Sustaining Intensities: Materialism, Feminism and Posthumanism Meet Sustainable Design

by

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ABSTRACT

This dissertation explores the concept of environmental sustainability and design by connecting posthumanist philosophies of materiality to material practices. This research complicates the idea of sustainability by posing sustainability as a problem or a question: What is sustainability? Or, indeed, what is worth sustaining? To explore these questions I engage with materialist and process-based philosophies such as the work of Deleuze and Guattari and materialist and posthumanist feminisms and connect them to theories and practices of environmentally sustainable design and design activism. My objective is to ask: How can these philosophies and practices critically and creatively inform ways of thinking and/as doing sustainable environmental relations? How can they promote building bridges, cultivating difference, and generosity toward future generations?

This project contains four chapters that examine the relationship of onto-epistemologies of subjectivity to environmental ethics, the potential of design as an intensity-sustaining discipline, the ways contemporary rhetoric of sustainability serves to reinforce an unsustainable status quo, and the ways designers themselves engage with sustainability as a concept and problem. The first chapter begins by thinking differently about the relationship between subjectivity ("me") and spatio-temporality ("milieu") through the concept of habit, habitat, and co-habitation. I connect Deleuze and Guattari's immanent concept of a "people-yet-to-come" to what I call the "planet-yet-to-come" and argue that the intensive difference-generating processes

of the refrain or "*ritournelle*" present a therapeutic-ethic of co-habiting with the earth. The second chapter deterritorializes Deleuze and Guattari's "three domains of thought" in relation to design as an interdiscipline. I interrogate their critique of majoritarian design and its complicity with "creative" capitalism and explore "minor" modes of design (such as Toronto fruit-picking organization *Not Far From the Tree*) that seek to sustain intensities and activate heterogenous connections and collective flourishing. The third chapter connects the concept of "social sustainability" to what I describe as its contemporary "schizoid" modes: the rhetoric of "social resilience" and "social innovation." I draw on materialist and posthumanist theories of affect in order to complicate the kinds of social "grassroots" initiatives in which individuals today are being invited to participate and situate these within the broader context of a neoliberal ecological and economic milieu. I propose "intensive resistance" as a relational response to a diagram of power that locates agency in the "dividual." The fourth chapter "entangles" encounters with Deleuzo-Guattarian and materialist and posthumanist feminist philosophies together with conversations with designers and case study examples of their sustainable design concepts and practices. I extend the methodological "mud mode" developed in the dissertation to experiment with making "composthumanist" (Haraway, 2014) philosophies "meet halfway" (Barad, 2007) with sustainable design practices in order to generate thought-bridges that cultivate more generous (Braidotti, 2006, p. 259) modes of mingling with our milieu.

PREFACE

This dissertation challenges contemporary concepts and practices of sustainability and sustainable design oriented toward the maintenance of status quo ways of thinking, making, and doing. I posit a generative concept of environmental sustainability by inviting us to understand it as an intra-action of ecology, economy and equity and figuring sustainability as a process of sustaining intensities, generating differences, and fostering the emergence of heterogenous connections. Through an engagement with Deleuze and Guattari's toolbox of concepts as well as materialist and posthumanist feminisms, this project connects critical theoretical approaches rooted in materialist philosophies with creative material practices of sustainable design in order to ask: How can we think and design different styles, habits, and signatures of co-habiting with the earth? How, I ask, can we begin to develop an environmental ethic that, inspired by the Iroquois Confederacy's Great Law, thinks spatio-temporal intra-action through the concept of generationality and its related concepts: inter-generationality, generativity, regeneration, and generosity? I explore, in particular, concepts and/as practices that problematize the ways we conventionally understand subjectivity and ownership, and posit ways of co-habiting with the earth that are re-habilitative, generous to future generations, and treat life as a material expression of perpetual spatio-temporal "borrowing" and "giving away."

Drawing inspiration not only from indigenous ways of knowing but also from previous generations of feminist thinkers that trouble divisive binaries, this work seeks to think with middles or milieus – from the both/and rather than the either/or – in order to destabilize the distinctions we too often draw between the subject/object, human/non-human, living and non-living while emphasizing singularity, specificity, severality, and situatedness. I propose a methodology I describe as thinking in a "mud mode" that emphasizes becomings, movements, and processes,

and that embraces murkiness, imbrication, and "sticking with it." This methodological, onto-epistemological, and ethico-aesthetic approach is located in a present that holds together pasts and futures, inheritances and inventions, what is given and what one can give. It revels in the recognition that knowledge is always situated and thus limited and celebrates the co-constitutive and co-constructive role of uncertainty that inheres in any working knowledge.

This project opens sustainability as a concept, a practice, and an ethic onto a plane of immanence through bridge-building, connections, horizontality, tangles of roots, rhizomes, relations, and intra-action as images of thought. It bridges humanist and posthumanist theories of affect as they relate to ecology and invites us to imagine how we can think about our relation to the environment as entanglement rather than separation, as imbrication rather than isolation, and as phenomenal rather than apocalyptic or utopian. In doing this, my objective is to contribute to emerging environmental and design imaginaries and practices of sustaining the intensities of the earth that sustains us.

This thesis is an original work by Petra Hroch.

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DEDICATION

To Matthew,

and in memory of Mirko.

ACKNOWLEDGMENTS

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INTRODUCTION

Why should affirmation be better than negation? We will see that the solution can only be given by the test of the eternal return: what is better and better absolutely is that which returns, that which can bear returning, that which wills its return. The test of the eternal return will not let reactive forces subsist, any more than it will let the power of denying subsist. The eternal return transmutes the negative: it turns the heavy into something light, it makes the negative cross over to affirmation, it makes negation a power of affirming. (Deleuze, 1983, p. 86)

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SETTING THE "ANTHROPO-SCENE" (A BRIEF HISTORY OF THE ISSUES)

The scope, scale, and complexity of the ecological issues we are facing today – climate change, decreasing biodiversity and species extinction, air, soil, and water pollution, fresh water shortages and excesses of waste, to name just a few examples – have led environmental scholars and writers to suggest that we have entered the era of the "anthropocene," defined as a new geological epoch in which we as humans have altered not only individual ecologies but the entire system of environmental interactions (Scranton, 2013; Steffen, Crutzen, & McNeill, 2007). The demarcation of this era is apocalyptic, even if the impetus behind it may be to inspire change, in the sense that it predicts the end of an era in the earth's history predicated on an already-present "if" – if we continue to sustain the status quo, we will be instrumental in our own extinction. Even if we were to change course – that is, even if we were to substantially reduce greenhouse gas emissions – climate researchers argue that we've already caused irreparable change to the earth's climate. In other words, even a reversal of current greenhouse gas emission trends will serve merely to mitigate or slow, rather than reverse, already-inevitable negative effects of climate change. (Intergovernmental Panel on Climate Change, 1996).

Needless to say, the "anthropo-scene" into which this dissertation attempts to intervene is a scene of change with adverse effects to life on the planet as we know it. And yet, except for the occasional – albeit shocking and devastating – reminders of the effects of climate change that pierce through our daily lives through news reports (droughts in some parts of the world, hurricanes and flooding in others), or perhaps occasional outlier weather events in our local and everyday experience, the "realities" of climate-related environmental changes occur at such a large spatial and long temporal scope and scale that they can somehow still feel oddly distant from "ourselves." That is, even if we understand and accept the scientific evidence, and perhaps even see emerging signs of the reality of climate destruction, there is still a sense in which this destruction remains *not-here* and *not-yet* – it affects *other* parts of the world, or will impact *future* generations.[1] As climate researchers have noted, the not-here-ness and not-yet-ness of the devastating effects of climate change will continue to be unequally distributed and will impact those in the global north less severely than those in the global south, due in part to geography and in part to the ability of wealthier nations to literally "weather" these effects than countries that are poorer and have fewer resources. Ecological issues, then, are always entangled with economic issues (in their causes and their unequal effects) as well as with issues of social equity, ethics, and politics. As I explore in this dissertation, ecological issues are also always related to the ways we conceptualize our relationship to what we understand as our "environment" and the environment's relationship to what we understand as "ourselves."

Although this dissertation intervenes in conventional modes of understanding this relationship by positing an interdependent and intra-active relationship with the

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[1] For those who, against all evidence, remain skeptical of climate change, not only are these problems not-*here* and not-*yet*, perhaps most importantly, they are not-ours – that is to say, for climate skeptics, we as humans are also not *responsible*.

"environments" that surround and support "us," it strikes me that if ever there was an instance of human-environmental relations where a kind of anthropocentrism and human exceptionalism was warranted – the anthropocene is it (Murdoch, 2001). After all, in a description of the present situation, researchers point to (though "climate skeptics" may persist in their denials) many of the trends we have considered emblematic of human "progress" – fossil fuel combustion, industrialization, the market imperative for growth – as lying at the root of various kinds of ecological destruction and contributing to anthropogenic climate change. If ever there was a historical era that merits anthropocentric and human exceptionalist understandings, then we are living through it: we as humans are the only species on earth that has altered the earth to such an extent that it might destroy us. It is in this rather unfortunate sense, then, that we as a species are indeed "central" to this web of relations and that we as a species are indeed "exceptional."

As much as there is scientific consensus among researchers about the anthropogenic causes of climate change and other forms of environmental damage, there is little agreement about what ought to be done to re-think and re-design human-environmental interaction. What we can be sure of, however, is that in the search for alternatives, the kind of human-centred and human-exceptionalist thinking we've been doing to get to the present state of things will not get us much further (Murdoch, 1997, 2001). Indeed, neither will any kind of simplistic apocalyptic or utopian thinking. Indeed, the concept of the "anthropocene," depending on how it is used, can itself paralyze, legitimate, or motivate in complex and potentially perverse ways both human affect and human effects on the environment. If, for instance, we take the "anthropocene" as an indication that the "end" is inevitable (however speculative, imprecisely understood, and necessarily uncertain our understanding of how this "end" plays out), we risk being paralyzed into believing that there is nothing we can do to mitigate this inevitable conclusion and thus indirectly legitimate and

even reinforce the status quo. Worse yet, if the "anthropocene" is posited as an inevitable end, we risk being perversely energized into thinking that, with doom impending, we might as well intensify our efforts to "get while the going is good." Speculative thinking about the anthropocene risks putting us into a situation in which pessimist affects and dystopian futures or optimistic affects and utopian futures, are oppositionally defined and pitted against one another as the only affective choices and possible future outcomes.

But might there also be the possibility that this concept of the anthropocene – by forcing us to face the possibility of actual ends – invites us to contemplate the end-oriented ways in which we've conceptualized and systematized the world – the progressivist narratives, the imperatives for ongoing growth, achievement, and advancement, the teleological thinking with a constantly moving target toward the "new" – and the ways in which these conceptualizations and systematizations have led to our current conundrums? Might there be a way in which contemplating the anthropocene reconnects us to immanent modes of thinking and/as practice, invites us to ask questions such as, "how does this work?" and "what does this do?" In other words, rather than upholding the false choice of either pessimism or optimism as affective options, and utopianism or dystopianism as the only possible outcomes, how might thinking about ends help us to think better with middles?

The anthropocene, as an account of the present moment, forces us to confront is the fact that further anthropocentric thinking will not create a viable response to today's eco-crises (Braidotti, 2013; Shiva, 2010). If the anthropocene accounts for the ways in which anthropocentric thinking has given us anthropogenic environmental problems, then how might thinking differently about the human in relation to the environment be a way to begin thinking and/as doing a different future? A vital facet of the present environmental impasse is that we have inherited very limited ways of thinking

the human in relation to the environment. What is required, as I'll be arguing in this dissertation, is for our thinking to be able to reach beyond rigid categories and expand to meet the scope, scale, and complexity of ecological issues and their relation to the human scale in which we are situated – the local space and the everyday time in which we live. How, in other words, though we might believe ourselves to be in the centre of things, valuing the world according to human life above all else, might we come to understand ourselves, rather, as always merely in the middle, living together amidst a myriad of other entities? This dissertation strives to intervene in the complex problematic of the anthropocene and attempts to reach beyond rigid categories by examining, critiquing, and reimagining one of today's most seductive "solutions" to environmental destruction: sustainability. The key question with which this dissertation engages, then, is how might we conceptualize "sustainable" human-environmental relations differently and what material practices can flow from and intensify these conceptualizations?

RESEARCH QUESTION

> *I hold beginnings and endings together all at once.* (b.h. Yael, 2010)

This dissertation explores the concept of environmental sustainability and sustainable design by connecting posthumanist philosophies of materiality to material practices. This research complicates the idea of sustainability by posing sustainability as a problem or a question: What is sustainability? Indeed, what is worth sustaining? To explore these questions I engage with materialist and process-based philosophies such as the work of Deleuze and Guattari and materialist and posthumanist feminisms and connect them to philosophies and practices of environmentally sustainable design and design activism. My objective is to ask: How can the aforementioned

philosophies and practices critically and creatively inform ways of thinking and/as doing sustainable environmental relations? How can they promote the building of bridges, the cultivation of different connections, and generosity toward future generations?

The term "sustainability" – along with the contemporary "green movement" for which it has become a catch phrase – has, in a generation, gone from sounding potentially progressive and "new" to growing proverbial "scare quotes" that encapsulate the skeptical view that today so-called "sustainability" has been co-opted by capitalism and often means little more than sustaining the economic bottom line. Sustainability, then, is a problem in need of problematizing. The word "sustainable" is sometimes used as a stand-alone term and is at other times coupled with terms such as "sustainable agriculture," "sustainable development," "sustainable growth," "environmental sustainability," "economic sustainability," "social sustainability." When it's used, heads tend to nod, but what is it that we all mean, when we say that something is "sustainable" and what is it that we nod along with, when we hear the term being used?

It strikes me that many of the so-called "sustainable" practices that operate through environmentally-conscious consumption do more to mediate our human affect (by turning us into guilt-free "eco-consumers") than to significantly alter destructive environmental effects. Practices that focus on, for instance, "buying green" remain firmly rooted within logics and systems of free market capitalism and individual choice qua consumption decisions that have far-reaching environmental costs. Indeed, whether "consumptive" or "productive," the individual subject as the locus

of responsibility for the practice of politics is a notion that is hotly-contested by critics of neoliberalism (McNay, 2009; Foucault, 2010; Deleuze and Guattari, 1994).[2]

This project critiques the concept of sustainability as it is so often found in contemporary culture and at the same time seeks to creatively re-conceptualize or "transvalue" (Nietzsche 1966, p. 117) sustainability in an affirmative mode of its own becoming-other. In this dissertation, I invite us to think intra-actively across materialist philosophies of "sustainability" and material practices of "sustainable design" in order to pose the problem of sustainability: that is, I invite us to consider sustainability as an open question rather than as an agreed upon and common sense assumption. More specifically, I invite us to pose the always situated question of what do we want to sustain, or, what is it that is "worthy" of being sustained? Moreover, what sustains heterogeneous flourishing and the promotion of difference? How can we think and/as design different styles, habits, and signatures of co-habiting with the earth?

These kinds of questions lie at the heart of matters for the thinkers that inform and have inspired this project such as materialist and process-based philosophers Deleuze and Guattari, as well as new materialist and posthumanist feminist scholars including Rosi Braidotti, who argues that the current ecological crisis "calls for a deeper capacity for caring and for an extension of the moral community to the non-human world" (2006, p. 117); Karen Barad, who expresses our profound eco-dependence by pointing out that individuals "do not pre-exist their intra-relating" (2007, ix); and Jane

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[2] While on the one hand Foucault's late work on "micropolitical" potentials seems to offer a way of resisting dominant powers, and many contemporary "environmentalist" practices similarly act on this potential of the individual, on the other hand, as Foucault himself pointed out, neoliberal tenets – individualization, privatization, free trade and free market economics – rely upon and re-deploy similar logics of individual action and personal responsibility. Foucault focused explicitly on the emergence of twentieth-century ordoliberalism and neoliberalism in his 1978-79 lectures at the Collège de France on *The Birth of Biopolitics* (2010) in which he called attention to the critical convergence underlying the notion of individual governance and proposed his ethics of "care" in the mid-80s as a response to the ways in which power relations were becoming dispersed under the neoliberal regimes of power.

Bennett, who focuses on the non-human agency of "things" (2004). Together these thinkers – preceded most notably by the work of Deleuze and Guattari (1983, 1987), Nietzsche (1974), Spinoza (1992), Bergson (1911), Whitehead (1920, 1978, 1997), von Uexküll (2010), and Simondon (2009), amongst others – provide varied and yet related ways of approaching today's environmental problems, outlining their contours, describing their workings, accounting for affect, emphasizing the importance of effects, and radically re-framing and re-engaging important questions related to materiality, agency, spatiality, temporality, ontology, ethics, and politics. These thinkers demonstrate a different style of encounter with the material world – a style of encounter that questions simple dualisms between subject and object, object and surrounding, human and non-human, animate and inanimate, living and nonliving, organic and inorganic. These thinkers, in addition to their critiques, posit an alternate style of encounter that seeks to put so-called "fixed" objects into motion, and so-called "individual" entities into relation. They seek not to shift, but rather, to situate the subjective lenses through which we see the material world so that we see the ways in which objects were never actually "fixed" or "individual" to begin with, but were always relational through and through.

My focus on design in this project, particularly sustainable design, reflects design's being a meeting point of matter and materialist philosophy since design is a creative discipline that has traditionally been more related to materiality, limits, and so-called "usefulness" than has art, which has in classical discourses been considered design's "disinterested" cousin. The way we design objects, processes, and environments always reveals a particular understanding of, and enacts a creative response toward, the complex structural and functional problems, interconnections, and interdependencies of the world around us. Design, like art, is about making decisions – a creative designer works within limits and yet should take little for granted. At its best, the discipline of design consists of creative problem-solving processes and

practices in which everyday habits are interrogated, seemingly "foundational" assumptions are challenged, and, in which nothing about existing materials, habits, practices and processes are treated as "given." At its worst, as Deleuze and Guattari remind us (1994), design contributes to "designer" products or services that temporarily induce self-satisfaction prior to being added to already-existing heaps of out-of-fashion fetishes.

This project investigates sustainable design as a potentially critical and creative discipline and focuses particularly on design philosophies and practices that consider design to be an always-provisional, processual, and perpetual search for solutions to the problems posed by the ethics and politics of sustainability. Design practices are a crucial bridge between theoretical problems and practical solutions insofar as they, ideally, not only recognize the potential capacity of things (Bennett, 2004) but also endeavour, in a sense, to realize, actualize, materialize, these capacities.

In addition to this Introduction, which also consists of a description of the research problem, a description of the context in which the research problem exists, a literature review, and a description of my methodological approach, this dissertation is divided into four chapters:

1) Chapter One of the dissertation challenges the notion that sustainability is about sustaining-the-same by focusing on Deleuze and Guattari's radical materialist and posthumanist reconfiguration of subjectivity in relation to the political project of ecological, economic, and social sustainability. Deleuze and Guattari ask us to see potentiality in what is immanent, in the already-existing processes of becoming all around us and indeed, throughout us, in the *here* and *now*. In this chapter I connect Deleuze and Guattari's concept of a "people-yet-to-come" to what we might call a "planet-yet-to-come" in order to highlight some of the ways in which Deleuze and

Guattari's materialist, posthumanist and ecological reconfiguration of subjectivity helps us learn to think in critical and creative new ways about "sustainability" - a term that is taken-for-granted as having a clear meaning, a meme that has become a cliché, and indeed, as Adrian Parr argues in *Hijacking Sustainability* (2009), a concept that is often highly problematic in its conceptualization and practice. This chapter focuses on Deleuze and Guattari's conception of subjectivity as always in-relation to human and non-human, living and non-living entities, interrogates the ways a more sustainable notion of subjectivity can be connected to what I will term other "sustainable concepts" in their work, and asks how these concepts are crucial to the project of critical environmental politics.

Focusing on the work of Deleuze and Guattari on capitalist economies (1983, 1987) and ecologies (Guattari, 2008), this chapter asks: What does it mean - if we think with Deleuze and Guattari - to think "sustainability" differently? How can we conceptualize "sustainable relations"? What is to be "sustained"? Moreover, what does it mean to consider Deleuze and Guattari as theorists of sustainability in light of their focus on difference, repetition, newness, and nomadism? What is the role of limits, habits, crises, and rupture in their work?

I propose that we think sustainability differently - namely, by thinking sustainability in terms of intensities and difference - in order to critique, complicate and re-conceptualize the term. In so far as the term "sustainability" serves as a banner for ecological awareness that's gained cultural, social and political recognition, it provides the terrain for conversations and contestations about environmental relations, and encapsulates approaches that are problematic as well as many that are promising. Sustainability, then, is a concept worth thinking about critically and creatively rethinking.

Practices of sustainability are intimately linked to politics insofar as they require a transformation in habitual modes of thinking and acting. In this age of neoliberal capital flows and cascading economic and ecological crises, we must engage with notions of "sustainability" that exceed the confines of individualized and individualizing actions: what is required is a more radical change in habitual ways of thinking about ourselves as separate from human and non-human others. Focusing on *intensities*, *different connectivities* and an expanded understanding of *communities* in the work of Deleuze and Guattari can offer a critical response to the individualist, consumerist, and neoliberal notions of sustainability being promulgated today and can point to new directions for creative environmental ethics and politics. The objective of this chapter is to ask: What kinds of thinking "habits" are adequate for today's habitats? How do we create concepts that are contingent upon and connected to the planet we inhabit and that inhabits us today? How do we cultivate the joint becoming of a "people-to-come" and the "new earth" or *planet-yet-to-come* (1994, p. 109)?

2) Chapter Two examines sustainability and sustainable design by critically examining design as a discipline, particularly in relation to Deleuze and Guattari's critique of design and the "disciplines of communication" in their examination of the three domains of thought (i.e. art, science, philosophy). If, for Deleuze and Guattari, art makes percepts and affects, science deals in prospects or functions, and philosophy creates concepts (1994, p. 24), how then are we to think of an interdisciplinary activity like design – a creative endeavour at the interstices of artistic, scientific, and conceptual thinking and one that, increasingly, is being called upon in our economically-driven and environmentally-conscious moment to provide sustainably designed solutions to a myriad of social and ecological problems? Today, as people attempt to rethink and remake the world differently, design is often thought of as the solution for reconfiguring the world in more sustainable ways. Popular

"designerly ways of knowing" (Cross, 2001) and doing include: cradle to cradle design (McDonough & Braungart, 2009); biomimicry (Benyus, 2002); triple bottom line design (Norman & MacDonald, 2004); and emotionally durable design (Chapman, 2005).

My interest here is straightforward and specific. I ask: How can Deleuze and Guattari's work in *What is Philosophy?* be mobilized as part of a conceptual toolbox for emerging design activisms that operates in support of sustainability and sustaining intensities, particularly in light of their critique of design and its complicity with the repressive regimes of neoliberal capitalism?

To engage this question I suggest, first, that the *problem of design* as articulated by Deleuze and Guattari – that is, Deleuze and Guattari's critique of the discipline and its complicity with capitalism as "the great Major" (1994, p.149) – is critical to understanding the context and driving force for Deleuze and Guattari's thought about design and, as such, should not be overlooked by today's designers wishing to engage with their work and materialize their concepts. I also observe that the problem posed *by* design as a discipline – particularly by what I call "minor" (Deleuze and Guattari 1986, p. 16) modes of design such as emerging forms of "design activism" (Fuad-Luke, 2009; White and Tonkinwise, 2012; Julier, 2013; Markussen, 2013) that provide alternatives to mainstream neoliberal capitalist logics (Lazzarato, 2009) – challenges Deleuze and Guattari's overly narrow, negative, and reductive conceptualization of design as a creative discipline. I suggest that design has the potential to become an interdiscipline that both bridges and expresses artistic, scientific, and philosophical modes of thought.

To propel this argument about, respectively, the *problem of design* and the *problem posed by design*, I propose an intensive method of reading *What is Philosophy?* that

deterritorializes the three domains of thought by understanding the domains not in static terms of what they *are*, but rather, along the more Spinozist lines of flight that ask what they *can do* (Deleuze and Guattari 1983, p. 108). Extending this methodological approach I suggest that design be re-thought as an "intra-domain" mode of thought and re-conceptualized *intensively* through a re-consideration of how design works and what it can do (Deleuze and Guattari, 1983, p. 108). This approach reminds us to remain critical of examples of design that territorialize creativity onto reductive, difference-diminishing, monopoly-oriented outcomes. The second part of the chapter examines how this approach opens up fields of design that may not be conventionally recognized *as* design in order to demonstrate the potential of design to have effects other than what Deleuze and Guattari characterize as "shameful moments" (1994, p. 10). In sum, this chapter invites us to read Deleuze and Guattari's domains of thought *intensively* and also to consider the potential capacities of design activism to effect *intensive resistances* to the present. I invite us to ask what kind of design expresses both critical and creative alternatives to problems such as ecological destruction and waste, economic disparity and collapse, and social inequality. In other words, I consider *what design can do* as a set of practices intent on engaging with and re-making the material world in more ecologically, economically, and socially sustainable ways.

To this end, I am particularly interested in design activism focused on environmental sustainability that uses the social realm as its medium. I focus especially on a close analysis of Toronto's *Not Far From the Tree* – an example of what design theorist Ezio Manzini would describe as "social innovation" (Manzini, 2008a, 2008b) – to highlight some of the ways their activities operate as an expression of design activism that, by re-conceptualizing, re-organizing, re-designing, and deterritorializing material flows of – in this case – fruit, people, private property, and profit, reconfigures a system of deeply enmeshed social, environmental, as well as economic "problems" into a rich

web of opportunities for the flourishing of different, more equitable, and perhaps surprising or unforeseen connections.

In so doing, I suggest that transplanting the ways in which we engage with the concept of the concept from philosophy to include "design thinking" can open up ways not only of conceptualizing but also of materializing more sustainable modes of collective becoming. I ask: What can examples of sustainable design share with Deleuze and Guattari's philosophy, and what can a better understanding of Deleuze and Guattari's philosophy – on matter, mediation, and milieu, and the affective entanglements among ecological, economic, and social assemblages – contribute to the discipline, or the interdisciplinary mode, of design?

3) Chapter Three offers a critique of the increasingly popular contemporary rhetoric of "social resilience," "social sustainability," and "social innovation" and how these concepts function to serve and extend contemporary understandings of sustainability as a sustaining of the same and a sustaining of the status quo. My suggestion is that despite the apparent relevance, urgency, and innovative veneer of these concepts—concepts that have come to the fore in the face of cascading ecological and economic crises and the need for sustainable solutions—they nonetheless operate on subjects and communities affectively and perpetuate the capitalism-and neoliberalism-friendly status quo policies, practices, and programs that have contributed to our moment of social and environmental crisis in the first place. I will suggest that the kinds of solutions presented by "social innovation," "social resilience," and "social sustainability" are "sustainable" only in the sense that they are a model for a more "collective" mode of existing individually in a realm in which collective responsibility is individualized. This neoliberal diagram captures creative energies in the service of the neoliberal status quo. Thus, I draw out the double-edged meaning of

"sustainability" and "innovation" by analyzing the diagram of what these discourses seek to "sustain" and to "create" and the ways power puts them to work.

Resilience rhetoric, I observe, comes from the world of ecology and ostensibly presumes that social networks are like natural systems – i.e. that like natural systems the social sphere must absorb catastrophe. But this notion naturalizes the problems rather than recognizing their underlying social dynamics and dimensions. So while concepts like "design for social innovation" emerged out of the need not just to make more stuff – which is not sustainable – and the need for new ways of organizing the world, we are nonetheless left with the question: Are these concepts and "sustainable solution" really critical of the underlying problems and capitalist logics?

If, as Deleuze observes, the subject is "always-already" an assemblage of forces and flows, a material, mediated, and modulated entity, a singular multiplicity, what does it mean for that subject to transduce that always-already into something that is "not-yet"? And how does this transformation – this transduction – exceed the individual subject in order to transform not just subjectivity but also shift the social diagram and chart new cartographies?

To illustrate these ideas I turn to Dutch filmmaker Bregtje van der Haak's documentary, *California Dreaming* (2010), in which she explores the popular responses to the 2008 financial crisis by focusing on several families across the transatlantic transcontinental divide. She interviews Europeans who blame the state as the source of the economic problem, and thus expect the state to fix it. She also interviews Americans who, in reflecting on the "American dream," reveal their faith in meritocracy, blame themselves, and look to their own families and communities for solutions. Although the European and American financial crises may have different (though related) roots, and although these root causes are covered by media reports

which figure the failures to fit the respectively predominant "social welfare state" vs. "meritocratic" narratives, where people look – to society or to the individual – for the source of problems as well as the source of solutions, is telling. The activities of these families anecdotally illustrate some of the conventionally acceptable responses to crises available to today's necessarily enterprising subjects. Their stories can tell us how different and always flexible "neoliberal diagrams" (Tiessen and Elmer, 2013) structure, or rather, modulate, subjectivity and its relation to the social, as well as the emerging ways in which this relation is being framed.

I go on to outline the problem of locating agency in the individual as a response to a systemic crisis—a crisis that itself placed responsibility upon individuals while simultaneously disempowering them (too-big-to-fail became not a descriptive but a performative statement). Finally, using Foucault's critique of the "self" as an enterprise (Foucault, 2010; McNay, 2009) and Deleuze's critique of the "dividual" (Deleuze, 1992), I discuss the subject-system relation characteristic of contemporary "neoliberal diagrams" of power and control (Tiessen and Elmer, 2013; Deleuze, 1992). My objective in this chapter is to emphasize the ways in which affectively charged concepts are central to the modulation of today's crisis-filled events and serve as a means of bolstering existing flows of power and/or forces of transformation. I critically connect this analysis of affect to today's rhetoric of "resilience" and argue that although "resilience"-focused activities are characterized by an emphasis on production rather than consumption, and community participation rather than individual action – and although they ostensibly respond to the need for sustainable solutions – they nonetheless serve to perpetuate dominant neoliberal values such as entrepreneurialism, market-based decision making, and privatization. Finally, I sketch out criteria for what "resistance" might look like in a diagram of control in which "social resilience" is emerging as an imperative.

4) Chapter Four uses a methodology of "meeting halfway" (Barad, 2007) to build bridges between concepts in Deleuzo-Guattarian and materialist posthumanist feminist philosophies and the thoughts and practices of designers who grapple with concepts of sustainability and ways to materialize sustainable designs. While the "mud mode" is a way of thinking that troubles binary distinctions and attempts to think affirmatively from "middles," "meeting halfway" is a strategy for activating connections among thinking and/as practice.

Although it is outside of the scope of this dissertation – and, not to mention, likely an impossible feat – to provide a comprehensive overview of sustainable design thinking and/as practice, what I present here is an experiment in engaging with a few examples that begin to demonstrate: 1) the complexity of theoretical and practical issues that arise with any attempt to materialize ecologically, economically, and socially "sustainable" relations; and 2) the importance of specifity, "situatedness" (Haraway, 1997, p. 199), and "severality" (Ettinger 2006, p. 151) in any discussion of sustainability. These "meetings" among materialist, posthumanist, and feminist theory and design thinking and practice also demonstrate that any attempt at so-called "sustainability" needs to be, paradoxically, a thought and/as practice that is about ongoing critique, creativity, and *change* – whether that change is change that reinforces existing "diagrams" (Deleuze, 2006, p. 30, 37) of power, or change that leads to their transformation, is the key question.

In other words, this chapter demonstrates that sustainability as a generalizable *thing* or *category* also doesn't exist – it is always about maintaining an ongoing critical and creative stance toward specific conceptualizations and materializations, asking intensive questions such as: "What is being sustained?"; "What does this way of thinking and materializing sustainability do?" Questions of sustainability, as I describe in this chapter, are always in-process, but also always situated, always relational, and

never neutral or "innocent" (Murphy, 2014) – that is to say, they are never not an effect, nor are they ever free of having effects.

RESEARCH CONTEXT (A BRIEF HISTORY OF APPROACHES TO THE ISSUES)

The environmental issues with which we are confronted today are deeply connected to social and economic issues stemming from increasing disparities in the distribution of the world's material resources and a particular history of ideas about their value, ownership, and management. Since the rise of the environmental movement in the 1970s, inaugurated by calls to action in books such as Rachel Carson's *Silent Spring* (2002 [1962]), there has been increasing public awareness of the link between the acceleration of modern industrialized and financialized capitalism and environmental destruction, economic instability, as well as social inequity and unrest. Simply put, we began to suspect that, in a world of finite resources, the imperative to continue to extract resources, ignore waste, and perpetuate continued economic growth on a finite planet was ecologically "unsustainable." Schumacher's *Small is Beautiful: Economics as if People Mattered* (1989 [1973]) is among the first books that chronicled this realization and attempted to posit a way of thinking that countered the dominant mode of market expansion and monopolization. Bill McKibben, in *Deep Economy: The Wealth of Communities and the Durable Future* (2007) and Tim Jackson, in *Prosperity Without Growth: Economics for a Finite Planet* (2009) echo this argument a generation later. We also began to see that market expansions in the form of global "free" markets not only encouraged cross-border trade as a further acceleration of the extraction of natural resources, but also purported to benefit everyone while benefitting some more than others (Braidotti, Charkiewicz, Hausler and Wieringa, 1995). The 1980s saw the rise of environmental non-governmental activist organizations such as Greenpeace, the Sierra Club, and the Suzuki Foundation, which

sought to bring public awareness to environmental justice issues, to work for policy change, and to join forces with anti-globalization movements for social and economic justice.

While environmental consciousness was being raised an expansion of environmentalist rhetoric was directed to changes in individual behaviour patterns, most notably, for example, in campaigns to "reduce, reuse, recycle." In the 1990s we began to see campaigns for "green" everything and environmental awareness being channeled through the consumption-friendly invitation to "buy green." This "greening" of the environmental movement was critiqued by scholars such as Heather Rogers, who, in *Green Gone Wrong: How Our Economy is Undermining the Environmental Revolution* (2010) pointed out that "greenwashing" (i.e. giving products and services a green veneer) was another way for companies to differentiate from their competitors, create niche markets to sell to eco-conscious consumers, and ultimately leave unquestioned the underlying logic that individual purchasing decisions were the way forward for environmental activism and reform and that the configuration of our current economic system needed to change in order to allow for any meaningful environmental change.

Today, the primary mantra of environmental action is "sustainability" and "sustainable development" – a term defined in 1987 by the United Nations World Commission on Environment and Development as economic development "that meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987, p. 16) and the rise of which is chronicled in Andres R. Edwards' *The Sustainability Revolution: Portrait of a Paradigm Shift* (2005); today, sustainability and sustainable development are often understood to refer to the sustaining of what many companies and policy makers have come to call the "triple bottom line": ecological, economic, and social values (Norman &

MacDonald, 2004; McDonough & Braungart, 2002b). In an era in which there are warnings that we have exceeded the capacity of the planet to metabolize the carbon we've put into the atmosphere as a result of the combustion of fossil fuels, the imperative for market growth continues, though, as critics of contemporary approaches of the "slow violence" of environmental degradation and its effects on the poor (Nixon 2011) and environmentalism as governance in so-called "developing" nations (Agrawal 2005) have observed, faith in the markets (or state structures that champion so-called "free markets") to provide ecological and social equity is wearing thin.

Over the decades since human impact on the planet has become undeniable, much has been written to document environmental issues, and to proffer solutions – different ways of re-thinking and re-making the world. Designers interested in sustainability have often been part of these discussions about ways to "design" the interactions among human and the "natural" world differently. The prevalence of designers interested in questions of sustainability is especially marked today, with the movement toward "green" and "sustainable" design referring to everything from previously used and compostable products, to eco-friendly services, to the application of "design thinking" to re-configure systems (Brown & Wyatt, 2010). One wonders, in a market economy so quick to accept the latest environmental trends, how can we think environmental sustainability and sustainable design outside of capitalist logics?

These are enormous questions with long histories and unforeseeable future trajectories, and this dissertation doesn't look for final answers or one-time solutions; rather, it seeks to posit the questions of sustainable human-environmental relations and ecologically sustainable design within a broader spatio-temporal scope, to offer some methods for thinking and/as doing sustainability differently, and in so doing, to re-position sustainability from operating as a rhetorical tool of the status quo, to an

enabler of intensive relations. What *can* be said – given the feedback we are receiving from the earth – is that current modes of thought and action aren't working. What is required – as I articulate throughout this project – is a shift in perspective, an interest in connections rather than distinctions, and an effort to imagine what the world might look like if we "zoom out" to see across spatial and temporal scales.

In the following section I briefly engage in an experimental way with two vignettes of eco-design approaches that contextualize, conceptualize, and configure human-environmental relations differently – one by perpetuating the myth that humans can *escape* the environments in which they exist, the other by embracing the relational ways humans are entangled within their environments. These encounters demonstrate a sample from a spectrum of possible modes or "styles" of encounters with the surrounding environment. The two design projects I will engage with are: 1) Belgian architect Vincent Callahan's utopian "ecopolis" *Lilypad*, as an example of escapism; and 2) the living bridges of the indigenous Meghalaya bridge builders as an example of environmental entanglement.

Styling Sustainability: Vignettes from a Spectrum of Eco-Design Encounters

> *Style: it's not only a matter of aesthetics, it's about the logistics of the encounter – it's about testing what a body can do.* (Braidotti, 2011)

Escape: *Lilypad*

[Figure removed due to copyright restrictions]

Fig. 1 Vincent Callahan's ecopolis, "Lilypad"

We are currently finding ourselves in a rather precarious position – one wherein the fantasy that we are separate from so-called "nature" (Soper 1995, Morton 2007) has boomeranged back on us in the form of environmental effects on a grand scale putting life on earth as we know it at risk. In response to this ecological state of affairs some designers have undertaken the task of projecting potential future "solutions" to ecological crises and "adaptive" styles of encounter among humans and environments. When I began this project, I was initially interested in the notion of environmental citizenship – in what it means to "belong" to an ecology – and also to design issues at the scale of a city. I intended to explore the term "ecopolis," which, as it turns out, had not only been coined already, but also had blueprints for possible futuristic architectural plans. The most notable among these was Vincent Callahan's ecopolis called "Lilypad," an intriguing, if somewhat disturbing, floating city designed for a future in which sea levels have risen significantly and coastal cities would have to be re-built.

[Figure removed due to copyright restrictions]
Fig. 2 Vincent Callahan's ecopolis, "Lilypad"

The gleaming plans, constructed using sophisticated computer modelling software, feature a blue, green, and white future city, depict a self-contained, harmonious, balanced, eco-utopia physically separated and protected from a dystopian reality: the rising seas and dangerous "nature" that surrounds it. What is most striking about such a "futuristic" plan is that this kind of plan is, in a way, not "new" or "innovative" at all. The history of modern architecture as well as urban planning is a history of imagining and often constructing such utopian blueprints. These top-down "views from nowhere" of the world, seductive fantasy-like project illustrations, and 3-

D models of future urban constructions such as, for example, Dubai's Palm and World Islands (both of which have become part of our present), present utopian dreams of human-created, offshore, and escapist living. There is no doubt that human ingenuity – imagination, curiosity, technology, creativity, and problem-solving – is on full display in such "adaptations" or "solutions" to climate change, and the hopeful visions they offer potential "climate refugees" from populated coastal areas around the world. However, we are compelled to ask: what is overlooked when we assume that we can "innovate" our way out of the ecological crisis? What questions aren't asked when such "master plans" are unveiled? What, for instance, will such eco cost to build? At what cost to other things will they be built? And who will be able to afford to live in these utopian worlds created as a response to dystopian realities? More broadly – why is it that we as humans prefer to concoct visions of possible future worlds that exist independently of already existing ecosystems rather than live more creatively with the world we have inherited in the here and now? Why is it seemingly easier or more desirable to "float free" by constructing a monumental island than acknowledge our entanglement with the earth we've been given and work with what we've got? Why seek to escape the limits of the earth rather than use our ingenuity to work within its constraints?

Enmeshment: Meghalaya Living Bridges

The bridge-building indigenous people in the village of Mawlynnong in Meghalaya – a state in north-east India – have had a different response to nature and water management than Callahan and his floating ecopolis. The people in these communities been dealing with cyclical water patterns in the rainforest where they live for generations (cyclical water patterns that have over time become worse) and have devised an inter-generational way of dealing with flooding in a way that engages the environment rather than disavows it. The communities of Meghalaya quite literally

work *with* the earth to create a design adaptation or solution to their water problems: they work the roots of the indigenous trees across the ravines that flood and divide communities by weaving them into intricate living bridges both flexible and strong enough to survive the flood season.

[Figure removed due to copyright restrictions]
Fig. 3. Meghalaya living bridge

Over time, growing shoots of roots are tucked in among the withering roots that die off, creating a tangle of roots living and dead, growing and withering, flexible and tough. The roots are grounded in the soil on either bank and prevent the soil from eroding into the flooded river. They connect communities physically throughout the rainstorms and are themselves nurtured by the rainwater and cared for by the communities. The Meghalaya communities work with the roots of the trees, passing on the skill of working the roots from generation to generation. Just as the roots create new shoots, grow, strengthen, die, and wither, so too do the generations of people, passing on ecological, social, and cultural skills from generation to generation, the objective being to keep the soil intact, the communities connected, while making use of the trees without eradicating them for future generations.

[Figure removed due to copyright restrictions]
Fig. 4 Meghalaya living bridge

In this thesis, I think with the Meghalaya bridge builders in order to think about sustainability using enmeshment rather than escapism as an image of thought. As I explain later in the introduction, I propose a method I call thinking in the "mud mode," which I describe as thinking from "middles." I consider the "mud mode" a methodology as well as an affirmative ethic that weaves together pasts and futures in its focus on process and presence. The "mud mode" emphasizes enmeshment rather than escapism and emerges from the premise that regarding ourselves as separate from the world that sustains us is an onto-epistemological, and ethical, dead end.

LITERATURE REVIEW: THEORETICAL PERSPECTIVES AND APPROACHES

This dissertation project necessarily draws on a number of disciplines because environmental issues are never just ecological – they are always social, economic, ethical, and political. The material world doesn't abide by human-made categories and disciplinary boundaries, no matter how much we may try to divide, contain, or control it. The challenge of working on an interdisciplinary project like this one – a project that seeks to create connections among disconnected areas of knowledge and different approaches to an issue rather than remaining rooted in any one discipline, approach, or discourse – is the broad range of literatures with which one engages, to which one is indebted, and for which one is responsible. The literature upon which I draw in this project is not bound by any discipline precisely because in order to do justice to the complexity of contemporary environmental issues an approach is required that prioritizes complexity over conceptual rigidity and thinking across categories rather than simply capitulating to disciplining distinctions and divisions. This project, then, draws on literatures including philosophy, sociology, political science, science and technology studies, geography, literary theory, media and communication studies, and women's studies, or, more specifically, feminist

technoscience studies, and, of course, theories of design. But less important than from what discipline a project draws is what the project *does*. What connects the literatures that are central to this project are their own interdisciplinary approaches, and more specifically, their contribution to the interdisciplinary nexus of cultural theory today taking shape under terms like materialism, posthumanism, and affect theory and their emphasis on environmental issues, sustainability, and sustainable design.

Cultural theory, broadly speaking, has recently been taking a materialist, posthumanist, affective, relational, as well as what we might call an "ecological" turn. These "turns" follow from the post-structuralist turn which left critics wondering where, after so much emphasis on language and representation, that left the material world (Thrift 2008). Where Marxist theory (or historical materialism) anchors our understanding of the world in the relationship of materiality and labour, use and exchange value, and the commodity, and Freudian psychoanalysis connects human interpretations of the world to embodied drives and psychic desires, post-structuralist perspectives – for critics of representationalism – overemphasized the role of language, or representations, and underemphasized the role of the material world in the making of meaning as well as the distribution of power. Of course, critiques of representationalism existed as a "minor" mode of thinking in the work of other scholars and theorists. Alongside Marx and Freud, Nietzsche (1974), the third "master of suspicion," who foregrounded the role of embodied affect, health, and desire, as well as Spinoza (1985), Bergson (1911), and Whitehead (1920) influenced a generation of materialist and posthumanist critics such as Deleuze and Guattari and, today, a range of new materialist[3] and posthumanist[4] feminists whose work speaks to the

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[3] New materialisms, in this case, refer to recent philosophical and ontological theories that give primacy to matter as that which precedes representation and interpretation and acknowledges that humans are made of the same material as the world around them (categorical distinctions between human and nonhuman entities are untenable).

material underpinnings of contemporary environmental issues, the complexity of human and non-human relations and ecologies of human and non-human affect.

Despite the increasing amount of literature in new materialism, posthumanism, affect theory, sustainability, and design, there is currently little existing literature that thinks across these approaches. Literature that engages with human-environmental issues from a cultural theoretical perspective has tended to focus on "representations" of the environment in literature, media, and culture. Research that examines human-non-human relations from a non-representationalist perpective includes Michel Serres *The Parasite* (2007), Latour's actor-network theory (1993), and Deleuze and Guattari's oeuvre (1983, 1987, 1994). Guattari's work in the *Three Ecologies* (2008) stands out as work that connects Marxist and psychoanalytic critiques (not to mention critiques of Marxism and psychoanalysis) to contemporary environmental issues.

The work of Deleuze and Guattari is central to this dissertation and provides me not only with a toolbox of creative concepts, but an interdisciplinary methodological approach capable of making connections between and across divergent domains of thought. Deleuze and Guattari's work is concerned not with "identities" but rather with how things work – their philosophical focus is not on what something *is,* but what something *does*. Their work functions to de-essentialize and yet at the same time emphasize material capacities, especially entities' emergent and material capacities *in relation* to other entities. Deleuze and Guattari's oeuvre creates concepts, enacts ways of thinking, and produces vocabularies that enable a project like this one to continue

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4 Posthumanism is a contested term that has been used to describe a variety of ways in which the category of the "human" has been challenged, decentered, contaminated and superseded. On one hand, the "posthuman" denotes the blurring of humans and technology (i.e. the cyborg) (Haraway, 1990). On the other hand, the "posthuman" can refer to a destabilization of the human-animal divide (i.e. companion species) (Haraway, 2007; Wolfe, 2009). Posthumanism in this project does not specifically denote (and although it may include is not delimited by) a particular hybrid-human figure; rather, I am using the term to refer to a philosophical direction that challenges the anthropocentric assumptions of the humanist tradition that has faith in a uniquely "human" nature and the notion that values derive from human experience and culture (i.e. posthumanism as "after humanism").

to mobilize connections – their work acknowledges the force of material limits while at the same time emphasizing that these are always in productive tension with potentialities.

Deleuze and Guattari bring an economic and ecological angle to my interest in sustainable relations and becomings. I am interested not only in which of their concepts relate to economic, ecological and social sustainability, but also in which of their concepts are robust enough to withstand experimentation with sustainable design practices and contribute to our understanding of the complex crises we face today. Key scholars to whom I am indebted who have connected Deleuze and Guattari's work to environmental issues include Rosi Braidotti, in her work on nomadic ethics and sustainability (1994, 2006, 2012), Dianne Chisholm, in her work on Deleuze and Guattari, ecology, and geophilosophy in the special issue of *Rhizhomes* (2007) and her work on ecological thinking (2011), and Bernd Herzongenrath in his work called *An [Un]likely Alliance: Thinking Environment[s] with Deleuze and Guattari* (2008) and his edited volume on *Deleuze, Guattari, and Ecology.* In this project, I contribute to this field of scholarship by being taking a particular interest in the questions: What does it mean – if we think with Deleuze and Guattari – to think "sustainably"? How can we conceptualize sustainable relations? What do we sustain? Moreover, what does it mean to consider Deleuze and Guattari as theorists of sustainability in light of their focus on difference, repetition, newness, and nomadism? What is the role of limits, habits, and crises in their work? How do Deleuze and Guattari's posthumanism and their attention to materiality connect with the work of new materialist posthumanist feminists and contemporary practitioners of sustainable design?

To date, the key literature that engages with the philosophy-practice nexus of "sustainability" and sustainable design includes Adrian Parr's consistently

groundbreaking work beginning with her critique of sustainability discourses in *Hijacking Sustainability* (2009) and culminating in *The Wrath of Capital: Neoliberalism and Climate Change Politics* (2012). I am not only indebted to Parr's work on Deleuze, but also to her sustained critique of the relationship of sustainability and capitalism. Additionally, Parr's edited collection *New Directions in Sustainable Design* (Parr & Zaretsky, 2010) presents very valuable case studies by contributors who share an interest in the relationship of sustainability and design. In this project, I contribute to this field of scholarship by focusing in particular on examples of environmentally sustainable "design for social innovation" as well as the meanings and materialities of concepts and/as practices of "resilience."

Feminist Perspectives

Alongside the work of Deleuze and Guattari, this project is informed by ongoing work in new materialist feminist theory. Feminist theory has since its beginnings worked to problematize the seemingly fixed "nature" of identity categories – these have historically included the categories of sex and gender, as well as race, class, ethnicity (Davis, 1983; hooks, 1999; Spivak 1988); queer identity (Butler, 2006; Halberstam, 2005); and ability (Wendell, 1996). Further, feminist theory has been concerned with the link between the personal – how we experience ourselves, imagine our identities, and think about our subjectivity – and the political. This challenging of boundaries and questioning of categories and connection between the personal and the political has always made feminist theory about "thinking differently," transformation, and becoming open to a full range of human potentials and capacities (Braidotti, 2002). As Braidotti emphasizes: "Feminism is a philosophy of change and of becoming" (1996, p. 312).

Feminist new materialist thinkers carry on this tradition of challenging rigid identity categories and by moving beyond the category of "the human" as distinct from other (non-human) entities (Coole & Frost, 2010). This non-anthropocentric feminist approach is crucial for the development of more comprehensive understandings of sustainability. Rather than argue, as have some ecofeminists (Merchant, 2008), that women have a shared experience with the "environment" (*qua* "natural" environment) either because women are closer to "nature" or "materiality" (as opposed to "culture" or "mind") or because of womens'/nature's shared history of oppression, feminist new materialist and posthumanist theorists problematize the very ontological categories – "human" and "non-human" – that underpin our thinking of ourselves as separate from the world around us (Barad, 2007; Braidotti, 2006; Bennett, 2010). Thus, new materialist posthumanist (eco)feminists critically negotiate a way beyond *either* identity-based essentialist equivalencies *or* coalition-based experiential alliances between women, and indeed, humans, and "nature." The feminist theorists with whom this project engages remain committed to the feminist project of radical transformation by challenging how we as humans understand what we are in a posthumanist context in an effort to open up new possibilities of what we might become.

New Materialist and Posthumanist Perspectives

New materialist and posthumanist feminists work to dismantle the dualistically-structured debate that has dammed up feminist discourse for too long, deadlocking discussions, dividing debaters, polarizing passions and, antagonistically aiming collective energies – namely, the debate about gender, and other notions of "identity" and whether these were either "essentialist" or "socially constructivist." New materialist feminist interventions in these debates dislodge some of the dualistic ways

we had come to understand matter – as raw, passive, and always filtered through the world of culture and representation; they have collectively, and together with a host of "other" allies and allies of "others," taken on matter on as a "matter of concern." Karen Barad's recent work on material-discursive "intra-actions," for example, demonstrates the depth and degree to which all phenomena have never been either natured or nurtured, but always both (2007). For her, the natural "histories" involving matter and occurring through space and time are inseparable from the "stories" we tell and the meanings we make about the nature of the universe. Moreover, Barad's work demonstrates that attachments and emancipations are not mutually exclusive terms; rather, their relation is precisely the ground for a re-viewing and re-visioning of the ways in which we "intra-act" with the world around us. For Barad, the false choice between nature and culture is a trap - it is entanglement that is the opening. Leaning back upon worn-out dualisms is a failure not only of our powers of imagination but also, as Barad so keenly demonstrates, our powers of observation. What we see is, in this sense, what we get. A key question in this project, then, is how can we nurture our relationships to a materially-and discursively-entangled understanding of the nature of the world around us?

Posthumanist theory, in addition to Deleuze and Guattari and new materialist feminism further bolsters the onto-epistemological perspectives that inform this project. Although "posthuman" figures such as the human-machine "cyborg" (Haraway, 1990) or the human-animal "companion species" (Haraway, 2003, 2007) demonstrate the degree to which we as humans have never *not* been hybrid entities, the concept "posthuman" in this project refers less to any particular hybrid entity and more broadly to a philosophical trajectory that challenges humanist and anthropocentric ideals that "equate the subject with rationality, consciousness, moral and cognitive universalism" (Braidotti 2010, p. 47). This is the perspective that Donna Haraway, as a creative response to the dualist and dialectical logic of "posts" instead

has called "composthumanist" (2014). As Braidotti identifies, this conception of the "'knowing subject' - or the 'Man' of humanism - posits itself as much by what it includes within the circle of his entitlements, as in what it excludes. Otherness is excluded by definition" (2010, p. 47). The "others" excluded by the ideal humanist subject are "the sexualised other, also known as women, gays and trans-sex; the ethnic, native or racialised others and the natural, animal and environmental others" (Braidotti 2010, p. 47).[5] The posthumanist, or, to use Haraway's term, "composthumanist" perspective, then, is critical of both the idealized "human" subject and the exclusion of non-human entities that this anthropocentric understanding of humanism presupposes. Posthuman perspectives, then, are crucial if we are to begin to think about our relationship to the environment and sustainability differently.

Braidotti acknowledges the significance of the work of Foucault and Deleuze and Guattari for the development of a posthumanist sustainable ethics.[6] Counter to what she calls the "pretentious belief that only a liberal and humanistic view of the subject can guarantee basic elements of human decency, moral and political agency and ethical probity,"[7] she argues that "a nomadic and posthumanistic vision of the

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[5] Serres interrogates the notion of so-called "parasitic relations" (which have a negative natural and social connotation) and deconstructs what it means to be a "parasite" when we are all, in effect, always in consumptive and productive relations with others (2007).

[6] "For Foucault, Deleuze, Derrida and Irigaray, the critique of liberal individualism is a fundamental starting point": their "priority is how to rethink the interconnection between self and society in a non-dualistic manner" (Braidotti, 2006, p. 17).

[7] "Ethics in poststructuralist philosophy is not confined to the realm of rights, distributive justice, or the law, but it rather bears close links with the notion of political agency and the management of power and of power-relations. Issues of responsibility are dealt with in terms of alterity or the relationship to others. This implies accountability, situatedness and cartographic accuracy. A poststructuralist position, therefore, far from thinking that a liberal individual definition of the subject is the necessary precondition for ethics, argues that liberalism at present hinders the development of new modes of ethical behaviour" (Braidotti, 2012, p. 300).

subject" can offer a basis for a different kind of "ethical and political subjectivity"[8] (2006, p. 11). Braidotti suggests that Deleuze's concept of "becoming imperceptible" is the "affirmative answer to Foucault's much celebrated and grossly misunderstood 'death of the subject'" (2006, p. 261). To "become-imperceptible" is, for Braidotti, an affirmative and ethical notion. In her words, "You have to die to the self in order to enter qualitatively finer processes of becoming" (2006, p. 261). The dissolution of the self or "death of the subject" is, she argues, an ethical gesture that concomitantly affirms the extension of the self toward a broader "eco-philosophy of the subject" (2006, p. 204). As Braidotti explains:

> In philosophical nomadism this mode of becoming [becoming-imperceptible] is rather linked to a sense of interconnectedness that can be rendered in terms of an ethics of eco-philosophical empathy and affectivity which cuts across species, space and time …. Bio-centred egalitarianism is an ethics of sustainable becomings, of affirmative qualitative shifts that decentre and displace the human. Becoming-imperceptible is about reversing the subject to face the outside: a sensory and spiritual stretching of our boundaries. It is a way of living more intensely and of increasing one's *potentia* within it, but in a manner which aims at framing, sustaining and continuing these processes by pushing them to the limit of endurance. It is the absolute form of deterritorialization and its horizon is beyond the immediacy of life. (2006, p. 262)

Braidotti understands "sustainability" as a "regrounding of the subject" in a "materially embedded sense of responsibility and ethical accountability for the environment she or he inhabits"; at stake in reorienting the subject to "face the outside" is "the very possibility of the future, of duration or continuity" (2006, p. 137). In Braidotti's view, sustainable ethics and, for the purposes of this project, sustainable design privileges "the idea of continuity," "assumes faith in a future," and accepts "responsibility for passing on to future generations a world that is livable and

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[8] "The ethics of nomadic subjectivity rejects moral universalism and works towards a different idea of ethical accountability in the sense of a fundamental reconfiguration of our being in a world that is technologically and globally mediated" (Braidotti, 2006, p. 15).

worth living in"; as she argues, "A present that endures is a sustainable model of the future" (2006, p. 246).

Posthumanist theory extends the limits not only of "the human" but also of the ethical, social, and political sphere in which humans operate. Lorimer suggests that theories of non-human agency "ecologise" the social sciences (Hutchins, 1995; Ingold, 2000; Latour, 1993; Macnaghten and Urry, 1998; Murdoch, 2001; Scoones, 1999; Thrift, 1999), describe "more-than-human" economies, ecologies, geographies and systems of interaction (Braun, 2004, 2005; Castree and Nash, 2004; Hinchliffe, 2003; Whatmore, 2002), and explore the "nonrepresentational dimensions to social (and ecological) [relations]" (Lorimer, 2007, p. 912; see also Dewsbury et al., 2002; Thrift, 2000). As Lorimer points out, the posthumanist recognition that agency extends beyond "human" actors raises one of the key questions with which this dissertation is concerned: "On what grounds can we include the non-human in our theoretical and therefore 'ethical' frameworks?" (2007, p. 912).

In order to think about sustainable ethical relations we must think about these relations as dynamic systems. Although systems of relations exist at any number of scales, new materialist thinking about inter-relations at the level of what Jane Bennett calls "things" (2004) compels us to think in particular ways about relations that are ethical and sustainable across human and non-human connections. New materialisms, as Bennett points out, "[hazard] an account of materiality even though materiality is both too alien and too close for humans to see clearly" (2004, p. 349). In Bennett's view, our world is not "in the first instance" composed of "subjects and objects"; rather, it is made of "various materialities constantly engaged in a network of relations" (Bennett 2004, p. 354). As John Frow explains, although we tend to distinguish "things from persons" we live in a world in which these two "kinds" of entities "exchange properties" (qtd. in Bennett, 2004, p. 355). New materialisms,

Bennett argues, emphasize "the shared material basis, the kinship, of all things, regardless of their status as human, animal, vegetable, or mineral" (2004, p. 359). This mode of thinking about materiality acknowledges the specificity of humans at the same time as it endeavours to move beyond anthropocentrism. For Bennett, new materialist philosophy "does not deny that there are differences between the human and non-human" but "strives to describe them without succumbing to the temptation to place humans at the ontological center" (2004, p. 359).

Bennett expands on her views on new materialist thinking, or what she calls "thing" or "thing-power" materialism, in the following statement:

> [New materialism or] thing materialism is, I think, a viable competitor alongside the historical materialism of Marx and the body materialism of cultural studies. I present a contestable figuration of materiality among others, each of which emphasizes a different set of powers and does different political work. Historical materialism has tended to emphasize the structured quality of materiality - its ability to congeal into economic classes, stratified patterns of work, and dominant practices of exchange. Its political strength lies in its ability to expose hidden injuries of class, global inequities, and other unjust effects of capital flows and sedimentations. Body materialism has tended to focus on the human body and its collective practices (or arts of the self). It highlights the susceptibility of nature and biology to culture, and it exposes the extent to which cultural notions and ideals are themselves embodied entities and thus materialities that could be reshaped through politics. Thing-power materialism, for its part, focuses on energetic forces that course through humans and cultures without being exhausted by them. It pursues the quixotic task of a materialism that is not also an anthropology. Its political potential resides in its ability to induce a greater sense of interconnectedness between humanity and non-humanity. A significant shift here might mobilize the will to move consumption practices in a more ecologically sustainable direction. (2004, p. 366-367)

So, what is significant about looking to matter to find new ways of conceiving sustainability and the potential significance of a "sustainable ethics"? I will argue that attending to the material as "a protean flow of matter-energy" and things as

"relatively composed form[s] of that flow" enables us to recognize the degree to which "the us and the it slipslide into each other" – in other words, that we as humans are not as separate (nor as independent) from the world as we may think we are (2004, p. 348). As Bennett underscores, "we are also non-human" and "things too are vital players in the world" (2004, p. 348-9). For a new materialist, "humans are always in composition with non-humanity, never outside of a sticky web of connections or an ecology" (2004, p. 365). The implications of "thing-power" materialism for sustainable ethics is that both advocate for an ontological position that regards things as being "spun together in a dense web" while, at the same time, warning of "the self-destructive character of human actions that are reckless with regard to the other nodes of the web" (2004, p. 354). Further, a new materialist perspective, by attending to matter – the material compositions of things and the connective forces and flows among them – facilitates and encourages a connection between ethical critiques of sustainability and creative sustainable design practices that perform sustainable relations.

Design Perspectives

Sustainable design is not only a creative response to a set of theoretical critiques, but is a *particular* kind of creative response to a *particular* set of critiques that puts into play co-determining, pragmatic, and potentially collaborative methods. My focus on design as a fruitful site for theorizing how sustainable ethics can be enacted is, in effect, a response to the more common focus in Deleuzo-Guattarian theory on the emancipatory and creative potential of art. Indeed, although it is "art" that is often championed as the ultimate creative response and is often touted for its unrestrained potential for creativity, limitlessness, newness, revolutionary potential (O'Sullivan & Zepke, 2008, Zepke, 2005, Zepke & O'Sullivan, 2010), I am interested instead in

focusing on design precisely because of the implicit *limits* within which design, by definition and in practice, operates and the "wicked" or complex problems to which it responds (Buchanan, 1992). Design theorists describe design as both a conceptual and material practice that seeks experimental and creative solutions to problems by working within material, spatial, temporal, and economic constraints (Cross, 2001). I investigate both sustainable design theory and practice – particularly examples of sustainable design that recognize material forces and flows to create not just concepts, products, or services, but also economies, ecologies, processes, and communities and thus offer tangible examples of how an ethics of sustainability can be put into motion to "inaugurate an eco-philosophical approach to nomadic subjectivity, and hence also new ecologies of becoming" (2006, p. 37).

The design parts of my project, then, figure sustainable design as having the potential to pragmatically prioritize creative processes, interconnectivity, and interdependence. Rather than approach design as capable of creating a one-time "solution" I will approach design "solutions" as responsive processes that model always-contingent, always-conditional, always-contextual, always-relational, always-in-becoming creative engagements. A focus on design's relationship to sustainability will foreground and emphasize the reality of the limits – whether ecological, economic, social, or political – that necessarily (and perhaps, crucially) circumscribe any attempts to enact theories of sustainability in our socially- and materially-bound world.

METHODOLOGY: THINKING NOMADICALLY IN "MUD" MODE

> *That capacity to endure is collective, it is to be shared. It is held together by narratives, stories, exchanges, shared emotions and affects. … It is a moment in the process of becoming; as Virginia Woolf puts it: "But when we sit together, close … we melt into each other with phrases. We are edged with mist. We make an unsubstantiated territory.*
> (Braidotti 2006, p. 199)

In this dissertation project I employ an interdisciplinary and nomadic way of thinking to interrogate sustainability as a theoretical concept and to create connections among discourses and disciplines among materialist, posthumanist and feminist theory and design philosophy and practice. Thinking in "mud" mode is a critical theoretical perspective or method that emphasizes becomings, movements, processes, and potential for growth and change while embracing murkiness, imbrication, and "sticking with it." This bottom-up methodological, onto-epistemological, and ethico-aesthetic approach is located in a present that links together pasts and futures, inheritances and inventions, what is given and what one can give and understands sustainability in terms of sustaining intensities. Rather than thinking "green" as an extensive measure, the "mud mode" is interested in thinking "brown" – with the mud, the earth, the soil, and roots as milieu, matrix, and middle. To thinking in "mud" mode is to revel in the recognition that knowledge is always situated and is thus limited and celebrates the co-constitutive and co-constructive role of uncertainty – muddiness and murkiness – that inheres in any working knowledge (Prigogine and Stengers 1984, 1995). Thinking in "mud" mode welcomes the co-presence of multiple knowledge trajectories, the opportunity to build bridges, and the responsibility of making the earth more habitable for those living near and far, today and in future generations.

This project opens sustainability onto a plane of immanence through bridge-building, connections, horizontality, tangles of roots, rhizomes, relations, and intra-action as images of thought. It bridges humanist and posthumanist theories of affect as they relate to ecology and invites us to imagine how we can think about our relation to the environment as entanglement rather than separation, as imbrication rather than isolation, and as an immanent and phenomenal rather than apocalyptic or utopian. In

doing so, my objective is to contribute to emerging environmental imaginaries and practices of living *with* the earth that sustains us.

This project is motivated by a theoretical position and methodological approach that considers regarding the "natural" world or "environment" as in any way separate from us as a mere (and yet grave) conceptual and practical bad habit since whatever we are, we are already also nature (contrary to the best attempts throughout Western history to either forget or behave as if we have forgotten this fact). The idea that nature is distinct from us, and yet that we alone are the ultimate stewards of environmental activity is at best flawed and at worst fatal in its presumptions and consequent effects (Carson, 2002 [1962]). Thinking differently about our relationship with the natural world means reframing in a post-anthropocentric fashion who "we" are and thus, in this new configuration, what it means to relate and "care" (Foucault, 2005) not only about "ourselves" but also about that of which we are a part. Moreover, it demands that we regard the natural world as an active partner or agent in our collective becoming and thus a source of potential creative solutions for sustaining human and non-human life (McDonough and Braungart, 2009).

This dissertation builds on the ongoing emergence in social theory of radical challenges to anthropocentric and individualist constructions of subjectivity that recognize and attempt to respond to the complex networks of interactions in which we are living today (Deleuze and Guattari, 1983; DeLanda, 2002; Grosz, 1999, 2004, 2005, 2008; Haraway, 1990, 2003; Ingold, 2000, Latour, 1993, 2004, 2005; Thrift, 2004, 2008). Our twenty-first century world is one that, as a result of the forces of globalized capitalism (Appadurai, 1996; Bauman, 1998), has come to be understood as being increasingly interconnected socially, politically, culturally, economically, and of particular significance for this research project, ecologically. This project is motivated by the urgent need to articulate critical and creative, theoretical and

"practical," discursive and material responses to the ecological challenges posed by the prolific, and yet often misrepresented, interconnections among so-called "human" and "non-human" worlds (Deleuze and Guattari, 1983; Haraway, 1990, 2003; Barad, 2007; Bennett, 2004; Braidotti, 2006; Benyus, 1998; Pollan, 2007; Serres, 2007; Wolfe, 2009).

The theoretical and methodological ground and backbone for my research includes relationally-focused ontologies being developed by feminist posthumanist theorists of new materialism such as, most notably, Rosi Braidotti, Karen Barad, and Jane Bennett. These theorists' expressions of posthumanist and new materialist feminist philosophy foreground the notion that human becoming must be understood as being inseparable from the becoming of other entities. My project focuses on the ethical and political consequences of theories that expand conventional conceptions of the social (Mellor, 1998), especially in a world wherein we as humans are so entangled with other human and non-human entities that seemingly stable categories such as "self" and "other," "subject" and "object," and "human" and "non-human" require rigorous and yet radical reconsideration and reformulation. As Rosi Braidotti underscores:

> A great deal of courage and creativity is needed to develop forms of representation that do justice to the complexities of the kind of subjects we have already become. We already live and inhabit social reality in ways that surpass tradition: we move about, in the flow of current social transformations, in hybrid, multicultural, polyglot, post-identity spaces of becoming (Braidotti 2002). We fail, however, to bring them into adequate representation. There is a shortage on the part of our social imaginary, a deficit of representational power, which underscores the political timidity of our times (2010, 9).

Braidotti, a champion of philosophical and disciplinary nomadism, uses the term "transposition" to describe a methodology premised upon "mobility and cross-

referencing between disciplines and discursive levels" (2006, p. 6). She calls "transposable" concepts "nomadic notions" that "weave a web connecting philosophy to social realities; theoretical speculations to concrete plans; concepts to imaginative figurations" (2006, p. 7). My project focuses on sustainability as a sort of "transposable concept" or a "nomadic notion." As Braidotti points out:

> "sustainability" as a concept in the social sciences, social theory and philosophy, can function as a bridge-builder which draws together areas of study that are not often connected. As such, it raises issues of ethical and political concern and value, which are best approached within the general framework of philosophical nomadism. (2006, p. 206-7)

More specifically, my approach to analyzing what "sustainability" means in various cultural discourses and my approach to arguing for what "sustainability" might mean as an ethics and a politics will trace the always-already nomadic forces and flows of the always murky material world. In keeping with this nomadic approach this project will engage sustainability from four intersecting and overlapping perspectives distributed across four differently themed chapters in order to examine: 1) how sustainability can be imagined differently; 2) the ways design can become a critical discipline for responding to environmental crisis; 3) the ways conventional understandings of sustainability as sustaining the status quo get reinforced through the deployment of concepts like "social resilience" and 4) how design and sustainability theories intersect with design and sustainability practices and how new materialist and posthumanist feminist theory can offer different perspectives in human/non-human relations.

Karen Barad contends that vital to understanding the ways forces flow across thresholds and between human and non-human assemblages is "an understanding of the nature of power in the fullness of its materiality"; she continues:

To restrict power's productivity to the limited domain of the "social," for example, or to figure matter as merely an end product rather than an active factor in further materializations, is to cheat matter out of the fullness of its capacity. How might we understand not only how human bodily contours are constituted through psychic processes but how even the very atoms that make up the biological body come to matter and, more generally, how matter makes itself felt? It is difficult to imagine how psychic and socio-historical forces alone could account for the production of matter. Surely it is the case-even when the focus is restricted to the materiality of "human" bodies, that there are "natural," not merely "social," forces that matter. Indeed, there is a host of material-discursive forces – including ones that get labeled "social," "cultural," "psychic," "eco-nomic," "natural," "physical," "biological," "geopolitical," and "geological" – that may be important to particular (entangled) processes of materialization. (2003, p. 810)

Barad underscores the importance of nomadic thinking for theorizing across disciplinary divides when she warns that: "If we follow disciplinary habits of tracing disciplinary-defined causes through to the corresponding disciplinary-defined effects, we will miss all the crucial intra-actions among these forces that fly in the face of any specific set of disciplinary concerns" (2003, p. 810). Methodologically, then, any project on as multifaceted a concept as sustainability necessitates that we think across the material and the virtual; the designed, the technological and the social; the humanities, biology, and ecology.[9]

A project about sustainability and sustainable relations necessitates not only an interdisciplinary perspective but also, as Braidotti argues, a rethinking of "the very category of subjectivity" that underpins current power relations; Braidotti argues that:

A non-unitary, open, dynamic subject in or of becoming is a far more adequate point of reference in the cartography of contemporary power-

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[9] "The point is to achieve successful transformations by striking sustainable interconnections. For the purposes of academic and scholarly discussions on ethics, several constituencies need to be involved, from the science and technology corners as well as from ecology, culture and social theory" (Braidotti, 2006, p. 272).

relations, than the unitary, humanistic vision of a fixed and self-transparent subject. A new community needs to be engendered, which cuts across the internal divides between scientific disciplines, but also the larger divide that separates science from other intellectual endeavours, artistic projects and community-based actions. A new model of kinship is needed, which moves beyond the subject- object distinction imposed by classical rational thought and induces instead new forms of empathy, a new sense of connection. Above all, more conceptual creativity is called for. (2006, p. 208)[10]

At stake in tracing forces, flows and relations of power through human as well as non-human intra-actions is not only a reconceptualization of how we think about what constitutes subjectivity but also how a subject is implicated in and constituted by his or her material world. My work contributes to the project of creating "a new kinship system: a new social nexus and new forms of social connection" with human and non-human entities. Braidotti voices the strategy that this project methodologically enacts when she asks: "What kinds of bonds can be established and how can they be sustained?" (Braidotti 2006, p. 202).

A consistent criticism in environmental philosophy and philosophical critiques of environmentalism as a movement is the tendency to humanize, anthropomorphize, and extend our human modes of understanding to the natural world – be it "benevolently" or as a means of exerting control over nature. To some degree this is undoubtedly a result of our situatedness as humans, a situatedness that must be acknowledged or accounted for. But the other pole – to treat nature as wholly "other" – is no less destructive. My project takes aim at these dualistic discursive distinctions that get drawn between what constitutes the human and non-human and the divide between what is considered "nature" and what is considered "culture" by attempting to muddy the waters by thinking more complexly about the intra-actions (Barad,

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[10] Similar themes are engaged by Guattari in his work on "pathic knowledge," as elaborated upon in his essay, "Space and Corporeity: Nomads, City drawings" (1992).

2006) and what Bracha Ettinger calls "matrixial" relations (2006) among human and non-human living entities.

I'd also like to describe my methodology as itself feminist, new materialist, and posthumanist. I approach thinkers and theories as a new materialist posthumanist feminist by attempting not to capitulate to dualistic, or dialectical readings of texts and design object (my primary object of study) – whereby one thinker, text, or concept opposes or supercedes another as I approach "truth" within a stream of constant progress. Rather, I attempt to find connections among thinkers, texts, and concepts through close readings and "intensive" nomadic wonderings and wanderings (Deleuze and Guattari 1987, p. 482) and by finding ways that ideas relate to one another and have pertinence to a set of problems from a variety of angles.

The issue of "angle" or "perspective" is also a vital consideration for new materialist posthumanist feminist thinking; however rather than understanding a research perspective as a politics of "location" in terms of either identities or coalitions of shared experience, "perspective" as "situatedness" is understood in terms of what networks an entity (including a researcher) is connected to, relating with, or plugged into and how those various connections constrain, transform, and enable what each respective entity can do within that relation.

Another aspect of new materialist posthumanist feminist methodologies I adhere to is the need to attend to, account for, and in a sense, follow matter or material forces and flows. Particularly in my work on sustainable design practices, I take materiality seriously and follow the flows of material objects from conception to resource-extraction, creation, consumption/production, community connection, refusal, reuse, recycling, etc. In the project's design sections I follow "matter" as a way of approaching the material world with humility.

My methodology is also informed by John Law's approach to method in *After Method: Mess in Social Science Research* in which his aim is "to broaden method, to subvert it, but also to remake it" by "responding creatively to a world that is taken to be composed of an excess of generative forces and relations" (i.e. a part of what he calls "mess") (2004, p. 9). To do this, he writes:

> we will need to unmake many of our methodological habits, including: the desire for certainty; the expectation that we can usually arrive at more or less stable conclusions about the way things really are; the belief that as social scientists we have special insights that allow us to see further than others into certain parts of social reality; and the expectations of generality that are wrapped up in what is often called "universalism." But, first of all we need to unmake our desire and expectation for security. (2004, p. 9)

I would say that a crucial strength of my methodological approach is that I don't come to this project with a set of methodological expectations. This is perhaps why I feel that my method is already, in a sense, the very type of method that Law advocates: a "slow method," a "vulnerable method," a "quiet method," a "multiple method," a "modest method," an "uncertain method," a "diverse method" (2004, p. 11). Thus, the methodological focus of this project is to engage in a critical and rhetorical analysis of logics of sustainability which includes the broader "intra-actions" (Barad, 2003) and feedback-loops amongst, for example, theorists of sustainability, socio-political forces that thwart or overcode (Deleuze, 1983, p. 222) sustainable practices, technology and "nature," and sustainable design practice. My method will be to apply, expand upon, and contribute to the ways new materialist feminist discourses can contribute to contemporary theories and practices of sustainable design.

This dissertation, by bringing Deleuze and Guattari's work together with new materialist feminist posthumanist philosophy, sustainability, and design thinking works

to situate the politics of the environment in terms of cultural shifts under globalization, and contributes to academic and non-academic conversations regarding the role of ecologically responsible global citizenship in a world of 21st century environmental and philosophical concerns.

CHAPTER ONE

DELEUZE, GUATTARI, AND THINKING SUSTAINABILITY DIFFERENTLY: *RITOURNELLES* FOR A PLANET-YET-TO-COME

What becomings pass through us today? (Deleuze and Guattari, 1994, p. 113)

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A PEOPLE-YET-TO-COME AND BECOMING NOW-HERE

Deleuze and Guattari's invocation for a "people-yet-to-come" leads us to ask: *what* are the people-yet-to-come? Or rather, *who* are the people-yet-to-come? Or perhaps, *where* are the people-yet-to-come? Or even, *when* are the people-yet-to-come? Early twentieth-century avant-garde artist Paul Klee made a similar plea, seeking "a people" in his 1924 lecture "On Modern Art": Klee lamented that "the people" present in his milieu "are not with [them]" – the modernist artists at the Bauhaus school of design who were so ahead of their time (1964, p. 55).[11] His remarks in this famous lecture and elsewhere in his diaries and notebooks suggest he thought that the art audiences of his era were not ready to release artists from the representationalist paradigms of traditional art and embrace modern art-making as the creation of the new. In other words, art audiences were not prepared to embrace a new notion of art and design as *presentation* rather than *re-presentation*. Klee, like Deleuze and Guattari, sought a people-yet-to-come – an art audience hospitable to new concepts. His ideas were indeed *avant-garde*: in one sense they were perfectly *of* their time, arising out of the context of a specific historical moment and surroundings; but, in the sense that his work was

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[11] Paul Klee writes: "the people are not with us … But we seek a people. We began over there in the Bauhaus. We began there with a community to which each of us gave what he had. More we cannot do" ("On Modern Art," 1964, p. 55).

experimental, innovative and even deemed radical, his ideas were also *un*timely, out-of-step with time, and, we might even say, *ahead* of their time (especially given the significant influence of his work on later thinkers and artists such as Walter Benjamin, Deleuze and Guattari, CoBrA, and others). His theories about art and art-making were *too* new – too "modern" – for the people in his milieu, not to mention their social and political representatives. Those who formed the conservative and majoritarian Weimar Germany, famously condemned Bauhaus art as "degenerate," and eventually closed down the school.

Deleuze and Guattari's concept of a "people-yet-to-come," though it echoes Klee's call in its ethical and political implications, is less a historical lament and more an expression of an ontological concept. Deleuze and Guattari's plea for a "people-yet-to-come" does not presume that the ethical or political process of transformation at work is one through which a pre-existing (though not-yet-existing) "people" will come to adopt a pre-existing "idea" over time. Rather, they understand the people present *in the present* as *already* the "people-yet-to-come." That is, for Deleuze and Guattari, we are always already people-in-becoming and thus the concept of a "people-yet-to-come" expresses the perpetual potentiality of becoming-other inherent to the present. This more mundane – and yet more radical – understanding of people-in-becoming *as* the "people-yet-to-come" is crucial for rethinking concepts of environmental "sustainability" and practices of environmental ethics and politics. Deleuze and Guattari's notion of a "people-yet-to-come" as people-in-becoming is more *mundane* because for them the "people-yet-to-come" are the people who are already here (rather than an *other* radical people who are waiting in an *other* future time and place). And it is also more *radical* because rather than locate potentiality in far off futures, Deleuze and Guattari ask us to see potentiality in what is immanent, in the already-existing processes of becoming all around us and indeed, throughout us, *here* and *now*.

Rather than simply hold out hope for a different future, we, in our constant becoming-other, our on-going yet-to-come-ness, are recognized by Deleuze and Guattari as agents with the potential capacity to bring such futures about. Deleuze and Guattari's concept of a "people-yet-to-come" can thus be understood as what Rosi Braidotti describes as an affirmative expression of a futurity (2006, p. 209) in so far as it locates futurity in the potential for change inherent in our immanent and material present rather than in a transcendent or possible future. A "people-yet-to-come" as an image of thought anchors the utopian-sounding summoning of a people in a futurity-oriented *now-here* rather than in a future *no-where* (Samuel Butler, quoted in Deleuze and Guattari, 1994, p. 100). As a result, this concept, especially when articulated in terms of a more ecological notion of subjectivity, have the potential to promote transformative reconceptualizations of current ways of thinking and/as practices of doing environmental "sustainability."[12]

In this chapter-to-come, I connect the concept of a "people-yet-to-come" to what we might call a "planet-yet-to-come" in order to highlight some of the ways Deleuze and Guattari's materialist, posthumanist and ecological reconfigurations of subjectivity help us learn to think in critical and creative new ways about "sustainability" – a term that is taken for granted as having a clear meaning, a contemporary meme that is perhaps even becoming a cliché, and indeed, as Adrian Parr argues in *Hijacking*

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[12] Thinking ought to be included in our conception of action – not to mention included in the habits under consideration here. Ian Pindar and Paul Sutton, translators of *The Three Ecologies*, point out that although the "concept of 'praxis' (from the Greek for 'doing') originated in Karl Marx's early writings" and "suggests action rather than philosophical speculation," Guattari did not oppose thought to action but understood praxis more broadly as "effective practices of experimentation" (2008, p. 85 n. 16). Following this line of thought, in *The Ecological Thought* Timothy Morton ponders the thought/action distinction and defines ecological thought not only as thinking *about* ecology but, equally importantly, as "a thinking that is ecological" to which he adds that ecological thinking is: "a contemplating that is a doing. Reframing our world, our problems, and ourselves is part of the ecological project. This is what *praxis* means – action that is thoughtful and thought that is active. Aristotle asserted that the highest form of praxis was contemplation" (2010, p. 8-9).

Sustainability (2009), a notion that is often highly problematic in its conceptualization and practice. My suggestion is that we think sustainability differently – namely, through the concept of the "refrain" and its process of differentiation – in order to critique, complicate and re-conceptualize the term.[13] This requires that we not take the term "sustainability" for granted as a good or as a goal. As Parr observes, "the meaning and value of sustainability is contested, produced, and exercised" (2009, p. 3). For Parr, sustainability is "an instrument of knowledge formation" that engages the "energies" that propel "new and emerging social values" as well as "more traditional values and conventions" and the "habits and stereotypes underscoring these" (2009, p. 3). In so far as the term "sustainability" serves as a banner for ecological awareness gaining cultural, social and political recognition, it provides the terrain for conversations and contestations about environmental relations, and currently encapsulates approaches that are problematic as well as many that are promising. It is a concept, then, worth thinking about critically and creatively rethinking.

I suggest that practices of sustainability are – or ought to be – intimately linked to ethics and politics in so far as they require *transformation* of habitual modes of thinking and doing. In this era of neoliberal governmentality, global capital flows, and cascading economic, ecological and social crises, we must engage with notions of "sustainability" that exceed the confines of individualized and individualizing actions and responses to issues that remain circumscribed in consumerism or oriented towards extracting profit. What is required is a more radical change in habitual ways of thinking about ourselves as separate from other human and non-human, living and non-living others. Focusing on the work of Deleuze and Guattari on capitalist economies (1983, 1987) and ecologies (Guattari, 2008), this chapter connects

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[13] I thank Dianne Chisholm for her thoughtful feedback on this chapter. I am grateful, in particular, for her insights regarding the paradox of sustainability as sustaining what *is* versus as sustaining *difference* and for suggesting the "refrain" as a way of thinking differently about this problematic.

concepts such as geophilosophy, habit, the new, nomadism, and the refrain or ritournelle in order to ask: What does it mean – if we think with Deleuze and Guattari – to think "sustainably"? How can we conceptualize "sustainable relations"? What is to be "sustained"? I suggest that focusing on *intensities*, *different connectivities*, and an expanded understanding of human and nonhuman *communities* in the work of Deleuze and Guattari offers a critical response to the individualist and consumerist neoliberal notions of sustainability being promulgated today and informs new directions for creative environmental ethics and politics. I demonstrate how thinking sustainability through the concept of the "refrain" or "*la ritournelle*" (1987, p. 312) is vital for the kind of environmental engagement needed *in* the present for the future of our planet.

GEOPHILOSOPHY: A PEOPLE-YET-TO-COME AND A PLANET-YET-TO-COME

Remapping the concept of a people-yet-to-come onto the becoming of a people-in-the-present prompts us to ask ourselves: So *what* are we, *who* are we, *where* are we, and *when* are we here and now? It also leads us to be concerned with the question: How is the concept of a "people-yet-to-come" connected to what we might call a *planet-yet-to-come*? Deleuze and Guattari's concept of "geophilosophy" is one of the ways in which they express the connection between people and the planet in their work (1994, p. 85). Their writing on geophilosophy calls attention to the terrestrial contingencies that bring a particular way of thinking into expression in particular places and times. They call attention to the fact that, for instance, Greek philosophy was more a product of its geographical milieu than the sign of the natural origin of philosophical thought belonging to the "Greek territory" and, by extension, to the "Western earth" (1994, p. 95). Moreover, they propose that just as Greek philosophy was an immanent and contingent expression of its earthly place-time, the philosophical challenge for us

today is not to seek to return to an origin, a point of departure, a philosophical home to which we may (or may never) have belonged (and to which we certainly no longer belong) but instead to create concepts that express where, when, and how we are living here and now. As Dianne Chisholm elucidates in her editorial introduction to a special issue of the e-journal *Rhizomes* devoted to Deleuze and Guattari's ecosophical expressions:

> Modern European philosophy, notably German philosophy, colonizes (or reterritorializes upon) Greek philosophy while overlooking and misconstruing the immanence and contingencies of its own territorial assemblage. To recover the philosophy of ancient Greece is an unrealistic option for a really innovative philosophy, a philosophy that is alive to the here and now of creative, geographic, and demographic evolution, and to its own place in this process. Instead, Deleuze and Guattari urge that philosophy – and affiliated arts that share geophilosophy's desire to uproot the exhausted ground of thought – tune into earth's flows and forces from where they are, and that, with sympathetic intuition, they articulate the concepts and affects of a most becoming territorial refrain. (Chisholm, 2007)

In Deleuze and Guattari's analysis, philosophy emerged in Greece "as a result of contingency rather than necessity, as a result of an ambience or milieu rather than an origin, of a becoming rather than a history, of a geography rather than a historiography, of a grace rather than a nature" (1994, p. 96-97). Subtracting "nature" and adding "earth," removing the inherent and replacing it with the contingent, turning history into geohistory, and reorienting philosophy into a geophilosophy invites us not only to wonder "Why philosophy in Greece at that moment?" (1994, p. 95), but also challenges us to ask: How do we make a connection between thinking today and the present-day earth that provides the context for our thinking? Indeed, for Deleuze and Guattari, the only thing that ought to remain the same across the different and constantly differing locations of thought is the *creative* function of philosophy: what is consistent about philosophy across varied times and places is that its function is "to create concepts" (1994, p. 136). Our task today, then, is to ask:

What kinds of thinking "habits" are adequate for today's habitats? How do we create concepts that are contingent upon and connected to the planet we inhabit and that inhabits us? How do we cultivate the joint becoming of a "people-to-come" and the "new earth" or *planet-yet-to-come* (1994, p. 109)?

The ecological dimension of what Deleuze and Guattari called "geophilosophy" is not lost on these thinkers when they propose that we pose philosophical questions that relate to "the Now" (1994, p. 112). For them, the objective of philosophy is not "to contemplate the eternal or to reflect history" but rather "to diagnose our actual becomings" (1994, p. 112). Moreover, Deleuze and Guattari themselves not only present, but also perform, an ecologically and economically engaged philosophy – a philosophy connected to the *oikos*, our habitat and, indeed, our home (1994, p. 112).[14] It is in the context of the ecological and economic issues central to Deleuze and Guattari as well as the crises of our current ecological and economic climes that they call for creativity when they remark: "We do not lack communication. On the contrary, we have too much of it. We lack creation. *We lack resistance to the present*. The creation of concepts in itself calls for a future form, for a new earth and people that do not yet exist" (1994, p. 108). For Deleuze and Guattari, this call for the creation of new concepts, a new earth and new people has an important ontological, epistemological, ethical, and political dimension that cannot be underscored enough: the call for a new earth, and a new people is at once an affirmation of and an invitation to the people in the here and now to be creative in thinking and practices concerning their earthly existence so that they can become-other. This immanent and affirmative kind of thinking and/as practice is itself what brings about the existence of a new people together with a new earth. In other words, while a people-yet-to-come might already be here now, their task is to forge a critical resistance towards

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[14] As Guattari notes, the Greek word, *oikos*, from which the word *eco*logy and *eco*nomy derives, means "house, domestic property, habitat, natural milieu" (2008, p. 95 n. 52) and denotes a location where "interactions and encounters take place" (Herzogenrath, 2009, p. 5).

taken-for-granted and worn-out ideas, foster a creative betrayal of the categories of thought to which they have been tethered, and create new concepts adequate to the complexities of new contexts.[15]

Deleuze and Guattari focus on art and philosophy as potent engines of creation when they explain, "Art and philosophy converge at this point: the constitution of an earth and a people that are lacking as the correlate of creation" (1994, p. 108). Indeed, as we have already seen, sustainability has much to do with not only doing "sustainable" things but also learning to become more "sustainable" thinkers – that is to say, we need to understand *thinking as also a kind of doing* and understand "sustainable" thinking as learning to think differently about ourselves, our becomings and, indeed, about "sustainability" as a concept. Just as a "people-yet-to-come" can be conceptualized as a critique of molar (or common-sense) categories of thought, so too must "sustainability" be critically re-examined, creatively re-conceptualized, and freed from its common-sense understanding: the simple reproduction and perpetuation of the status quo. Thus, "sustainability" should not be thought of in terms of sustaining what is (the people as they are, the earth as it is, and the pre-existing interconnectedness of things as they are) but rather as the sustaining of intensities, the generative drivers of becoming-other, to create and test different connections (heterogenesis) for how they work and what they do. Let us begin this process of sustainable thinking, then, precisely *by thinking differently* about sustainability. This will lead us to shift from thinking sustainability as the repetition of the same to the process of generating difference through deterritorializing refrains – or what Deleuze and Guattari call "*ritournelles*" (1987, p. 312).

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[15] I thank Jason Wallin and Matt Carlin for emphasizing this point.

"THINKING DIFFERENTLY" AND THE FORMATION OF NEW HABITS

Several authors have recently focused on the ways we think about pressing earth-matters and have proposed various ways of "thinking differently" as a response to current ecological crises.[16] In *The Three Ecologies,* Guattari describes thinking ecologically as "thinking about interconnectedness" or thinking "transversally" (2008, p. 29).[17] Learning to think differently is itself a political project since politics involves processes of change and transformation. Indeed, change and transformation are critical in the area of environmental education and environmental politics, both of which, in their attempt to create connections between us "in here" and the environment "out there" presume and reinstate a separation between what constitutes "us" and the "environment." Guattari registered this criticism when he accused "political groupings and executive authorities" to be:

> totally incapable of understanding the full implications of these issues. Despite having recently initiated a partial realization of the most obvious dangers that threaten the natural environment of our societies, they are generally content to simply tackle industrial pollution and then from a purely technocratic perspective, whereas only an ethico-political articulation – which I call *ecosophy* – between the three ecological registers (the environment, social relations, and human subjectivity) would be likely to clarify these questions. (2008, p. 19-20)

Not unlike what Guattari calls the limited perspectives of politicians and policy-makers, most approaches to ecology do not include what Guattari identified as "mental," "social," and "environmental" ecologies. I would like, then, to follow

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[16] Gregory Bateson proposes thinking in terms of an "ecology of ideas" in *Steps to an Ecology of Mind* (1972), a related concept finds expression in Guattari's later work on "mental ecology," especially in *The Three Ecologies* (2008), and, more recently, Timothy Morton elucidates what he calls thinking about "ecology without nature" (2009) and "the ecological thought" (2010).

[17] Guattari writes: "Now more than ever, nature cannot be separated from culture; in order to comprehend the interactions between ecosystems, the mechanosphere and the social and individual Universes of reference, we must learn to think 'transversally'" (2008, p. 29).

Chisholm's invitation to think in terms of a geophilosophy that includes not only us as humans but also other non-human, living and non-living entities and imagine new ways to inhabit the earth and co-habit the earth with others:

> "Geophilosophy" and the various "plateaus" of *A Thousand Plateaus* describe and prescribe the becoming-earth of philosophy and art, bearing in mind the first principle of ecology: namely, that all things assemble with other things in hetero-geneous composites. [But g]eophilosophy offers more than just a description of these matters and forces; it articulates an ontology of ecological consistency that maps for us a rhizome – or symbiotic network of matter-energy flow – that we can either block with environmental damage or extend so as to increase the functional and expressive health of machinic assemblages (couplings of earth and *socius*). As such, geophilosophy is more ecological than ecology, the discipline of which is restricted to the quantifying analytics of ecosystem dynamics, ecosite constituencies, and population stability and sustainability. (Chisholm, 2007)

As Chisholm observes, thinking geophilosophically is to think differently. Learning to think differently requires the formation of new thinking habits that break free of the confined and restrictive ways in which we think about ourselves as individuals separate from other human and non-human, living and non-living others in such a way that even these very categories become confounded. A more materialist, posthumanist and ecological way of thinking about subjectivity such as the one Deleuze and Guattari present in their joint work, and Guattari presents in his later projects,[18] opens us up to the potential to craft creative responses that are not limited to individualized and individualizing actions and, indeed, to think differently about "sustainability."[19]

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[18] Guattari further describes his ecosophical project as "a reconstruction of social and individual practices which I shall classify under three complementary headings, all of which come under the ethico-aesthetic aegis of an ecosophy: social ecology, mental ecology and environmental ecology" (2008, p. 28).

[19] The concept of the "new" and that of "habits" might initially seem a paradox; however, I read Deleuze and Guattari's work on "habit" (like their work on other concepts such as "the new") as not necessarily suggesting that habits are necessarily "good" or "bad," but rather that they could be either

In one of the few articles to date that deals explicitly with learning in relation to sustainability, Adam Douglas Henry states that scholars in sustainability science "generally agree that learning is a critical hinge for sustainability" (2009, p. 131). Henry defines problems of sustainability as "those that involve conflicts between enhancing the well-being of humans, protecting the integrity of ecological systems, and balancing these often conflicting goals in the long term" (2009, p. 133). Although Henry's study acknowledges that understanding learning as "the accumulation of truthful knowledge about the world" is an "overly constraining and narrow definition, and leads to a smaller class of model than is needed to address problems of sustainability" (2009, p. 133), a critical issue to which I will return, he nevertheless reproduces an understanding of the human as separate from the environment and pits these "conflicting" interests against one another. Further, this study goes only so far by suggesting that sustainability is about "complex and uncertain problems" (2009, p. 131) without proposing new ways of thinking about what sustainability might be and stopping short at the suggestion that sustainability simply "means different things to different people" (2009, p. 133). Deleuze and Guattari offer useful cartographies as well as suggest new routes for thinking about subjectivity and the problems of sustainability in the face of such complexity, uncertainty, and difference. Rather than define sustainability on an extensive plane of sameness, or make a relativist argument about what sustainability means, Deleuze and Guattari's approach helps us to focus on how sustainability is always about complexity, uncertainty (as Deleuze and Guattari write, paraphrasing Spinoza, "we do not know what a body can do"), intensity, becoming-other, and transversal relations (1983, p. 39).

(depending on what they do). That is, a good habit is a habit that does not repeat, but rather refrains, generating creativity, experimentation and difference. Good thinking habits are ways of thinking – or "images of thought" that imagine thought to be the work of ongoing experimentation aiming at sustaining intensities and the creation of concepts rather than those that routinize life. In this way, good habits are habits of resisting repetitive habits – habits that refuse to solidify into common-sense ways of thinking and routine ways of doing.

First, the task of critical environmental learning and thinking is to think of ourselves as a people-to-come, which, as Henry suggests, means moving beyond our reductive focus on accumulation and exchange of information wherein what is sustained is a habituated circulation of knowledge (and thereby the status quo). Second, we need to think more geophilosophically about the notion of subjectivity by moving beyond an unquestioning acceptance of liberal humanist views of subjects as discrete individuals. Instead we can begin to approach environmental problems using approaches that understand subjects as ecological entities. Opening up the notion of subjectivity means that our relations to our environs – the earthly environment, as well as the social, cultural, and political ecology – are open to question, critical interrogation and creative reconceptualization. What is at stake in having the courage to examine our habits of thought is the possibility to experiment with creative new ways to inhabit this earth and co-habit this earth with human and non-human, living and non-living others. This more "eco-sophical" notion of subjectivity is also grounded in a way of thinking about humans that underscores our connections to others. Such connections are often stifled, or even severed, in contemporary contexts that focus on competition between rather than cooperation among so-called "individuals," and perpetuate the ideologically-inflected notion that "nature" works via competition rather than co-production – rather than positing that this notion is a reflection of the way neoliberal capitalist logics have become naturalized. Societies and cultures that rely on liberal accounts of subjectivity and that reproduce rather than radically interrogate capitalist logics of competitive rather than cooperative, collaborative, co-productive relations reinforce a stratified socius, recapitulate unchecked economic practices, and repeat ecological bad habits that contribute to the destruction of the planet. We need to think differently about the next generation of thinkers – a people-yet-to-come already here – in order to build the capacity to generate new ideas, and to regenerate ideas that sustain the intensities of our planet.

The pressing issues of our milieu are no doubt the earthly issues of our habitat, our habits, and the ways we inhabit our home (*oikos*) – ecological, economic, and social sustainability. In light of cascading ecological and economic crises such as environmentally damaging resource extraction, climate change, and toxic contamination of the earth from e-waste, nuclear waste, oil spills, and other refuse that we dump and yet that refuse to disappear, not to mention debt-fuelled, profit-driven, bubbling and collapsing financial markets, we must ask: What kind of transformation in thinking is needed for our changing habitat? And how do we change our thinking habits?

In the next section I bring together Deleuze and Guattari's concept of geophilosophy as a philosophy that connects a people and a planet with their concept of people as themselves "habits" and the planet as habitat. These are conceptual tools to help us cultivate new ways of contemplating ourselves, the earth, and how to inhabit both and co-habitat the earth with others. The way in which Deleuze and Guattari think about people and planet addresses thinking as a habit (and indeed, habit as "contemplation") and activates a kind of thinking that results in "a transformation not only of our schemes of thought, but also our ways of inhabiting the world" (Braidotti, 2006, p. 8). The project of breaking unsustainable thinking habits and ways of living in the world inheres in activating the potential of the "people-yet-to-come."

HABITS AND HABITATS: "I" AS A HABIT AND "ME" AS "MILIEU"

To initiate this shift in our thinking habits in the hope of learning new ways to think about subjectivity, let's begin by considering the connection between individuals and their habits and habitats or, in other words, on the concept of "me" in relation to

"milieu" in the work of Deleuze and Guattari. The word "milieu" in French means not only the "environment," but also the "middle." I invite us to start, then, in the middle of matters by thinking differently about the "I" by de-centering "I" as an individualistic identity (Braidotti, 2006, p. 262) and enmeshing the "I" in relation to its environment – as a habit, interaction, intra-action, or habitual encounter with habitats.

Deleuze and Guattari's shifting of the terrain of subjectivity in a way that takes habits and habitats seriously means that subjectivity is understood as simultaneously material (though not essentialist) *and* constructed (materially, socially, and in other ways) and thus subject to change. Indeed, for materialists like Deleuze and Guattari, the "natural" and the "socially constructed" world are not opposing binary categories; rather, both are expressions of underlying material forces and flows. Habit is a crucial concept for understanding our own subjectivity in the context of the complex forces at work in the world beyond "us." Deleuze and Guattari connect thinking to being-as-becoming in their writing about habit. In their words, we are all "contemplations, and therefore habits. *I* is a habit. Wherever there are habits there are concepts, and habits are developed and given up on the plane of immanence a radical experience: they are 'conventions'" (1994, p. 105).

Influenced by the work of Gilbert Simondon (2009) and Jakob von Uexküll (2010), Deleuze and Guattari challenge the notion of a stable subject as an individual agent in their materialist and posthumanist account of subjectivity by situating the subject in the middle, *en milieu*, of an environment and arguing that it is this "milieu" that composes a "me."[20] For Deleuze and Guattari, whether it is what/who/where/when we are or how we think about what/where/when/we are, the "contemplations" that

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[20] For Simondon, the process of individuation makes visible "not only the individual, but the pair individual-environment" (2009, p. 5) and we can think of the relations that are "interior and exterior to the individual as 'participation'" (2009, p. 8). For von Uexküll, "every subject spins out, like the spider's threads, its relations to certain qualities of things and weaves them into a solid web, which carries its existence" (2010, p. 53).

make our "selves," the terms "subject and object," are inaccurate descriptors that "give a poor approximation of thought" (1994, p. 85). Indeed, not only are "subject and object" excessively blunt distinctions, the terms "human" and "non-human," "living" and "non-living," become similarly troublesome when we consider the ways in which the living, human "me" is inextricably connected to, and reliant upon, the non-human, living and non-living in the midst of human "milieus," surroundings or environments.

Just as we become most aware of a part of a body or a part of a machine at the moment when it breaks down, we become most aware of our material imbrication in our milieu – the connection between what we think of as "outside us" and what we think of as "comprising us" – in instances where the connections between what was presumed to be a clear-cut "inside" and "outside" is marked by an identifiable "breakdown" of connections or "breach" across them. For instance, environmental crises such as land contamination, viruses, or oil spills not only reveal the lack of separation between the "human" and "non-human" but also the "living" and "non-living," and indeed, the "organic" and "inorganic." The lack of a "line" or boundary between "us" and our "environs" is perhaps most explicit in how quickly we are implicated in and affected by the spread of any so-called "contagion." We are always already made of (as well as un-made by) our milieu. Indeed, as Michel Serres observes in his work on "the parasite" (2007) or as Myra J. Hird observes in her work on bacteria and microbial life (2009, 2010), contagions, parasites, or symbionts reveal the ways we are nested entities, to use Donna Haraway's words, "all the way down" (in Schneider, 2005, p. 140). As Timothy Morton writes, "At a microlevel, it becomes impossible to tell whether the mishmash of replicating entities are rebels or parasites: inside-outside distinctions break down. The more we know, the less self-contained we are" (2010, p. 36). Materialist accounts that trouble the distinction between the human and non-human as well as extensive evidence of anthropogenic effects of the so-

called "non-human" environment lend support to Bateson's observation that "the unit of survival is organism plus environment. We are learning by bitter experience that the organism which destroys its environment destroys itself" (1972, p. 484).

Deleuze and Guattari suggest that just as subjects and so-called "objects" or "surroundings" are materially implicated, so too is the way in which we think about them (and about thinking): "Thinking is neither a line drawn between subject and object nor a revolving of one around the other. Rather, thinking takes place in the relationship of territory and the earth" (1994, p. 85). This more material and posthumanist reading of subjectivity de-centres identity questions of "who" we are by re-positioning the subject in the middle – *en milieu* – and thereby accounting for the "who" through a "what, where and when" we are. We are reminded here of Deleuze and Guattari's description of Greek philosophy as linked to a particular habitat, and as a particular way of thinking consisting of particular habits. In their grounded – and yet fluid and creative – conception of habits, Deleuze and Guattari explain that:

> habits are taken on by contemplating and by contracting that which is contemplated. *Habit is creative*. The plant contemplates water, earth, nitrogen, carbon, chlorides, and sulphates, and it contracts them in order to acquire its own concept and fill itself with it (enjoyment). The concept is a habit acquired by contemplating the elements from which we come. (1994, p. 105, my emphasis)

Describing ourselves as "habits" or patterns of difference and repetition, Deleuze and Guattari write that we are made up of "contractions" consisting of "passive syntheses" that constitute "our habit of living, our expectation that 'it' [us, our 'life'] will continue … thereby assuring the perpetuation of our *case*" (1994, p. 74). Habit, Deleuze argues, "concerns not only the sensory-motor habits that we have" but also, "before these, the primary habits that we are; the thousands of passive syntheses of which we are organically composed" (1994, p. 75).

There is no "self"called "I," no identity, no subject apart from the "continuity" formed from "our thousands of component habits." In this way, as Deleuze and Guattari argue, we as humans are not unlike "wheat" – "a contraction of the earth and humidity" (Deleuze, 1994, p. 76-8). Indeed, Deleuze asks,

> What organism is not made of elements and cases of repetition, of contemplated and contracted water, nitrogen, carbon, chlorides and sulphates, thereby intertwining all the habits of which it is composed? … [E]verything is contemplation, even rocks and woods, animals and men, even Actaeon and the stag, Narcissus and the flower, even our actions and our needs. (1994, p. 76-8)

For Deleuze, the subject is a contraction, contemplation, or composition of nested agencies, agential materialities, actions, responses, and witnesses that interact with no origin, no centre, no "I," only a cooperation among many "little" so-called "selves":

> Underneath the self which acts are little selves which contemplate and which render possible both the action and the active subject. We speak of our "self" only in virtue of these thousands of little witnesses which contemplate within us: it is always a third party who says "me." (1994, p. 76-8)

What Deleuze calls the "self" within this dynamic milieu is itself "by no means simple"; indeed, as Deleuze points out, it is "not enough to relativise or pluralise the self, all the while retaining for it a simple attenuated form": "selves are larval subjects; the world of passive syntheses constitutes the system of the self, under conditions yet to be determined, but it is the system of a dissolved self" (1994, p. 78). The work of Deleuze and Guattari is concerned not with determining "identities" but rather with how things work – their philosophical focus is not about what something *is,* but what something *does*. Their work functions to de-essentialize and yet at the same time emphasize an entity's ever shifting material realities, especially an entity's emergent capacities *in relation* to – and as a condition of a relation to – other entities. Deleuze

and Guattari's iterative oeuvre creates concepts, demonstrates ways of thinking, and produces vocabularies that enable new projects to continue being open as they mobilize connections – their work acknowledges the force of material limits and actualities while at the same time emphasizing that these always coexist with virtual potentialities.

"FACING THE OUTSIDE" AND CREATING SUSTAINABLE CONNECTIONS

Deleuze/Guattarian theorist and feminist philosopher Rosi Braidotti is, alongside Adrian Parr, one of the foremost scholars concerned with connecting Deleuze and Guattari's oeuvre with concepts of sustainability. For Braidotti, so-called "subjects" are "ecological entities" (2006, p. 41). She emphasizes that our way of thinking about subjectivity should be brought up-to-date with the material and environmental underpinnings of our subjectivity. Braidotti argues that our conception of subjectivity should reflect the openness of the subject to his/her milieu when she calls our attention to the crucial importance of "reversing the subject to face the outside" (2006, p. 262). If "*I* is a habit" or a contraction of a territory, then if we reverse our view, we see that that same "I" functions as a kind of collection and connection – a machinic part of its milieu. As Bernd Herzogenrath puts it, "While deep ecology subjectifies and shallow ecologies objectify nature, Deleuze's flat eco*logics* intensify it, by opening up the 'philosophical subject' to the realm of non-human machines, affects, *haecceities*" (2009, p. 11). This shift in thinking about subjectivity from thinking about habits *as something someone does* to thinking about habits *as something that "does" someone* offers a better account for what Braidotti argues are "the kinds of subjects we have already become" – that is to say, the kinds of entities we have not only become but are also always in the process of becoming (2006, p. 40).

In *The Three Ecologies* Guattari expands the notion of ecology beyond environmental concerns to include "the whole of subjectivity and capitalistic power formations" (2008, p. 35). He takes the idea that individuals are "captured" by their "environment, by ideas, tastes, models, ways of being," and argues that, just as it is difficult to know where we begin and end relative to our milieu, "it is difficult to know where, or rather who 'we' are" – particularly in the ecology provided by the dominant refrains of the milieus produced by what he critically calls "Integrated World Capitalism" (Pindar and Sutton, 2008, p. 5). Guattari's central concern in outlining the social, mental, and environmental ecologies is to ask how we can learn to use the fits and starts, differences and repetitions, haecceities and moments of habit to propel ourselves from one kind of habit to another (or, more specifically, towards the habit of non-habit, or becoming-other). As Pindar and Sutton note, in *Chaosmosis*, Guattari describes a psychological patient who finds himself "stuck in a rut, going round and round in circles" until:

> One day, on the spur of the moment, he decides to take up driving again. As he does so he immediately activates an existentializing refrain that opens up "new fields of virtuality" for him. He renews contact with old friends, drives to familiar spots, and regains his self-confidence. (quoted in Pindar and Sutton 2008, p. 6-7)

Habits have a centrifocal force, concentrating forces in routines, reterritorializations, and representations, but perhaps we can use their other *centripetal* force to propel ourselves into new non-routines, deterritorializing refrains, and creative productions – after all, we are reminded by Deleuze that habit, while having a tendency toward redundancy, is also "*creative*" (1994, p. 105). Indeed, the refrain, in this case, can also have "*re-creative* influence" (Guattari quoted in Pindar and Sutton, 2008, p. 7).

We are indeed creatures of habit, which is to say, contractions of habit, and indeed inhabited by our habitat just as we inhabit our habitat. The question of our

becoming-other is dependent upon this recognition of our selves as porous, open, in-becoming subjects and thus necessarily interested in our environment as an integral part of our own self-interest (indeed, when the "self" is configured in this open way, the false opposition of "selflessness" and "selfishness" becomes troubled; instead, the aim becomes, as Bateson suggested, the sustainability of the "self" plus its "environment").

What is sustained in this more open concept of the self-other relation is not a static status quo, nor an oppositional relation to it, but rather the sustaining of intensities, a mutual becoming-other and the creation of a new and different assemblages. Deleuze and Guattari famously give the example of the mutual becoming-other of the wasp and the orchid:

> How could movements of deterritorialization and processes of reterritorialization not be relative, always connected, caught up in one another? The orchid deterritorializes by forming an image, a tracing of a wasp; but the wasp reterritorializes on that image. The wasp is nevertheless deterritorialized, becoming a piece in the orchid's reproductive apparatus. But it reterritorializes the orchid by transporting its pollen. Wasp and orchid, as heterogeneous elements, form a rhizome. It could be said that the orchid imitates the wasp, reproducing its image in a signifying fashion (mimesis, mimicry, lure, etc.). But this is true only on the level of the strata-a parallelism between two strata such that a plant organization on one imitates an animal organization on the other. At the same time, something else entirely is going on: not imitation at all but a capture of code, surplus value of code, an increase in valence, a veritable becoming, a becoming-wasp of the orchid and a becoming-orchid of the wasp. Each of these becomings brings about the deterritorialization of one term and the reterritorialization of the other; the two becomings interlink and form relays in a circulation of intensities pushing the deterritorialization ever further. (1987, p. 10)

In *Deleuze, Guattari and Ecology*, Herzogenrath writes, "If the eminent eco-socialist Barry Commoner's 'First Law of Ecology: Everything is Connected to Everything Else'" meets with Deleuze and Guattari's idea that "what makes a machine, to be

precise, are connections" then, he argues, we can think of nature as an abstract machine composed of multiple assemblages of "interconnected relations" (Deleuze and Guattari quoted in Herzogenrath, 2009, p. 5). Following what Chisholm also calls ecology's first principle of "generative interconnectivity," the key concern of a "clinical ecology" is the promotion of the vitality of these connections (2007).

In Braidotti's view, the question of sustainability is intimately related to what one connects to – and the cultivation of "good" and "bad" habits.[21] Although the Deleuze and Guattarian oeuvre, following Friedrich Nietzsche's, is often hostile to the idea of habits and more hospitable to the notion of "the new," this is largely due to the naturalized authority that habits have in dictating the "normal" and their role in holding to historical and conservative patterns of thought.[22] Upon closer examination, however, we discover that for Deleuze and Guattari, habits are, in and of themselves, neither "good" nor "bad." Indeed, even Nietzsche's ethic of an eternal return – or the Deleuze and Guattarian refrain – is what one might call the cultivation of a "good" or un-habitual habit. Guattari writes that we need to "kick the habit" of sedative discourse, particularly the "fix" of television," in order to learn to "apprehend the world through the interchangeable lenses or points of view of the three ecologies" (2008, p. 28). In effect, he argues that we need to kick one – unsustainable – habit in order to learn another – more sustainable – one. Guattari stresses that all things must be "continually reinvented, started again from scratch, otherwise the processes become trapped in a cycle of deathly repetition" (2008, p.

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[21] I thank Rosi Braidotti and Anneke Smelik for their lucid elaboration upon the concept of "good" and "bad" habits in the seminar on "Gilles Deleuze and Cultural Studies" they co-taught at the Centre for the Humanities at Utrecht University in the fall of 2010.

[22] Braidotti adds that habits are "socially enforced" and thereby "legal" types of addiction. They are cumulated toxins that by sheer uncreative repetition engender forms of behaviour that can be socially accepted as "normal" or even "natural": "The undue credit that is granted to accumulation of habits lends exaggerated authority to past experiences"; her goal in *Transpositions* is to grapple with "the question of which forces, desires or aspirations are likely to propel us out of traditional habits, so that one is actually yearning for changes in a positive and creative manner" (2006, p. 9).

27). This reinvention is an example of a "good" habit that can also promote more sustainable (or, to put it differently, "refrain"-able) modes of becoming. A "good" habit is composed of sustainable or "good" connections or connections that "work" by sustaining intensities through generating difference. A "bad" habit, on the other hand, eradicates differences, creates monotonies and monopolies, and diminishes intensities – the potential to further regenerate by generating difference.

We can think of "sustainable habits" as habits that work like Deleuze and Guattari's concept of the "refrain" or the "*ritournelle.*" Deleuze and Guattari invite us to recall "Nietzsche's idea of the eternal return as a little ditty, a refrain, but which captures the mute and unthinkable forces of the Cosmos" (1987, p. 343). For Nietzsche, the eternal return is an ontological concept as well as an ethical challenge. For him, because the world works through a repetition of difference, we need to *amor fati* or love our fate; we should, in other words, affirm the world as it is and want the world to be no other way than this repetition of difference, and difference via repetition.[23]

For Deleuze and Guattari, the refrain, this pattern of difference via repetition, or repetition via difference, "fabricates time" (1987, p. 349). It is what gives what we consider the "given." But within this "given" there is a lot at play – the tempos and rhythms can be territorialized or deterritorialized, habituated or de-habituated, repetitive or experimental. For Deleuze and Guattari, territorializing refrains are not "opposite" those that deterritorialize, but rather, compose different movements. Deterritorializing refrains may even rely on territorializing refrains. Deleuze writes,

> It is odd how music does not eliminate the bad or mediocre refrain, or the

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[23] In a section entitled "Why I Am So Clever" in his autobiography, *Ecce Homo*, Friedrich Nietzsche extols the virtues of loving our fate: "My formula for greatness in a human being is *amor fati*: that one wants nothing to be other than it is, not in the future, not in the past, not in all eternity. Not merely to endure that which happens of necessity, still less to dissemble it – all idealism is untruthfulness in the face of necessity – but to love it" (2006, p. 509).

bad usage of a refrain, but on the contrary carries it along, or uses it as a springboard … [A] musician requires a *first type* of refrain, a territorial or assemblage refrain, in order to transform it from within, deterritiorialise it, producing a refrain of the *second type* as the final end of music: the cosmic refrain of a sound machine. (1987, p. 349)

For Deleuze and Guattari, "producing a deterritorialized refrain" is paramount to "building a new system" (1987, p. 350). The habituated pattern can be the basis of a new habit – that is*, a habit of non-habit*, or experimentation. For Deleuze and Guattari, these are not opposites, since "one was already present in the other; the cosmic force was already present in the material, the great refrain in the little refrains, the great maneuver in the little maneuver" (1987, p. 350). The movement of experimentation is what should be sustained. Thus, recasting the imperative "to sustain" as the desire "to refrain" is to think sustainability not as prescribed system or pre-known end-goal, but rather an experimental process. As Deleuze and Guattari write, "we have no system, only lines and movements" (1987, p. 350).

If we take seriously Bateson's observation that there can be "an ecology of bad ideas, just as there is an ecology of weeds" (1972, p. 19), we can say that Braidotti, inspired by the work of Deleuze and Guattari, takes up the task of vigorous conceptual weeding by pulling up the habits of thought that suffocate the potential for more sustainable connections, and planting new thought-seedlings that she hopes will take hold as roots of new "habits." In place of the belief that, as she writes, has "little more than longstanding habits and inertia of tradition on its side" (2006, p. 11), Braidotti posits what she calls "nomadic subjectivity," as "an alternative conceptual framework, in the service of a sustainable future" (2006, p. 3-4). In the next section I focus on "nomadic subjectivity" as a different way of thinking, as a rhizome that can lead to better connections, and as a way of thinking about subjective relations among habits and habitats that can lead to more sustainable – or rather, refrain-able – habits and ways of becoming.

NOMADIC SUBJECTIVITY: "WE" ARE WANDERINGS

Contemporary flows of capital and the forced migration of workers and "climate refugees" due to economic and ecological crises raises the question: Surely *this* is not the kind of nomadism Deleuze and Guattari would have championed? What, if not an image of a wanderer walking through a landscape, is the relationship of the nomadic subject to his or her habitat? The nomadic subject is not an expression of *an entity moving through a milieu*; rather, it is an expression *of a milieu moving through an entity*. Indeed, this re-conceptualization of the way in which we habitually think of the nomad as a conceptual persona connects us to more sustainable ways of thinking about subjectivity that may lead us to adopt more sustainable habits.

Nomadic thinking is central to Rosi Braidotti's conception of doing philosophy and, indeed, to thinking ethically. Influenced by the concept of "nomadism" in the work of Deleuze and Guattari, Braidotti argues that we are all "nomadic subjects" in multiple senses. Important for her rethinking of social, economic, and political subjectivities, Braidotti points out that many of us are nomadic subjects in so far as we might relate to multiple gender, sexual, ethnic, racial, class, and national identities. Similarly important for her thinking about our ecological and ethical subjectivities, she brings a meta-perspective to life and stresses that we, like all living entities, live on what she calls "borrowed time" (2006, p. 210). For Braidotti, life is a force that runs through us that, although it may find expression in our existence, does not "belong" to any entity (human or non-human) for more than its lifetime. As she argues: "The life in you is not marked by any signifier and it most certainly does not bear your name" (2006, p. 234). Accordingly, since "life" traverses entities for the time of their existence, Braidotti shares the view with other Deleuze and Guattari theorists as well as other posthumanist and new materialist feminist thinkers that material forces and flows circulate and confound stark distinctions among "human" and "non-human,"

"living" and "non-living" things and thus "[t]he life in "me" is not only human" (2006, p. 236). This recognition radically reconfigures our relations and results in at least two associated ethical consequences: first, it involves the "dissolution of the self, the individual ego, as the necessary premise" (Braidotti 2006, p. 253); and second, it assumes that our existence is "bound up with things that existed before and after us" (2006, p. 238). The dissolution of the self or "death of the subject" is, she argues, an ethical gesture that affirms the extension of the self toward a spatially and temporally broader "eco-philosophy of the subject" (2006, p. 204).

This nomadic entity is not the nomad of neoliberalism, always in search of newness, so that it can cumulate and accumulate. Although a superficial reading of Deleuze and Guattari's work, especially their focus on concepts such as the new and the nomadic, might be read as providing some sort of skewed legitimacy to capitalist logics, this kind of reading is a mistake. Although, as Braidotti notes, the "polycentred, multiple and complex political economy of late postmodernity" is also "nomadic" in that it lubricates the exchange of capital and commodities, this is not an example of the kind of nomadic ethics she, or Deleuze and Guattari, advocates (2006, p. 8). Indeed, Deleuze and Guattari's warning in *A Thousand Plateaus* to "[n]ever believe that a smooth space is enough to save us," in conjunction with the insistence on sustaining potential that underlies their thought, suggests that we ought to read what they mean by the "new" and the "nomadic" more *intensively* and with more *complexity* (1987, p. 500). In *Difference and Repetition*, Deleuze draws upon Nietzsche's distinction between the creation of new values and the recognition of established values and emphasizes that these:

> should not be understood in a historically relative manner, as though the established values were new in their time and the new values simply needed time to become established. In fact it concerns a difference which is both formal and in kind. The new, with its power of beginning and beginning again, remains forever new, just as the established was always established from

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the outset, even if a certain amount of empirical time was necessary for this to be recognized. What becomes established with the new is precisely not the new. For the new – in other words, difference – calls forth forces in thought which are not the forces of recognition, today or tomorrow, but the powers of a completely other model, from an unrecognized and unrecognizable *terra incognita*. (1994, p. 137-8)

Rosi Braidotti orients this critique of the "new" squarely at capitalism when she argues that:

The much-celebrated phenomenon of globalization and its technologies accomplishes a magician's trick: it combines the euphoric celebration of *new* technologies, *new* generations of both human and technological gadgets, *new* wars and *new* weapons with the complete rejection of social change and transformation. In a totally schizophrenic double pull the consumerist and socially enhanced faith in the *new* is supposed not only to fit in with, but also actively to induce, the rejection of in-depth changes. The potentially innovative, de-territorializing impact of the new technologies is hampered and tuned down by the reassertion of the gravitational pull of old and established values. (2006, p. 2)

The notion of nomadism that Deleuze and Guattari describe, and that Braidotti advocates, does not flow through life colonizing, owning, and moving on. Rather, life flows through this nomad in a way that confounds any notion of acquisition, individualism or identity, ownership, property, profit, and yet also is not in the business of abandonment. Braidotti's nomadic subject is, conversely, what she calls a "not-for-profit" entity that recognizes its dependence upon the environment in which it is situated and participates in its forces and flows. As she explains, "this does not mean that one is not productive or useful to society, but simply that one refuses to accumulate," and instead "gives itself away" in a "web" of "becomings and complex interactions" (2006, p. 215).

If we think of this version of a nomadic subject as the conceptual persona of a sustainable way of connecting the "habit" that is a human with its "habitat"

composed of human and non-human, living and non-living entities, the question that remains is "what exactly do we aim to sustain"? In the next section, as we move to this chapter's conclusion, I argue that focusing on sustainable *intensities*, *different connections*, and an expanded understanding of human and nonhuman *communities* in the work of Deleuze and Guattari offers a critical and creative response to the individualist and consumerist neoliberal notions of sustainability being promulgated today and informs new directions for environmental learning, thinking, and doing vital for a *planet-yet-to-come*.

NOMADISM AS VOYAGING IN PLACE: SUSTAINING INTENSITIES, CONNECTIVITIES, COMMUNITIES

In ecology, sustainability is defined as the capacity to endure and describes how biological systems remain diverse and productive over time. For us as humans, sustainability is understood as the potential for long-term maintenance of well-being, which has environmental, economic, and social dimensions. It is upon these related planes of immanence – that of the earth and that of human existence – that we can begin to make connections between sustainability and Deleuze and Guattari's concept of intensity.

If sustainability is "the capacity to endure," then it would seem that, for Deleuze, the principal task for sustainable existence is the modulation of intensities.[24] As Manuel DeLanda argues in *Intensive Science and Virtual Philosophy*, the crucial function of

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[24] In *Difference and Repetition,* Deleuze describes extensities – "everything which happens and everything which appears" as the products of intensities, the "differential processes that generate extensive properties or qualities" (1994, p. 222): "Intensity is [thus] the determinant in the process of actualization" (1994, p. 245). Differences of intensity, which, as Deleuze points out is a tautological expression since "every intensity is differential, by itself a difference," include differences of level, temperature, pressure, tension, [and] potential" (1994, p. 222).

intensities in Deleuze's ontology is the "productive role which differences play in the driving of fluxes" as well as the capacity to "further *differentiate differences"* in the ongoing, divergently evolving processes of becoming (2002, p. 73). The question of intensity, then, is tied to the question of sustainability in terms of defining the limits of what an entity can endure – in other words, modulating instances of high speeds with periods of slow burn – and in terms of the ongoing creation of the conditions of possibility for further endurance. Sustainability is both an extensive and an intensive concept; and yet, intensity is an overlooked dimension of conventional ways it is conceptualized.

Following Deleuze and Guattari's concept of intensity means rethinking ecological sustainability defined as diversity and ongoing productivity as ends in themselves, since these are both extensive measures. Rather, for Deleuze and Guattari, what must be sustained is the potentiality (what Deleuze and Guattari call "intensity" or "difference") that creates diversity, or, in other words, the potential of difference to continue producing differences via generative connections. As I have shown elsewhere, when we move from understandings of sustainability in strictly ecological terms to an understanding of sustainability that also includes economic and social dimensions, an emphasis on diversity or productivity is not a sufficient criterion for the creation of sustainable systems.[25] As Braidotti, points out, capitalism, too, with its "entropic power of hybridization," promotes the "proliferation of differences" for the homogenizing, hegemonizing, monotonizing, and monopolizing "sake of profit" (2006, p. 275-6). It is not enough simply to "diversify" – we have to think about the

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[25] In a different paper, I point out how diversity and productivity, though they may be sufficient principles for ecological sustainability, are problematic when applied to economic sustainability in a global and so-called "free-market" capitalist system (Hroch, 2011). The current contraction of ecological and economic crises in such phenomena as climate change, food crises, financial crises, and the destruction of habitats and communities strongly suggest that ecological sustainability is at serious odds with economic sustainability as it is currently configured. While ecological sustainability aims at sustaining diversity and productivity so that intensity is maintained and potential can continue to flow, economic sustainability as it is currently configured is at odds in so far as, as Braidotti points out, capitalism "proliferat[es] … difference for the sake of [producing] profit" (2006, p. 276).

kinds of diversifications. It is not enough simply to "produce" – we have to think about the purpose of the production. The concept of sustainability thought with intensity as the plateau – the generative ground – of endurance suggests that keeping intensive forces connectively flowing is paramount to what or how much is produced (although diversity and productivity as extensities will determine the conditions of possibility for perpetuating the flows of forces or intensive magnitudes). Sustainability is about the ability to create and keep up generative connections – connections that arise out of differential relations and maintain the intensity to continue to generate difference.

If potentiality is that which needs to be sustained, this is precisely what the current configuration of capitalism drastically diminishes.[26] If we consider, for example, industrialized, globalized farming practices, we find a system based entirely on oil-derived chemical fertilizers, a system under threat not only because of increasing oil prices and decreasing supply, but also because it is based on uniform monocultures, and therefore more easily threatened than traditional agriculture by "climate change, to which it has contributed, and to diseases and pests" (Shiva, 2008). The alternative farming practices advocated by Vandana Shiva in *Soil Not Oil* (2008) are based on a principle of cultivating the productive capacity – the intensity – of the soil rather than a focusing on what the soil can produce – in other words, she argues that farming practices should be in the business of cultivating potential as much as, if not more than, agricultural products. Shiva's work provides a rich example of the importance of sustaining intensities and regenerating difference.

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[26] How can you sustain the earth when it is profit that capital seeks to sustain? When diversity and productivity are its extensities with a diminishing, increasingly indebted, potentiality as the underlying force? Although economic theories may be influenced by selective ecological presumptions or "laws of nature" such as competition, the stark difference between ecologies and capitalist economies is that the goal of capitalist production is accumulation. Indeed, with the production of so-called "products" such as derivatives and various other debt instruments, even the destruction of potential is configured in such a way as to be for-profit.

I would like to close this chapter by thinking about nomadism and intensities in Deleuze and Guattari's work in relation to the notion of cultivating potentiality as demonstrated by "soil-not-oil" focused farming practices – practices that, in the process of producing more diverse products, and producing more product, enhance rather than destroy the *potential* of regional (cultural, social, economic, and ecological) systems. "Soil-not-oil" focused farming practices aim at maintaining (if not augmenting) the intensity inherent in the soil by making connections that work – by reorganizing the flows of energies, food, waste, inputs and outputs, sinks and yields in the ecologies, economies and communities they sustain and that sustain them. These practices demonstrate what Braidotti has called a form of gratuitousness based on principles of non-reciprocity that do not follow the "logic of recognition" but rather the "logic of mutual specification" by specifying what a body can do. They couple the time-spans that often present a tension between economic and ecological goals of sustainability and take the long view – treating ecological sustainability as what Braidotti calls an "experiment in inter-generational justice" and demonstrating that economic sustainability can exist at an intensity that is in step with ecology.[27] They demonstrate a kind of nomadism that is not exemplified in the persona of the indebted farmer, exploited worker or climate refugee who is forced to move to greener pastures to follow the flows of capital, leaving an exhausted earth behind, but rather, in a kind of nomadism that cultivates intensities and connectivities, and participates a range of milieus and environments by being "nomadic in place" (Deleuze and Guattari, 1987, p. 482). In *A Thousand Plateaus*, Deleuze and Guattari describe this kind of rooted nomadism that is intensive, *in situ*, and interested in sustaining a milieu:

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[27] These are quotes from my notes from a seminar on "Gilles Deleuze and Cultural Studies" jointly led by Rosi Braidotti and Anneke Smelik at the Centre for the Humanities at Utrecht University the in Fall 2010.

> The nomad distributes himself in a smooth space; he occupies, inhabits, holds that space; that is his territorial principle. It is therefore false to define the nomad by movement. Toynbee is profoundly right to suggest that the nomad is on the contrary *he who does not move*. Whereas the migrant leaves behind a milieu that has become amorphous or hostile, the nomad is one who does not depart, does not want to depart, who clings to the smooth space left by the receding forest, where the steppe or the desert advances, and who invents nomadism as a response to this challenge. (1987, p. 381)

This nomad is not attuned and adaptive for the sake of ongoing learning in the service of neoliberal competition, but rather is attuned and adaptive for the sake of staying and sustaining its surroundings in the spirit of cooperation. The question for this nomad is not how quickly you can ride the wave to get to where you are going but how well you can be more hospitable to the flows that run through you and the connections that augment rather than diminish your local and global milieu by producing deterritorializing refrains that sustain earthly intensities. The nomadic subjects that Deleuze and Guattari describe are interested in sustaining the intensity of the ground that sustains them: "They are nomads by dint of not moving, not migrating, of holding a smooth space that they refuse to leave. Voyage in place: that is the name of all intensities, even if they develop also in extension" (1987, p. 482).

THE PEOPLE-YET-TO-COME, THE PLANET-YET-TO-COME, AND SUSTAINABLE POLITICS

> *To think is to voyage* …. (Deleuze and Guattari, 1987, p. 482)

Thinking differently about our subjectivities – namely, thinking about the connected and collective becoming of the "people-yet-to-come" and the "planet-yet-to-come" – in the service of sustainability is a political and onto-epistemological project not only because it is concerned with transformation and becoming, but also because it is

concerned with the boundaries between so-called "subjects" or so-called "objects" and their "surroundings" and "environments." As Haraway remarked in her work on "situated knowledges," "objects are boundary projects" (1991, p. 201); and, as the work of Deleuze and Guattari and theorists inspired by their work such as Braidotti demonstrate, in a world wherein "subjects" and "objects" are so co-constitutive and "intra-acting" (Barad, 2007, p. 33), decisions about where we draw boundaries among "subjects" and "objects" are primarily political decisions; that is to say, they are decisions that are made real based on their desired effects – their inclusions and exclusions – rather than decisions grounded in a reality that we can call "truth." Although Deleuze and Guattari's more material and posthumanist reconfiguration of subjectivity may not provide ready-made solutions to the problem of ecological, economic, and social sustainability, their work can help us reconsider these boundaries, and open up new ways to approach the problem of sustainability and how to think sustainability differently. Indeed, perhaps the most "sustainable" kind of thinking is not the kind that searches for a ready-made solution but is rather what Guattari advocated as a "work in progress" or the "continuous development" of adequate philosophical and political "practices" that are attuned to the question: what does this do? (2008, p. 27).[28] Indeed, if we are "contemplations," then let us "voyage in place" (1987, p. 482) by learning to think more intensively and in more complex ways about the wanderings that we are in order to become more hospitable to the human and non-human, living and non-living forces that sustain us

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[28] Guattari writes, "similarly, every care organization, or aid agency, every educational institution, and every individual or course of treatment ought to have as its primary concern the continuous development of its practices as much as its theoretical scaffolding" (2008, p. 27).

CHAPTER TWO

SUSTAINABLE DESIGN ACTIVISM: AFFIRMATIVE POLITICS AND FRUITFUL FUTURES

We lack creation. We lack resistance to the present. The creation of concepts in itself calls for a future form, for a new earth and people that do not yet exist.
(Deleuze and Guattari, 1994, p. 108)

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If, for Deleuze and Guattari, art makes percepts and affects, science deals in prospects or functions, and philosophy creates concepts (1994, p. 24), how then are we to think of an interdisciplinary activity like design – a creative endeavour at the interstices of artistic, scientific, and philosophical thinking? Design draws upon and contributes to all three of Deleuze and Guattari's "domains of thought": it shares with art its concern with percepts and affects, with science its interest in prospects and functions, and designers often think of themselves as creating "design concepts." We might assume, then, that design is exactly the kind of experimental exercise, the sort of hybrid multiplicity, the type of creative, critical, and conceptual assemblage that Deleuze and Guattari would have found promising. And yet, while they refer extensively to art, literature, music, theatre, opera, and film in their work, they pay remarkably little attention to design, let alone sustainable design. Moreover, while they find promise in creativity expressed through these various artistic, scientific, and philosophical modes, they are overtly hostile when they do – albeit briefly – turn their attention to design. Here is Deleuze and Guattari's most significant statement on design as a discipline from *What is Philosophy?*:

> Finally, the most shameful moment came when computer science, marketing, design and advertising, all the disciplines of communication, seized hold of the word *concept* itself and said: "This is our concern, we are the creative ones,

we are the *ideas men!* We are the friends of the concept, we put it in our computers." Information and creativity, concept and enterprise: there is already an abundant bibliography. Marketing has preserved the idea of a certain relationship between the concept and the event. But here the concept has become the set of product displays (historical, scientific, artistic, sexual, pragmatic), and the event has become the exhibition that sets up various displays and the "exchange of ideas" it is supposed to promote. The only events are exhibitions, and the only concepts are products that can be sold. Philosophy has not remained unaffected by the general movement that replaced Critique with sales promotion. The simulacrum, the simulation of a packet of noodles, has become the true concept; and the one who packages the product, commodity, or work of art has become the philosopher, conceptual persona, or artist. How could philosophy, an old person, compete against young executives in a race for the universals of communication for determining the marketable form of the concept. (1994, p. 10-1)

This chapter approaches the question of sustainability and sustainable design by focusing on design as a discipline and by taking a critical stance to the limitations – but also the potential – of Deleuze and Guattari's three domains of thought. My suggestion will be, first, that the *problem of design* as articulated by Deleuze and Guattari – that is, Deleuze and Guattari's critique of the discipline and its complicity with capitalism as "the great Major" (1994, p. 149) – is critical to understanding the context and driving force for Deleuze and Guattari's thought and, as such, should not be overlooked by designers – whether sustainable or not – wishing to engage with their work. However, I also suggest that the *problem posed by design* as a discipline – particularly by what we can call "minor" (Deleuze and Guattari, 1986, p. 16) modes of design such as emerging forms of "design activism" (Fuad-Luke, 2009; White and Tonkinwise, 2012; Julier, 2013; Markussen, 2013) that provide alternatives to mainstream neoliberal capitalist logics – challenges Deleuze and Guattari's overly narrow, negative, and reductive conceptualization of design as a creative discipline. In fact, emerging directions in design and design activism that challenge taken-for-granted assumptions, structures, systems and distributions of power resonate with concepts in Deleuze and Guattari's oeuvre by sharing a common interest in

challenging *doxa*, experimenting with intensities, and creating heterogenous connections in the interest of promoting more equitable forms of future flourishing.[29] Indeed, as Marcelo Svirsky observes in the *Deleuze Studies* supplement on Deleuze and Political Activism, "Deleuze and Guattari's political philosophies have created some of the conceptual tools which may be put to use in activism that seeks to break with repressive traditions" (2010, p. 4).

My interest here is simple and specific: to focus on how Deleuze and Guattari's work in *What is Philosophy?* can be mobilized as part of this conceptual toolbox for emerging design activisms that operate in support of sustainability and sustaining intensities, particularly in light of their critique of design and its complicity with the repressive regimes of neoliberal capitalism in this, their last, text. A focus on this issue will contribute to emerging debates on art, design, and politics in Deleuze and Guattari's work (Massumi, 2013), as well as to debates on the relationship of design, sustainability, activism, and neoliberalism (Julier, 2013).

To propel this two-fold line of argument (or what I call, respectively, the *problem of design* and the *problem posed by design*), I propose an intensive method of reading *What is Philosophy?* that first seeks to deterritorialize the three domains of thought by seeking to understand the domains not in static terms of what they *are*, but rather, along the more Spinozist lines of flight that ask what they *can do* (Deleuze and Guattari 1983, p. 108). Extending this methodological approach, I then suggest design be re-thought as an "intra-domain" mode of thought and re-conceptualized *intensively* through a re-consideration of how design works and what it can do (Deleuze and Guattari, 1983, p. 108). This approach reminds us to remain critical of examples of design that

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[29] Previous work on Deleuze and Guattari and design activism includes a special issue of *Design Culture* as well as the special issue of *Deleuze Studies* on Deleuze and Guattari and political activism (2010) based on the conference that took place at Cardiff University. More recently, work has been done on Deleuze and the Occupy Movement by Thomas Nail in *Theory & Event* (2013) and Brian Massumi has done work on activism and philosophy in *Semblance & Event* (2013).

territorialize creativity onto reductive, difference-diminishing, monopoly-oriented outcomes. As the second part of the chapter demonstrates, this approach also opens up fields of design that may not be conventionally recognized *as* design in order to demonstrate the potential of design to have effects other than what Deleuze and Guattari characterize as "shameful moments" (1994, p. 10). In sum, this chapter invites us to read Deleuze and Guattari's domains of thought *intensively* and also to consider the potential capacities of design activism to effect *intensive resistances* to the present (2011, p. 4). I invite us to ask what kind of design expresses both critiques and creative alternatives to problems such as ecological destruction and waste, economic disparity and collapse, and social inequality. In other words, I consider *what design can do* as a set of practices intent on engaging with and re-making the material world in more ecologically, economically, and socially sustainable ways.

To this end, I am particularly interested in design activism focused on environmental sustainability that uses the social realm as its medium. I focus especially on a close analysis of Toronto's *Not Far From the Tree* to highlight some of the ways their activities operate as an expression of design activism that, by re-conceptualizing, re-organizing, re-designing, and deterritorializing material flows of fruit, people, private property, and profit, reconfigures a system of deeply enmeshed social, environmental, as well as economic "problems" into a rich web of opportunities for the flourishing of different, more equitable, and perhaps surprising or unforeseen connections.

Not Far From the Tree is a grassroots project that engages creatively with a series of existing, entrenched, "wicked" problems. As Fuad-Luke notes, in the world of design sustainability is one such "wicked problem" – a type of problem first described by Horst Rittel in the 1960s as "a class of social system problems which are ill-formulated, where the information is confusing, where there are many clients and decision-makers with conflicting values, and where the ramifications of the whole

system are thoroughly confusing" (Rittel and Webber qtd. in Fuad-Luke, 2009, p. 142). In the case of *Not Far From the Tree*, the complex or "wicked" problem involves issues related to social cohesion among neighbours, food going to waste by people who don't have time to harvest it, and lack of access to produce by lower-income individuals and families. *Not Far From the Tree* confronts these problems not merely by "problem-solving," but by identifying a series of complex needs that may go unseen in the first place, by seeing these from a different perspective, and by re-conceptualizing, re-configuring, re-designing, and creatively re-inventing a set of existing relations into potentially different, surprising, and more equitable – and even more joyous – connections among trees, fruit, cargo bikes, neighbourhoods, and people.

DELEUZE AND GUATTARI'S CRITIQUE OF DESIGN (THE PROBLEM OF DESIGN)

In this section I start by delineating Deleuze and Guattari's three domains of thought in relation to the *problem of design* in their work. I underscore Deleuze and Guattari's critique of the discipline and its complicity with contemporary capitalism as "the great Major" (1994, p. 149) and argue that it is critical to understanding the context out of which Deleuze and Guattari's thought arises and the impetus that drives it. To begin, Deleuze and Guattari's overt criticism of the "disciplines of communication" including computer science, marketing, design, and advertising (1994, p. 10) is rooted in the wide-ranging critique of capitalism that grounds their collective work in *Anti-Oedipus* (1983) and *A Thousand Plateaus* (1987). Indeed, the subtitle that connects these two tomes, *Capitalism and Schizophrenia*, offers what we might think of as their summary assessment of the state of things and identifies the problem with which the two volumes in the series take issue.

In their last book, *What is Philosophy?*, Deleuze and Guattari argue that the disciplines of communication including design are dangerous because no matter how "creative" they purport to be the so-called "creativity" of these disciplines produces little if anything "new." By "new," these thinkers who had a passion for inventing tools for thinking that work against the capture of life's forces and flows by capital refer to concepts, percepts, and affects that do just this. That is, they argue against concepts, percepts and affects that create – or themselves become – the "new" as in new commodities. The "new" for Deleuze and Guattari, is not the "new" in neoliberal capitalism, but rather, its intensive resistance – or resistance through the ongoing creation of difference. Indeed, for designers drawn to Deleuze and Guattari's vocabulary of concepts, to ignore their indictment of advanced capitalism is to risk reproducing the very same problematic they critique: using design as simply another capital-creating enterprise and reducing concepts such as the "rhizome," "assemblage," "deterritorialization," "concept," and, indeed, the term "new" to mere slogans. As Adrian Parr argues in her recent piece on Deleuze and Guattari and architectural design, if concepts such as "the fold, force, and becoming are not connected to the larger political impulse driving Deleuze and his collaborations with Guattari," then "the concepts are no longer tools in the way that Deleuze insisted they need to be treated" and in their political disengagement become "profoundly un-Deleuzian" (2013, p. 204).

Deleuze and Guattari's collective work takes aim at the way in which capitalism eliminates – rather than creates – difference and "newness" (that is, the production of ongoing differentiation). They warn, for instance, that capitalism today has appropriated, instrumentalized, and commodified the concept of the "concept" for the purposes of sloganeering, seduction, and sales. They not only critique the way in which the "concept" is used by the disciplines of communication such as design, but

also foreshadow the rise of contemporary neoliberal capitalism's championing of concepts such as the "knowledge economy," "creative class," "enterprising individual," "design thinking," "social innovation," and "design thinking" (concepts we'll engage with more thoroughly in the next chapter) when they write:

> Information and creativity, concept and enterprise: there is already an abundant bibliography. Marketing has preserved the idea of a certain relationship between the concept and the event. But here the concept has become the set of product displays (historical, scientific, artistic, sexual, pragmatic), and the event has become the exhibition that set up various displays and the "exchange of ideas" it is supposed to promote. The only events are exhibitions, and the only concepts are products that can be sold. ... The simulacrum, the simulation of a packet of noodles, has become the true concept and the one who packages the product, commodity, or work of art has become the philosopher, conceptual persona, or artist. (1994, p. 10)

In an era in which ubiquitous capitalism is the new normal within which images of thought reside, Deleuze and Guattari have this to say about the role of philosophy in creating concepts:

> Certainly, it is painful to learn that Concept indicates a society of information services and engineering. But the more philosophy comes up against shameless and inane rivals and encounters them at its very core, the more it feels driven to fulfill the task of creating concepts that are aerolites rather than commercial products. It gets the giggles, which wipe away its tears. So, the question of philosophy is the singular point where concept and creation are related to each other. (1994, p. 11)

In the face of the concept's appropriation by the capitalist machine Deleuze and Guattari seek to defend the concept of the concept from the way it is used to commodify ideas – what they call an "absolute disaster for thought" (1994, p. 12).[30]

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[30] Deleuze and Guattari witnessed the beginning of the phenomenon we continue to see today – the predominance of "design" as a synonym for innovative thinking. Their remark that the "concept" is "everywhere" (Dosse, 2010, p. 457) or, even more boldly, that "marketing appears as the concept

At the same time, the distinction they draw between the concept in philosophy and its instrumentalization by "rivals" is also an attempt to defend philosophy as a discipline from conservative forces within the discipline of philosophy itself. In other words, Deleuze and Guattari's defensive argument against "rivals" is a two-fold attempt to deflect forces that reduce what philosophy can do from within as well as from without. Like their critique of majoritarian modes of design, Deleuze and Guattari's critique of the conservative forces at work in philosophy champions experimental, presentational (not representational or recognition-based), and "new" (as difference-producing) modes of concept-creation. Indeed, for Svirsky, although Deleuze and Guattari "do not provide ready-made blueprints for revolution" they do certainly promote "a minor art of thinking/doing" as a way to challenge oppressive structures including representational forms of thought (2010, p. 5).

In order to argue that the problem posed by "minor" modes of design (Deleuze and Guattari, 1986, p. 16) such as emerging forms of "design activism" challenge Deleuze and Guattari's reductive conceptualization of design as a discipline, I begin by proposing in the next section an intensive method of reading *What is Philosophy?* that deterritorializes the three domains of thought by understanding the domains not in terms of what they are, but rather, what they can do (Deleuze and Guattari, 1983, p. 108).

DETERRITORIALIZING THE THREE DOMAINS OF THOUGHT

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itself" (Deleuze and Guattari, 1994, p. 146) reveals their critical stance on the term "concept" becoming a way of marketing a "new" idea.

Throughout their collaborative work, beginning with *Anti-Oedipus* (originally published in 1972) Deleuze and Guattari are not as interested in setting up *extensive* categories as they are in exploring, expressing, and experimenting with *intensive* processes (DeLanda, 2002; Hroch, 2013a). These thinkers' emphasis on processes of desiring-production reveals their interest not in what things are called, what they mean, or what they call "extensities" (extensive measures of things) so much as in "intensities" and intensive capacities – what things are capable of, what becomings they engender, what effects they can have, what they produce, *and what they can do*. As they underscore, "the question posed by desire is not 'What does it mean?'" but rather *"How does it work?"* (1983, p. 108 [original emphasis]). It strikes a reader as strange, then, given Deleuze and Guattari's insistence on intensities and intensive processes rather than extensities (such as categories and classifications) that in *What is Philosophy?* they shift from a style of thinking and writing focused on breaking down categories and building connections that they put to work in *Anti-Oedipus* and *A Thousand Plateaus* to one that attempts rather rigidly to delineate disciplinary territories and erect conceptual boundaries around the "three domains of thought": "art," "science," and "philosophy" (1994, p. 24).

Isabelle Stengers notes that for her, as it was for many readers, Deleuze's last book*,* co-authored with Félix Guattari,[31] came as "a surprise," or even "a disappointment" (2005, p. 151). In her essay on *What is Philosophy?* entitled "Deleuze and Guattari's Last Enigmatic Message," she observes that we suddenly "face a strong differentiation between the creations which are proper to philosophy, to science, and to art" which has "caused many to wonder or even to feel betrayed" (Stengers, 2005, p. 151). After all, these were the thinkers associated with "the affirmation of

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[31] As François Dosse notes in his biography of Deleuze and Guattari, Deleuze attributed shared authorship of *What is Philosophy?* to Guattari despite their not penning the work together, out of a sense of gratitude and indebtedness to Guattari for friendship and previous collaborative work which made this text possible (Dosse, 2010, p. 456). In this chapter, despite the book's noted "ambiguous status," I follow this tribute by attributing the authorship of the text to both authors (2010, p. 456).

productive [connections], the creation of deterritorializing processes escaping fixed identities, transgressing boundaries and static classifications, destroying the power of exclusive disjunction, that is the either/or alternatives" (Stengers 2005, p. 151). Deleuze and Guattari's last work together thus left many readers – especially those who appreciated their previous critique of categories such as "royal science" (1987, p. 361) wondering why, as Stengers asks, they chose to create a trifecta – "a seemingly 'classical picture'" (2005, p. 151).

So, why this approach in *What is Philosophy*? Why this tripartite territorialization? I suggest – alongside Stengers' insightful reading of Deleuze and Guattari's writing on philosophy in relation to science[32] – that the shift in style and the concerted effort to clarify and simplify (and perhaps even *over-simplify or reduce*) concepts (such as their effort to clarify the role of philosophy suggested by the title itself) can be seen as a purposeful attempt at once to defend each domain from the reductive tendencies encroaching upon them, as well as to launch an offensive strategy to remind readers of the potential of each domain to continue to be creative, to resist the present, and to refuse not only to be treated reductively in terms of disciplinary definitions, but also to resist being instrumentalized in the service of capital.

I support Stengers' argument that *despite* the "classical" delineation of tripartite categories, the text may be the most "political" of Deleuze's books insofar as the crucial problematic it tackles is their observation that "we lack a resistance to the present" (Deleuze qtd. in Stengers, 2005, p. 152). Stengers adds that by "resisting the present," Deleuze and Guattari don't simply mean criticizing or denouncing but rather creating and constructing (2005, p. 152). It is in this spirit that I invite us to revisit these categories of "art," "science," and "philosophy" and suggest that rather

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[32] Stengers focuses particularly on the connections and disjunctions between philosophy and science. As she notes, she "leave[s] art aside and concentrate[s] on the differentiation between philosophy as a creation of concepts, and science as dealing with functions" (2005, p. 151).

than simplistically denouncing or uncritically fetishizing them, we should heed Deleuze and Guattari's own advice to "resist the present" by creating and constructing, to not simply repeat what they said, but rather, to "do what they did." I follow Stengers' lead in my approach to this text – an approach that, in the following passage, she describes as an engagement that seeks to "actualize" or "effectuate" ideas:

> I will not stay within Deleuze and Guattari's text but rather follow Deleuze's own advice: we should be interested in tools for thinking, not in an exegesis of ideas. An idea is always engaged in what he called a matter, always a specific one … in order [to ask] how and the why [the idea] matters, the kind of difference it makes (2005, p. 151)

The style of reading Stengers suggests is in keeping with Deleuze and Guattari's own style of engagement with other authors' ideas. Following Deleuze and Guattari's advice, we should read their own concepts by asking *what they do* (1994, p. 28) and continuing, as they did, to create concepts "adequate" for and "worthy" of the ever-changing present (Braidotti, 2006, p. 18). I thus suggest that we regard Deleuze and Guattari's seemingly territorializing gesture in *What is Philosophy?* as one that attempts to concentrate on the intensities – and indeed *to concentrate the intensities* – of each "domain" in the face of what they may have regarded as their potential "collapse" (1987, p. 161). As they tepidly point out, while stratification, or staying "organized, signified, subjected" as a strategy may not be "the worst that can happen," experimenting with strata is the approach they champion (1987, p. 161). My intention, then, is not simply to repeat these categories by tracing the contours that delineate their territories, but rather, to ask *what these categories do*. In deterritorializing these domains, we can draw connections that actualize and effectuate the intensities – the forces that resist the present – that inhere in them.

Following Deleuze and Guattari's advice to problematize existing concepts and postulate concepts – in other words, to do the work of philosophy – I suggest that their own categories of not only "art," "science," and "philosophy" but also their critique of "design" require reconsideration. This is particularly the case because of the ways design is changing today, as well as my own interest in thinking sustainability as a sustaining of "intensities" – a Deleuzean concept. Moreover, thinking about these categories in relation to the work of design and *vice versa* enable us to do this work – that is, to reconsider their own previous work in the ways they suggest. This kind of re-reading is important not only as Deleuze and Guattari's work – and in particular their attention to the three domains of thought – is continually taken up by designers and architects, but also as the fields of design and architecture shift toward projects and activities that Deleuze and Guattari may not have identified as "design," projects and activities that stand in a different – sometimes problematic and sometimes also *problematizing* – relation to capitalism or what they call "the great Major" (1994, p. 149).

FROM EXTENSIVE MODELS TO INTENSIVE MODES: UNDERSTANDING THREE DOMAINS OF THOUGHT AS IMAGES OF THOUGHT

In order to extend this deterritorializing movement as a methodological approach, in the following section I suggest that the three domains of thought be understood as images of thought; that is, I posit that we move from understanding Deleuze and Guattari's categories as extensive models to understanding them as intensive modes. Following this line of argument, design can be re-thought as an "intra-domain" mode of thought and re-conceptualized *intensively* through a re-consideration of how design works and what it can do (Deleuze and Guattari, 1983, p. 108). This approach enables us to consider "minor" modes of design as examples of design that Deleuze and

Guattari overlooked in their analysis, at the same time that it reminds us to remain critical of examples of design that territorialize creativity onto reductive, difference-diminishing, monopoly-oriented outcomes.

In *What is Philosophy?* art, science, and philosophy do not function as "extensities." Rather, given the overtly political thrust of their previous work, and in keeping with Stengers' observation that *What is Philosophy?* is implicitly political, these categories or "domains of though" attempt to re-intensifying each domain, to wrest each free of its impotent state, and to re-focus, re-charge, and re-new each domain of thought so that they might work together again with their full critical and creative force. At the end of his life, Deleuze turned his focus from "doing philosophy" to the question of "what philosophy *is*" in order to ask "what philosophy *does*." That is, the question posed in terms of the "identity" of philosophy here is a final attempt, approached perhaps with more clarity and certainly more urgency, to underscore philosophy's strengths and to emphasize its potencies and potentials. Deleuze and Guattari's parallel focus on the other domains of thought does not separate them from philosophy once and for all. Rather, it invites us to be critical of increasingly common, habitual, and reductive approaches to each, to encourage us to find each domain's creative force, and, in turn, to afford us each domain's full capacity to "resist the present." In this way, Deleuze and Guattari's seemingly conservative manoeuvre can be read, paradoxically, as a radical gesture.

In this section, then, I attend to the concept of the "concept" in Deleuze and Guattari's oeuvre by suggesting that to understand the "three domains of thought" in their work – art, science, and philosophy – requires that we understand these "domains" as *modes* through which thought-events happen rather than as *disciplines* to which a particular image of thought belongs. I propose that deterritorializing the territories that define these "domains of thought" affords us the ability to engage

more productively with Deleuze and Guattari's oeuvre and with interdisciplinary disciplines such as design – those "perpetually interbreeding" (1994, p. 24) disciplines that are uniquely prepared to tackle some of today's most pressing conceptual, perceptive, affective, social, and ecological problems, namely problems of sustainability or, more precisely, problems of what I described in the first chapter and elsewhere as "sustaining intensities" (Hroch, 2014). Indeed, this deterritorialization of the domains is an always-present and yet often-underemphasized dimension of *What is Philosophy?* and perhaps reveals less about the authors of the text and more about us as readers and what "lines" of reading we have been prepared to "effectuate" (Stengers, 2005, p. 151). Indeed, Deleuze and Guattari recognize their own over-simplification and outline their methodology as follows:

> At present we are relying only on a very general hypothesis: from sentences or their equivalent, philosophy extracts *concepts* (which must not be confused with general or abstract ideas), whereas science extracts *prospects* (propositions that must not be confused with judgments), and art extracts *percepts and affects* (which must not be confused with perceptions or feelings). In each case language is tested and used in incomparable ways – but in ways that do not define the differences between disciplines without also constituting their perpetual interbreeding. (1994, p. 24)

Deleuze and Guattari begin their delineation of the "three domains of thought" in *What is Philosophy?* by pointing out that the "sciences, arts, and philosophies are all equally creative" (1994, p. 5). Although, for Deleuze and Guattari, all three domains of thought are creative,[33] what distinguishes philosophy from science and from art is

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[33] Deleuze and Guattari describe all three domains of thought as creative in the following passage: "If philosophy is this continuous creation of concepts, then obviously the question arises not only of what a concept is as philosophical Idea but also of the nature of other creative Ideas that are not concepts and that are due to the arts and sciences, which have their own history and becoming and which have their own variable relationships with one another and with philosophy. The exclusive right of concept creation secures a function for philosophy, but it does not give it any preeminence of privilege since there are other ways of thinking and creating, other modes of ideation that, like scientific thought, do not have to pass through concepts" (1994, p. 8).

that it is "the art of forming, inventing, and fabricating" (1994, p. 2) or "*creating*"

concepts" (1994, p. 5). Deleuze and Guattari address the work of science and art in

order to distinguish it from the work of philosophy, and to defend a creative mode of

philosophy from being encroached upon by reductive scientific and artistic

paradigms.[34] At the same time, from their first definition of philosophy, despite

distinguishing it from science and art, Deleuze and Guattari already forge connections

between philosophy and art, by conceiving of philosophy as one kind of creative

process the object of which, by definition, is to create "new" concepts (1994, p. 5).

This definition already compels us to ask: If philosophy creates concepts, *isn't it the*

case that wherever there is the creation of concepts there is philosophy? This may sound like an

analytical gesture but it addresses the issue at the heart of how to read this text by

placing emphasis on what things *do* as opposed to what things are and are *called*.

Philosophy creates concepts and so even when something isn't necessarily called

"philosophy," if a concept is being created, philosophy is being done, or one is

working in a philosophical *mode*. Deleuze and Guattari concur when they write: "so

long as there is a time and a place for creating concepts, the operation that undertakes

this will always be called philosophy, or will be indistinguishable from philosophy

even if it is called something else" (1994, p. 9).

It follows, then, that if we read Deleuze and Guattari's definition of philosophy not

as a disciplinary model, but rather, as an image of thought, then we can say that

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[34] This delineation presents a number of paradoxes. First, Deleuze and Guattari – thinkers of
interdisciplinarity and the "inter-breeding" of domains – in order to create a tripartite classification
system, take a very reductive view of what "science" is as well as what is considered "art" (not to
mention design) in their defense of a proper "philosophy." Commenting on what Deleuze and
Guattari seem to have in mind when they refer to "science," Stengers points out that these process-
philosophers paradoxically seem to privilege "what is usually called 'science made'" (2005, p. 153) – a
definition of science focused on the "achieve[ment of] result[s] as the direct consequence of a normal,
rational method" (2005, p. 154) over "the vivid, open, risky construction of 'science in the making'"
(2005, p. 153). Stengers remarks that this narrow characterization of science as "royal science" is
"disappointing" at first, adding that "this first disappointment … led [her] to a political reading of
What is Philosophy?" (2005, p. 53). My argument that design is thought overly reductively in *What is*
Philosophy? (design as "discipline of communication" rather than a mode of conceptual-material
fabulation and fabrication) resonates with Stengers' response of this text.

aspects of artistic, scientific, and even *design practice* can be philosophical if they create concepts in the philosophical *mode* and, concomitantly, engage in the posing of problems (1994, p. 27). For Deleuze and Guattari, when doing philosophy – or thinking philosophically – problems must be posed "just as concepts must be created" and "new concepts must relate to our problems, to our history, and, above all, to our becomings" (1994, p. 27). Deleuze poses philosophy as a problem-solving endeavour that involves the positing of questions, the putting forth of propositions, and the creation of always-provisional concepts that respond to an ever-shifting context. By posing problems and creating concepts that relate to our current and ever-changing context, we remain immanently rooted in – while using philosophy as a way to intensively resist – the present.

As the second part of this chapter unfolds, it focuses on activist design as a set of philosophies that are critical of capitalist waste and accumulation and as a set of practices intent on making and re-making the material world in more ecologically, economically, and socially sustainable ways. I focus particularly on activist design practices that, rather than create objects, artifacts, or "products" (or, "services," which, David Noble argues in filmmaker b.h. yael's *Trading the Future*, commodify relation), re-conceptualize existing "problems" and re-organize existing territories (1994, p. 81) in order to contribute to the design of more equitable and yet difference-sustaining connections among humans and their more-than-human environments (1994, p. 81). What is at stake in this section is this: deterritorializing the domains of thought allows us to expand the concept of the concept from applying only to the work of philosophy proper to include activist aspects of "design thinking" which, in turn, can open up ways of not only conceptualizing but also of materializing more sustainable modes of collective becoming.

LODGING THE SELF ON A STRATUM: DESIGN AS THINKING/DOING DIFFERENTLY

At the same time as Deleuze and Guattari's work compels us to interrogate critically design's complicity with capitalism, their concepts – not to mention modes of "minor" design themselves – also enable us to see the complexity of capitalism in its contemporary neoliberal modulations (Harvey, 2005; Hroch, 2013b). Design practices are products of, co-produce, and at times intensively resist in a myriad of complex ways, the ways capitalism is both conceptualized and materialized (Julier, 2013a, 2013b; Svirsky, 2010). Design, by engaging the material world through a practice that includes conceptualization, also exceeds it by doing the work of conceptualization through more-than-abstract media thereby complexifying what concepts are and what they can do. Design methods and "ways of knowing" (Cross, 2001) experiment with a variety of modes of thinking, doing, and thinking and/as doing, and doing and/as thinking. By engaging the material world, and re-making it differently (through concept, practice, concept-as-practice, and practice-as-concept) design understands an ideological/material practice such as capitalism less abstractly than critical theoretical conceptualizations of capitalism alone. Design enables a less reductive understanding of capitalism – not only as a totalizing abstraction, but as itself a design: a series of practices, habits, ideas, patterns, materialities, fabulations, and fabrications (Deleuze and Guattari, 1994, p. 2) that are made, and thus, can also be un-made and re-made (Julier, 2013b, p. 224).[35]

Design practices might be said, then, to enable what Deleuze and Guattari invited us to do: "lodge [oneself] on a stratum, experiment with the opportunities it offers, find an advantageous place on it, potential lines of deterritorialization, possible lines of

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[35] Although I include the work of ideology and conceptualization in my understanding of design activism as also material, it is in material practice especially that in Julier's view the real work of design activism takes place (2013a, 2013b). Svirsky underscores the importance of both thinking and collective action for activism, stressing that the "time activists spend on articulating ideologies will count for little if their practices are separated from a strategy that includes, at least partially, entering into joyous participation with others – meaning, pursuing compossible relations with them" (2010b, p. 176).

flight, experience them, produce flow conjunctions here and there" (1987, p. 161). We might even say that engaging with "minor" design practices is an experiment in "a lodg[ing oneself] on [the great Major] stratum [of capitalism]" in particular. As I discuss in the following section, "minor" modes of design such as the social design activist practices I explore produce two related flow conjunctions: 1) they conceptualize the world differently in order to re-make or re-materialize it in different ways; and 2) they materialize the world differently in order to re-make or re-conceptualize it in different ways. Through the design process, conceptualization happens through materialization, materialization happens through conceptualization, and both modes of engagement – the conceptual and/as the material, and the material and/as the conceptual – engage, lodge on, find an advantageous place in the made world in order to experiment, find potential lines of deterritorialization, possible lines of flight, and re-make the world differently, producing different connections and different conjunctive flows.

Let us address, prior to proceeding further, what I mean by 1) design, 2) activism, and 3) the term design activism. Following the work of Deleuze and Guattari in *What Is Philosophy?*, My objective is to posit intensive definitions of design, activism, and design activism – definitions that focus on how things work and what they do (rather than what Deleuze and Guattari call an "extensive" one – namely, what things are called or what they mean) (1983, p. 108). Alastair Fuad-Luke provides an intensive working definition of design as "the act of deliberately moving from an existing situation to a preferred one by professional designers or others applying design knowingly or unknowingly" (2009, p. 5). Interestingly, Fuad-Luke's definition of activism is remarkably similar – and similarly intensive – to his definition of design. He defines activism as "taking action to catalyze, encourage, or bring about change, in order to elicit social, cultural, and/or political transformation" (2009, p. 6).

Of course, in spite of the similarities between design and activism as modes of change, transformation, movement, and differentiation, not all design is activism, and not all activism is design. Likewise, not all those doing design (often called "designers") are doing (or claim to be doing) activism, and not all those doing activism (often called "activists") are doing (or claim to be doing) design. Still, it is interesting to note that design and activism have much in common in their focus on imagining possible futures and working toward their actualization. Indeed, design and activism as modes of engagement with the world share a number of similar characteristics that makes their intra-action particularly synergistic: both design and activism fit very much within a Deleuzo-Guattarian strategy of producing different connections, experimenting with intensities, actualizing latent potential and engaging in processes of transformation of the status quo.

So what, then, is "design activism"? In *Design Activism*, Fuad-Luke provides a combined definition of "design activism" as "design thinking, imagination, and practice applied knowingly or unknowingly to create a counter-narrative aimed at generating and balancing positive social, institutional, environmental, and/or economic change" (2009, p. 27). I suggest this definition is "intensive" because, like the definitions of design and activism above, it too focuses on what design activism does rather than by whom it is done, or what it is called (that is, whether the doing is explicitly defined as design, activism, or activist design). Indeed, as Fuad-Luke adds, to speak of "design activism" is to imply "that it already exists and has an established philosophy, pedagogy, and ontology" (2009, p. 1) although this is not necessarily the case. Rather, to speak of design activism is to gesture towards the existence of what Fuad-Luke describes as "an emergent" phenomenon with the "potential to help us deal with important contemporary societal issues" (2009, p. 1). Guy Julier's definition of design activism adds to this broad definition the idea that design activist practices, like Deleuze's "minor" modes of art, are "collective and constructive struggles"

concerned with the "public sphere rather than the individual" (2013a, p. 146). For Julier, design activism "reallocates resources, reconfigures systems, and reprioritizes interests" and is thus "necessarily broad in its scope and aims" (2013a, p. 145), intersecting with other practices such as "social design, co-creation, sustainable design, and critical design" (2013a, p. 146) as well as "community design" and "participatory design" (2013b, p. 226). In order to elaborate upon and ground these ideas about design activism I will focus predominantly on one case example that fits within these broader trends, as well as an emerging trend that design theorist Ezio Manzini has called "design for social innovation": *Toronto's Not Far From the Tree* urban fruit-picking project. *Not Far From the Tree* is an example of the kind of activity that "analyzes and critiques systems of provision, looking for or proposing non-mainstream models to create alternative constellations of people and artifacts and rearrange channels between them" (Julier, 2013a, p. 146) and, as such, can be seen as a form of "minor" design that intensively resists neoliberal systems of power that deregulate, individualize, privatize, and "free" up for the market what was once shared, collective or "common" (Hardt and Negri, 2011).

DESIGN ACTIVISM: DIFFERENCE AS INTENSIVE RESISTANCE

The second part of this chapter turns to fields of "minor" design in order to demonstrate the potential of design to have effects other than what Deleuze and Guattari characterize as "shameful moments" (1994, p. 10). In other words, I invite us to ask *what can design do* as a set of practices intent on engaging with the made world and re-making the world in less resource-intensive, less polluting, less economically unequal and monopolistic, and more socially just and equitable ways? I look to Toronto's *Not Far From the Tree* to highlight some of the ways their activities operate as a model of design activism that, by re-conceptualizing, re-organizing, and

deterritorializing flows of fruit, people, private property, and profit, experiment with the reconfiguration of a system of deeply enmeshed social, environmental, as well as economic "problems" into a rich web of opportunities for the flourishing of different, more equitable, and perhaps even surprisingly fun, connections.

Many designers today recognize that in a world in which non-renewable resources are quickly becoming depleted and where waste – whether landfill, water pollution, or greenhouse gas emissions – is exceeding critical limits, we cannot "design" our way out of these issues merely by innovating technologically or by producing more "stuff" within a design context that ignores ecological limits.[36] Manzini, echoing the work of designers such as Victor J. Papenek in *Design for the Real World* (1971) and *The Green Imperative* (1995), as well as the many critiques of environmentalists, sociologists, political theorists, and critical economists points to the tension between the results of our current consumptive patterns and the impossibility of the promise of unending capitalist growth and expansion when he underscores that today "20 percent of the world's population … consumes 80 percent of the available physical resources" (2008b, p. 11). If this trend continues, the other "80 percent of the world's population, to whom we are trying to sell the same dream, will have to make do with the remaining 20 percent of the resources" (Manzini, 2008b, p. 11). He points to this inconsistency in order to drive home the point that the promise of ongoing consumption of "stuff" is a promise "we now recognize is impossible to keep" (2008b, p. 11). This very predicament – the tension between the economy's growth imperative and the environmental, social, and political limits with which this "growth" and "expansion" conflicts – leads designer Nathan Shedroff to argue provocatively that "design is the problem" and to go so far as to suggest that even "sustainable" design too often results in the production of more stuff (Shedroff 2009, p. xxiii).

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[36] Examples of design activism that work within an economy of scarcity include projects such as Cynthia Hathaway's work in *Car Mekka* on the sustainability of skills and expertise as part of *Utrecht Biennale for Social Design No.4* and Darren O'Donnell's work in collaboration with the Catalyst Centre in *Beachballs41+All* in Toronto, Canada.

Ann Thorpe reinforces this observation when, in *Architecture & Design versus Consumerism*, she remarks that although "sustainability" is taught in design school:

> outside of the studio or class that investigates "sustainability," students are often immersed in the business context for design. Students are groomed for conventional market expansion rules through standard portfolio development, final year shows and "design management" modules. Individual practitioners and researchers may meet at conferences to examine inspiring activist case studies and assemble systemic and necessary transdisciplinary approaches, only to return to institutions … that reward siloed expertise, profitability and disciplinary purity. (2012, p. viii)

A potential issue with these critiques is that by not being specific enough about *what kind of* "sustainable design" and *which kinds* of sustainable design schools and institutions, they risk generalizing and dismissing what is in fact a varied landscape of sustainable design pedagogies and practices. Although there is room for more specificity, what is valuable in their critique is similar to what I think is valuable in Deleuze and Guattari's, namely, that they pointedly address the missed opportunities of modes of design that simply perpetuate an individualist, consumerist, capital-driven status quo. Although these designers' critiques may be excessively broad – and indeed, in this chapter my aim is to add nuance to Deleuze and Guattari's own generalizations about design – they are motivated by an interest in promoting sustainable design solutions that challenge dominant capitalist paradigms. In so doing, they echo Deleuze and Guattari's critical questions about activities that follow, reinforce, and reproduce existing contemporary capitalist logics, assumptions, and mechanisms all the while promising "the new" or, in Deleuze and Guattari's words, whether these promises of "the new" or "the innovative" do not often lead us right back "to the simple opinion of the average capitalism, the great Major?" (1994, p. 149). Of course, many designers are themselves asking critical questions about what is specific, unique, and indeed, "innovative" or *different* about what designers can bring to the world. Some designers, such as those participating in the panel on "Design

Activism and the Production of Future Social Natures" organized by Damian White and Cameron Tonkinwise at the *Association of American Geographers Annual Meeting* in New York in 2012, as well as the panelists at the *Desis Philosophy Panel* on "Emerging Aesthetics: Is sustainable social innovation generating a new aesthetic paradigm?" (a panel that included Clive Dilnot, Ezio Manzini, Victor Margolin, Cameron Tonkinwise, Virginia Tassinari, Tom Fisher and Margherita Pillan) at Parsons The New School for Design in New York in 2012, are interested in activities that, rather than create new commodities or services, focus on the creation or re-creation of systems in ways that prioritize more equitable social, economic, and ecological relations.

One example of an organization that takes this approach is Toronto's *Not Far From the Tree*, who I introduced at the beginning of this chapter. Although *Not Far From the Tree* does not explicitly define itself as a design project nor an activist project – indeed, the organization prefers to focus on what they do rather than what they are called (Reinsborough, 2012b, personal interview) – I am describing it as an example of design activism following a definition of design activism that focuses not on what is called design or activism, but rather by what a given activity or design does. I am inspired here by the work of not only Deleuze and Guattari, but also Tony Fry, whose definition of design is a process-oriented one. He suggests that design need not be practiced by a designer, nor does a person need to recognize that s/he is doing design for an activity to be considered design. For Fry, design is defined by what it does: "design designs" (1999, p. 176; see also Fry, 2009, 2011). Similarly, we can say that activism need not be practiced by those who refer to themselves as activists, nor pre-defined as activism, for it to activate people and effectuate social, environmental, or economic change. We might say, similarly, taking inspiration from the work of Rosi Braidotti, that activism activates affirmative affects and latent potentials in people, places, and things (2010, p. 45).

Thus, although *Not Far From the Tree* may not overtly self-define as a design, activist, or design activist project, organizations such as this are becoming of increasing interest to designers interested in "minor" design modes and taking inspiration from a range of community activities and "social innovations" (Manzini & Tassinari, 2012) that do not necessarily consider themselves "design." To name just one further example of this trend, the recent emergence of "participatory design" similarly borrows from the kind of community organization and action that has a long history in grassroots local political activity (such as neighbourhood associations) and practices of direct democracy (such as those perhaps most prominently on public display during the Occupy Movement). What I suggest here, following Manzini, Julier, and others, is that design activism today is intermingling with, inspired by, and also inspiring other kinds of interventions that may not consider themselves design or activism per se. The section that follows makes reference to other emerging examples of such practices, while focusing on *Not Far From the Tree*, in order to flesh out in greater detail its connections to "minor" modes of design.

NOT FAR FROM THE TREE: INTENSIVE AND AFFIRMATIVE MODES OF DESIGN ACTIVISM

Inspired by Los Angeles' Fallen Fruit project and itself inspiring other fruit-sharing projects in numerous cities, Toronto's *Not Far From the Tree* is a not-for-profit organization that mobilizes volunteers to harvest produce that would otherwise go to waste from fruit-bearing trees in private yards across the city. Founded by Laura Reinsborough in 2008, this experiment in social, economic, and environmental sustainability has grown into an organization that has since 2008 mobilized 1600 volunteers to pick 71,159 pounds of fruit from 1500 downtown trees in 14

neighbourhoods (notfarfromthetree.org). *Not Far From the Tree's* harvest – as diverse as cherries, apricots, plums, grapes, elderberries, pears, apples, mulberries, service berries, gingko and walnuts – is picked by volunteers, distributed by cargo bikes, and shared in thirds among fruit-pickers, fruit-tree owners, and local social service agencies such as food banks. Reinsborough describes the project as a "logistics" operation that "moves all the pieces" and "mobilizes" people, property lines, and produce using a modular design (2012b, personal interview). The organization does not itself pick the fruit – rather, it works to facilitate a series of new connections and flows. Fruit tree owners who can't keep up with the amount of fruit their tree is bearing, don't have time to harvest the fruit, or can't make use of all of the produce, register their tree with *Not Far From the Tree*. Volunteers who have the time and have registered their interest in picking fruit, sign up for the fruit pick neighhourhood by neighbourhood.

The fruit that is picked by volunteers is divided in thirds among fruit tree owners, tree-picking volunteers, and food banks, soup kitchens, and shelters for those who need food but may not be in a position to volunteer. The fruit-picking tools and ladders, as well as the produce that is picked, is distributed by cargo bicycles stored in central, accessible locations in each of the participating neighbourhoods. The organization's simple mandate, to "pick fruit and share it" responds to a series of complex needs – for environmental sustainability, social justice, food security, and economic equity and offers an alternative, creative, and collective model of ecological, economic, and social sustainability premised upon an affirmation and reconfiguration of existing abundance, an actualization of latent potentials, and an orientation toward enabling the future flourishing of trees, neighbourhood connections, and access to fresh local fruit by those in need.

Reinsborough describes how the shift in her perspective came when picking apples in a city orchard at a one-time event. This act of picking fruit in the city activated what she describes as her "fruit goggles": all of a sudden, she became attuned to her milieu and began to see the city differently (Reinsborough, 2012a). Most notably, she began to see fruit trees – and their latent, unpicked potential – throughout the downtown core (an area often described by food activists as a "food desert." This shift in perception – from seeing the given world in terms of scarcity (i.e. downtown Toronto as a setting for homelessness, poverty, hunger) to seeing it from the point of view of abundance – is the very kind of shift in perception and interpretation that Deleuze and Guattari advocated in their Spinozist focus on the capacities of things, their Nietzschean emphasis on joy, and their interest in affirming immanence (Thiele, 2010). Although, for example, there can be little doubt that there are real shortcomings in the ways in which current food and social systems are organized, a Deleuzo-Guattarian response to such a situation would begin by advocating for an activation of desire in a productive mode, which begins with an ontological shift – an attempt to conceptualize the world differently in order to re-make it in a different way. Similarly, *Not Far From the Tree* engages with the world affirmatively – by creatively identifying what is possible in what is already immanently given, by experimenting with the virtual potential in every actual state of affairs, and by being oriented toward a future that does not merely attempt to "solve problems" but, more importantly, enables environmentally and socially equitable flourishing.

As I mentioned already, *Not Far From the Tree*, though it doesn't call itself a design or activist project, is nonetheless the type of project that designers interested in models of design for social innovation consider an example of the direction design can take in order to engage with emerging social, economic, and environmental challenges. Ezio Manzini, leading theorist of design for social innovation, describes the

challenging and yet promising transition that design as a discipline is currently undergoing:

> Design was born and has developed its conceptual and operational tools in a world that looked simple, solid, and limitless. This triad of concepts has been swept away by the force of new phenomena: by the discovery of system complexity, by the need to learn how to navigate in the fluidity of events, and, today, with reference to the transition towards sustainability, by the emergence of limits. It is in this new complex, fluid, limited world that design must operate today … . [D]esign for sustainability has to find its way and to define its concepts and tools. (2008a, p. x)

Not Far From the Tree is one among many examples of design for sustainable social innovation. Some of the kinds of projects Manzini and Tassarini described in a working paper for the *Desis Philosophy Panel* on "Emerging Aesthetics: Is sustainable social innovation generating a new aesthetic paradigm?" at the Parsons New School for Design in 2012 included policies and infrastructure such as "cohousing, collaborative housing, couch surfing, circles of care, elderly mutual help, social incubators, micronurseries, time banks, local currencies, carpooling, car-sharing, food coops, farmers' markets, zero miles food, CSA, street festivals, [and] community gardens" (2012, p. 4). Though an in-depth critical engagement with each of these examples – though very important – is beyond the scope of this project, these kinds of examples exist in communities around the world. Although each of these activities responds to a different set of "wicked problems," and each arises from a specific context, many of these activities can be thought of as eclectic modes of design activism, though they may not identify in such a way. What is clear, however, is that they are of interest to designers interested in activist modes of re-making the world. According to Manzini, these kinds of initiatives demonstrate that "already today, it is possible to do things differently" (2008b, p. 18) from conventional mainstream economic, ecological, and social paradigms and expectations (Deleuze and Guattari, 1994, p. 85).

Of course, as one network in a much broader set of networks, *Not Far From the Tree* isn't single-handedly able to solve hunger, social cohesion, economic equity, or food waste issues in Toronto; however, it models at a local level a conceptual and a material *mode* of thinking and/as doing our environmental, social, and economic system differently. As Reinsborough explains, "it takes that first experience of getting over the social barrier" of entering a neighbour's yard, having a neighbour enter your yard as well as eating the fruit that grows in it (2012b, personal interview). *Not Far From the Tree* challenges the ways in which individual property lines and increasingly individualistic social systems have created divisions among people. It also challenges the notion that the "urban" isn't also an "environment" or a "nature" capable of providing food for inhabitants and it promotes not only individual food growing but also food sharing in a metropolis. *Not Far From the Tree* creates – even if just for a short time – a blurring of the boundary between private and common space, challenges the idea that we must live in an era of scarcity, and that economic austerity and increased competition among individuals are the ways to promote positive change. Indeed, when someone regards cities as zones of austerity and scarcity – as concrete jungles of anonymous, uncaring, and disconnected neighbourhoods – it takes a shift in perception and action to reveal the latent and actualizable abundance – an abundance of trees bearing fruit and an abundance of people willing to give their time to connect and transform their ecological, social, and economic environments.[37] In other words, in the case of *Not Far From the Tree* it's not about what's missing, but about creatively re-conceptualizing, affirming, and activating what's immanent in the environment – what's already here. In this way, *Not Far From the Tree* synthesizes what Julier terms "materialist and postmaterialist interests" by "grappling with" both the

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[37] Indeed, *Not Far From the Tree* has shown that what was once regarded as "lack" (i.e. food deserts striated by private properties) can actually yield not only abundance – but over-abundance. There are currently more people interested in registering trees than there is infrastructure to pick them, and there are more volunteers interested in picking fruit than are able to attend any single pick (Reinsborough, 2012b).

"everyday stuff of life" as well as "ideas and understandings" (2013a, p. 146) and functions as what Svirsky calls an "activist-machine" by creating "alternative connections" through both the "actualized world" and "new imaginations" (2010, p. 177).

THE PROBLEM POSED BY **"MINOR"** DESIGN: AFFIRMATIVE POLITICS AND FRUITFUL FUTURES

In this chapter I have invited us to read Deleuze and Guattari's domains of thought *intensively* and to consider design activism as an "intra-domain" discipline capable of effecting *intensive resistances* to the present – resistances that present ways to think and do otherwise (2011, p. 4). I contend that Deleuze and Guattari's return to "categories" in their classification of the three domains of thought is a critical response designed to defend the capacities of each domain and to target the way the creative force of the fields of art, science, and, most importantly for them, philosophy (but also the "disciplines of communication" such as design) have been captured by reductive thinking and practice. Although their critique remains pertinent to discussions about design today, especially as the ways in which we have been making and re-making the world are increasingly recognized for their problematic social, economic, and ecological effects, contemporary expressions of activist design are also demonstrating potentialities that at once problematize the narrow way in which Deleuze and Guattari conceived of design, and, more importantly, respond critically and creatively to their prescient warnings.

Deleuze and Guattari's critical analysis of the way in which concepts such as "newness," "creativity," and indeed "design" often work as part of a difference-*diminishing* machine that leads to environmental degradation, economic monopolization, and social inequity is an important critique to contend with for

anyone interested in positing different modes of engaging and designing the world. However, in their categorical dismissal of design, they failed to create a space for design as a potentially "minor" mode.

In this final section, I summarize some of the characteristics of design and what Deleuze and Guattari called the "minor" mode. "Minor" modes of design, like Deleuze and Guattari's modes of "minor art" are "collective enunciations" that challenge dominant paradigms and are thus always "political" (1986, p. 17). I emphasize the need to think the three domains of thought intensively – in terms of what they do, rather than what they are called – in order to do the kind of work Deleuze and Guattari advocate. Finally, I underscore the potential of design practices to effectuate difference in the way that Rosi Braidotti describes as "putting the active back into activism" (2010, p. 45). That is, I highlight how design activism can enact affirmative politics – politics that engage the made world in order to re-make the world in ways that promote the flourishing of future heterogenous connections.

First, the primary "problem" posed by design as practiced today to Deleuze and Guattari's trifecta is that it is much more diverse, and also potentially much more like the kind of activity Deleuze and Guattari advocate than they recognized in *What is Philosophy?* Designing in a "minor" or activist mode enacts creative modes that are not simply part of a marketing machine churning out "concepts," and instead challenges the underlying structures that territorialize creativity onto a plateau of profit at-all-costs. The design activist's role is to question whether the field of possibility that exists and has become taken for granted – the current way in which capitalism is operating – is the context within which we should continue to define sustainability or whether sustainability as a paradigm must instead ask more difficult-to-answer questions such as: What is it we want to sustain? Does the economic, environmental, social and political framework within which we are operating allow for the conditions

of possibility of a sustainable world (Hroch, 2013b)? As Manzini points out, although we have been told that consumption "turns the wheels of the economy and produces wealth … for everybody" (2008b, p. 10), ecological and economic evidence suggests the contrary; as he explains, "beyond a certain threshold, our conventional way of conceiving well-being, and the economy that supports it, produces disaster" (2008b, p. 11). Indeed, Manzini advocates for enabling solutions that enhance the capacities of people and things and argues that:

> Sustainability and the conservation and regeneration of environmental and social capital means breaking with the currently dominant models of living, production, and consumption and experimenting with new ones. If this experimentation does not take place, if we are unable to learn from the new experiences thus generated, then the historical pattern of disabling solutions will continue. (2008b, p. 16)

Second, the need to think Deleuze and Guattari's three domains of thought intensively – in terms of what they do – extends to the way we think about design as an intra-domain modality of thought and/as action. Because of the border-crossing characteristic of most problems, design is, in its modes of analysis and its modes of engagement, a necessarily complex and interdisciplinary endeavour (Farrell and Hooker, 2013; Coyne, 2005). Design thus has the potential to offer us a set of complexity-embracing approaches and tools for dealing with the vagaries of "wicked problems" and "sustainable" solutions. Indeed, it is especially in the search for sustainable design solutions that, as Stuart Walker notes, "the boundaries between the distinct disciplines can become barriers to change" (2008, p. 26-7). By following the flows of fruit through the circuitry of a city's citizenry, *Not Far From the Tree* is one example of an emerging form of design activism that expresses a response to a more broadly felt struggle about how to effectuate collective agency in the context of neoliberal structures of governance and their inherent processes of individualization, fragmentation, competition, and inequality. This kind of project not only challenges

the status quo but also posits – at a local scale – alternative economic, ecological, and social models that affirm what is immanent in the environment and activate more equitably fruitful futures.

In conclusion, designers reading Deleuze and Guattari's work need not despair at the harshness of their characterization of design. Indeed, many modes of activist design have already incorporated Deleuze and Guattari's critical and creative modes of conceptualizing and materializing – fabulating and fabricating – the world. At the same time, if we are to learn from Deleuze and Guattari's oeuvre, we should take seriously the political impetus of their work, attend to their expressed enthusiasms as well as to their warnings, and to continue to reflect critically throughout the creative design process on the question: "what does this do?" Indeed, Deleuze and Guattari are thinkers who have themselves designed formidable tools with which to fabricate concepts for thinking and doing differently. So although Deleuze and Guattari did not address design activis¡m directly, design that aims to generate such a counter-narrative is very much the kind of problem-posing, counter-effectuating, convention-resisting mode that resonates with Deleuze and Guattari's description of art, science, and philosophy in their most creative actualizations. Design activist responses to some of today's most pressing problems are already materializing intensive resistances to the present in their experimentation with different ways of thinking that draw on philosophical, scientific, and artistic modes. We should not only include such design activist practices in our toolbox of "concepts" but also put them to use.

CHAPTER THREE

RESILIENCE VERSUS RESISTANCE:
AFFECTIVELY MODULATING CONTEMPORARY DIAGRAMS OF SOCIAL RESILIENCE, SOCIAL SUSTAINABILITY, AND SOCIAL INNOVATION

> [Narrator]: *California is a strong brand: the place of dreams, movie stars, and new beginnings, with a heavenly climate. [At the same time], the Golden State is running out of money and so is the city of Los Angeles. Public services are being cut, unemployment is rising, and many people have lost their homes in the economic crisis. But optimism and belief in the power of America seem unaffected. Who are the pioneers of the new America-in-the-making, and how do they see the future?*
> (van der Haak, *California Dreaming*, 2010)

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The above narration – together with a backdrop of images of beach-side stands selling knick-knacks – sets the scene for Dutch filmmaker Bregtje van der Haak's 2010 documentary, *California Dreaming*. Shot in sunny Los Angeles and Santa Barbara, the documentary explores some of the ways American individuals, families, and organizations have been managing the ongoing aftermath of the 2008 financial crisis. As a European documentary filmmaker in California, van der Haak becomes fascinated by the transcontinental difference in approach toward the economic crisis and its resulting issues and effects. She is familiar with what she describes as a "typical" European response to current social, political, and economic problems: blaming the government as the source of the problem and expecting the government to fix it (van der Haak, 2010b). Although she finds that Californians enduring the US financial meltdown are suffering as much as their Europeans counterparts embroiled in the EU fiscal crisis, she remarks at the surprising difference in their responses to the crisis: "Americans are optimistic, not like Europeans who are always complaining" (van der Haak, 2010a).

In *California Dreaming*, van der Haak interviews Californians who have lost their homes and jobs as a result of the housing market crash. She also profiles those trying to reintegrate into society in the midst of the recession after having lost all or part of their lives to the state's for-profit prison sector and the "three-strikes law" – a law that can result in life imprisonment for repeat non-serious and non-violent offenses. Most of the people interviewed, although they have first-hand evidence that there is something wrong with the system, do not, as van der Haak observes, hold the government responsible for faulty policies. Nor do they demand reforms. Rather, they tend to blame and be ashamed of themselves, maintain an unflinching faith in meritocracy, and reaffirm their positive, optimistic, and "can-do" attitude and belief in the "American Dream." They resolve to "pull-up their bootstraps" and look to their own capacities, families, and communities for survival strategies and potential solutions.[38]

So, although *California Dreaming* focuses on the potential benefits of "optimism" as a "positive" affect leading to resilience, it simultaneously complicates normative narratives and assumptions that "optimism" is necessarily desirable for social change (and conversely, that pessimism, or "complaining" is not). Indeed, the documentary title, *California Dreaming*, itself can be read as having a double valence of meaning: on the one hand, it reinforces the positive, optimistic nature of the California "brand" as "the place of dreams" and possibilities, and, on the other hand, it suggests that Californians who buy into this "branded" identity, this "belief," are "dreaming" – that California's optimistic citizens might in fact be inattentive to reality, engaging in delusional fantasies, or impeded in their ability to think critically.

In what follows, I offer a critique of the increasingly popular contemporary rhetoric of "social resilience," "social sustainability," and "social innovation." My suggestion is

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[38] Unless otherwise noted, all references to van der Haak refer to her documentary film, *California Dreaming* (2010a).

that despite the apparent relevance, urgency, and innovative veneer of these concepts – concepts that have come to the fore in the face of cascading ecological and economic crises and the need for sustainable solutions – they nonetheless operate on subjects and communities affectively and perpetuate the very status quo policies, practices, and programs that have contributed to our moment of crisis in the first place. I begin with a description of some of the activities of the Californians profiled in van der Haak's *California Dreaming*. Their activities anecdotally illustrate some of the acceptable responses to crises available to today's necessarily enterprising subjects. Next, I outline the problem of locating agency in the individual as a response to a systemic crisis – a crisis that itself placed responsibility upon individuals while simultaneously disempowering them (too-big-to-fail became not a descriptive but a performative statement). Finally, using Foucault's critique of the "self" as an enterprise (Foucault, 2010; McNay, 2009) and Deleuze's critique of the "dividual" (Deleuze, 1992), I discuss the subject-system relation characteristic of contemporary diagrams of control (Deleuze, 1992). My objective here is to emphasize the way in which affect and affectively charged concepts are central to the modulation of today's crisis-filled events and serve as a means of bolstering existing flows of power and/or forces of transformation. I critically connect this analysis of affect to today's rhetoric of "resilience" and argue that although "resilience"-focused activities are characterized by an emphasis on production rather than consumption, and community participation rather than individual action, and although they ostensibly respond to the need for sustainable solutions they nonetheless serve to perpetuate dominant neoliberal values such as entrepreneurialism, market-based decision making, and privatization. Finally, I sketch out criteria for what "resistance" might look like in a diagram of control in which "social resilience" and "innovation" is becoming an imperative.

AFFECTIVELY INTENSIFYING THE STATUS QUO: A NEW AMERICA-IN-THE-MAKING

In *California Dreaming* some of the grassroots community initiatives created by and for the Californians van der Haak describes as "pioneers of the new America-in-the making" include initiatives that, as I described in the previous chapter, Ezio Manzini might describe as "designs for social innovation": (1) The New Beginnings Safe Parking Program, a program that points people who are living out of their cars to registered "safe" parking lots where they can spend the night without being disturbed, ticketed, or towed; (2) Homeboy Industries, a program that helps ex-gang members who have been recently released from prison to reintegrate into society by providing services such as laser removal of tattoos and gang markings, counseling, and job training; (3) The Jobs Club, a program that helps people without employment find work; (4) Fallen Fruit, an urban fruit picking art project; and (5) a commune created by a group of thirty-somethings based on what architect/founder Laura Burkhalter calls "practical" rather than "ideological" principles such as having people grow their own food and live communally.

Although the European and American financial crises may have a variety of underlying causes, and although these causes may be differently constructed in and through various media, whether people come to believe the source of the problems and solutions to be individual or social points to an issue just as critical as what the root causes of these issues really are or how the roots of these issues are constructed in dominant narratives. How people themselves construe an understanding of their own agency, how they internalize dominant affective norms, and how they imagine their relationship to these complex issues is intimately related to the ways they consider themselves as capable of acting or reacting. The stories of people managing

the consequences of financial crises that van der Haak presents tell us about the ways different contemporary mappings of power – or "neoliberal diagrams" (Tiessen and Elmer, 2013) – modulate subjectivity in relation to social, economic, and ecological truths and reveal the need to account for affective economies when engaging in political and economic critiques. In other words, these stories highlight the importance of the modulation of affect as a key component of the modulation of power and its material effects in the management of unsustainable problems and apparently "sustainable" solutions.

The initiatives highlighted by van der Haak in *California Dreaming* reflect the kinds of citizen-led social programs popping up to fill social needs in cash-strapped cities and regions around the world. Although these efforts address a variety of problems and provide a variety of services, they can be grouped into activities that are increasingly being referred to by business and design schools, local and regional governments, development agencies, and international governance institutions (such as the Organisation for Economic Co-operation and Development, World Bank, and International Monetary Fund) as examples of "social resilience" (Meybeck et al., 2012; World Bank, 2013a; Zhu, 2012), "social sustainability" (World Bank, 2013b; Lipsky, 2009), or "social innovation" (OECD, 2000; World Bank, 2011). Such activities reveal the catastrophic failure of – and, paradoxically, the reemergence of faith in – what Foucault and Deleuze identify as the neoliberal, individualized/individualizing, enterprising subject as the locus of social, economic, ecological, and political agency.

At the heart of the paradox I am describing is the fact that while the neoliberal capitalist game has been revealed to be in crisis, this crisis has led to greater insistence that we ought to have intensified faith in the status quo and the same rules of play. As we know, the global financial crisis and its ongoing fallout have revealed that

corporations and banks cannot be left to regulate themselves, that they cannot be entrusted to impose their own checks and balances, and that there is no such thing as a benevolent "invisible hand" of the market. Indeed, the demands for government-funded (i.e. taxpayer-funded) bank bailouts and quantitative easing (QE) programs have shown that even those CEOs and central bankers that profess faith in the free market don't believe in "allowing the market to decide" when it comes to their own survival. In other words, even the so-called "invisible" hand reaches out for a helping hand after it stretches too far, risks too much, crashes, and falls. In the United States, the "too-big-to-fail" banks that approved the risky (and often predatory) sub-prime loans were bailed out by citizens, while the citizens, teetering on the brink of losing their homes in the sub-prime mortgage crisis, were left bankrupt and homeless. This socialization of losses and privatization of gains made plain that, as critics of globalized capitalism have long argued, the "free market" was never "free" to begin with (or at least, that "free" here has a contested meaning). As the bailouts revealed, there was one set of free market rules for the private sector (when the private sector fails, it is protected by public funds) and another set of rules for the public (when private individuals fail, as the foreclosures revealed, they are left to fend for themselves and be "resilient" in the face of the ongoing market insecurities). The risks and liberties taken advantage of by the private sector were backstopped by the very social safety net the private sector so often targets for destruction via privatization. The paradoxes abound and yet the same hard-working, enterprising, individual subject who has been systematically disempowered by the mechanisms of neoliberal capitalism finds him/herself, as the crisis unfolds, with seemingly no alternative to having to intensify his/her actions as a hard-working, enterprising, individual subject in the face of social, political, economic, or environmental situations that are increasingly out of (his or her) control. Individual and social resilience as the imperative, appropriate response forecloses the alternative: resistance. Obligatory optimism marginalizes complaints and critiques, and an over-emphasis on

individual responsibility obfuscates the need to hold responsible those who have the greatest power to make decisions to transform a given situation.

If, as Deleuze writes, "there is no diagram that does not also include, besides the points which it connects up, certain relatively free points, points of creativity, change and resistance," how can analysis of these shifting – and indeed *shifty* – subjective-social diagrams of power help us identify expressions of resistance (Deleuze, 1992, p. 44)? Can we, or how can we, make distinctions about which actions/reactions are acts of so-called resilience and which are acts of resistance? Moreover, what constitutes this difference? How can we find the pressure points that, if targeted, might transform a configuration of subjectivity designed to capitulate to what Foucault called power-*over* (*potestas*) into a site from which that subject has the capacity to express power-*to* (*potentia*) – a power to reshape not only itself but also the broader social and political field (Braidotti, 1994, 2012)?

I am engaging here with intrastitial affective spaces as constitutive and constructive of power relations in order to analyze evolving neoliberal diagrams and to remap new cartographies of power (Braidotti, 2012) of what I call "intensive resistances." More specifically, my main interest is to interrogate critically three contemporary imperatives that describe and prescribe the actions of contemporary neoliberal agents in an attempt to render their behaviour sustainable: the imperative of social resilience, social sustainability, and social innovation. I suggest that all three can be thought of as "schizoid" (Deleuze, 1983, 1987) modes of expressing what Deleuze calls "the cliché" (Deleuze, 2004, p. 57) as "the new" (Deleuze, 1994, p. vii) – that is, that these are variously modulated expressions of the authority of the *same* masquerading as *difference*. The indirect effect of this short-circuiting is that any actual possibility of "resistance" *qua* social transformation, let alone sustainability as a sustaining of intensity, is rendered imperceptible and un-actualizable. I connect this tension to the

work of Deleuze, who, though he takes a more posthumanist approach than Foucault in his analysis of power relations, also engages with precisely this dilemma: can, or how can, the individual subject composed by the neoliberal diagram be the site from which dividuated modes of subjectivity, as well as broader neoliberal structures, are challenged? If, in Deleuze, the subject is always an assemblage of forces and flows, a material, mediated, and modulated entity, a singular multiplicity, what does it mean for that subject to transduce the *always-already* into something that is *not-yet*? And how does this transformation in turn exceed the individual subject and also shift the social and political diagram?

Many of the responses to the problems of social sustainability in the context of a neoliberal governmentality classified under the overlapping terms social resilience and social innovation are sustainable primarily in the sense that they reproduce, or sustain, dominant modes of existence – that is, they reproduce modes of so-called collective action by "dividualized" (Deleuze, 1992) agents who, in expressing their so-called agency, reciprocally reinforce *a realm in which collective responsibility is further individualized*. This neoliberal diagram of power captures creative energies in service of the capitalist status quo. As we proceed, I want to draw out the double-edged meaning of social resilience (with its aim of resisting external change) and social innovation (with its aim to bring change about) in the context of social sustainability by analyzing the diagram of what these discourses seek to withstand (resilience), to create (innovation), and to maintain (sustainability). Moreover: (1) How can critical analyses of this diagram of power help us to defragment, reformat, and recreate responsive and resistant cartographies? and: (2) Why is it vital that we understand resistance to neoliberal diagrams in *intensive, matter-mediated-modulated, non-binary modes*?

SELF-STYLING IN THE SHANTY TOWN: SOCIAL RESILIENCE, SOCIAL SUSTAINABILITY, AND SOCIAL INNOVATION

> *Man [sic] is no longer man enclosed, but man in debt. It is true that capitalism has retained as a constant the extreme poverty of three quarters of humanity, too poor for debt, too numerous for confinement: control will not only have to deal with erosions of frontiers but with the explorations within shanty towns or ghettos.* (Deleuze, 1992, p. 6–7)

To illustrate these ideas more concretely, I'd like to return to California, and revisit more specifically a few of the case studies upon which van der Haak focuses in her filmic exploration of the popular response to the financial crisis. In the opening few scenes, van der Haak encounters L.A. fire fighters collecting money for the fire department from cars stopped at an intersection. When asked why they're in need of money, one of the fire fighters describes the cutbacks to the fire department. Shocked by hearing this news of cutbacks to what she considers one of the most essential emergency services provided by a local government, van der Haak interviews Wendy Greuel, city controller (and mayoral candidate), who describes the depth of the debt problem including L.A. County's half-billion dollar deficit, their non-existent emergency reserve fund, and the extent of the debt crisis beyond the city, to the state and the country as a whole. Upon describing the severity of the problem, she warns, as if anticipating what van der Haak might come to observe in her interaction with people living through the crisis, "we can be eternally optimistic, but if optimism is blinding you then this is a revolving-door problem."

In the next scene, Roslyn Scheuerman, a social worker with the New Beginnings Safe Parking Program goes knocking "door-to-door" on the RV, bus, and car windows of people who have lost their homes to the banks – people whose former occupations include the self-described "former software engineer and CEO of a major.com" as well as "Dan Rather's former editor." Although she maintains a sunny disposition, the social worker admits that some of the people who have lost their jobs and are living

out of their cars are "very depressed." When van der Haak asks her, "Don't you think the city government should be taking care of these people?" she responds by saying that she "[doesn't] think it's up to the government," since "the government doesn't have money." She thinks, instead, that "it's going to take more people being part of the solution" and doing some "creative thinking."

The next series of scenes feature interviews with a young family – a college-educated woman who lost her job as a hotel receptionist and a college-educated man who lost his job as an electrician who are living out of an RV with their two young boys. These interviews reveal a similar reluctance to hold any level of government responsible for their loss of employment and the loss of their home. We see the family driving to a parking lot that is part of the Safe Parking Program as the young mother explains how shocked she is that in California, the seventh largest economy in the world, she sees so many people living in their cars or RVs. When asked whether she's angry with anyone for ending up like this, she says she "can't be mad at anybody" because the employers who let them go "were really nice." And they "can't really blame themselves" because despite "[trying] their best" they couldn't manage to accumulate enough savings to continue to make ends meet after they lost their jobs. She observes that she sees class divisions widening – that the people without money are doing worse and becoming more desperate while the people with money are doing better – and also remarks that "the middle rung is gone." Looking hesitantly at her partner she cautiously ventures what he might perceive to be a radical remark when she says, "in history this is never good." When van der Haak asks about her biggest fear, the young mother confides, tearfully, that she is afraid that her kids will be embarrassed about their family situation in front of other kids at school and ashamed of their parents if they're still living "this way" when they are old enough to realize it. The young father responds to the question, and to her admission of fear, by saying, in contrast, that he "doesn't look at life as fears" but rather as "challenges." The next morning we see

him riding his bike to The Jobs Club, a not-for profit that teaches people who are out of work how to write resumes and provides Internet access for online job searches. He goes every day, despite the fact that, unlike the people to whom the service is targeted, he has a college degree, previous job experience, and job search skills.[39]

The Safe Parking Program and the Jobs Club are examples of the kind of social services that help people to be "resilient" in the face of an economic crisis by mitigating the effects of homelessness and unemployment for those already in desperate situations. In the documentary's second half, van der Haak chronicles some programs that express the kind of "creative thinking" to which the social worker refers – programs that might look like they are less about surviving resiliently after-the-fact and more about innovating pre-emptively to build resilience not only for past and present but also future crises. Fallen Fruit, a public fruit-picking project in L.A., is one such project. Part performance art project, part environmental activist endeavor, and part social service, *Fallen Fruit* was founded by artists David Burns, Austin Young, and Matias Viegener, who noticed the abundance of fruit growing on public property around the city and, taking advantage of the lack of a law regarding picking fruit growing on public land or reachable from a public sidewalk, began to map the public fruit trees and bushes in the city in 2004.

David Burns of the Fallen Fruit collective notes that since the financial crisis people have become more interested in experiences than in acquiring objects, and that there is a greater sense of connectedness. Indeed, he shows the properties of some neighbours who have planted extra vegetables on the public property just beyond their sidewalks for public consumption. Noting that one-third of the people in L.A. don't have work, and that he was himself a university instructor for sixteen years until

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[39] In a later scene in *California Dreaming* we see a job fair sponsored, ironically enough, by the Bank of America – one of the primary contributors to the sub-prime mortgage crisis. When asked about people's reaction to this in an interview, van der Haak remarked that "people did not find anything strange here. Nobody blamed the banks. Nobody blamed anyone but themselves" (2010).

the California public university system recently cut his position, he explains that the public fruit program helped him find new work and job security and, simultaneously, helps other people find food security by having increased access to free local produce, including a range of citrus such as lemons, tangerines, naval oranges, blood oranges, grapefruit as well as dragon fruit, tomatillos, tomatoes, peaches, broccoli, and artichokes. Programs such as Fallen Fruit have taken root in other cities including New York, Boston (Boston Area Gleaners), Berkeley, Santa Clara, Oakland (Forage Oakland), Philadelphia (The Philadelphia Orchard Project), Portland (The Portland Fruit Tree Project and Urban Edibles), San Francisco (Guerilla Grafters), Atlanta (Concrete Jungle), Vancouver (Vancouver Fruit Tree Project), Hamilton (Hamilton Fruit Tree Project), and Toronto (Not Far from the Tree) (Eaton, 2009).

In a discussion paper presented at a design philosophy workshop at the Parsons New School for Design, leading theorist of design for social innovation Ezio Manzini together with Virginia Tassarini listed a range of initiatives similar these fruit picking projects that they consider examples of social innovation defined broadly as "new ideas that work in meeting social goals" (Mulgan, 2007, p. 9). Many of these actions may also be described as examples of social resilience or social sustainability and include initiatives such as:

> groups of families sharing services to reduce economic and environmental costs, while also improving neighbourhoods; new forms of social interchange and mutual help (such as time banks); systems of mobility that present alternatives to the use of individual cars (from car-sharing and car pooling to the rediscovery of bicycles); the development of productive activities based on local resources and skills that are linked into wider global networks (e.g. certain products of a specific place, or the fair and direct trade networks between producers and consumers established around the globe. The lists could continue, touching on every area of daily life and emerging all over the world. (Manzini and Tassarini, 2012, p. 1)

Although I do not suggest that such practices of social innovation are all the same, nor that they are *necessarily* problematic in either their analyses of critical issues or their efforts to address them, I do want to suggest that these initiatives may unwittingly recreate the issues they seek to address. For example, are they indeed innovative, sustainable, or resilient even as they continue to operate within the current dominant paradigm, or do they contribute to changing the broader social and economic structures that led to the need for their intervention? What broader systemic problems might these examples of social resilience, sustainability, and innovation inadvertently help to sustain? And despite – or perhaps even *because* of their existence – what broader diagrams of power are *not* resisted or transformed at all? Indeed, what broader diagrams of power do these programs make *more* sustainable? In other words, when Manzini and Tassarini highlight that a main feature of "creative communities" and "the promising initiatives they generate" is that "they have grown out of problems posed by contemporary life," we must ask whether the "sustainable solutions" they generate are sustainable in the sense that they are merely adaptive to the new normal, functioning as a temporary "patch," as a downloading onto citizens the responsibility for problems that exist at scales beyond their scope, or whether they also call into question the root mechanisms that give rise to the creation of these problems (2012, p. 4). It seems to me that there is a fine line between sustainable social innovation as an adaptive behaviour that, in a sense, enables a system to continue to break down by putting temporary patches on inevitable, long-term, systemic problems and sustainable social innovation that questions, challenges, and resists the kinds of social, political, and economic changes that contribute to systemic breakdown in the first instance.

Moreover, despite Manzini and Tassarini's claim that one of the characteristics of social innovation initiatives is that "citizens, associations, enterprises and local governments that conceive and set up new solutions" do so "by choice," it is

imperative to ask (and difficult to discern) what constitutes "choice" in many of the situations in which people find themselves today (2012, p. 4). As we see in many of van der Haak's interviews with "creative" citizens, associations, and enterprises in *California Dreaming,* it is questionable whether people – whether they are engaging in activities focused on "survival" or "innovation" – have any significant choice (that is, choice powerful enough to significantly change their situation) at all. Rather, despite the fact that we live a neoliberal diagram that perpetuates the myth that people are individual free agents that choose their failures and successes, when individuals find themselves in a situation in which they have no choice, it is framed, first of all, as the fault of the individual (or the culmination of poor previous choices), and, second, it is presented to the individual as just another fork in the road where choices must be made. In other words, even when faced with no real choices, the individual is expected to play into the pretense of choice and agency by, for instance, "choosing" to have a positive attitude, and trying (even if in vain) to do something about the situation. This so-called "choice," then, exists within a context in which individuals' choices are sharply delimited. So strong is the imperative to be enterprising that no matter the real *lack* of choices, options, powers, and capacities, it is incumbent upon a good subject to participate in the fiction of actively making choices within what is in fact a diagrammatic blockade of agency. An individual is effectively expected to express freedom and agency within a context in which he/she has no access to power – and even if there is nothing that can be done to improve the situation, at the very least it is incumbent upon individuals to "stay positive," remain "optimistic," and continue to smile as they continue trying to survive and thrive. A person who pursues the alternative route – whether by admitting defeat, refusing to participate, complaining, or criticizing the overriding structure – risks being seen as a "bad subject," a "killjoy" (Ahmed, 2010), as a threat to the system of enterprising activity, obligatory positive affect, and endless flexibility and adaptability.

The current expansion of the discourse of sustainability to include terms like resilience and innovation is reflective of the ways in which individuals and organizations are required to realign their orientations toward the mitigation of past, present, potential, and predetermined (or, in other words, all-pervasive) risks. The move from the rhetoric of sustainability toward the rhetoric of resilience reflects the shift in emphasis from looking for ways to keep up the status quo toward looking for ways to absorb potential shocks (as another way of maintaining the status quo), while the move from speaking about sustainability toward speaking about innovation uses "creativity" as a means of mitigating change (and further maintaining the status quo). As shock-absorbing, status quo-maintaining, or forward-thinking as resilience, sustainability, and innovation, respectively, may sound, all three terms reflect the move from a proactive to a reactive subject position – one that may certainly be flexible, hardy, or creative, but not necessarily critical (let alone a threat to the established order of things).

Indeed, as critics of the concepts of social resilience, resilience thinking, and resilience policy and activism have recently pointed out, the application of the notion of resilience to the social sphere – a notion originally used to describe ecological systems – has "important limits" (Cote and Nightingale, 2012, p. 475). First, the practical relevance of the term is questionable due to the lack of clear distinction between the descriptive aspects or "specifications of what is the case" and normative aspects or "prescriptions of what ought to be the case or is desirable as such" (Brand and Jax, 2007, p. 22). In addition to the problems associated with such normative claims, there is also an epistemological issue. Although the term resilience has the advantage of being a more holistic and complex approach to studying socio-economic and ecological change (such as anthropogenic climate change) by "emphasiz[ing] feedback dynamics between social and ecological systems," the extension of the term resilience from the ecological to the social realm

"problematically assum[es] that social and ecological system dynamics" function in similar ways (Cote and Nightingale, 2012, p. 475). As a result, the normative and epistemological limitations of the concept of social resilience does not account for the ways in which "power and competing value systems" are integral (rather than external) to social systems; nor does it account (nor allow) for social transformation in any significant sense (2012, p. 475). Indeed, the term resilience as used by the social resilience proponents focuses more on "accommodating" changing conditions and new risks than critiquing their root causes or imagining and acting upon alternatives (O'Brien, 2012). Resilience thinking reproduces an inadequacy common to a number of other approaches to risk – namely, resilience theories "overemphasize" the role of "physical shocks" and "undertheorize" the importance of "political economic factors" in understanding "vulnerability" (Watts qtd. in Cote and Nightingale, 2012, p. 478). This underlying assumption that shock is "natural" or "given" is problematic because it obscures the need to ask critical questions about power and to "unpack normative questions such as 'resilience of what?' and 'for whom?'" (Cote and Nightingale, 2012, p. 479).[40]

Similarly, Danny MacKinnon and Kate Driscoll Derickson argue that resilience is a conservative concept when applied to social relations. Identifying it as the latest in a "long line of naturalistic metaphors" applied to the social sciences, and especially to cities and regions, the concept of resilience takes for granted and, in effect, *naturalizes* rather than problematizes resilience as a "common project" as well as existing social structures and relations that are to be mobilized in its pursuit (MacKinnon and Derickson, 2012, p. 259). The rhetoric of resilience is thus fundamentally "anti-

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[40] On the one hand, as Walker and Cooper note, "resilience" has become "a pervasive idiom of global governance" – a term flexible enough to be applied to the realm of "high finance, defence and urban infrastructure" (qtd. in MacKinnon and Derickson, 2012, p. 254). On the other hand, MacKinnon and Derickon note that "resilience" is also often invoked by "progressive activists and movements," including those critical of capitalism. It is due to the term's more widespread use not only in the rhetoric of adaptive governance but also by activists themselves that they suggest there is a need for "critical appraisal" of the term itself as well as "the politics it animates" (2012, p. 254).

political" in the sense that it glosses over pre-existing social inequalities and "the role of the state and politics" (2012, p. 259). Resilience may sound like a positive quality "imbued with notions of self-reliance and triumph over adversity" but, as MacKinnon and Derickson observe, this assumption overlooks its "affinities with neoliberal thinking" (2012, p. 259) that privilege market rationalities over social needs and require that individuals and communities "constantly remake themselves in a manner that suits the fickle whims of capital with limited support from the state" (MacKinnon and Derickson, 2012, p. 263).

Drawing from the work of Donna Haraway, Muriel Cote and Andrea Nightingale point out that resilience as a contemporary concept cannot be "seen from nowhere" but must be seen as a concept "nested" within "political and social processes that give rise to the production and reproduction" of systems of power that operate "in and through" socioenvironmental systems (Haraway qtd. in Cote and Nightingale, 2012, p. 481). To this end, they suggest an "engagement with social theories about structure/agency as a way to formulate questions that were previously invisible from a systems theory standpoint" (Cote and Nightingale, 2012, p. 481). This kind of "situated resilience approach" means that we must take context into account and ask, for instance, "Does the resilience of some livelihoods result in the vulnerability of others? Do specific social institutional processes that encourage social inequalities have implications for the resilience of these groups?" Or, "resilience for whom and at what cost to which others?" (2012, p. 485).

The rhetoric of resilience is often promoted by agents outside of local communities who are regarded as having "expert knowledge" in spheres such as national security, financial management, emergency planning, public health, economic development, and urban planning, design, and policy making (Walker and Cooper, 2011). These outside experts routinely impose "top-down" solutions that "place the onus on

individuals, communities, and places to become more resilient and adaptable to a range of external threats" (MacKinnon and Derickson, 2012, p. 254) while the underlying causes of these threats themselves remain unquestioned, accepted, and even expected. This results in misplaced emphasis on the resilience of the "local" scale at the feet of individual citizens who have what Jamie Peck and Adam Tickell call "responsibility without power" (qtd. in MacKinnon and Derickson, 2012, p. 255). Citizens at the local level are expected to mobilize their own assets and resources to solve problems that unfold primarily at the scale of global "capitalist social relations" (MacKinnon and Derickson, 2012, p. 253). This top-down process of "responsibilitization" involves citizens and communities in their own risk management. It downloads responsibility to individuals by promoting "greater community self-reliance and empowerment," often in the form of voluntarism or "community activism," while simultaneously shrinking the responsibilities, capacities, and powers of the state and treating capitalism in its current configuration as if it were a "given" or even a "natural" external force (MacKinnon and Derickson, 2012). Resilience strategies may make localities *feel* like they are empowered; however, by ignoring broader issues such as the imposition of global market forces and the absence of social supports that are causing adversity and limiting opportunity in local communities in the first place, local resilience initiatives may inadvertently sustain and even perpetuate policies that perpetuate the problems to which localities are then forced to respond.

As MacKinnon and Derickson point out, "capitalism is itself highly resilient at a systemic level" through its constant "reinvention and restructuring" in the face of cyclical booms and busts (2012, p. 261). The paradox is that the resilience of the capitalist system is premised upon the making-vulnerable of local and regional economies (and ecologies): "The long-term success of capitalism is predicated upon the periodic undermining of resilience of certain local and regional economies, which

are vulnerable to capital flight and crisis in the face of competition from other places offering more profitable investment opportunities" (Smith qtd. in MacKinnon and Derickson, 2012, p. 261).

MacKinnon and Derickson argue that the rhetoric of resilience in economic development discussions is a current expression of the "creative class" and "creative cities" craze of the mid-2000s (Florida, 2002, 2008; MacKinnon and Derickson, 2012, p. 260). They point out that, much like the "creative class" and "creative cities" narratives, "resilience" is a "mobilizing discourse" that presents individuals, organizations, and communities with the "imperative [to continually adapt] to the challenges of an increasingly turbulent environment" (2012, p. 260). Walker et al. point out, however, that there is a major difference between "resilience" and *transformation* as approaches to crisis (2004); however, it can sometimes be difficult to discern between initiatives that are adaptive behaviours that take a given system of power for granted and the initiatives that question the root causes of the distributions of power and attempt to agitate and activate against them. Unlike the "creative cities" narrative, however, which was criticized for advocating policy making that served the interests of the privileged "creative class," "resilience" narratives appear to provide "more socially inclusive" scripts that require the engagement of all community members (MacKinnon and Derickson, 2012, p. 260). Even then, there are a number of critical questions that individuals and communities must ask prior to pursuing apparently resilient policies and socially innovative solutions. These questions might include: Do these initiatives shift the diagram of power? Or does the diagram become even more entrenched through what looks like a state of flux? More specifically, if social resilience activities focus on solving problems at the local level, do corporations operating at a global scale continue to benefit by being able to reap profits while avoiding having to pay for problems? Do governments benefit by being able to continue to ignore the needs of people, having off-loaded this responsibility to

individuals, neighbourhoods, and not-for profit organizations? Does the "freedom" of the enterprising subject circumscribed by creating DIY solutions in discourses of social resilience take the place of "free" citizens engaged in political processes or, conversely, citizens protesting against problematic policies?

Indeed, the healthy skeptic of resilience discourses has good reason to answer these question by observing, for example, that all too often some parties "win" more than others; that those asked to "share" wealth and resources are all too often not those in position to accumulate wealth; and that those who move from "ownership" to "usership" models routinely become parts of an apparatus that concentrates ownership in the hands of a decreasing few while accelerating the "mechanics of dispossession" for the majority (Tiessen, 2012). The issue of ownership and control over what is shared is a key factor that is overlooked in discourses of agency in which people are asked to "take ownership" of problems that are, for better or for worse, not really in their control and to "take responsibility" in instances in which they have little if any power.

FOUCAULT AND DELEUZE'S NEOLIBERAL DIAGRAMS: PRODUCING POINTS OF RESISTANCE

> *The diagram is no longer an auditory or visual archive but a map … that is coextensive with the whole social field … a map of relations between forces, a map of destiny, or intensity … the cause of concrete assemblages that execute its relations; and these relations take place "not above" but within the very tissue of the assemblages they produce.*
> (Deleuze, 1992, p. 34, 37)

Foucault's late work and Deleuze's work on Foucault focuses intensely on the situatedness (Haraway, 1997, p. 199) of the subject in a neoliberal diagram of power and endeavour to identify possibilities for subjective modes of resistance. For

Foucault, the notion of the self as an "enterprise" expresses a neoliberal configuration of subjectivity that is simultaneously an individualized and individualizing locus of power (Foucault, 2010; McNay, 2009). Deleuze's "dividual," too, is both created by and recreates a neoliberal diagram of power (1992). As Foucault and Deleuze identify, a diagram of power, although it may present routes of greater and lesser resistance, neither determines nor forecloses any particular pattern or flow of power. In addition, subjects situated within any diagram may engage in practices that present very little resistance and that thus reinforce power's existing configuration. Deleuze situates subjectivity as a key site of the production of power when he underscores that the "dividual" works as *a point through which* power operates.

Deleuze – writing with Guattari – situates his discussion of subjectivity within his process ontology. For him, subjectivity is a process of becoming, and a subject is never a stable entity. Deleuze and Guattari speak about becoming as "no longer time that exists between two instants" but rather "the event that is a meanwhile" (2009, p. 158). The subject – always a subject "in becoming" – is an entity that exists both as an "already happened" and a "still to come" (2009, p. 158). The subject is, throughout Deleuze's work (and Guattari's), a materially mediated and modulated entity. Subjectivity is *material* because subjects are always material instantiations – composed of matter – and their becoming is also a material process in both its actuality and virtuality. Subjectivity is also *mediated* because the forces and flows of materiality are mediations – just as subjects are processes, becomings, unfoldings, and meanwhiles, so too are all of the materialities of which they are composed. This composition is always a mediation of materialities. And finally, subjectivity is *modulated* because the mediation of materialities is always produced by and productive of power relations. The diagram of power that materializes, mediates, and modulates the way in which subjects are composed is a diagram that composes subjects as "meanwhiles" – both as "having already happened" and as "still to come," both *as subject to* "power over"

and as *subjects with* a "power to." The key to resisting the ways in which subjectivity is modulated by "power over" is to draw a "critical cartography" (Braidotti, p. 2005) of shifting diagrams of power and to indicate what Deleuze called the possible "points of resistance" – points through which "power to" can be exercised in ways that transforms the diagram and de-dividualize subjectivity as it is currently configured.

For a shift in a given configuration of power to occur, the process of resistance cannot, however, simply be an oppositional resistance to the diagram of power. Indeed, binary oppositions are reductive representations of complex situations and, in capitulating to false binaries, resistances framed as oppositions often serve simply to reproduce or re-legitimize existing diagrams of power. In a diagram of power premised upon Deleuze's notion of "modulation" as a form of control, resistance must instead be thought in *intensive* rather than *extensive* modes, as *transformation* rather than *opposition*, and as drawing new cartographies rather than reproducing cartographies of power as they currently exist. As Deleuze describes, what is needed for transformation to occur is the ability to locate the points through which power is produced and reproduced so that the pressure of intensive resistance can be applied and configurations can be shifted. If subjectivity is the "point through which power operates," then, as I suggest here, *neoliberal* subjectivity is a pressure point – a key site that, if paid attention to, called into question, and placed under scrutiny, is also capable of being reimagined. If subjectivity is a "point through which power operates," then it is a point through which diagrams of power can be reconfigured. Deleuze's notion of subjective agency is not a "dividualized" and thus inert site of the reproduction of neoliberal diagrams of power, but rather an *empowered* notion of agency that emphasizes rather than overlooks the material, mediated, and modulated connections between the subject and the system, and the individual to the context. Affect, then, is a crucial component of activating and deactivating agency, but affect must not be thought in dividual terms, but rather, as material, mediating, and

modulating relation between subject and system, individual and context, the local and the outside.

Deleuze describes the move from disciplinary to control societies as a shift from a more static to a more dynamic and flexible shape-shifting diagram of power. If the "enclosures" of disciplinary societies are "*molds*, distinct castings," then the "controls" of control societies are "a *modulation*, like a self-deforming cast that will continuously change from one moment to another, or like a sieve whose mesh will transmute from point to point" (Deleuze, 1992, p. 4). The neoliberal diagram (and the institutional systems that feed it) works, according to Deleuze, by dividing individuals from one another and within themselves by constantly presenting the "brashest rivalry as a healthy form of emulation, an excellent motivational force that opposes individuals against one another and runs through each, dividing each within" (Deleuze, 1992, p. 5). Deleuze describes the deformations and undulations to which "dividuals" in contemporary capitalist societies submit and warns that so-called positive affect – generated, for example, by optimistic rhetoric – can be used to serve as a mechanism of control (as we've seen in van der Haak's documentary):

> Many young people strangely boast of being "motivated"; they re-request apprenticeships and permanent training. It's up to them to discover what they're being made to serve, just as their elders discovered, not without difficulty, the telos of the disciplines. The coils of the serpent are even more complex than the burrows of a molehill. (Deleuze, 1992, p. 7)

Scholars such as Deleuze, and more recently Sara Ahmed (2010), Lauren Berlant (2011), and others, have also taken up the ways in which so-called "positive" affects such as "happiness" or "optimism" or, as Deleuze notes here, "motivation," can seem liberating, but, under particular diagrams of power such as those that emphasize enterprising notions of subjectivity, can in fact be oppressive. Affect, then, must be understood as part of the material condition, part of what is mediated, and

modulated in the political economy of power. As these affect theorists underscore, the affective economy does not run alongside but is an integral part of the political economy, and the affective economy is managed using, in part, conceptual, rhetorical, and semantic modulations (Massumi, 2002). It follows, then, that our critical understandings of contemporary capitalist political economy should be extended to include affective economies – the "promises of happiness" (Ahmed, 2010), the "cruelties of optimism" (Berlant, 2011), and the "boasting of being motivated" (Deleuze, 1992, p. 7).

Using Deleuze's conceptual schema, I suggest that sustainability-promoting concepts like social resilience, social innovation, and social sustainability are a set of social (and rhetorical) technologies produced by control societies for modulating political and social realities in a time of ecological and economic crises. Their rhetorics and their activities, their discourses and materialities, their actualities and virtualities are produced and are productive *through* a particular neoliberal diagram of power that "dividualizes" the subject, and trades in an economy of affects and materialities, and indeed, affects *as* materialities. Deleuze's comments on "technologies" or "techniques" of various modalities of power are instructive here. For Deleuze, technology is always "social before it is technical" (1992, p. 40):

> And if the techniques – in the narrow sense of the word – are caught within the assemblages, this is because the assemblages themselves, with their techniques, are selected by the diagrams: for example, prison can have a marginal existence in sovereign societies (*lettres de cachet*) and exists as a mechanism only when a new diagram, the disciplinary diagram, makes it cross "the technical threshold." (1992, p. 40)

These neoliberal diagrams of power function simultaneously as "always-already" displays of existing "relations between forces" and as the "still to come" or as "transmission[s] of particular points or features" (Deleuze, 1992, p. 86). Existing

diagrams of power thus produce the diagrams of power of tomorrow by transmitting features and prescribing what is possible. Notably, however, the diagram of power is not a fixed structure that merely reproduces its form but is rather a strategy that modulates possible reiteration "like a series of draws in a lottery, each one operating at random but under the extrinsic conditions laid down by the previous draw" (Deleuze, 1992, p. 86).

The discourse of social resilience, social innovation, and social sustainability is thus more than mere rhetoric; it is also part of the production of practices, practices that are always "material-discursive" assemblages (Barad, 2007). These programs and initiatives and the rationale behind them belong to contemporary neoliberal governmentality that, under the pressure of international agenda setting organizations such as the International Monetary Fund, World Economic Forum, and World Bank endeavour to bring about the kind of "rational economic" behaviour they desire by, as John Protevi argues in an interview with Manuel DeLanda and Torkild Thanem:

> actively producing the social situations the model assumes: normalization of behaviour by making people behave in individual self-interest (due to lack of social interaction/social security). The problem comes when people write about such economics as if they were only a matter of assumptions and models rather than prods for concerted efforts to produce a social reality conforming to the model's assumptions. (2005, p. 73)

The discourse of social resilience, social sustainability, and social innovation can then be said to function as an "abstract machine" that, as Deleuze and Guattari describe, links "a language to the semantic and pragmatic contents of statements, to collective assemblages of enunciation, to a whole micropolitics of the social field" (1987, p. 7). The diagrammatic or abstract machine, as they point out, "does not function to represent, even something real, but rather constructs a real that is yet to come, a new type of reality" (Deleuze and Guattari, 1987, p. 142).

What possibilities do such pre-emptions and preclusions leave for subjectivity as a site of power? How can oppressive affective and political economies be transformed in a system of power designed to appropriate resistance, sustainability, and innovation in order to perpetuate, reproduce, and even pre-empt shifts in the status quo? How might we stay attuned to the ways in which tools of resistance might themselves become systemically absorbed and resistant to transformation?

California Dreaming ends by focusing on a housing commune created by a group of thirty-somethings, including architect Laura Burkhalter. Burkhalter (although Swiss-born) epitomizes the kind of forward-thinking subject position van der Haak ascribes to Americans but she also articulates a number of important critiques – even if tensions exist between the two narratives she articulates. One of the key ways in which she differentiates the communal living project we see in the film from the communes of the 1970s is precisely by suggesting that the contemporary commune is "less ideological" and "more practical." Burkhalter also observes that the housing crisis "helped us out" by making plain that you "can't depend on the system," a system that, for example, builds cities for "cars, money, and power" rather than for people. She remarks that the "system has made us [citizens] believe we're powerless, but we're not – the system only exists because we take part in it." She adds that the financial crisis has prompted people to ask themselves how they can become empowered and self-sufficient. The solution, she argues, first involves "daring to imagine" how a "good city" would operate and, second, "taking some action."

For Burkhalter and the friends living together in an urban commune, "taking some action" involves living together and growing and sharing their own food. She finds that in a post-financial crisis world, creating communities is more important for people across income levels and observes that they "need each other and depend on

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each other" and are "not as self-interested" now. When asked about whether the crisis represents a failure of the "American Dream" Burkhalter replies that, although the "gold rush" may be over, the "American Dream" is bigger than that: the "American Dream has to do with freedom and self-expression," which she argues has been caught up in materialistic self-expression and is currently being "redefined." Perhaps "freedom," she muses, is "freedom from the system" or maybe it's "finding one's own power." She concludes by remarking that Americans are "very optimistic" and "very flexible"; they accept new identities and are experts at starting over and second chances.

Burkhalter's critiques and proposals demonstrate the tensions inherent in the positioning of the subject in the neoliberal diagram of power. On the one hand, she makes the claim that the breakdown of the system demonstrates the ways individuals have been systematically disempowered through the unequal distribution of resources. However, she credits this breakdown for reminding individuals of the agency that they have, and for reminding them that this agency exists "outside of the system." At the same time, she argues that the current system only exists "because we take part in it." Burkhalter's response seems to be that the crisis prompts the creation of alternative communities, but it remains unclear whether or how these alternative communities, in her view, represent or ought to represent any challenge, connection, or transformative role vis-à-vis "the system" she describes. Since such communities are intended to exist precisely as alternatives to the system, this leaves the question of their relationship to the larger system unresolved. Critics of neoliberalism have problematized the idea that individual purchasing decisions are political gestures because they remain premised upon individualism, channeling the expression of "free choice" via market logics. Does moving from a consumption-oriented toward a production-oriented social model present a shift away from a "dividualized" lifestyle politics?

Further, Burkhalter asserts that the "American Dream," which has to do with "freedom" and "self-expression" was caught up in "materialism" and "self-interest" before the crisis and is only now being "redefined" as "finding one's own power," being "optimistic," "flexible," finding new identities, and starting over. Although she acknowledges aspects of her own relatively privileged position as a well-educated person with a strong social network, one of the unacknowledged ironies is that she was able to purchase the property for the commune in part because it had been foreclosed upon and was being sold at a post-crash price. It follows, then, that her own resilient, sustainable, and innovative activities are dependent upon another person's poor fortune in a system that perpetuates power no matter how much Burkhalter wishes to be "free." Finally, Burkhalter does not acknowledge that the ability to make the social shift she advocates (from self-interest and materialism toward community living and self-empowerment) depends heavily upon class position and relative material privilege. As a contrast to the people profiled earlier in the documentary who have little to no access to basic goods such as a place to live and food to eat, Burkhalter is clearly in a more empowered position to begin with. Does it not follow that the contemporary, flexible, optimistic subject that Burkhalter enacts is a *result* of the current configuration of power, a mode of its *reiteration*, a mode of its own *resistance* to change?

THE STRUGGLE FOR SUBJECTIVITY IN THE FACE OF DIVIDUALIZATION

> *The struggle for subjectivity presents itself, therefore, as the right to difference, variation and metamorphosis.* (Deleuze, 1992, p. 29)

For Deleuze, the points through which power flows are the points through which power can be transformed. The configuration of subjects as "dividuals" is one such

point in this diagram. Such a view of subjectivity – even in the context of the neoliberal diagram of power in which subjects are "dividuated" – means that subjects or "dividuals" are points *qua* material; subjects are products of mediated and modulated *relations* with the capacity not only to reproduce but also to fundamentally challenge contemporary rationalities "founded in the logic of the market and 'enterprise culture' and a dystopian vision of society" (Venn and Terranova, 2009, p. 10). The non-oppositional, non-binaristic, but also non-resilient mode of intensive resistance is described by Venn and Terranova as the:

> assertion of the possibility of new forms of sociality and ways of being constructed on the basis of a view of the human as an essentially collaborative, convivial spiritual and historically located social being. This ontology is in solidarity with the view of life itself as grounded in the dynamic compossibility of all creatures. It follows that such a view is diametrically opposed to all ontologies founded on egocentric, self-interested, individualistic, atomized and abstract views of the human and of life generally. (2009, p. 10)

If, as Deleuze suggests, the "dividual" is a point through which power is co-produced and reproduced in the neoliberal diagram, what can this way understanding power offer for a critical analysis of the relationship between subjectivity and systemic power? If power is produced both "from above" and "from below," if the entire diagram is shot through with power, with subjects as a point through which power flows, then we must attend not only to community resilience as a "top-down" mandate of governmentality in support of sustaining the status quo, but also as a "bottom-up" activity of "community groups and environmental campaigns" (MacKinnon and Derickson, 2012, p. 257). Further, we must be attuned to the ways both "top-down" and "bottom-up" approaches might be co-opted and reshaped such that they begin operating as two expressions of a single diagram designed to sustain power.

In "Postscript on Societies of Control" Deleuze describes the transformative potentialities that inhere in any diagram of power, including the neoliberal diagram. He argues that the diagram, "as the fixed form of a set of relations between forces, never exhausts force, which can enter into other relations and compositions" (1992, p. 89–90). Every diagram – shot through with forces – "presents particular features of resistance, such as "points, knots or focuses" that "make change possible (1992, p. 89–90). In this chapter, I have explored subjectivity as one such "point, knot, or focus" in the neoliberal diagram, and the way in which so-called positive and negative affects modulate imagined and actualized subjective capacities and their potential for sustainable relations.

Deleuze goes on, in the same passage, to focus not only on subjectivity as a "point, knot, or focus" through which a particular diagram of power is reproduced or transformed, made more resilient or resisted, but also on the role of thinking and action that exceeds the existing diagram. He writes:

> *The diagram stems from the outside* but the outside does not merge with any diagram, and continues instead to "draw" new ones. In this way *the outside is always an opening on to a future*: nothing ends, since nothing has begun, but *everything is transformed*. In this sense … [the outside] presents itself as the possibility of "resistance." … Moreover, the final word on power is that … power relations operate completely within the diagram, while *resistances necessarily operate in a direct relation with the outside from which the diagrams emerge*. This means that a social field offers more resistance than strategies, and *the thought of the outside is a thought of resistance*. (1992, p. 89–90, emphasis added)

What emerges as a crucial criterion for activities that resist reproducing neoliberal diagrams of power is whether particular approaches to community resilience, innovation, or sustainability interrogate, challenge, or otherwise act upon processes of power that lie outside of their immediate zone of potential. This outside can be thought of as having three critical dimensions. Distinguishing characteristics of

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resilient vs. resistant or transformative initiatives is their ability to: (1) challenge "dividualized" subjectivity by connecting to a yet unknown or imperceptible "outside"; (2) question the outside's relationship to broader power structures; and (3) connect local initiatives to other initiatives across spatial and temporal scales.

"RESOURCEFULNESS" AS INTENSIVE RESISTANCE TO RESILIENCE

> *There is no need to ask which is the toughest or most tolerable regime, for it's within each of them that liberating and enslaving forces confront one another. ... There is no need to fear or hope, but only to look for new weapons.* (Deleuze, 1992, p. 4)

In this chapter I have argued that the concepts of social resilience (as the capacity to resist change) and social innovation (as the capacity to change), though they seemingly occupy opposite poles of a "sustainability spectrum," do not *necessarily* sustain anything other than prevailing systems of (neoliberal) power. This diagram of sustainability "dividualizes" and depoliticizes the subject by determining his/her agency in relation to structures and processes of power that demarcate the subject's capacities and possibilities. Critics of contemporary narratives that are meant to address today's social and environmental problems point out that while "adaptation" to the current situation is "clearly a necessary choice," it is "only one of the numerous plausible options" (O'Brien 2012, p. 668).[41] For critics like Karen O'Brien, the idea of transformation is given too little attention within research and policy circles as a valid response to, for example, global environmental change. In one sense this is not surprising since transformation challenges the status quo, threatening those who benefit from current structures and systems (O'Brien, 2012, p. 668). O'Brien

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[41] As Paolo Freire (1970) points out in his work on education, the well-adapted human is one who does not problematize the changes that are being adapted to – a situation that conveniently suits the needs of the oppressors: "the more completely the majority adapt to the purposes which the dominant minority prescribe for them (thereby depriving them of their right to their own purposes), the more easily the minority can continue to prescribe" (Freire, 1970, p. 76, qtd. in O'Brien, 2012, p. 669).

argues that research that focuses on adaptation fails to engage with "the real "adaptive challenge" of climate change." In her view, adaptation research fails to question "the assumptions, beliefs, values, commitments, loyalties and interests that have created the structures, systems and behaviours that contribute to anthropogenic climate change, social vulnerability and other environmental problems in the first place" (2012, p. 668).

One promising transformative approach is MacKinnon and Derickson's suggestion that we adopt a politics of resourcefulness as an alternative to resilience (2012). Resourcefulness is meant "to problematize both the uneven distribution of material resources and the associated inability of disadvantaged groups and communities to access the levers of social change" (2012, p. 263). Indeed, if resilience, as Cote and Nightingale argue, shifts the focus "away from the quantitative ability of resources" and towards the scope of response options (2012, p. 478), then resourcefulness might be a strategic example of a form of resistance that can transform the ways in which structures of power are being materialized, mediated, and modulated. Developed with collaborators in the Govan Together Project – a year-long project funded by the Scottish Government's Climate Challenge Fund that sought to explore ideas of how to make Govan (Glasgow) a resilient, low-carbon, high-wellbeing community – resourcefulness as a strategy is characterized by incorporating an understanding of the "outside" – the external factors, forces, and flows – that today's popular narratives of resilience, sustainability, and innovation often ignore and leave unchallenged. In response to the problem of resilience-oriented solutions – namely, that individuals and communities adapt to change from the bottom up while the top-down external structures of power maintain their dominance – MacKinnon and Derickson emphasize that resourcefulness begins with the "normative desirability of democratic self-determination as its fundamental starting point" (2012, p. 264). MacKinnon and Derickson argue that the concept of resourcefulness is both "more scale-specific" by

attending to the need for capacity building in communities and more "outward-looking" by focusing on the importance of "foster[ing] and maintain[ing] relational links across space" (2012, p. 264).

Resourcefulness is thus "spatially grounded in identifiable local spaces" but also "open and relational" in so far as it "recogniz[es] the wider politics of justice that often underpin local activism" and "emphasizes the need for alliances between community groups and broader social movements" (2012, p. 264). A politics of resourcefulness – of sustaining intensities – challenges the conservativism of resilience-based policies by focusing instead on fostering the "tools and capacities" for communities to find the "the discursive space and material time that sustained efforts at civic engagement and activism, as well as more radical campaigns, require" (2012, p. 265). MacKinnon and Derickson suggest that community groups can, in this way, form a part of "an expansive spatial politics" and connect to "broader campaigns and social movements that seek to challenge neoliberal policy frameworks at the national and supranational scales" (2012, p. 266).

Researchers like MacKinnon and Derickson note that the "the burgeoning sphere of action" established by contemporary narratives of "social resilience" and "social innovation" tends to operate according to a kind of "inclusive localism that is largely apolitical and pragmatic in character" (2012, p. 258). In the face of the apolitical characteristics of these status quo sustaining social movements different, more globally minded (even if locally rooted), and more politically engaged (even if pragmatic and practical), tactics are necessary. Communities and individuals wishing to develop transformative strategies with which to challenge neoliberal configurations of power and their reproduction through "dividualized" modes of subjectivity and control could begin the journey out of the diagram by: (1) interrogating their complicity with the ubiquitous diagram of power of which they are an expression, a

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diagram of power that more often than not grows stronger by being confronted directly (rather than by being sidestepped obliquely); (2) re-imagining the human subject as being *connected to*, and dependent on, rather than "dividualized" from, others; (3) extending their vision for change beyond not only the local and the present, but also beyond the "human" and beyond the "social," by pursuing new epistemological and ontological trajectories adequate not only to the problems of today but to the challenges of future generations.

CHAPTER FOUR

MATERIALIST AND POSTHUMANIST FEMINISMS MEET
MATERIAL PRACTICES OF SUSTAINABLE DESIGN

Most ills in this world (and we know there isn't a shortage of them) require massive change on systematic and ideological levels. Indeed, it is a capacity–and many say, a responsibility–of design to address the many pressing problems facing the world today. But is this the only role for design? Is design solely a form of crisis management and problem solving? Or can design also offer a different perspective on a problem, without having the aim of solving the problem entirely? (Ramakers (*Droog*), 2011, online)

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MATERIALIZING A METHODOLOGY OF "MEETING HALFWAY"

This chapter uses a methodology of "meeting halfway" (Barad, 2007) – as an extension of what I term the "mud mode" – to build bridges between concepts in Deleuzo-Guattarian and materialist posthumanist feminist philosophies and the thoughts and practices of designers who grapple with concepts of sustainability and ways to materialize sustainable designs. While the "mud mode" is a way of thinking that troubles binary distinctions and attempts to think affirmatively from "middles," "meeting halfway" is a strategy for activating connections among thinking and/as practice.

Although it is outside of the scope of this dissertation – not to mention, an impossible feat – to provide a comprehensive overview of sustainable design thinking and/as practice, what I present here is an experiment in engaging with a few examples that can begin to demonstrate: 1) the complexity of theoretical and practical issues that arise with any attempt to materialize ecologically, economically, and socially "sustainable" relations; and 2) the importance of specifity, "situatedness" (Haraway,

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1997, p. 199), and "severality" (Ettinger 2006, p. 151) in any discussion of sustainability. These "meetings" among materialist, posthumanist, and feminist theory and design thinking and practice also demonstrate that any attempt at so-called "sustainability" needs to be, paradoxically, a thought and/as practice defined by ongoing critique, creativity, and *change*. Whether or not that change is change that reinforces existing "diagrams" (Deleuze, 2006, p. 30, 37) of power, or change that leads to their transformation, is the key question. This chapter also demonstrates that sustainability as a generalizable *thing* or *category* doesn't exist – it is always about maintaining an ongoing critical and creative stance toward specific conceptualizations and materializations, about asking intensive questions such as: "What is being sustained?"; "What does this way of thinking and materializing sustainability do?" Questions of sustainability, as I describe in this chapter, are always in-process, but also always situated, always relational, and never "innocent" (Murphy, 2014) – that is to say, they are never not an effect, nor are they ever free of having effects. Thinking about the specificity, situatedness, and severality in any particular sustainability practice requires thinking across temporal and spatial scales.

SITUATED AND SEARCHING: VOYAGING AND/IN PLACE

The examples with which I engage in this chapter are expressions of my own situated position as a researcher – my academic history, location, connections, and process. Although I began this dissertation with an interest in biomimicry, I encountered its limitations vis a vis thinking sustainability early on and became interested, more than in any one project or practice, in becoming immersed in a range of design approaches through encounters with texts, field contexts, design exhibits, panels, and interviews with designers. In other words, I was interested in trying to understand conversations, critiques, and creative approaches toward sustainability in contemporary design

theories and practices while remaining open to examples that emerged through these interactions as well as through the interaction with my theoretical research. Over the course of my research I've reviewed literature devoted to a particular points of view on sustainability including *Biomimicry* (Benyus, 2002), *Cradle to Cradle* (McDonough and Braungart, 2009)*, Natural Capitalism* (Hawken, 1999)*,* as well as edited volumes providing an encyclopedic overview of a range of sustainable design approaches and practices including *Ecological Urbanisms* (Mostafavi & Doherty, 2010), *Green Design* (Fairs, 2009), and *Worldchanging* (Steffen, 2007). I've conducted field work on urban ecological projects in New York City (The High Line), Paris (Promenade Plantee – the inspiration for The High Line), Copenhagen (urban cycling infrastructure, *Copenhagen Cycle Chic*, BIG Design), and Toronto (Evergreen Brickworks). Alongside my research, I participated as a member of a volunteer citizen advocacy group called the Pedestrian Charter Steering Committee (PCSC) in my community which worked together with the Cycling Committee to advocate for more ecologically sustainable forms of mobility – a lot of this work focused on the role of policy as well as on the built environment. I represented the PCSC at two international Walk21 conferences – one in New York City (which included walking tours with New York City public planners of the Project for Public Places Program and other pedestrian and cycling infrastructure projects) and another in The Hague, The Netherlands. I attended exhibits on sustainability and design at the Danish Design Centre (Copenhagen), Museum of Art and Design (New York), Dutch Design Week (Amsterdam and Utrecht), and the Interior Design Show (Toronto). Using an "open" method (Law, 2004) I, as a researcher, was not an observer "outside" of the design practices, so much as an engaged, entangled, and always "intra-active" (Barad, 2007) part of the research process. Not unlike Deleuze's "animal," I was "on the lookout" (Deleuze in Stivale, 2011) for design examples that resonated with the ongoing emergence of my critical and theoretical perspectives on sustainability.

Attending panels on design, sustainability, and social innovation at the American Association of Geographers annual conference and at Parsons New School of Design in New York was a turning point in my research. The discussions I encountered there resonated with my emerging interest in *Not Far From the Tree* in Toronto. It was after my encounter with these conversations that I recognized that my restlessness while researching for this project – my reluctance to settle on any one example I'd encountered – was a response to: 1) my critical stance toward design approaches focused simply on creating more "green" products or processes without adequate attention being paid to broader economic or social critiques (which included much of what I'd read about and seen in exhibits); 2) my observation that there was already substantive interdisciplinary conversation (across disciplines including architecture, urban planning, but also in sociology, geography, and political science) focusing on the role of "green" mobility infrastructures, public spaces, and built environments; and 3) my longstanding and ongoing interest in the role of art and design in social activist movements. I became increasingly interested in what I observed to be two co-emerging phenomena: an increased emphasis on "design" or "design thinking" as an approach to, and strategy for, business (and/as social change) (Brown & Wyatt, 2010; Kelley and Littmann, 2005; Martin, 2009) in contemporary culture and emerging conversations in design on "design for social innovation" and "design activism" as an approach to ecologically, economically, and socially "sustainable" design.[42] I began to search for literature that, like the panel discussions I'd attended, gave voice to critiques of "sustainable design" or perhaps even design or sustainability itself in texts such by Papanek (1995, 2005), Manzini (Vezzoli & Manzini, 2008), Fry (2009), Fuad-Luke (2009), Thorpe (2012), and Julier (2013a, 2013b). While these texts critiqued the role of design and the production of "more stuff," what I became most interested in was a sustained critical engagement with what these designers were identifying as the

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[42] Although I do not wish to dismiss any of these practices or discussions about them, my longstanding interest in art/design and social movements in general and ecological movements in particular is what I think resonated with, and attracted me to, practices in which the "social" was the "medium" of design.

"emerging paradigm" in design – namely, "design for social innovation" (Manzini, 2008) and "design activism" (Thorpe, 2010, Fuad-Luke, 2013).

It was during the second of my two research visits in the Netherlands during which I studied under the host supervision of Rosi Braidotti at the Centre for the Humanities at Utrecht University, that I began to engage with "design for social innovation" and "design activism" focused on ecological, economic, and social sustainability. During these research trips I had the opportunity to tour two top Dutch design schools, conduct various design studio visits, and interview designers at the cutting-edge of design practice in the Netherlands. I had the opportunity to tour both the Eindhoven Design Academy and participate in M.A. thesis project critiques at the Delft University of Technology, and also to interview some of the leading figures in Dutch design in Amsterdam to ask them about sustainability from a designer's point of view.

The opportunity to visit design schools and studios – and most importantly of all, to speak with designers – was a great complement to reading about sustainable design concepts as presented in "sustainable design" literature. Whereas much of the sustainable design literature tries to present a coherent approach to sustainable design practice, my on the ground interviews with designers – much like the design literature that problematizes sustainability – offered examples of much more complex, critical, and self-reflexive accounting of sustainable design concepts and practices. What follows, then, in this final chapter, are a series of conversations or experiments in "meeting halfway" which are a result of: 1) my meeting with each designer I interviewed to have a conversation about their work, design in general, and sustainability; 2) my putting the designers into conversation with one another; and 3) my putting the conversations among the designers into conversation with materialist, post humanist, and feminist perspectives. The result is a final chapter that is (literally) more conversational in tone, more experimental in its approach to creating

connections among thoughts and/as practices, and that remains intensely open-ended in its conclusions.

As a concluding chapter to this dissertation, this chapter reflects upon and extends themes that emerged in previous parts of this project. The first chapter of this dissertation focused on a theoretical critique of sustainability as sustaining the status quo and imagines how we might think and do sustainability differently by sustaining intensities – the capacity to produce difference; the second chapter examined sustainability and sustainable design by critically examining design as a discipline, particularly in relation to Deleuze and Guattari's critique of design and the "disciplines of communication" in their examination of the three domains of thought (i.e. art, science, philosophy); and the third chapter offered a critique of the increasingly popular contemporary rhetoric of "social resilience," "social sustainability," and "social innovation" and how these concepts function to serve and extend contemporary understandings of sustainability as a sustaining of the same and a sustaining of the status quo. This final chapter moves toward an experimental mode of engagement with the previously explored themes through conversations with designers and a constellation of design examples that conceptualize and materialize sustainability in a variety of different ways.

INTERVIEWS

In Spring 2012 I conducted interviews with several designers working in Amsterdam. I chose to interview these designers for a number of reasons. First, not only was I located in Utrecht for the second of two extended research periods at the Centre for the Humanities at Utrecht University (the first was in Fall 2010 for 4 months), but also because the Netherlands is one of the leading countries in contemporary design

(Betsky & Eeuwens, 2008). Dutch design schools consistently rank among the top design schools globally and the Netherlands has a number of internationally renowned designers and design firms (including *Droog* and its collaborators, whom I interviewed).[43] Indeed, the fact that the entire country is designed and engineered is not lost on the Dutch, and contributes to the integral and highly valued role of design in the Netherlands. I conducted three interviews in Amsterdam, including conversations with: 1) Agata Jaworska, Concept Project Manager, Writer, and Spokesperson at *Droog* Design about *Droog* Design as well as her own independent design practice. *Droog* Design is a design company that consists of a collective of some of the Netherlands' leading designers, including co-founders Gijs Bakker (the current Director of the Eindhoven Design Academy) and design historian Renny Ramekers (as well as numerous other independent designers); 2) Cynthia Hathaway of Hathaway Designs (who is a *Droog* Design collaborator); and 3) Aldo Bakker of Aldo Bakker Design (who is a *Droog* Design collaborator and an instructor at the Eindhoven Design Academy).[44] Incidentally, both Jaworska and Hathaway are Canadians living in the Netherlands.

My interviews were each approximately an hour long and consisted of conversations for which I prepared by researching each designers' practice, formulating open-ended questions that focused on each designer's practice, as well as questions in which I asked them to speak to issues that had come up in my own research about sustainability. I followed up with additional questions during the interviews in an open-ended conversational style. The conversations were audio recorded using a digital recorder. Following my return to Canada, I transcribed each conversation into text to create interview transcripts. The interview transcripts were verified by each

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[43] I would like to acknowledge and thank Tim Antoniuk for sharing with me the design contacts based on his previous collaborations.

[44] I also interviewed Laura Reinsborough, founder of *Not Far From the Tree* in Toronto in Spring 2013, after keying in on her project as an area of focus for the dissertation.

designer I interviewed and they provided me with permission to cite them prior to their use (in an effort to ensure that each designer's ideas were accurately represented and in order to fulfill the requirements of the Research Ethics Board at the University of Alberta).

The work and responses of each designer were very different, but what I found they had in common – and what was at first surprising – was each designer's explicit critique of the term "sustainability" as well as "sustainable design" as a concept and a set of practices. Each designer thought about and materialized sustainability in a different way in his/her own practice, but strikingly, each designer voiced similar critiques of the term. In fact, though this thesis may read as having done the conceptual heavy-lifting on the front end, and presenting case studies as examples near the back end, the interviews I conducted with designers contributed much to my conceptual critiques of sustainability in earlier chapters. Although this thesis may read as somewhat thematically organized, I would like to note here that it was produced in a "mud mode" from the beginning – a messy methodological approach wherein critical theoretical work in materialism, post humanism, and feminism informed and was informed by my engagement with design theories and practice. The encounters with the designers made me think about the ways in which concepts and materialities intra-acted throughout the writing of the theoretical sections, just like the reading of Deleuzo-Guattarian and new materialist and posthumanist feminist philosophy gave shape to the kinds of questions I was asking the designers. In what follows I seek to demonstrate some of the ways in which these materialist philosophies and material practices encounter one another but I wish to make clear, so to speak, that the "mud mode" and the "meetings-halfway" were making things critically and creatively messy all along.

DROOG: "DOWN TO EARTH" DESIGN

Droog design was co-founded by design historian Renny Ramekers and product designer Gijs Bakker (current Director of Eindhoven Design Academy) in 1993. Since the early 1990s the design company has been at the forefront of Dutch design, creating "cutting edge products, projects, and events around the world" by working collaboratively with independent designers, clients, and partners worldwide (*Droog*, online). *Droog*, currently directed by co-founder Renny Ramekers, is composed of two "branches" – the commercial branch, which continues to develop new products, and the *Droog* lab, which experiments with new concepts and scenarios for "spaces, events, and communication tools" and is funded by the Dutch Ministry of Education, Culture and Society, City of Amsterdam, and local partners ("*Droog* Lab"). Both branches are located under one roof in Amsterdam, and a second *Droog* location also exists in Hong Kong.

Renny Ramakers and Gijs Bakker started *Droog* as an "anti-statement; a no-nonsense, down to earth design mentality that opposed the high style and form-based world of design" (Ramakers, online). In response, *Droog* proposed a highly conceptual way of working, one captured by the Dutch word "*droog*," meaning "dry" which referred to the sobriety, simplicity, and dry humour of their design approach (Ramakers, online). They describe their approach as "always [designing] with a twist and [a] respect for the existing" (*Droog*, online). This statement of *Droog*'s approach, it strikes me, also connects to four of the key design trends that have became iconic expressions of this collective and struck me as having a connection to environmental sustainability: first, the trend to repurposing used objects in new designs; second, *Droog*'s interest in memory; third, *Droog*'s interest in experimenting with notions of luxury; and fourth, their interest in the play between the notion of the "natural" and the "artificial." The statement, "respect for the existing" but "with a twist," itself connects to Deleuzo-

Guattarian notions of sustainability which, as I have argued in previous chapters, could be expressed through design through an affirmative stance toward what exists at the same time as looking for ways to think and do things (with a twist) that promote the proliferation of difference, heterogenous connections, and collective flourishing – by sustaining intensities rather than the status quo. In the next section, we will address each of these themes in order, with reference to the designs and in conversation with *Droog* Concept Project Manager, Writer, and Spokesperson, Agata Jaworska. As we will see, the conversation with Jaworska complicated each of these themes and also introduced additional insights that provide a glimpse of the ways designers are today critiquing and creatively re-imagining sustainability.

REPURPOSING AS "EXPERIMENTING WITH INTENSITIES": RESPECT FOR THE EXISTING – WITH A TWIST

One thing *Droog* is famous for is recuperating used and discardable objects. The trend in *Droog* design to recuperate used objects is evident in what is perhaps *Droog*'s most iconic design: the "Chest of Drawers" created for the Milan Furniture Fair in 1993 by Tejo Remy as a response to consumption, plenitude, over-production, and the "pretensions that had beset the profession" of design (Ramakers qtd. in Design Museum, online). Following this theme, the "Chest of Drawers" was soon joined by: 1) the "Rag Chair" and "Milk Bottle Lamp" by Remy, 2) a chandelier made of recovered, cheap, milk bottles called "85 Lamps" by Rody Graumans, and 3) the "Tree Trunk Bench" made from a locally found trunk and old chair backs by Jurgen Bey.

[Figure removed due to copyright restrictions]

Fig. 5 *Droog*, "Chest of Drawers"

[Figure removed due to copyright restrictions]

Fig. 6 *Droog*, "Rag Chair"

[Figure removed due to copyright restrictions]

Fig. 7 *Droog*, "Milk Bottle Lamp"

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Fig. 8 *Droog*, "85 Lamps"

[Figure removed due to copyright restrictions]

Fig. 9 *Droog*, "Tree Trunk Bench"

These items strike the observer as putting two of what were the "3 R's" that predominated environmental discussions in the 1980s and 90s – namely reduce and reuse – directly on display (and bestow reducing and reusing with a designerly and artsy gloss). By taking old objects and repurposing them for new use, the designers minimized the need to create new materials and also the need to add old ones to the garbage heap. Unlike, for instance, *Cradle to Cradle* design processes, no industrial reprocessing such as the melting down of recyclables or the reforming of plastics was used; this was old fashioned re-purposing: making something new out of what you've

got. This trend in *Droog* design sought to sustain potential of choosing to design within a set of constraints – in this instance using objects that already exist – with minimal energy input and minimal resulting waste while, crucially, thinking creatively about what an object can do by exploring its various properties and creatively experimenting with its various capacities.

The notion of creativity within limits is not knew. The Bauhaus designers (not to mention art movements including the Surrealists and Dadaists, for instance) played with the purposeful imposition of arbitrary constraints precisely for this reason: to be forced into thinking creatively, avoiding cliché, and coming up with something different from what already exists. When presented with particular constraints and certain limits, thinking can be challenged, materials can be experimented with, and having to react to a set of "givens" can result in the creation of something different or "new." *Droog* design demonstrates that limits – whether arbitrary (for the sake of a design experiment) or real (for the sake of ecological, economic, or social limits), imposed from within (by the designer) or without (by ecological, economic, or social circumstance), need not be a limit to design; indeed, limits (consider, for example, our own environmental limits) can push designers further in their thinking and practice (beyond simply making more "stuff"). What would it mean for designers to embrace and work within our collective ecological (as well as economic) limits? How could design begin to think differently if it was compelled to acknowledge social, material, ecological, and economic constraints?

In my preliminary research on *Droog*, I came across an interview in which *Droog* was asked about the relationship between designing using re-used items and ecological sustainability. The interviewee replied, and I'm paraphrasing, "we're not interested in sustainability, it's just Dutch design – we're just being thrifty." While this statement may have been an example of *Droog*'s "dry" sense of humour on display, I think it

also speaks to an interesting potential coming-together of ecological and economic

concerns – specifically, an interest in ecological and economic limitations and the

desire not only to consume less "stuff" but also to challenge the idea that endless

consumption makes for sound economics. My recollection of this interview comment

sparked some discussion in my interview with *Droog* Concept Project Manager,

Writer, and Spokesperson, Agata Jaworska. I began by asking her about this response,

and more broadly, I asked her to speak to *Droog*'s approach to sustainability –

particularly about the recuperation of objects that already exist such as the iconic

drawers or in their most recent work in a project called "UP." Drawing on the history

of *Droog* design, Jaworska explained that:

> In the 1990s *Droog* hit the global design scene with the theme of
> "improvisation" (as a reaction to sleek materials), by making things out of
> existing things, discarded things, which emerged from an interest in *memory*.
> For instance, the designer of the "Chest of Drawers" was interested in …
> [the] meaning associated with those drawers; so it was not only about using
> discarded things but also the *memory* that went along with it. But yeah, in the
> 1990s they were *experimenting with new notions of luxury*: bringing together
> existing things that were accessible to people (old discarded things or ordinary
> lightbulbs that became a chandelier) and changing the *meaning of luxury*.

Jaworska goes on:

> At that time, *Droog* eventually got known as a sustainability project and the
> public started to recognize that it was leading a sustainability movement (the
> "Tree Trunk Bench" by Jurgen Bey was a good example). But then *Droog*
> reacted to *that*. Once it got known for that, it reacted with new plastics and
> high tech, *against* simplicity with ornament. So it wasn't such a rational
> strategy, but it kind of was, it was about always surprising people, so when
> you think you understand *Droog*, they turned it around.

In the next three sections, we'll look more closely at the themes raised by Jaworska –

"memory," "experimenting with new notions of luxury," and playing with the notion

of the "natural" and the "artificial" – and the ways these themes intersect with

sustainability. We'll also connect these themes to the work of new materialist and post humanist feminist theorists like Rosi Braidotti and Jane Bennett.

MEMORY AND DURABILITY: BRIDGING "HUMAN" AND "NON-HUMAN" AFFECT

Droog's stated interest in sustaining memory expanded the way in which I thought about the repurposing of materials in *Droog*'s design practice. I came to recognize that their repurposing of materials was a reflection not only of ecological and economic concerns, but also their implicit interest in social sustainability. In other words, their interest in memory made me reflect upon the ways in which so called "non-human" and "human affects" constantly intra-act, and the importance of this intra-action as an aspect of an ongoing, enduring, and indeed, durable relationships among human and non-human entities. Jaworska's comments highlighted for me the degree to which sustaining memory – as a kind of lasting or persistent relation of human and/or non-human entities and affects – can be an important aspect of sustainable design, especially if prolonging the life cycle of an object whose life intersects with our own is made a priority.

Droog's use of memory as a design strategy resonates with Jonathan Chapman's proposal in *Emotionally Durable Design: Objects, Experiences and Empathy* (2005) that empathetic connections to both objects and experiences can be a way to create more "durable" relationships and a way to promote and materialize sustainable design. Indeed, it was interesting to me that memory came up in each of my three conversations with designers.

Cynthia Hathaway referred to the role of memory in a discussion of how she approaches sustainability in her work. For Hathaway, lead designer at *Hathaway Designs*, her main interest relative to sustainability is in sustaining the "social." More specifically, during the interview she described her interest in "social sustainability" as playing out in her practice by working with what she calls "a life span of memory" or "a life span of effect" as a major focus in her work. Elaborating on how memory figures prominently in her work, she explained that if in her practice she can "create meaning for an individual or a group, if [she] can be a participant in supporting meaning, not necessarily being the designer of it, but [supporting] meaning, finding it, promoting it, re-adjusting it," then that for her can "create long-term memory" which for her "is sustainability." In a part of her practice she calls "Archiving from the Edge" that she extends across a series of projects including a collaboration with *Droog* on a project called "Luxury of the North," a focus on "Mennonite Conversations with Technology," as well as a project called "Car Mekka" (2012) for the Utrecht Biennale for Social Design she focuses on working with memory as a theme and its connection to social sustainability through the passing on of expertise, knowledge, and skill as a form of social memory. As she explains:

> I'm also very much about sustainable expertise and knowledge and how it's so much more wonderful to know a lot about one thing than it is to know a bit about a lot of things. ... I would love to know everything about the car, let's say. … And it's going to come back to that. … That expertise is so wonderful for me.

Designer Aldo Bakker, lead designer at *Aldo Bakker Design*, creates objects that according to critics "refuse to be classified by time, fashion, or zeitgeist" or "by the surrounding world"; indeed, "those who see Bakker's designs for the first time, often wonder what their purpose is" (Jager, online). In my interview with Bakker, he also referred to the relationship of memory and sustaining what I'd call "intensities" in his practice, which consists of the design of products for everyday use such as, for

example, "Saltcellar" (2007), "Oil Platter" (2007), "Vinegar Flask" (2008), "Watering Can" (2010), "Tonus (wood)" (2011), and "Jug + Cup" (2011). He remarked that his interest in ecological, economic, and social sustainability takes the form of a reaction against "mass consumption" and an effort to "create something that relates to us in an intelligent way, something that you can age with, not for a moment but for a long time." Bakker explains that:

> [In] every design I create [the object's purpose] is not [entirely] clear, it's not something you can "get" immediately– I hope that … in different times when [for instance], we are not there anymore and [the object has] lost its original purpose … I want this thing to have a place. … Maybe somebody else is going to use it as something else that it can be.

[Figure removed due to copyright restrictions]
Fig. 10 Aldo Bakker, "Saltcellar"

[Figure removed due to copyright restrictions]
Fig. 11 Aldo Bakker, "Oil Platter"

[Figure removed due to copyright restrictions]
Fig. 12 Aldo Bakker, "Vinegar Flask"

[Figure removed due to copyright restrictions]
Fig. 13 Aldo Bakker, "Watering Can"

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Fig. 14 Aldo Bakker, "Tonus (wood)"

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Fig. 15 Aldo Bakker, "Jug and Cup"

When I asked Bakker about his choice of materials and his relationship to materiality in his work, he explained:

> I work mainly with natural materials – not only, but mainly. The answer is simple, it's because I can relate to them [more easily] than artificial materials because *[they are] … also alive or [they have been] alive, like us.* The smell, the touch, the colours, the aging, it's very rich, very complete. But because of all this, [working with natural materials] they are also … much more demanding. But I like this challenge. [The questions that arise when working with natural materials are questions that] I take seriously – you cannot just cut [a natural material] off here or there, you have to think about what's your way in this. Wood, or stone, [have] a direction, vein, grain. Of course, you can close your eyes, and not see [it] but it's there, so then I think you need to *respond to this in some kind of way*, in a way that fits you. Not only because of constructive reasons but also because of … the expressions a material has, you have to stop. … [I think it's important to take seriously] this *sensorial and emotional relation* to materials.

On the "Biography" page of Aldo Bakker's website Hans den Hartog Jager remarks that "it is telling" that Bakker's objects "often remind us of (parts of) autonomous beings that seem to have a logical place in the world." The "Saltcellar" and "Oil Platter," for instance, look like mounds or pools. The "Vinegar Flask," for Jager, "irrefutably evokes a penguin-like creature with an eagerly snapping beak," "Tonus" evokes an elephant, and "Jug + Cup" recalls otherworldly, yet familiar, nested

creatures. And yet, as Jager remarks, although Bakker's designs evoke a kind of "memory," Bakker is not interested in our "identification or endearment" with the objects so much as an interest in creating an "entirely independent, new world in which people handle things differently, see time differently and relate themselves to their environment in a new way" (Jager, online).

Bakker's interest in memory-evoking affective responses – his interest in "creating something [people] can age with," that have a "life of their own," and object whose purpose extends through time, as well as his interest in working with materials people can "relate to" and need to "respond to" sensorially and emotionally – recalls new materialist and posthumanist feminist Jane Bennett's work on "vibrant materiality" (2010) and "enchantment" as a an affectively charged – and memory rich – way of responding to the vitality of the material world (2008). Bennett calls her onto-epistemological approach "thing-power" (348). In "The Force of Things: Steps Toward an Ecology of Matter" Bennett expresses the hope that perhaps a "sensitivity" to what she calls "thing-power" – the vitality inherent to the materiality of "things" – might "induce a stronger ecological sense" (2004, p. 348). For her, developing an ontological attentiveness to the mysterious and multiplicitous power of "things" – whether "living" or "non-living" – can potentially move us toward a more sustainable system of relations with our environment. As she explains:

> Thing-power materialism emphasizes the closeness, the intimacy, of humans and nonhumans. And it is here, in a heightened sense of that mutual implication, that thing-power materialism can contribute to an ecological ethos. To call something ecological is to draw attention to its necessary implication in a network of relations, to mark its persistent tendency to enter into a working system. (2004, p. 365)

Bennett emphasizes "the shared material basis, the kinship, of all things, regardless of their status as human, animal, vegetable, or mineral" (2004, p. 359). This mode of

thinking about materiality connects human and non-human affect by acknowledging the specificity of human affect – feeling, relation, responsibility, emotion, enchantment, and memory – at the same time as it moves us beyond anthropocentrism. For Bennett, new materialist philosophy "does not deny that there are differences between the human and nonhuman" but "strives to describe them without succumbing to the temptation to place humans at the ontological center" (2004, p. 359). I think this is a key intervention because: 1) thinking affect in a posthumanist sense should not exclude our humanity; 2) thinking affect while focused on the question of the human need not exclude the nonhuman; and 3) thinking about affect in a posthumanist way while focusing simultaneously on the question *of the human* – not in terms of our exceptionalism, but merely in terms of our specificity – is crucial to a critical and creative reconceptualization of how *human* affective relations are a potential conduit for sustaining human and non-human relations.

By arguing for an attentiveness to the agency of the material world Bennett points to the ways in which the materialism of contemporary life in the global north runs counter to the materialist principles she espouses. Bennett points out that our "'materialistic' way of life" – insofar as it externalizes the cost of waste and encourages ever-shorter product life spans – perpetuates an "*anti*-materiality bias"; as she argues, "the sheer volume of products, and the necessity of junking them to make room for new ones, devalues the thing" (2004, p. 350). Counter to an ethic of sustainability, she adds that in many respects "American materialism is *anti*materiality. Too much stuff in too quick succession equals the fast ride from object to trash" (2004, p. 351). It strikes me that an attention to the vitality or "vibrancy" of matter and its "nonhuman" affect, as well as what Bennett calls an "enchantment" with the material world as a "human" affective response – namely, the way an object affects or makes an impression on a human being through, for example, memory – was, for all

of the designers I interviewed, a way to promote heterogenous connections and ecologically sustainable relations. But the question remains: Can memory-generating designs that are durable and last for generations compete with our persistent desire for the new?

REVALUATION OF VALUES: SCARCITY, ABUNDANCE, LUXURY

Bennett's observation that "materialistic" – namely, consumerist – ways of life "externalize the cost of waste" and "encourage ever-shorter product life spans" while perpetuating an "*anti*-materiality bias" and, paradoxically, facilitating a "devalu[ation of] the thing" (2004, p. 350) also evokes the third theme related to sustainability in the work of *Droog* design. *Droog*'s initial interest in re-purposing discarded things has recently been revived (re-purposed?) in a new iteration of this idea in a 2012 project called "UP" – a reference to "up-cycling," or, making new things from old things – that was part of a recent initiative cheekily titled "New is the New New."

Jaworska explained that the origins of "UP" go back to the 1990s and *Droog*'s initial interest in "improvising and adding value to objects" and as "a statement against new materials and perfection." In more recent years, and particularly following the financial crisis of 2008, *Droog* revisited these themes as part of "New is the New New," a Dutch government-funded investigation into the value of "dead" stock – stock that was never sold, hasn't been thrown away, and isn't being used. In their latest undertaking, inpired by "a commitment to unwanted material" and "resourcefulness relevant to our times," *Droog* invited designers, manufacturers, industry experts, and sustainability pioneers to "discuss the possibilities (and impossibilities) of redesigning unsold goods to bring them back into circulation" (*Droog*: The UP Conference, online). The type of stock the attendees were invited to

engage with was "often functional yet for whatever reason left behind, consists of bankruptcy leftovers, production failures, unsold goods and other assets left behind by the product manufacturing and distribution industry" (*Droog*: New is the New New). As Jawoska explained, *Droog*:

> started to buy liquidation goods from online auction – chairs, napkins, or ordinary things that aren't even used, but they're dead stock in warehouses. We bought all this stuff and invited different designers to pick a lot (chairs, napkins, safety vests) and propose designs. We were interested in having dead stock treated as raw material for creative reinterpretation without deconstructing dead stock – without putting time, money, or energy into breaking it apart (recycling), but rather, taking a cup and doing something with it. We were interested in how this is a different challenge for a designer – instead of designing a fork, it's "I have a fork, what should I do with it?" We wondered what that could do for the creative process as well, that was an extra question.

The result of this process was 19 new products made out of unsold or "dead" stock. For example, Tejo Remy, in what looked like an homage to his 1990s designs, created elaborately tiered, sculptural serving platters out of a variety of tea cups and saucers. Unlike in the 1990s, however, Jaworska points out that *Droog* wanted to go a step further by connecting issues of ecological sustainability beyond individual or "home" economics (i.e. "thriftiness") and focusing on collective, systemic, broader economic issues by asking: "can we make this an economic model, can this become a business model?" As *Droog* moved beyond the creation and sale of products, they became interested in "looking at new systems, business models, platforms." As Jaworska explains:

> The idea with "UP" was maybe we can make a platform of this dead stock and be the brand that is curating the dead stock and finding a market for it – that was the dream. The difficulty that we came across was companies that didn't want to talk about dead stock, they are ashamed of dead stock … because it represents failure … valueless jeans they feel undermines the value of jeans that are successful. … So "UP" aimed to make it an economic model

> – and there was a symposium at the end for business and non business audiences.[45]

I was struck by the way in which Jaworska's description of "UP" described value as not being an absolute, but rather, a relation of real as well as perceived supply and demand (recalling Marx's observations on use and exchange value); it reminded me that in a world of overproduction this relation can, and indeed often "must," be manipulated in order to maintain the "value" of an object. Real material resources with "use value" are kept out of the supply chain in order to keep up the perception of a balance of "exchange value" between supply and demand. Clearly what is at stake here is the exchange value of the commodity – and its relationship to the economic bottom line – more so than the use value of the resources – and their relationship to ecological supply (running out) and social demand (over-run). I commented that the dominant rhetoric post-financial crisis – the rhetoric of austerity – is one that would make people think that we live in a world in which there aren't enough resources. Jaworska replied: "I don't believe there isn't enough or in the 'scarcity' of resources … *it's a matter of mismatched resources.*" Jaworska's reference to "mismatched resources" points to the role of value and perceptions of value – perceptions of scarcity and abundance, for example, and the role of power in economic, ecological, and socially equitable – and sustainable – distributions of resources.

Jaworska's statement that she doesn't "believe there isn't enough or in this 'scarcity' of things" and that "*it's a matter of mismatched resources*" reminds us that the world that we've been given can always be looked at differently through, for example, *anti*-austerity and *anti*-scarcity glasses. Indeed, *Droog*'s engagement with questions of

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[45] The symposium raised questions including: "to what extent are companies willing to acknowledge that a product is not sellable, what are the intellectual property right issues associated with redesign of existing products, what are the financial implications of the model, how will redesigned products be perceived by the market and should the redesigned products be branded as UP or should they return anonymously into the production process. Its extreme qualities–extreme coldness, remoteness, lightness, darkness, feasts and famines–shape people's living practices and ways of using resources." (Droog: New is the new new)

perceived scarcity in projects like "UP" and their project called *Luxury of the North*[46] (2010-2011) recalls Rosi Braidotti's examination of the need to draw on the theme of "gratuitousness" (2012, p. 278) as a means of revaluing the values by which we live. What would it mean, she asks, to "accurately account" for the complex systems we've been given? What kinds of "feedback loops" are sustainable within these systems? And how could the art of living "gratuitously" possibly be a sustainable response or perspective to an age of ecological and social exploitation, and so-called economic austerity?

My interest – and Braidotti's – in experimenting with a "gratuitous" approaches to living in an age of austerity by critiquing what it is that "austerity measures" or requires that we do without is an interest in finding or identifying value beyond capital. How can you sustain the earth when it is profit that capital seeks to sustain? When diversity and productivity are capital's extensities with diminishing, increasingly indebted, potentiality as the underlying force? Although economic theories may be influenced by selective ecological presumptions or "laws of nature" such as competition, the stark difference between ecologies and capitalist economies is that the goal of capitalist production is accumulation while perpetuating myths of scarcity (and the need for austerity for the majority) and the impossibility of alternatives.

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[46] In this project, which took place in Pond Inlet, Canada, *Droog*, in partnership with Tim Antoniuk at the University of Alberta, Cynthia Hathaway at *Hathaway Designs*, Winy Maas (*MVRDV*, *The Why Factory*), Pirjo Haikola (*The Why Factory*), and Christien Meindertsma, explored how "qualities of the Canadian North can inspire new urban luxuries and future city concepts" and what it means for the Canadian North to be "simultaneously characterized by scarcity and abundance" (Droog: Luxury of the North, online).

THE "NATURAL" VS. "ARTIFICIAL": COMPLEXIFYING SUSTAINABILITY

The final theme in *Droog*'s design practice related to sustainability that came up in my interview with Jawoska was their desire to play with the boundary between "nature," the "natural," and the artificial, as demonstrated in, for example, *Droog*'s 2004 "Shadylace Parasol" by Chris Kabel. The parasol is a sun shade featuring "natural motifs" – namely, a shade cover that looks like a tree canopy complete with a small bird perched on top – but is made from polyester, an artificial material that can in no way be considered conventionally "sustainable" (i.e. it's neither recycled nor recyclable). I asked Jaworska about *Droog*'s play with the boundary of the natural and artificial, the relationship of this practice to sustainability, and the tension between the concept and material practice of sustainability.

[Figure removed due to copyright restrictions]
Fig. 16 *Droog*, "Shadylace Parasol"

Jaworska remarked that:

> *Droog* is interested in the border between "artificial" and "real" nature, but this is not at all sustainability-driven, but just driven with the *idea* of nature and the fascination with borders or that distinction between natural and artificial. … We [as humans, generally speaking,] have stereotypes about what is "natural" and what is "good for nature," and we [at *Droog*] are interested in confronting [those stereotypes].

I asked Jaworska to speak in more detail about the relationship in design of addressing sustainability conceptually and executing these ideas in material practice,

which seemed to be in tension in a number of examples in *Droog*'s designs in addition to the "Shadylace Parasol." Jawoska responded by saying:

> You're totally right, [it's] more of an *idea* about sustainability, a statement about sustainability. … it's about what it stands for than what it does, and *Droog* is full of such conceptual conceits.

At the same time, she was careful to point out that material objects that "seem" sustainable need not necessarily be. For instance, she observed that things "don't have to have a certain aesthetic to be sustainable," referencing, for example, diapers that are marketed as being "green" but to which dye is added in order to give them that "recycled look…. And they "don't necessarily have to be recyclable, because maybe you buy recyclable things but throw them out every day."

Referring to *Luxury of the North*, Jaworska addressed the way in which *Droog* tried to address the "contradiction and complexity" inherent to the natural/artificial distinction and explained that it was evident in that project that while people have a tendency to try to protect "nature" and try to treat it well, often that's to the detriment of nature:

> So [for example,] we have a ban on the seal import here in the Netherlands, but when we met with the Inuit people in the Canadian North, that [ban] is destroying [what was for them a sustainable] way of life.

We can see through *Droog*'s various design projects that they have a consistent interest in reacting in a surprising variety of ways to common-sense notions of what sustainability does and can mean. When I asked Jaworska to articulate specifically what she saw as the problem with conventional notions of sustainability and some of the things *Droog* is critical of, she gave an answer that resonated with many of the critiques I have come across in my research. Jaworska explained that:

> The biggest problem is that it's a trend: that's the great thing about it but also the bad thing – and it's the problem. It's great because it's a trend: a principle or possibility of free market environmentalism. So if the consumer wants to buy sustainably, the market demands sustainability and supply reacts to it … . But the bad thing is: How do you define sustainable? How do you design for it? It's way more complicated … so that's the difficult thing about it.

Jaworska's comments reminded me of Barad's objervations about apparatuses where Barad observes that the tools we use for measuring, or the onto-epistemological perspectives we use to evaluate indeterminate concepts like "sustainability," work to determine and define the outcomes of our assessments and interpretations. As Barad makes clear:

> there is something fundamental about the nature of measurement interactions such that, given a particular measuring apparatus, certain properties become determinate, while others are specifically excluded. Which properties become determinate is not governed by the desires or will of the experimenter but rather by the specificity of the experimental apparatus. (Barad, 2007, p. 19)

In our quest for sustainable solutions to today's problems we are left wondering: Where do we make the cuts? How do we measure? What apparatus do we use? How can we begin untangling the entangled world we live in?

DESIGNING FOR "SOCIAL SUSTAINABILITY": CYNTHIA HATHAWAY AND DESIGNERS FOR DESIGNERS

Cynthia Hathaway, a collaborator in *Droog*'s "Luxury of the North" project, is, like all of *Droog*'s designers, also engaged in independent practice. Her practice is largely oriented around social sustainability. Hathaway's project, "Car Mekka," which she was in the process of preparing for the Utrecht Manifest Biennale for Social Design

when we met for coffee and conversation, was focused, like much of her design practice, not on designing more stuff or better stuff, but on thinking differently about what we already have, using things more efficiently, and connecting people. Hathaway described her current project as being typical of the way she works in that she is given given an existing location for her work. In this case, the location Hathaway was given was a car wash in Utrecht, which she described as being in an area that's "small" but also "very historic" and is now "being swallowed up by the expanding city of Utrecht." As Hathaway explains, this area:

> used to be very much defined through the industry that was there – incredible tile making, furniture making, all sorts of really strong Dutch industry, that's slowly been cut away at, chiseled away at, by importing and also the fact that cities are now where people live, they aren't productive anymore. Industry is taking a second position to the residential in our cities, and it's being pushed out.

Her project was oriented around resisting these trends – emblematic of forces of globalization as well as gentrification – and demonstrating that, as Hathaway explained:

> [W]e can be productive while living in our cities. Cities are dynamic places, and if more and more people are coming to cities, then they better be productive rather than just for consumers. So this whole project is actually about that – to map this area and see what's already there in terms of productive units, whether they're singular freelancers or medium to big companies, or medium-sized companies, and to celebrate this and continue productive cities into the future rather than pushing industry out for condominiums and apartments.

When Hathaway was given the location of the car wash in this area, which was "perfect" since she sees "the power of the car as one of the most important objects designed that is a connector, that is a common denominator between "a vast array of people." As Hathaway explained:

> For me, it's amazing to see all different types of people through one object being potentially linked to one another. ... A gas station can also be seen as a community hub – there aren't many community hubs anymore, and a gas station is one of our last remaining hubs – everyone goes there, no matter what kind of car they own, who they are, and for a short moment they fill up a car, and then they leave. But maybe while they're filling up the car they're standing together, or they go in for a coffee. For me, in these seconds, there is a chance for design, a chance to create an awareness of the area, to connect to a place through its citizens and their productive capacity. It's a place where hundreds of people come from all over the city, country and even the would pass through. What an opportunity to connect and disseminate local identity. And it was an interesting place to show the potential for redefining what a gas station and car wash can be and supporting it even more.

In response to this site, and the vision of what it could be – a community hub – Hathaway created "an itinerary of events" that brought together a variety of "local expertise" to a car wash, converting it into a "centre of car expertise, something it has lost over the years." She also brought existing "experts to a new place to do business, a place they had not considered but could be a very viable place to set up shop and apply their knowledge to a new playing field." For example, Hathaway found:

> a local college that is training students to be car salespeople to come to the gas station to sit in the back of the car while you're in the car wash and debate the merits of your car. So the students are in someone's car, a stranger's car, and you get this car wash with the added bonus of learning about the car. So it's an exchange of information and expertise and it's also a great experience for education and these students to be in touch with the real world, a variety of cars and outspoken owners.

In addition, Hathaway invited "a professional cleaner who normally cleans elderly homes" to "apply his expert cleaning skills to cleaning cars". His transfer of expertise onto the car, as Hathaway explains, "makes sense," and he found "a new place to do business," which also "makes sense." And finally, Hathaway mentions that "some of

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the things get quite fun but make sense as well," like for instance, being able to get a manicure or a "manicar" at the gas station. As Hathaway sees it:

> our obsession with the beauty of our cars can be translated onto the self – our cars reflect who we are, so why not design on this line of thought? A local manicurist will do your nails on site as you wait for your car to be washed. Your nails can be painted the colour of your car and a stencil applied with the logo of your car. So the car lot and the car wash becomes a beauty spa as well.

Hathaway pointed out that although the car wash was "an event for a certain amount of time," she is interested in continuing to work with the gas station owner to "create a business model out of it, so it's something that the owner of the gas station can implement and support as a new way for her to generate income, and also through the translation of what she already has, which is a diamond, a community hub." The one-day event, as she explains, is a way to "put these things on for real so people can experience them" in order to understand new ways of "bringing people together" and new ways of creating communities and encounters that sustain intensities.

"DESIGN SPEAK": DESIGNERS' CRITIQUES OF DESIGN FOR SOCIAL SUSTAINABILITY

Hathaway also reflected upon some of the issues with "social design" or design for "social sustainability" and articulated some critiques of "design for social sustainability" or "social design" in general, as well as in her own practice in particular:

> You know another big word [like sustainability] now is "social design" – another "bling" word – and a lot of people are trying to work with community and try to make communities more sustainable whether it's in a social way or in an environmental way. Well, I have to say that we have to

watch our for "design for designers" and "design speak." As designers we think we should be going into these communities and doing all these weird and wonderful things, "fixing it," but these communities are getting sick and tired of it because designers come and then you go and leave the people in the community with nothing they can continue using or that really supports them.

Designers don't always solve problems, but often can create more problems. Like, for instance, going into communities and saying "let's do some wonderful architecture" here or "let's do some social events that will draw all of you people together" – it's starting to backfire because people in communities will look at designers as just focusing on the surface of things, when what matters to them is making money, or having a sustainable income, or having a job. [They ask themselves]: "How can this integrate into my existing lifestyle and the issues I face every day?"

Half the people I'm working with right now in Utrecht don't immediately see or indeed care that the car wash is a community hub … it doesn't have to be a realization to them, unless it is something supportive of their day to day routine. As designers we have to design a two-way street, where all parties see the viability, the value of the design. We have to be careful that it is not about "design for designers" or if it is be clear about it.

Aldo Bakker echoed some of the reservations voiced by Hathaway and was similarly critical of "social design" or "design for social sustainability," but he brought another perspective. He remarked that he observes many designers today – including many of his Masters students at the Eindhoven Design Academy where he teaches – are "busy with this new trend" – "social design" and "social sustainability" – but that he considers it "very much the opposite of what I'm doing" which is focusing on product design. In his view, practices of "design for social sustainability" often demonstrate that "people are more creative in coming up with methods and tools [behind which] they can hide themselves":

That's why, now, with this new method ["social sustainability"], I can imagine that it is very tempting for a lot of young people to find a way of being creative but somehow also managing to not take responsibility for it all the way.

"THERE ARE WAY TOO MANY CHAIRS, ANYWAY!": DESIGNERS' CRITIQUES OF THE DISCIPLINE OF DESIGN TODAY

A critique of the role of design as a discipline in contemporary culture led Cynthia Hathaway to ask during our interview: "What I am always curious about is why is 'design' attached to practically everything now?" When I asked Hathaway to speculate upon why she thought this was the case, and asked her what role was design particularly good at playing, she responded with a critique of design's having been given what she described as an "elevated" position – a critique of design as something that has the answer to all kinds of problems, even though it can't solve them all:

> Why so elevated? Well I think it's this consumerist culture that we're in, for sure, and we're just happy to feed that desire and addiction to *things* rather than *experiences*. And, of course, experiences have to be sometimes propped up by a material thing. There just seems to be this focus on objects to give us satisfaction more than ever before. I guess that's because they can be pumped out more cheaply, so more and more people can get they're hands on [them], or maybe it's because people have more disposable income. … It just seems that to have a day off means that you have to go down to the main street and shop … and I don't know when that's going to burn out. I think it's maybe starting [to slow down] a bit, as people are starting to feel this economic tension in the world, but I also think some people are just coming around to not wanting so much, that objects are not giving us what we wanted, our relationships with people are more important than the chair we're sitting in – in fact there are way too many chairs, anyway!

Hathaway was careful to point out, as was Jaworska, that their collaboration in the "Luxury of the North" project revealed that "having too much" isn't a universal experience. Hathaway specified that:

It also depends where you go. … When I was in the arctic, material stuff is very important up there … at least with young people, and it's a way for them to feel a part of the world, rather than on the periphery. So you'll be sitting and someone's got their great Adidas sneakers on, or when I was with a family, while we were talking, Cher was on MTV in the background, so design and objects can be an amazing global connector across a huge spectrum of people …

Of course, in parts of the world in which people live in poverty, such as the majority of the global south (as well as in our very own communities in the global north), not only do these people not share the experience of "having too much" – their experience is marked by having "not enough" of material things that are even more basic than objects created by designers – namely, life-sustaining materials such as clean water, nutritious food, and shelter from the elements. To say that there is "overproduction" in the world today, then, always has to come with a caveat – that while this may be true from the perspective of someone living, broadly speaking, in the global north, but the distribution of this "abundance" is anything but equitably distributed. Some people experience "overproduction" as having "too much stuff" while others (not unrelatedly) experience the effects of such overproduction as "not having enough" water, food, and shelter.

Speaking critically about the role of design today – and in particular the expansion of design to include initiative such as design for "social sustainability" or "social design" – Jaworska had a similar response to Hathaway and described the "design"-fetishizing trend in the following way:

Design used to be industrial design, or architecture, or a material realization of something … whereas now it has broadened. I think the design profession is broadening itself to become anything. Maybe it's seeing limitations in material possibilities. On the one hand [this expansion of design beyond designing objects reveals] a growing faith in design thinking as a strategy, to bring the design thinking process to the problems of society and also realizing that the problems of society are not always materially related – things can't always be

solved through a product, architecture, or urban planning. You need cross-disciplinary and beyond –what is traditionally termed as "designerly ways of thinking." This way of thinking is not limited to designers, though designers can have a role in it, but then the problem [for designers] is that design loses its specialization and professionalization.

DESIGNING POTENTIALS: CREATIVITY, IMAGINATION, PERCEPTION, EXPERIMENTATION, FACILITATION AND CONNECTION

When I asked Hathaway what role designers are good at playing she underscored that, first and foremost, designers are "super creative" and "imaginative" people:

> They see the world through different glasses. … It's a creative act to be a designer. I think [we are] also story-tellers, sometimes quite romantic about the idea … rather than the material thing – it depends on what designer you're talking to.

Hathaway remarked that as a designer, she "solve[s] different kinds of problems" than people in other professions and that the problems she solves have more to do with "perception" – they have to do with the way people see the world and engage in it:

> I think that for me that's a huge part of the way I see my way of designing, … it's about provoking ideas, provoking new models, but there's a backlash now against too much conceptual stuff. On the other hand, I see the conceptual as a way to trigger possibilities, so I think experimentation, and being goofy and fantastical and dreaming is still a very important part of being a designer.

One of the most interesting takeaways from my interviews was the skepticism with which the designers with whom I spoke approached "sustainability" as a category as well as the insights they had regarding the term. When I asked Jaworska to propose,

based on her design experience, what would for her be the key criteria for sustainability, she replied:

> There is no answer within a category, it's just individual people and their specific initiatives … people's own initiatives, like crowdfunding, other "self"-initiatives, and new economic models.

I was interested to know, given her response, whether in her view the important thing to keep in mind when thinking about sustainability was an ongoingly critical and responsive approach to "sustainability." She responded:

> You have to know when you should go with the flow and when to react: to be critical of the details and the actual impact of something. ... You just can't really trust the claims and the categories. … Basically, there's no [clear] answer. [To find out if something is] actually more or less sustainable [than something else], you'd have to do a real analysis of something and what it's doing, you'd have to compare it to something. There's no such thing as sustainable or unsustainable – it's always *more* or *less* sustainable. It's relative not absolute.

When I asked Hathaway the same question, she responded, by saying that sustainability, for her, is merely a trend or "buzzword":

> I think all these words, they're all words, words, *words*. And they're *big* vague words. I find anytime you put a term on something it's going to expire rather quickly. [Sustainability is] the word of the moment, and yet it's a very important term, but I think I've probably been designing sustainably without this word coming into conversation, which in itself I think is sustainable as it's the flow of a design process. For me words stop the flow, definitions stop the flow. … [These words] can be slightly dictatorial or say look, you now have to think about sustainable actions, lifespans, and materials for products, but those have been part of the conversation for a very long time, so I get a little bit sick of these terms, even though they are valuable. ... *A good idea is sustainable*, otherwise it goes in the garbage dump, or should never [be] produced, or go on the back burner. *I think a good designer is always designing sustainably*.

THINKING IN "MUD MODES" AND MATERIALIZING "MEETING HALFWAY"

The interviews with Dutch designers who conceptualize and materialize ecological, economic, and social "sustainability" proved an immensely complex and rewarding mode of "meeting halfway" with materialist, posthumanist, and feminist philosophies of sustainability. My interviews with designers who seek to materialize "sustainability" underscored the inherent complexity of material making and re-making and complemented materialist posthumanist feminist theoretical understandings of materiality as an agency involved in complex networks of human-non-human relations.

Materialist posthumanist and feminist theorists who "think with materiality" may work primarily with concepts, and designers who "work with the material world" may work primarily through percepts and affects; however, these intensive engagements with the world reveal that there are resonances that emerge although there are differences in, quite literally, practice. The interviews demonstrated that indeed, those engaged with material making and re-making of the world using "materials" such as wood, ceramics, copper, dead stock, repurposed materials, expertise, fruit, people, ladders, and cargo bikes as a way of thinking and doing sustainability worked just as conceptually as they did practically. Indeed, sometimes their "material practice" *was* the concept. Similarly, as materialist posthumanist feminist philosophy demonstrates, thinking is a material practice – not only are we as humans never outside of a complex web of material relations, never *not* "contemplations" of our milieu while "contemplating" our milieu, the ways in which we think about our relationship to what we understand to be our "environment" has material effects and, like any practice of design, disruptively makes and re-makes the world.

The strength of the work of designers, I found, was their attention to the particular – to the specificities of local context, whether social, spatial, ecological. This can be the weakness of theoretical approaches. Even theoretical approaches that, for instance, *emphasize* specificity, situatedness, and severality are often quite general. Designers working with the material world are bound by the material forces and flows of particular spaces, times, and contexts in ways that lead to all kinds of complexities as a result of their specificity. Designerly ways of knowing start from specific material forces and flows and lead to all kinds of questions, critiques, adaptations, re-iterations, complexifications, and creative experimentation. Although materialist posthumanist feminist thinkers emphasize that knowledge must be situated, experimentation with materiality through designerly approaches reveals that "situatedness" opens out constantly to an "outside" and is even more complex – and grounded – than we with our concepts can imagine.

That being said, the strength of the work of critical theorists such as materialist, posthumanist, and feminist thinkers is that they are able to think critically about how specific practices are themselves situated within a broader milieu, a complex web of relations, and indeed, a differentially distributed network of power that often privileges the inclusion of particular "severalities" (Ettinger 2006) while systematically contributing to the exclusion of others. This lack of attention to broader systemic question of power and meaning can be the weakness of design approaches. Even design approaches interested in complexity, broader ethical, social, political, geographic, historical, and geopolitical factors, and systems of power, for instance, often overlook broader critical considerations. Materialist, posthumanist, and feminist approaches to material practices can introduce what Deleuze calls the "thought of the outside [as] a thought of resistance" (1992, p. 89–90) to practices of conceptualizing and materializing sustainability. Their process starts from conceptualizing intra-action, especially in the context of questions of power. Although design approaches help us

think about broader relations of power with respect to their work, materialist, posthumanist, and feminist approaches allow us to push at the critical boundaries of design practices by asking: "What does this do?" "How does this practice reinforce and/or transform Majoritarian conceptual paradigms and/as modes of making and remaking the material world?" "How can thinking about the systemic, or about the 'outside,' push activist design, in particular, to think in more complex ways and across broader temporal, spatial, and systemic scales?"

Designers who work with materiality show the murkiness and indeed, the "muddiness," of concepts and practices of "sustainability" – both in their complexity as well as their inherent uncertainty. However, design practices can also be complicit in the perpetuation of the very issues they attempt to address. Connecting design practices to critical discourses enables designers to connect to the politics of their practices, and, who knows, perhaps critical theorists interested in "minor" modes of making and re-making the material world might be encouraged to move beyond "muddying" their thoughts to also "getting their hands dirty" by heterogenously connecting to those working in other disciplines, experimenting with different approaches to materializing their thinking, and creating communities committed to sustaining intensities.

CONCLUSION

In conclusion, this dissertation engaged with sustainability as a problem and question and connected materialist, posthumanist, and feminist critiques of sustainability as a concept to creative practices of sustainable design – particularly design for social innovation. Engaging the concept of sustainability as a problem and a question rather than as an assumption is a gesture that raises ethical and political questions such as: Sustainability of what? Sustainability for whom? By attempting to think from "middles" – that is, from the human subject not as an individual entity but as a singularity, a specificity, and a severality situated within and sustained by a *milieu* – this project sought to re-connect human and nonhuman, living and nonliving, organic and inorganic entities and systems.

This thesis was informed by materialist and posthumanist feminist theory and focused on close readings of Deleuzo-Guattarian approaches. It connected new materialist and posthumanist feminist theory together with a range of design concepts and practices. In future iterations of this project, more specific focus could be put on the ways new materialist feminist theories and theorists intersect and can inform emerging modes of design and on developing sustainable solutions to ecological and social challenges. Additionally, in order to extend this line of research on sustainability, further research could be pursued on notions of singularity, specificity, severality, and situatedness as onto-epistemologies and ethics and politics of relationality, with a specific focus on uncertainty. Two specific areas that I think could be productively connected to the work I've done here include attention to indigenous ways of knowing – particularly about thinking environmental spatio-temporality, relationality, and generationality – as well as literature on the "gift" as it connects to an ethics and politics of generosity. Along those lines, this project could be extended by focusing on some of today's emerging "borrowing" and "sharing" economies –

projects such as time banks, bartering platforms, and swapping services – and how these can potentially reconfigure notions of time, value, property, ownership, labour, and the "common."

At the end of this project, sustainability remains an open question – one that must necessarily remain open. Asking the question, "What does this do?" keeps us open to the complex ecological, economic, and social effects of attempting to pin down a definition of so-called "sustainability." With this question, and by thinking across temporal and spatial scales to future generations and to places that may seem to us to be distant, we encounter an uncertainty about the common-sense notion of "sustainability" that must remain part of an ethics of sustainability: namely, "we cannot know what a body (let alone a *milieu*) can do."

What emerged in this project, working between and across critical theoretical approaches and creative initiatives, is the way that terms – even a term like "capitalism" – need to be rethought more specifically and materially (rather than ideologically). In an era of neoliberal capitalism, in which subjectivity and agency are increasingly "dividualized," there is no capitalism "out there" and us "in here"; rather, we are imbricated and implicated in a much more complex system of relations, and indeed, a system of relations in which we are complicit. We might, for example, buy "green" products at the same time as our investment portfolios include equities in companies that destroy the environment or that lobby governments to roll back environmental regulations. In this sense, the "dividual" is a divided self – acting at cross-purposes in its expressions of power and often left (or made?) to feel powerless in the face of such complexity and complicity. These kinds of imbricated and implicated relations are not unique to the "dividual" in a capitalist system, but indeed, constitutive of all relations which always consist simultaneously of exchanges of affect in the form of "power over" (*potestas*) and "power to" (*potentia*). What is unique, specific, and particular about the human "dividual" in such complex relations is the

specificity of human affect – not only in the exchange of material forces and flows but also in the ways those exchanges are expressed in human feelings such as hopefulness and hopelessness.

Affirmative affects enable us to remain critical and creative. An important part of an affirmative critique and intensive resistance to the way in which power is being "dividualized" in neoliberal capitalist systems today – the way in which both empowerment and agency as well as shame and blame are located in the individual, who is not only set against other individuals, but is him/herself often "divided within" – is the ability to think across scales, to connect affective experiences and events to the systems that generate them. An important strategy for seeking out affirmative affects is working with "middles" or with *what we have* rather than wishing for final ends or new beginnings – this is what Haraway calls "staying with the trouble." Perhaps in this era of environmental degradation we are all too often attracted to apocalyptic narratives or utopian futures because they relieve us of our responsibility for the present. Indeed, we may tell ourselves that if it is too late to do things differently, or if there will always be a time in the future do things differently, there is no need for us in the now-here to do anything at all. Whether we imagine ourselves saving the world or imagine the world as better off without us, each is a form of escapist fantasy. In response to this sentiment, and as I have been arguing here, the way to embrace the future is to embrace our enmeshment in the present and to remain open to more sustainable futures.

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