, with the prefix of *cum* refers to the collective, to that which is not of an individual.<sup>219</sup> Importantly, this collective obligation or office is not a property, it is not a material thing in and of itself, though it is indeed expressed in material ways such as through territory, traditions, and shared identities. *Communitas* is "the totality of persons united not by 'property' but precisely by an obligation or a debt."<sup>220</sup> This debt is always characterized, as Esposito argues, by a mentality of "I owe *you* something,' but not 'you owe *me* something,'"<sup>221</sup> Another way of understanding this debt is as a gift that is always given, but not the gift that one receives. The obligation to others is from the idea that

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<sup>218</sup> Esposito, *Immunitas*, pg. 6

<sup>219</sup> Roberto Esposito, *Communitas: The Origin and Destiny of Community*, trans. Timothy Campbell (Stanford, Stanford University Press, 2010 [1998]), pg. 3

<sup>220</sup> Esposito, *Communitas*, pg. 6

<sup>221</sup> *Ibid.* pg. 6 - 7

what is most proper to an individual, their subjectivity, is in fact common because of its inherent relation to all others and its partial origin in the alterity of another.<sup>222</sup>

Considering this, Esposito argues that modern subjects, throughout the historical process that resulted in the immunitary paradigm conditioning contemporary politics, have been “freed in advance from the ‘debt’ that binds them one to the other... they are released from, exonerated, or relieved of that contact which threatens their identity, exposing them to possible conflict with their neighbor, exposing them to the contagion of the relation with others.”<sup>223</sup>

This process of immunization is at its core an attempt to concretize the individual as an absolute, indivisible, a subject unto its own without any obligation to others and erasing the very real relationality to others at the core of its being. *Immunitas*, as the opposite of *communitas*, represents the “transformation” of subjects “into individuals equally absolute by subtracting them from the *munus* that keeps them bound communally.”<sup>224</sup> This removal of the *munus*, creating the immune subject, foments a decay in community where communal ties and obligations are no longer seen as relational but rather transactional between fully independent subjects. Immunized from the obligations of community, the individual is free to act in ways opposed to communal interest while maintaining the veneer that they are in fact still doing so. Immunization transforms not just subjects but also our whole notion of community: the latter becomes an inside/outside divide that either is or is not, instead of a relational, messy, connectivity that is always in flux. The process of immunization, expanded out from the individual

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<sup>222</sup> Ibid. pg. 7

<sup>223</sup> Ibid. pg. 13

<sup>224</sup> Esposito, *Bios*, pg. 61

level to the level of the community, state, or other political organization of people shows how these two are connected. *Immunitas*, coupled with the *communitas* of a political community, is how that community also limits its horizons and separates it from an ever-larger vision of *communitas*. If sovereignty, as expressed within a political community for example, is “the not being in common of individuals, the political form of their desocialization,” then on an intercommunity level it represents the desocialization and lack of obligation groups have to one another despite their essential relationality.<sup>225</sup>

Esposito’s vision of the relationship between the communal obligation and the immunizing power and process of sovereignty, property, and liberty is a good starting point for how resilience thinking functions and why it allows for seemingly ‘rational’ decisions to further the ecological risk of communities for seemingly beneficial social purposes. Immunization and resilience are two distinct but related processes that endeavour to achieve the same goal; generating the ability of an individual or group to separate itself from social and communal obligation or responsibility in order to maintain a limit on how any given community can be defined. In the socio-ecological context of the Broughton Archipelago the processes of resilience and immunization take on very specific iterations. The transcendence of the sovereign, the adherence of property, and the relation of liberty mediated through sovereignty and property make up the immunitary paradigm which forwards atomization and a severance of the immunized, indeed resilient, subject from the relations of their socio-ecosystem. In the case of the Broughton Archipelago, as discussed in the previous chapter, we have seen how the state as sovereign has been a part of historically dispossessing Indigenous communities, and

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<sup>225</sup> Ibid. pg. 61

Indigenous and non-Indigenous working-class communities, of power and material resources to maintain socio-ecological relations with salmon.<sup>226</sup> At the same time, the introduction of aquaculture has transformed the socio-ecosystem of the Broughton Archipelago by introducing the Atlantic salmon, a species more akin to a private commodity in this position. In the commodity form, Atlantic salmon are able to be an extension of the owners of the aquaculture set up rather than a species with which those in the fisheries industry must engage with relationally. From these developments there is a particular kind of liberty that is brought about, a freedom *from* common obligation to others through the mediation of the sovereign, and also a freedom *from* obligation to non-human others from their treatment as commodities and property.

Anna O'Byrne points out, in the course of exposing Esposito's neglect of women in particular in his examples of community and his investigation of the *communitas-immunitas* relationship, he ignores more broadly how communities are always communities of difference.<sup>227</sup> Not only do we see different in terms of sex, gender, race, and class, we must also address the fact that communities are communities of human and non-human life. As explored in the previous chapter, social and ecological cycles are intimately linked and when they do not complement one another rifts can appear bringing about the ecological crises we experience. Human communities are likewise always just as connected to non-human ones as well as ecological cycles making them always socio-ecological. The socio-ecological character of communities ensures that though the

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<sup>226</sup> See the discussion of the Davis Plan and the neoliberalization of fisheries in Chapter 2.

<sup>227</sup> Anna O'Byrne, "Communitas and the Problem of Women," *Angelaki*, Vol. 18, no. 3, (2013).

relations between individuals may be envisioned as a kind of reciprocal obligation, they are always mediated or manifested in, some material way.

From a Deterritorializing *Immunitas* to a Grounded *Communitas*

Esposito's immunitary paradigm should not be thought of as a finished product but rather an ongoing process -- *immunization* – that depends, however intentionally or unintentionally in particular situations, on the degradation of existing social relationships in favour of market relations. Now controlled, standardized, and atomized, these subjects form a new community. The latter is an immunized community, composed of immune subjects who, however individual they may consider themselves to be due to their lack of communal obligation, are in fact homogenized as subjects under particular state, capitalist, and often colonial structures. This could have deeply conservative implications depending on what is deemed owed to community. This however is not Esposito's position. Esposito branches off from Jean-Luc Nancy's conception of subjectivity and community as a singular plurality.<sup>228</sup> This means that the very idea of our obligation to community must be in plurality, thereby embracing difference as its singularity.

Community, for Esposito, is based in a shared mutual obligation, but this often shows up in a specific territorial location as a physical manifestation of the community, and is confined to that location. Implicitly, Esposito's concepts of community and *communitas-immunitas* are geographically static, but not actually grounded in place. The

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<sup>228</sup> Jean-Luc Nancy, *Being Singular Plural*, trans. Robert D. Richardson and Anne E. O'Byrne, (Stanford, Stanford University Press, 2000 [1996]).

geographic boundedness of communities in practice however is not actually present, as *communitas* is not something that is physically or geographically restricted and social relations can and do develop regardless of physical distance, and even in virtual domains. However, considering the eminently socio-ecological character of communities and their geographical composition, there are material consequences to *communitas* and *immunitas* that effect particular locations, and people and communities in those locations. The outcomes of actions in a geographically bound location can be a part of a dispersed socio-ecology. In the case of the Broughton Archipelago, for example, the vast majority of workers are those who come into the area to work for a time, then return to their lives in urban centers away from the archipelago. One recent example of this appeared in the opinion section of the Victoria newspaper, the *Times Colonist*. Here, a fish farm worker recounts how important the development of fish farms has been to her and her family; it provided the stability they needed in a constantly changing socio-ecological landscape. This account directly points to the destabilization of the wild salmon stocks as a major reason for the family losing their livelihood in commercial fishing, and the relative stability that derives from control over Atlantic salmon in a farmed context. In a similar vein, the author credits the existence of fish farms with helping the wild salmon populations to rebound by reducing reliance on commercial fishing and the overfishing that is presumed to come with it.<sup>229</sup> The needs of this author are of course compelling, but they raise interesting geographical points that ought to be addressed. Consider, for example, the geographic distance of the residences of this individual and of other workers

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<sup>229</sup> Rebekah Norton, "Island Voices: Fish farming the best thing that happened to my family," *Times Colonist*, June 17, 2018, URL: <http://www.timescolonist.com/opinion/op-ed/island-voices-fish-farming-the-best-thing-that-happened-to-my-family-1.23337919> (date accessed February 11, 2019).

from the Broughton Archipelago, and therefore how distinct their immediate socio-ecosystem is from the Broughton Archipelago. Consequently, this geographic distance are factors in the immunizing character of some forms of resilience. Physically separated from the socio-ecosystem of the Broughton Archipelago for much of the meaningful communal aspects of life, this worker is de-socialized from those waters and islands.

Gilles Deleuze and Felix Guattari offer a useful tool to continue our exploration here. For Deleuze and Guattari, territory can be territory in a simple spatial sense, that is to say a bounded area that is claimed and be imbued with some kind of meaning, but need not be. Territory can be the form of social, cultural, political, artistic, or other such characteristics that help to constitute and organize assemblages – that is constellations of objects, subjects, expressions, etc.<sup>230</sup> Territory itself, participating in ordering expressions or objects within an assemblage, is likewise made up of an “aggregate of matters of expression” making a refrain, an ongoing repetition of establishing, (de)crystalizing, changing, and mutating relations.<sup>231</sup> It manifests identifiers and identities that can be embraced, fought, subverted, and hijacked. Even though it has a centre, though not necessarily a spatial one, a territory does not really rigidly determine that which inhabits it, instead making space for mutation and decoding. Territory is a realm of belonging for particular assemblages the way a university can be the territory of the scholar, but can also be a territory of the revolutionary student each of which inscribe it with different meaning and affect the way it is viewed by other assemblages.

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<sup>230</sup> Gilles Deleuze and Felix Guattari. *A Thousand Plateaus: Capitalism and Schizophrenia*. trans. by Brian Massumi. (Minneapolis: University of Minnesota Press, 1987) pg. 323

<sup>231</sup> Deleuze and Guattari, *A Thousand Plateaus*, pg. 323

From territory we can look at what it is to deterritorialize and reterritorialize. To deterritorialize and reterritorialize is not merely to move out of a specific area and then to take up another geographic location: the pair can entail de-inscribing and re-inscribing meaning and uses on to territory, in effect redrawing how we conceive of a physical territory. The physical separation experienced by labour on the fish farms in the Broughton Archipelago reorganizes how meaning is inscribed in that territory for this community, but the material effects of that territorialisation are not limited to the community that makes them. The immunitary paradigm, by producing *immunitas*, severs the communal obligations of one individual to another, and both presupposes and informs a severance of obligation between one individual and their socio-ecosystem. The geographic flexibility of territory makes this all the clearer. Free from communal obligation to a socio-ecosystem, an individual can (re)territorialize meaning in a way that separates them from the material consequences of whatever they engage into socio-ecosystems physically distant from their usual haunts. It is in this way that industrial aquaculture reterritorializes upon the Broughton Archipelago's waterways. Because these waterways flow throughout the coast and into the interior through river systems, reterritorialization in one specific location reverberates physical effects throughout the connected regions. Immunization then contributes not just to the effects of any given ecological crisis in a specific place, but also to the separation of apparent causes of these specific crises from other crises in physically distant places. Meanwhile, the communities of labour are further separated from these socio-ecosystems to the point that the work in which they participate is transformed from being deemed harmful, to being

deemed positive, necessary, and the only possible form of resilience-building, even community-building for that place.

As a geographically mobile concept, *communitas* cannot be presumed to be fixed and defined through a location, though it can indeed be *grounded* in place. Glen Coulthard explains the Lakota philosopher Vine Deloria Jr.'s argument about the ontological differences between the Western Euro-American philosophical tradition, and those of many Indigenous communities throughout what is known as North America in terms of a difference between time and place.<sup>232</sup> The ontological primacy of time over place in the immunitary paradigm allows for the dissociation of land and territory from social relations, relegating them to the status of simple material property. Though they may or may not be valued to different degrees, land and territory in this view are fully separate from the relations of obligation and reciprocity that are implicit to *communitas*. On the contrary, prioritizing place over time ontologically presumes that geographic space is a field of relations and intimately bound into these relations at the same time; it decentres the human and places it together with the other-than-human in an interconnected web, rather than in a linear, consequentialist relation. Thus, for Coulthard, in Indigenous conceptions, “[land and] place [are] a way of knowing, experiencing, and relating with the world – and these ways of knowing often guide forms of resistance to power relations that threaten to erase or destroy our senses of place.”<sup>233</sup> Reterritorialization of land on this or similar bases as a site of relations and identity within a capitalist and colonial structure of the state obstructs and challenges the

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<sup>232</sup> Glen Coulthard, “Place Against Empire: Understanding Indigenous Anti-Colonialism,” *Affinities: A Journal of Radical Theory, Culture, and Action*, Vol. 4, no. 2, (2010), pg. 79; Vine Deloria Jr., *God is Red: A Native View of Religion* (Golden CO, Fulcrum Publishing, 1992).

<sup>233</sup> Coulthard, “Place Against Empire,” pg. 79

prominence of capitalist property relations with land. This reterritorialization bridges both the spatial and spiritual dimensions of imbuing meaning on land writ large. As Coulthard argues, the “organizational imperatives of colonial-capital accumulation has signified an affront to this place-based understanding of what constitutes proper relations – relations between people, relations between humans and their environment, and relations between individuals and institutions of authority.”<sup>234</sup> The immunitary paradigm and the resilience projects and thinking that spread from it all undergird this conceptualization of relations and push communities away from socio-ecological understandings of their place in nature. This opens space for the creation of socio-ecological consequences in one geographically bound community that are facilitated through an attempt to socially immunize another community from crises, risk, or harm.

When one thinks about community relations, flipping the ontological primacy of time to place can radically shift the ways in which immunization and resilience can be used. Rather than viewing a space or territory as a material field to control, dominate, exploit, and use for a given community, an explicitly relational place-based ontology ensures that the territory is a part of the socio-ecological relations that make up community. For example, Leanne Betasamosake Simpson explains that land and territory in Nishnaabeg traditions is pedagogy. It is a field of relations that teaches and it is intermingled with social relations beyond the purely material, though it is eminently grounded in materiality.<sup>235</sup> The obligations and reciprocity of *communitas*, though geographically mobile and existing potentially amongst any number of individuals, can

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<sup>234</sup> Ibid. pg. 81

<sup>235</sup> Leanne Betasamosake Simpson, “Land as pedagogy: Nishnaabeg intelligence and rebellious transformation,” *Decolonization: Indigeneity, Education & Society*, Vol. 3, no. 3, (2014).

be, and in Indigenous communities often is, grounded in place. This stretches a necessary reciprocity and obligation to territory and the human and non-human inhabitants of it to all those who interact with it. Coulthard and Simpson both express the need for a “grounded normativity” in order to revitalize anti-colonial work and expand the sense of place-based obligation and reciprocity.<sup>236</sup> Coulthard explains that grounded normativity is a foundational thought in Indigenous anti-colonial and anti-capitalist struggles which are “for land in the material sense... [and] deeply informed by what the land as a system of reciprocal relations and obligations can teach us about living our lives in relation to one another and the natural world in non-dominating and non-exploitative terms.”<sup>237</sup> Grounding the obligations of *communitas* in the land, not as a nationalistic site of rebirth nor as a purely materialist resource, but as a relation and as a field of relations embraces the point of grounded normativity and strengthens the always already present socio-ecological ties of community that the immunitary paradigm is constantly attempting to sever more and more thoroughly. As Greg Bird and Jonathan Short argue, the kind of community that is prevalent in the immunitary paradigm, and the kind of community that Esposito challenges, is one of atomized individuals who are the sole proprietors of their selves.<sup>238</sup> This community limits conceptions of freedom to the liberty of property and freedom from *its* appropriation.<sup>239</sup> When *communitas* is expanded to include the socio-ecological, however, water, land, and salmon transforms from things

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<sup>236</sup> Glen Coulthard and Leanne Betasamosake Simpson, “Grounded Normativity/Place-Based Solidarity,” *American Quarterly*, Vol. 68, no. 2, (2016), pg. 254

<sup>237</sup> Glen Coulthard, *Red Skin, White Masks: Rejecting the Colonial Politics of Recognition*, (Minneapolis, University of Minneapolis Press, 2014), pg. 13

<sup>238</sup> Greg Bird and Jonathan Short, “Community, Immunity, and the Proper: An introduction to the political theory of Roberto Esposito,” *Angelaki*, Vol. 18, no. 3, (2013), pg. 8 – 9

<sup>239</sup> Bird and Short, “Community, Immunity, and the Proper,” pg. 8

that are resources and properties to be appropriated, to the idea that these things are a part of communities in and of themselves and thus implicate human community members in reciprocal relations with them. Obligation goes both ways. In protecting the water, land, and salmon, one is also ensuring that a reciprocal service is gifted, namely, the use of these things for human livelihoods in a sustainable metabolism.

If it is this grounded *communitas* that is necessary to fight the deterritorializing character of the immunitary paradigm, the problem of spreading this conception remains. Further, how do we transform this concept into a meaningful material force that can challenge the capitalist mode of production, the state, and colonial expansion and accumulation? How do we use it in a way that can walk along the metabolic rifts that these forces have created with the aims of resealing the rifts and revitalizing reciprocal relations within the socio-ecological community? The task of repairing the metabolic rifts that have opened in the Broughton Archipelago thanks to the onslaught of state-supported capitalist and colonial processes is not easily completed. Power over these matters is concentrated in the hands of Marine Harvest, Cermaq, and other fish farming companies, while the provincial and federal government branches pass responsibility back and forth and even deny the simple scientific facts about the effects fish farms have on wild salmon populations.<sup>240</sup> There are however movements pushing against this power and aiming to reseal these rifts through both material contestation of the fish farms presence on the water, and by reformulating the way the wider (in particular wider settler population) view their relationships with wild salmon.

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<sup>240</sup> See for example Linda Aylesworth, "Federal fisheries minister talks about controversies," *Global News* video, 2:00, February 13, 2019, URL: <https://globalnews.ca/video/4959664/federal-fisheries-minister-talks-about-controversies/> (date accessed February 18, 2019);

To A Common Immunity of the Socio-Ecological and Repairing the Metabolic Rift

According to Rosella Bonito Oliva, “the modern community is thought and instituted exactly as the organism is for medicine, which is to say, premised on preventing infection even before the bodies come into contact, in the flattening of the relational dimension of the human being.”<sup>241</sup> The modern community here resists change, and excludes not just that which would violate its boundaries but also that which challenges the underlying basis of its make-up, namely the immune individual and the liberty of property. Any impression of relationality and originary co-living with other humans in a social sense, or with other-than-humans in a socio-ecological sense is treated as a potential threat to the ordering of this community.

It comes as no surprise, then, that the state favoured Marine Harvest with a court injunction against land, water, and salmon defenders on Swanson and Midsummer Islands in 2018, specifically targeting hereditary chief Ernest Alfred.<sup>242</sup> Or that throughout 2017 and 2018 the Fish Farms Out Now Matriarch Camp headed by Tsastilqualus Umbas, which occupied the Victoria Department of Fisheries and Oceans office entrance and Premier John Horgan’s constituency office in Langford, B.C. over

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<sup>241</sup> Rosella Bonito Oliva, “From the Immune Community to the Communitarian Immunity: On the Recent Reflections of Roberto Esposito,” trans. Timothy Campbell, *Diacritics*, Vol. 36, no. 2, (2006), pg. 76

<sup>242</sup> Andy Neal “Two protestors ordered off Marine Harvest Swanson Island fish farm by Saturday night,” *CHEK News*, May 18, 2018, URL: <https://www.cheknews.ca/two-protesters-ordered-off-marine-harvest-swanson-island-fish-farm-by-saturday-night-451698/> (date accessed February 18, 2019)

varying periods of time, faced continuous RCMP and local police surveillance.<sup>243</sup> The threats these actions posed to the continuation of a particular paradigm of community relations sanctioned by and integral to capitalism and the colonial state could not be left unmonitored or unchecked.

Alfred's occupation and monitoring of the Swanson Island Marine Harvest barracks (together with many other Indigenous and non-Indigenous activists, including myself), like Tsastilqualus' Matriarch Camp, constitutes a mixture of contemporary anti-colonial non-violent civil disobedience strategies that put bodies in the way of colonial developments, and to the burgeoning ethos of a unity of means and ends present in contemporary revolutionary politics and social movements. Uri Gordon shows the means-ends unity present in traditionally anarchist "prefigurative politics" seeks to point to, and pull out, a vision of future politics, as if from behind the back of Klee's angel in Benjamin's *Illuminations*, and institute that vision in the formation of today's struggles.<sup>244</sup> Gordon goes on to argue that prefigurative politics can risk a lack of long-term forethought or planning for future generations and even fully sidestep any semblance of responsibility to the future and as such this "presentism" must be replaced by a more generative and future oriented politics that still embraces the ethics of prefiguration.<sup>245</sup> The occupation sites in Victoria and the Broughton Archipelago exhibit

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<sup>243</sup> Travis Paterson, "VIDEO: Protesters chain doors shut at DFO office in Saanich," Victoria News, January 18, 2018, URL: <https://www.vicnews.com/news/video-protesters-chain-doors-shut-at-dfo-office-in-saanich/> (date accessed February 18, 2019); CTV News Staff, "Rallies held as B.C. fish farm pursues injunction to remove protesters," *CTV News Vancouver Island*, December 14, 2017, URL: <https://vancouverisland.ctvnews.ca/rallies-held-as-b-c-fish-farm-pursues-injunction-to-remove-protesters-1.3722470> (date accessed February 18, 2019).

<sup>244</sup> Uri Gordon, "Prefigurative Politics between Ethical Practice and Absent Promise," *Political Studies*, Vol. 66, no. 2, (2018), pg. 525; Walter Benjamin, "Theses on the Philosophy of History" in *Illuminations*, ed. Hannah Arendt, trans. Harry Zohn, (New York, Schocken Books, 1968).

<sup>245</sup> Gordon, "Prefigurative Politics," pg. 533 – 534

signs of fighting for what Gordon calls, borrowing from Ernst Bloch, a “concrete utopia,” a desired future that is actually effected by hope and action, not a fantasy lifestyle-ism that brings little material value to struggles.<sup>246</sup> It is this form of political action that makes space for decolonial struggles an anti-capitalist struggles to meld, and together to effectively challenge not just the material forces in their particular situation, but also to reform the patterns of making relationships with each other and with other-than-human nature.

Melding a reconstruction of social relations beyond the marketized ones of the immunized community with material restructuring is the necessary first step in resealing the metabolic rifts that have opened in the Broughton Archipelago, and indeed globally, due to the myriad of ecological crises that are facing the planet. As understood from the work of Foster, Moore, Clark, York, and others on the making and perpetuating of metabolic rifts, natural cycles and metabolisms have been altered, often violently altered, by capitalist social metabolisms inserting themselves in unsustainable ways.<sup>247</sup> The politics that tend towards a ‘concrete utopia,’ consisting of direct confrontation and interruption of the regular workings of fish farm activity, must have at its core a process of supporting the Indigenous ways of knowing that have been systematically destroyed or undermined by colonial and capitalist processes of knowing. “Colonial unknowing” as understood by Vimalassery et al. as the processes of willfully ignoring, making

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<sup>246</sup> Ibid. pg. 533; Ernst Bloch, *The Principle of Hope Vol. 3*, trans. Neville Plaice, Stephen Plaice and Paul Knight, (Cambridge, MA, MIT Press, 1995 [1959]); Ruth Levitas, “Educated Hope: Ernst Bloch on Abstract and Concrete Utopia,” *Utopian Studies*, Vol. 1, no. 2, (1990), pg. 15; See also Murray Bookchin, *Social Anarchism or Lifestyle Anarchism*, (Stirling, AK Press, 1995), for an additional (polemical) exploration of and expression of disdain for lifestyle ‘presentism’ in anarchist circles in particular, and activist work in general. Bookchin argues that too often, the overly individualistic focus of some anarchisms allows for a slide into a politics that rejects building power for the emancipation of oppressed classes in favour of an amorphous critique of power as such which provides little material change.

<sup>247</sup> Foster, *Marx’s Ecology*; Moore, *Capitalism in the Web of Life*; Foster, Clark, and York, *The Ecological Rift*.

illegitimate, or ensuring the replication of ‘not-knowing’ the relational ontologies and epistemologies that Indigenous communities have.<sup>248</sup> This can be used in order to maintain the illusion that colonialism has a lesser effect on contemporary struggles than it does, or even no effect. Tsastilqualus, when articulating why she engages in the Matriarch Camp occupations as well as actions such as the boarding of Marine Harvest’s restocking vessel while it was in dry-dock, makes it known that her actions are in accordance with Kwakwaka’wakw legal traditions in order to respect her obligation to the salmon and their waters.<sup>249</sup> In order to represent this as criminal activity, the state must intentionally undergo a process of colonial unknowing to render these legal orders unintelligible and illegitimate. This very form of unknowing allows for an immunization of the settler community from knowing that relationality with other-than-human and other-human communities is always materially present, and at the same time presents a forgotten *communitas*, an obligation that has been purposefully torn apart in order to make space for colonial dispossession and capitalist accumulation. Defying this colonial unknowing and forcing the recognition of Indigenous legal orders is one thing, but this does not change the fact that recognition does not necessarily mean empowerment.

A transformed and holistically socio-ecological resilience has the potential to be a radically communal politics. It can be used in a way to undo colonial unknowing by centering Indigenous lead anti-colonial struggles. Likewise it can be used to flip the process of immunization away from the individual, and towards generating a common

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<sup>248</sup> Manu Vimalassery, Juliana Hu Pegues, and Alyosha Goldstein, “Introduction: on colonial unknowing,” *Theory and Event*, Vol. 19, no. 4, (2016), pg. 2

<sup>249</sup> CTV News Staff, “Fish farm opponents detained in protest in Victoria shipyard,” *CTV News Vancouver Island*, September 5, 2018, URL: <https://vancouverisland.ctvnews.ca/fish-farm-opponents-detained-in-protest-at-victoria-shipyard-1.4080988> (date accessed February 20, 2019).

immunity that would protect the multiplicitous community members not from ‘others’ but rather embrace alterity and resist forces that seek to isolate and atomize individuals. Generating this resilience and forwarding these two distinct and connected political projects makes a dramatic new space for political action to repair the metabolic rifts that have erupted throughout the Broughton Archipelago and globally, thereby combatting the ecological crises we face.

The following concluding chapter will briefly summarize the arguments made thus far. Following this, having determined that there is indeed a space for resilience projects to be used as a unified means-ends for building socio-ecological resilience, ‘immunizing’ the socio-ecological *communitas* from the atomization of the immunitary paradigm, and repairing the ecological crises brought about by metabolic rifts, I will articulate potentials for political action. I will also outline the directions political actions might take in order to do away with the dominance of capital, colonialism, and the state.

## Conclusion

As I finish writing this thesis, I am anticipating returning to work in outdoor education. In fact, I will be returning to work in the Broughton Archipelago. The questions that started this investigation grew out of my association of resilience within the area of outdoor education with resilience in the area of politics. Amongst participants in outdoor education programs resilience grows through understanding the relationship that one has with their socio-ecological surroundings. One must learn the patterns of the weather, the topography of their environment, and one must trust the social relations between participants and instructors to be strong and caring. This resilience is holistic and organically grown, it cannot be imposed from the outside. The outdoor education industry has taken a long path to learn this and continues to do so. Running these programs lead me to question how ideas of resilience operate in the political realm and how they might be connected to the ongoing ecological crises I witness and fight to make right. Framing my investigation of this concept of resilience was a conception not so much of resilience as a discursive tool, but more so as a conceptual way to understand power formations, and as a way that power gets organized. The full argument of this thesis was to interrogate the concept of resilience and tie it to its material origins and one of its sites of reproduction, namely the material disruptions of metabolic rifts. From here, this thesis has argued that resilience, though commonly depoliticizing, can be worked with and extended to challenge the very structural underpinnings of capitalism, colonialism, and the state, that endeavour to use resilience as a crutch.

The first chapter of this thesis traced the lineage of the concept of resilience from the field of systems ecology to urban planning and finally to political theory and action.

Starting in the 1970s, C.S. Holling began to articulate a way of ecosystem development through stress and change, rather than static equilibrium.<sup>250</sup> These crises forced ecosystems to build a capacity for resilience and it was this resilience that led to the stability of ecosystems within a certain range of factors. Any ecosystem that exceeds this range for whatever reason and overshoots its capacity for resilience undergoes transformation into a new ecosystem structure. Holling and other systems ecologists soon began to expand the purview of the concept of resilience to incorporate not just natural events such as earthquakes or floods that affect ecosystems, but social events as well. This necessitated a reframing of what an ecosystem is, focussing instead on a more complex socio-ecological system wherein the massive variety of natural, social, and mixed cycles are nested within one another in a distinct but interdependent manner.<sup>251</sup>

The shift in focus to socio-ecological systems facilitated the movement of the concept of resilience into the social sciences, notably work on urban planning and disaster planning, and eventually political theory and practice. Socio-ecological systems internalized the natural world into the social, economic, and political silos that dot public policy. The attempt here was to use the understanding that social and ecological systems were connected to allow for social systems to ‘bounce back’ from whatever natural disaster or ecological crisis came their way.<sup>252</sup> A mainstream or neoliberal model of resilience presumes that the underlying political, economic, and social structures that make up and influence a given community are essential and ‘natural’ parts of the socio-ecological structure. The consequence of this however is that the apparently socio-

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<sup>250</sup> Holling, “Ecological systems.”

<sup>251</sup> Allen et al, “Panarchy,” pg. 580

<sup>252</sup> Cretney and Bond, “Bouncing back.”

ecological resilience that we see here is actually in conflict with the socio-ecosystem. The neoliberal turn multiplies the atomization and alienation of the capitalist subject and creates the conditions necessary for these subjects to act in individualized ways, at the expense of their community, in order to reproduce their social livelihood. Natural disaster, as per Naomi Klein, then begin to serve as an opportunity for capitalism to further its stranglehold of privatization and marketization over things that were held in common.<sup>253</sup> The apparent socio-ecological resilience of communities then, is distinguished from the actual social resilience necessary for subjects to survive in the more immediate social world they inhabit, and the socio-ecological resilience that would be necessary to ensure a sustainable relationship between the natural ecosystem and the social relations that inhabit it. Brad Evans and Julian Reid address this by arguing that today, the capitalist subject is this resilient subject.<sup>254</sup> The resilient subject is ever adaptable to the rapidly shifting social landscape they occupy, but because of the speed at which changes are thrown at them they are constantly left unwilling or unable to address and challenge socio-ecological problems that stem from the very structures they are both exploited by and dependent upon, or at least severely disadvantaged in their attempts to address and challenge them. I finished this chapter by highlighting how the state, colonialism, and capitalism, are all intersecting systems that are commonly treated as ‘natural’ developments and inevitable characteristics of society and that they work to ingrain themselves as such. They in turn facilitate the severing of social resilience from the greater concept of socio-ecological resilience. This chapter explored the

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<sup>253</sup> Klein, *The Shock Doctrine*.

<sup>254</sup> Evans and Reid, *Resilient Life*.

depoliticizing character of resilience and how it can lead to the continuation of ecological crises, but it did not successfully show where resilience falls into the material socio-ecological relations that can be disrupted.

The second chapter takes up the depoliticizing character of resilience and the role of the resilient subject and endeavours to understand them through the theories of metabolic rift and shift as put forward (predominantly) by John Bellamy Foster and Jason Moore.<sup>255</sup> Once these theories are examined, this chapter argues that resilience is an essential part of understanding how socio-ecological systems and cycles can be torn apart and how rifts can appear leading to ecological crises. It does this through an examination of the particular case study of fish farming in the Broughton Archipelago. In a sense this is asking how resilience is a part of making the conditions that produce its own necessity. Ecological crises within a neoliberal capitalist society in particular ravage the social livelihoods of individuals who must then adapt to these changes. They must be resilient to ecological crises that happen because they are resilient to the constant changes that capitalism puts upon them which have the additional consequence of causing ecological crises.

A metabolic rift, as Foster puts it, comes from the disruption of ecological cycles by social cycles such as capitalist production.<sup>256</sup> Moore contests this by arguing that, historically, natural and social cycles are co-produced and so the rift that appears is actually more of a shift in the value relations of how nature works for a given social system.<sup>257</sup> What is lacking from both Foster's and Moore's accounts of metabolism and

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<sup>255</sup> Foster, *Marx's Ecology*; Moore, *Capitalism and the Web of Life*.

<sup>256</sup> Foster, *Marx's Ecology*.

<sup>257</sup> Moore, *Capitalism and the Web of Life*.

metabolic rift is the role that resilience plays. Through an account of the development of, and conflict surrounding fish farms on the coast of Vancouver Island, and the ways in which fish farming is presented in contrast to more traditional means of commercial fishing, I have shown that the concept of resilience crops up in some key places. Firstly, resilience is a part of underlying logic behind the shift towards aquaculture. Marine Harvest and the British Columbia provincial and Canadian federal governments have all presented aquaculture as a means to provide a sustainable supply of fish to global markets while protecting rural communities and wild salmon stocks. This sustainability however is entirely about sustainability *for* capitalism and not at all about a sustainable relationship between nature and society. Alongside this, the claim to supporting rural communities by providing long-term jobs that are not susceptible to disruption by the falling wild salmon stocks is also troubled. Not only do Marine Harvest and other fish farm companies hire a significant portion of their employees from outside of the rural areas where they operate (all while unemployment remains high in these regions), but they also are a significant cause of the decline of wild salmon stocks to begin with.<sup>258</sup>

The methods used on aquaculture sights in the Broughton Archipelago are tied directly to the spread of diseases associated with farmed Atlantic salmon into the more vulnerable populations of wild Pacific salmon. Likewise, Atlantic salmon tend to have more aggression with other salmonid species and have frequently escaped, survived, joined in on wild Pacific salmon runs, and threatened their safety by attacking other salmonids. The rift that causes the ecological crises in the Broughton Archipelago is

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<sup>258</sup> Refer back to the discussion in Chapter 2 on how Atlantic salmon farms in the Broughton Archipelago are major vectors for diseases Pacific salmon are vulnerable to.

between the natural cycles of wild Pacific salmon and the vital socio-ecological relations they have to the different ecosystems they travel through, and the cycles that aquaculture tries to impose by bringing in invasive species that fit the market for salmon as a commodity better than Pacific salmon do. This rupture of wild Pacific salmon's natural cycles, migration routes, spawning grounds, and ecosystem stability has brought about rampant disease and severe threats to salmon run populations. Notably, as Alexandra Morton highlighted, this rupture has cascaded into affecting orca populations in the Broughton Archipelago as well.<sup>259</sup> This chapter shows that the 'need' for resilience is found in the ecological crises brought upon by metabolic rifts. What it has not shown is why and how people resist these happenings, rather than simply roll over and allow them to continue so they can maintain their jobs. Resilience has this material component and as such in order to repair the metabolic rifts that have opened globally, we must address the ways in which resilience feeds into them and maintains them.

Having argued that resilience is tied to the material origins of ecological crises just as much as it is tied to the material conditions of social crises, my final chapter sought to explore whether resilience can be worked through to counter these crises. The spark that gives certain forms of social resilience their tenacity and ability to overwhelm more holistic socio-ecological forms of resilience is the immunitary paradigm. As Roberto Esposito describes it, the immunitary paradigm is made up of a series of processes that atomize, isolate, and in a sense free the individual from the threat of community.<sup>260</sup> Rather than immersing oneself in the complex web of socio-ecological

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<sup>259</sup> Morton, *Listening to Whales*.

<sup>260</sup> Esposito, *Bios*, pg. 70

relations that exist in the world, the immunitary paradigm allows for these to be mediated by different forces such as the state or capitalist markets. Even more radically, some of these relations can be seemingly extinguished through processes of colonial unknowing.<sup>261</sup> Through immunization, social resilience becomes the seemingly natural course of action for any given subject because relational socio-ecological resilience is no longer seen as an option. In part this is due to the deterritorializing effect that immunization has on subjects.<sup>262</sup> The meanings and codes that overlay any given space are erased by immunization and overcoded with new assemblages of meaning that mediate direct interaction with space and other subjects in it.

The immunitary paradigm is the negation of what for Esposito is the relational and reciprocal obligation that individuals have to one another; *communitas*.<sup>263</sup> With the concept of *communitas* Esposito endeavours to show that our very subjecthood is inherently determined by our very alterity and as such as relationships with others. Esposito however, does not address the fact that communities are not just social bodies made up of relations between individuals, but are more complex socio-ecological things full of relations between humans and other-than-human populations and forces. Glen Coulthard and Leanne Simpson provide a framework for moving forward from this position. Their work on ‘grounded normativity’ centers complex socio-ecological relationships as a means for decolonizing and fighting back against ecological degradation.<sup>264</sup>

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<sup>261</sup> Vimalassery et al. “Colonial unknowing.”

<sup>262</sup> Deleuze and Guattari, *A Thousand Plateaus*, pg. 323

<sup>263</sup> Esposito, *Communitas*.

<sup>264</sup> Coulthard and Simpson, “Grounded Normativity,” pg. 254

Through the works of Indigenous resurgence literature, and the praxis of activists such as those fighting against fish farm development in the Broughton Archipelago, we can see a space within which to work towards linking social resilience back into its ecological context. This position pushes the logics of both resilience and immunization into a socio-ecological context where they no longer work to isolate and atomize individuals, but instead embrace the multiplicity of subjects and protect them against the forces that are used to mediate their direct relations with one another and their surrounding ecosystems. Generating a kind of common immunity for the wider socio-ecological communities we inhabit and are in relation with is a necessary step to take if we are to reseal the metabolic rifts that emerge as a result of the zero-sum game that gets put in play between the apparently separate social form of resilience and the socio-ecological form of resilience.

I can foresee a plethora of future research spreading out from this project. Understanding the ways in which resilience can be used and the fact that it has a material aspect that it can affect change upon means that we can use it as a tool for political action. As I return to work in outdoor education my immediate interest is to explore the ways in which this concept can interact with pedagogical research to transform ideas about education and the political aspect of education. Under the curriculum I was exposed to in my primary and secondary educative years the only kind of political action deemed possible, sensible, civil, and just was voting in an election or running for office oneself. This likely has a great deal to do with the teachers just as it has much to do with the actual make up of a curriculum on civics or political education. I think therefore that resilience must be interrogated in this realm as well in order to see how it might affect

this kind of education. A starting question may be does, and if so how does, the concept of resilience thread itself through formal educational systems? From here one might ask if there are educational systems, structures, curriculums, of pedagogies that challenge the organization of power that resilience thinking favours and how do they do so? Finally, we may ask how we can utilize formal education not just as a process that eventually ends for many, but as a field of relations that is manifestly political, to work towards emancipatory politics and a restructuring of what education means in society. I firmly believe that education is a vital part of forming one's political beliefs, sense of what constitutes political action, and willingness to engage in political action.<sup>265</sup> Resilience thinking, if it is indeed present in formal education, left unchecked, risks a shrinking of what is deemed political, what is considered proper or possible political action, and what are proper and possible political goals. This is something that must be challenged and overturned.

More specifically, a direction for research could include exploring the relationship that pedagogy and curriculum in primary and secondary schools as compared to outdoor education programming has with the political action of participants. From this we may begin to ask questions of how we can construct curriculums and embrace pedagogies that accept an activist stance on political issues. This will help us challenge popular understandings of the role of education being that of an objective system to prepare individuals for work and life in their communities, and shift it to education being a field of relations for social action. Through this we may also seek to explore the ways

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<sup>265</sup> In this I am influenced by Francisco Ferrer and his anarcho-syndicalist influenced *Escuela Moderna*, and in particular by Paulo Friere, *Pedagogy of the Oppressed*, trans. Myra Bergman Ramos, (New York, Continuum, 2005 [1970]).

education may affect metabolic relationships between nature and society and ways in which politics can inform and be informed by educational models, and pedagogies for a more socially and ecologically just future.

Travelling through and teaching amongst the multitude of ecological crises brought about by rifts between nature and society can be both disheartening and inspiring. To live in places directly affected by aquaculture and notice the decline in whales and the health of wild salmon year after year takes a toll, but it also can be galvanizing and can set one on a course to help prevent further destruction. Having found the material connection that resilience has to ecological crises, and in outlining ways to push further through the logic of resilience into a kind that necessarily undermines capitalism, colonialism, and the state in favour of an emancipatory politics, we can begin to tailor social movements goals and political actions to building socio-ecological resilience. From here our socio-ecologically resilient communities, and individuals, will be able to begin resealing the rifts that have opened throughout the world. Through this we can take steps towards shifting our socio-ecological relations between and within nature and society.

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