

Beta and bolt hangers: An Actor-Network approach to storying the Niagara Escarpment

by

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Author Declaration

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners. I understand that my thesis may be made electronically available to the public.

Abstract

Rock climbing is a messy practice that assembles dynamic landscapes, discursive regimes, processes of defacing, and the interferences of diverse more-than-humans (Barratt, 2012; Rickly, 2017; Rossiter, 2007). This thesis engages Actor-Network Theory to illuminate how the bolt hanger operates as a material-discursive token beyond the signification of a specific climbing route—as a representation of local ethics, a prompt of affect, and a delineation of territory. In their material manifestations, bolt hangers are employed within the practice of sport climbing as permanent fixtures to which climbers affix protective equipment. The placement of bolt hangers therefore interacts with practices of safety, route-finding, and *beta*: the sequence of movements unique to completing a climbing route (Phillips et al., 2012). *Beta* is further established, reinforced, and resisted through climbing practice in abundant, material-discursive ways. Orderings of *beta* are thus considered a more-than-human, relational configuration (Ness, 2011). In this context, *beta* becomes an entanglement of affect, ethic, and territory as sport climbing is recursively ordered. This thesis ultimately considers the material-discursive *beta* contained within the bolt hanger, and how the bolt hanger signifies a certain defacing of false binaries of human/nonhuman and nature/culture as it moves to translate the many *tourismscapes* of the Niagara Escarpment (Barad, 2007; Barratt, 2012; Rossiter, 2007; van der Duim, 2007).

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“In so far as we have to look forward
To death as a fact, no doubt we are right: But if
Sins can be forgiven, if bodies rise from the dead,
These modifications of matter into
Innocent athletes and gesticulating fountains,
Made solely for pleasure, make a further point:
The blessed will not care what angle they are regarded from,
Having nothing to hide. Dear, I know nothing of
Either, but when I try to imagine a faultless love
Or the life to come, what I hear is the murmur
Of underground streams, what I see is a limestone landscape.”

- W. H. Auden, *In Praise of Limestone*

Chapter One: Rock Climbing, *Beta*, and Tentative Orderings

1.1 Introduction

Climbing. I run it out. I can't contain it. The wrath and the wandering. The strange spaces, sly and seductive—I am enchanted; I am entranced. Completely immersed, I take time to curl the tips of my fingers around a sun-bleached edge of limestone—I feel the bite, the razor's edge, the tack of my imprint colliding with chalk and craft. My body is positioned with tension, as I linger (somewhere), tenuously tempting the thirty-or-so metres of air swirling below me. Here, climbing, I execute movements to continue (where?). Here, climbing, I am constantly rendered and rendering the cliffs, worldmaking, becoming, believing in the (many, many) possibilities: falling, failing, staying, sending, bringing myself (and being brought) into being.

This thesis is an attempt to bring together a storying of the Niagara Escarpment and its many relationships to the enactment of climbing. It builds upon relational-materialist and posthuman work in tourism in order to illuminate how climbers and the routes they climb emerge as both productive and destructive networks of human and nonhuman actors, with the result of altering both climbing practices and nature spaces. These many and multiple orderings of *beta*—the process by which a climb is elaborated—move far beyond their localized performances, continually re-making places like the Escarpment, as well as speaking to how climbing *feels*, what climbing should *be*, and who climbing is *for*. This work has the potential to extend beyond the pursuit of climbing, as it mobilizes and interrelates with ideas of sustainability, defacing, and making messes of naturecultures.

1.1.1 Rock climbing.

So: rock climbing is an absolute mess. (Truly.) This is not to say that it is not intoxicating, or not all-consuming, or not worth its many measurings as an obsession, a lifestyle, or a *being*... but mainly that it's unclear how climbing emerges and lingers in our world, how it proliferates and sustains, and how it can possibly move into the future within its current conceptualizations. Rock climbing has a history of being relegated to dualisms of human triumph over nonhuman nature (Rossiter, 2007), lamentations about flow (Csikszentmihalyi, 1975), performances of masculinity (Appleby & Fischer, 2005; Nettlefold & Stratford, 1999), flight from modernity (Beedie, 2015; Heywood, 2006; Kiewa, 2002; Lewis, 2000) and other such dominant discourses, but its everyday enactment becomes a slippery, vital, liminal space that is difficult to define (Ness, 2011). Climbing is unbounded, frustrating, and deeply non-representational (Barratt, 2012). It is so far beyond my ability to capture in text—it runs away from me like the rope through my fingers as I pull to make a precarious clip.

Because climbing is also a negotiation between many strange bodies—those both human and nonhuman—that are positioned and constituted in relation to one another (Barad, 2007). In moving through the emergence of a rock climb, I find myself jumbled up in a disarray of action (and actors); there is so much more to climbing than the simplicity of bodies and rocks. Climbing neither begins nor ends with the climb itself—the enactment reverberates through many modes of the world (Ness, 2011). Climbing continues to become an ordering, an interplay, a performance of possibilities, and an ongoing consideration of the minute and mundane material relationships. Barratt (2011, 2012) suggests that climbing is a more-than-human assemblage—this means climbing is not just about a human body executing the practice of climbing onto a

rock face, but that climbing is the engagement and the network of bodies, rocks, gear, weather, and many other nonhuman factors. Accordingly, climbing is inherently embodied, mobile, and productive—it moves through text and gesture, relating its many materials to generate spaces, places, and being (Rickly, 2017a).

1.1.2 Certain defacings.

Rossiter (2007) suggests that climbing is also a defacing, both of the human body and nonhuman rock; as climbers move across routes both are abraded, scarred, smoothed, and changed. This process is essential to elaborating a climb, but there is *more* to this. These physical alterations blur the boundary of what constitutes a climbing body and what constitutes a climb, assembling a space where the body (and thus the world) is ontologically reworked (Barad, 2007). Climbing becomes about more than pitting (nonhuman) nature against (human) culture, but instead shifts into a space where the action (and inaction) of climbing itself render the human and the nonhuman interlaced (Ness, 2011). Climbing does more than reductively transform natural spaces into cultural spaces (Rossiter, 2007)—it allows for a breath of clarity in which we can see that “the very notion of culture is an artifact created by bracketing Nature off” and that “Cultures ... do not exist, any more than Nature does. There are only natures-cultures” (Latour, 1993, p. 104). These false dualisms—those of nature/culture, or human/nonhuman—are prominent in historic discussions of climbing (Lewis, 2000; Nettlefold & Stratford, 1999) though much recent work has been positioned to (rightly) muddy them (Brighenti & Pavoni, 2018; Kiewa, 2002; Ness, 2011; Rickly, 2017a; Rossiter, 2007).

Importantly, these processes of defacing are not restricted solely to discussions about physical damage (though this remains crucial to ongoing discussions of climbing) but instead

work to disrupt dualisms of nature and culture as they story the many versions of climbing, resulting in unbound, complicated hybridities that rework climbing itself, some of which have been discussed by Barratt (2011, 2012) and Rickly (2017a), among others. Through understanding climbing as a defacing, as a change, we have space to include different affects, probe many materials, consider strange ethics, and uncover varying territories. Defacings, it seems, are intertwined in the many messes of rock climbing, and are crucial in understanding climbing as something enlivened and made vibrant through welcoming all those many things that are more-than-human. Through defacings, climbing natures (so to speak) are reaffirmed as not natures at all—they are and are not natures-cultures (Latour, 1993), or naturecultures (Haraway, 2003), or something that is entirely messier.

1.1.3 Climbing tourisms.

Climbing retains a multiplicity of meanings, even as it is studied within and as a practice of tourism. By definition, climbing is frequently considered adventure tourism because of its association with risk (Caber & Albayrak, 2016), but also due to its conceptualization as “a self-initiated recreational activity, typically involving a travel ... that usually involves a close interaction with the natural environment ... and has an uncertain outcome that can be influenced by the participant and/or circumstance” (Ewert & Jamieson, 2003, p. 68). Beedie (2015) deems the term adventure tourism oxymoronic, citing the impossible melding of uncertainty of outcome with the commodification of practice; indeed many scholars have attempted to more finely attune this definition to limited success, as adventure practices often continually rely on binary conceptualizations of nature and culture (Lewis, 2000), or humanist motivations of risk-taking and domination (Ewert et al., 2013; Holland-Smith & Olivier, 2013). Climbing also fits many

categorizations as a practice of nature tourism, as explored by Vespestad et al. (2019), though this too relies on limited definitions of “undisturbed natural surroundings” (p. 2) or the commodification of nature spaces (Bailey & Hungenberg, 2018).

However, scholars like Rickly (2016, 2017a) further Kevin Hannam’s position that traditional, rigid definitions of tourism are not sensitive to its diffuse, integrated appearance in the day-to-day lives of many individuals; instead, Rickly (2016) suggests that, in the context of her study on lifestyle climbers, narrow conceptualizations of tourism can only begin to suggest its endless relations. This distributed, overlapping, and flexible definition of tourism as “a set of possibilities for humans and non-humans to enact, (re)assemble, and organize” (Rantala, 2019, p. 58) is more aligned with how Barratt (2011, 2012) and Ness (2011) conceptualize rock climbing as a tourism practice, both in and of itself and within its broader cultural context. This conceptualization of climbing aligns with how Franklin (2004) and van der Duim et al. (2017) consider tourism as an *ordering*: a materially-heterogenous process positioning tourism

As something that had to be made to happen, that belongs to a story of becoming; that has quite explicit and often surprising twists and turns and unintended consequences; that once formed and unleashed on the world it took on a life of its own. (Franklin, 2004, p. 279)

Through understanding climbing as a tourism ordering, we leave room not only for previous (partial) overlaps with other climbing-tourism definitions, but also allow space for surprising, mundane, strange, and unexpected versions of climbing, one that defaces, changes, and reworks our worlds (Barad, 2007).

1.1.4 On conceptualizing *beta*.

Climbing is mobilized through the bodily, material, relational practice of *executing a climb*. This sequence of movements that are used to complete—or, ‘send’—a rock climb is highly specialized, articulated, and (sometimes) obsessed over, and is commonly-denoted as *beta*. *Beta* is essentially the ‘how’ of rock climbing: the choreography, map, diagram, narrative, or information as to how to best climb a route (Phillips et al., 2012; Rossiter, 2007). The origin of the term ‘*beta*’ is somewhat contested, but to the best of the climbing community’s knowledge it is generally agreed upon that the term was coined by Jack Mileski—a now-deceased climber from the Shawagunk region in New York State—as a reference to giving a friend or fellow climber the Betamax cassette of someone sending a specific rock climb (Tradgirl, 2009). In discussing and disseminating *beta*, climbers can communicate information about the difficulty of a climb, its sequences, its style, its quality, the gear needed to finish it, and many other specifics depending on the context. *Beta* can be verbally explained or physically gestured; it can be textually represented, inscribed into the rock, or inherent in the performance of climbing (Rickly, 2017a; Nettlefold and Stratford, 1999). Climbers frequently use all of these above methods to communicate *beta* both on and away from the rock.

Many of the discursive nuances of climbing—including ethical choices, unwritten climbing rules, integrations of emotionality and affect, and the interaction between human climbers and nonhuman actors (i.e, rocks, weather, gear, and other materials)—are captured in the process of route-finding and establishing *beta*. *Beta* is a language, yet one not relegated to the stuff of human textual fumbblings—because it constitutes an interaction with and acknowledgement of the *vibrancy of matter*, it is an exemplar of more-than-human orderings

(Barratt, 2012; Bennett, 2010). *Beta* is thus discursive—it is practiced, performed, and proliferated not only through human representations like guidebooks and symbols, but through the material implications of earthly substances as well (Rickly, 2017a; Lund & Jóhannesson, 2016). And so *beta* is not just information on how to complete a rock climb—it is a complicated interaction, it is not governed by one materiality or actor, it is uneven, it has a heavy vagueness, it is comprised of matters with vibrant and vital force but in its enactment has an agency unique to its ordering (Bennett, 2010; Bille, 2015).

To move forward, I have drawn from Ness (2011) a quote that I feel encapsulates and operationalizes *beta* for the broader purposes of this thesis. Ness (2011) explains that the formulation and execution of a climbing ‘action plan’—in other words, *beta*—is “a vehicle by which the [climbing] community’s translocal ethnoscape move[s] significance across the symbolic–experiential interface inward, down into the somatic reaches of... corporeality, inscribing its designs into ... being ...” (p. 80). In engaging Ness’s (2011) particular *beta*, I agree that “what climbers are moving on as well as into when they are climbing ... is oriented by the technical, ethical, commercial, political, and aesthetic discourses of the climbing community” such that the climb itself lingers—relationally—between many spaces of natures and cultures (p. 80). This emergent definition of *beta* aligns further with van der Duim’s (2007) understanding of *tourismscapes*—the process of ordering as applied to tourism—and positions this process such that *beta* has the potentiality to enact both climbing and tourism spaces. Consequently, *beta* is herein recognized as an (always) in/complete process of ordering, one that carries material-discursive realities through from the microscopic textures of fingerprints on limestone through to the macroscopic establishments of mountain grading and terraforming, and stories every im/

possible route on the way to *becoming*. *Beta* is necessarily coordinated, maintained, passed on, and performed through the persistence of and relationships between many human and nonhuman agents, and though it remains a term that is closely linked to practices of climbing, engaging and understanding many orderings of *beta* has the capacity to direct and disrupt broader understandings and manifestation of natureculture narratives, both in and beyond our climbing and tourism spaces.

1.1.5 Storying the Niagara Escarpment.

I have been climbing outdoors in Southern Ontario for five years. I have been, throughout this time, both introduced to and constituted through the discontinuities and drama of the Niagara Escarpment. Though my love of climbing has also moved me to many other physical locations across North America, the heart of my work and practice is stationed on the vertical faces of the Escarpment—a ridge of limestone and dolostone that runs from beyond Manitoulin Island, Ontario all the way into Niagara Falls, Ontario (and still further into New York State) (Hutson & Montgomery, 2010).

The Niagara Escarpment was (and is continuously) made and narrated as a *tourismscape*, a matter of relations of people and things distributed and diffused throughout spatiotemporal locations (van der Duim, 2007). The (continuous making) of the Escarpment is dramatic—as the blocky, steep cliffs of the Escarpment are sedimentary, their exposure was urged along by erosion of deposits roughly between three and five hundred million years old (Bracken et al., 1997). This period of initial deposition was the Silurian, one marked by massive inland seas—our local one is called the Michigan Basin—obscuring untold layers of organisms, dead invertebrates, and sediments slowly undergoing immense amounts of pressure (Kelly and Larson, 2007).

Predominantly, the cliff faces and the rocks that we encounter as climbers are limestone and dolostone, though the under layers are sometimes shale and sandstone (Bracken et al. 1997). Whereas shale and sandstone tend to result from the erosion of other rocks, limestone is assembled through the precipitation of minerals such as calcite (Bracken et al., 1997). The Escarpment is also home to some of North America's oldest (and most endangered) flora and fauna, including the Eastern White Cedar (*Thuja occidentalis*) (Kelly & Larson, 1997; Kuntz & Larson, 2006; Lorite et al., 2017), certain rare lichens (McMillan & Larson, 2002), and land snails (McMillan et al., 2003).

The Escarpment is also woven by and through certain industries, political classifications, and various histories. While it enjoys its current designation as a part of the Ontario Greenbelt (1.8 million square acres of protected greenspace), hosts the Bruce Trail, and contains multiple conservation areas, it is also the site of increased quarrying and aggregate industry (Patano & Sandberg, 2005), as well as recent political arguments regarding land rezoning (Rieti, 2018). Land conflict remains a continuous contention in the Escarpment's ongoing history, with many bodies like the Niagara Escarpment Planning and Development Act (NEPDA) and the Niagara Escarpment Commission (NEC) spearheading various attempts to balance conservation, outdoor recreation, and industrial use (Hutson & Montgomery, 2010). Many areas along the Escarpment were also used in the 1600s as encampments for the Attawandaron (Neutral) peoples, as the view points were particularly advantageous to their livelihoods (Kelly & Larson, 2007).

Due to its unique constitution (but mostly because of its proximity to urban locales) the Escarpment also has a rich and detailed history as a destination for rock climbing (Oates & Bracken, 1997). Though there have been active chapters of the Alpine Club of Canada in

Southern Ontario since 1910, the very first mention of climbing route development local to this area began in the late 1950s with reference to a quarry near Milton, Ontario (Alexandropoulos & Dwyer, 2016). Climbing steadily increased in popularity throughout the 60s, 70s, and 80s, as both Alpine Club members and bored suburban youth sought more interesting and difficult lines (Alexandropoulos & Dwyer, 2016). In the 1990s, sport climbing (climbing using a rope and permanent gear) in Southern Ontario took off at crags local to Burlington like Mount Nemo and Crag X—this was assisted by the introduction of bolting and technological advancements in fixed gear (Alexandropoulos & Dwyer, 2016). Bouldering (low-verticality climbing without a rope) is mostly restricted to the Niagara Glen and Halfway Log Dump; each of these areas has seen increased activity since the early 1990s (Alexandropoulos & Dwyer, 2016).

The Escarpment has always been host to competing versions of climbing that are more or less sympathetic to the intervention of nonhumans (fixed gear, flora and fauna, etc.)—many of these competing orderings involve employing rhetoric of ‘access’ as a way to police which actors, materials, and ethics are acceptable in rock climbing. The Ontario Alliance of Climbers (OAC) (formerly the Ontario Access Coalition) remains the primary body that suggests best practice for local (and visiting) climbers. The OAC liaises with conservation areas, land managers, private citizens, and government bodies in order to secure access to outdoor areas for the purpose of climbing, many of which are located along the Escarpment (OAC, 2019). Further, the OAC continues to advertise crag clean up days, hold gym-to-crag sessions, and promote their ‘Code of Ethics’ such that they position themselves as the authority on Escarpment climbing (OAC, 2019). Despite the OAC’s self-positioning as an authority, climbing on the Escarpment remains mostly unregulated, and continues to be negotiated as equippers develop new lines and

areas and secure (or lose) access to said areas depending on ongoing behaviour of and rapport between these many stakeholders. Indeed, just last year a newly-developed sport climbing near Burlington was opened and subsequently closed within the span of six months due to climber misuse, landowner frustration, and the OAC's inability to balance the two (Ontario Climbing, 2019). Today, climbing in Southern Ontario is mostly limited to sport climbing and bouldering, with some traditional climbing opportunities as well. At the time of this writing, there are 38 noted climbing crags in Southern Ontario along the Niagara Escarpment (Alexandropoulos & Dwyer, 2016).

1.1.6 In summary.

Climbing, *beta*, tourism, naturecultures, defacings, and the Niagara Escarpment—we have really made a mess of things (Law, 2004). As I present the rest of this thesis (much as I enter my climbing spaces) there are certain continuities I must consider, certain *ways of being* that I must base my actions on.

First, conversations around area access and 'proper' climbing practice (between citizen climbers, coalition bodies, and route developers) focus on ensuring the ongoing availability of the Escarpment's vertical limestone worlds for the explicit purpose of climbing. Accordingly, these practical discussions of *beta* within the climbing community still rely on binarist assumptions of natural climbing spaces as separate from the human, cultural practice of climbing. (We know this to be incorrect.)

Second, I am instead seeking to detail orderings of *beta* that explore the many hidden narratives embedded in and enabled by the pervasive agencies of nonhumans in order to encourage more ecologically vibrant (Evers, 2019) discussions of access issues among members

of the climbing community, and to encourage climbing tourism practices that diligently ensure ‘abundant futures’ for all actors, not just humans (Collard et al., 2015). This means attempting to highlight ways in which climbing practice defaces, changes, or messes with certain naturecultures. How might our emergent, translocal interface of *beta* map onto the mess of climbing spaces?

Finally, in this thesis, this vibrant being is best considered through an onto-methodological perspective that honours the actant ability of both human and nonhuman entities, and encourages a relational, emergent position (Barratt, 2010). Namely, I want to position the Niagara Escarpment as a *tourismscape* made emergent through climbing *beta*. *Tourismscapes* present a reworking of tourism practices such that these spaces are considered as relational, networked performances of people, objects, media, spaces, and times (van der Duim, 2007). For these reasons (and many beyond them) in the next sections I will introduce and explore the use of the of relational materialisms and the methodology of Actor-Network Theory in order to support my research aims.

1.2 Moving Beyond Humanism; Ontological and Material Considerations

In this section, I aim to introduce concepts of matter, materialism (both relational and vibrant), posthumanism, and anxiety, as each of these pertain to my ontological positioning for this study. These theories, ideas, and ontological worldings are to be presented and discussed with the intention of leading us toward considering the onto-methodology of Actor Network Theory, and its specific mobilizations in engendering *tourismscapes* and *beta*.

1.2.1 Matter and relational materialism.

Materials: dirt, grit, rubber, chalk, skin, sweat, leather, sand, schist, limestone, nylon, blood, grease, quartz, mud, moisture, silt, moss. Earthly (and non-earthly) stuffs. Things. Objects. Items with vital vibrancy. Spinoza assigns to each thing, object, or material a *conative nature*, or, a virtue that is inherent to its material ability to *persist* (as cited in Bennett, 2010). Even human beings can be considered to be made of these strange materials, these complex collections and assemblages of stuff(s) (Bennett, 2010). *Materialism* is the view that matter and materials exist in the physical world, and that their existence is sustained outside of human perception (Pernecky, 2016). Or: *physical things exist*, and their existence is not dependent on our acceptance of that fact. But a *vital materialism* is the raising of this distinction such that the subject/object divide is minimized with the application of a shared materiality (Bennett, 2010). With vital materialisms, humans are finally not “*apart from, but a part of matter*” (Kumm & Barbary, 2018, p. 74)—we are together a material-discursive emergence borne from the mess of the world (Barad, 2007). We are this same vibrant stuff, wrapped up in everything; we endure despite our desperate cognitions.

But what of a *relational materialism*? This ontological position is a consideration that aligns with the broader description of posthumanism (van der Duim et al., 2017). Matter is, in the words of Karen Barad (2007), “a dynamic intra-active becoming that is implicated and enfolded in its iterative becoming” (p. 151). Matter is not just a property of things—it is generative, relational, and has discursive agency (Barad, 2007). ‘Intra-action’ is fundamentally at odds with the more frequently-used ‘interaction’—while the latter presupposes the existence of separate agents that come together in action, the former presents a *conceptual shift* where phenomena

(objects, entities, *beings*), are bound and determined through processes of relation (Barad, 2007). Essentially, notions of intra-action dramatically alter our traditional understanding of *causality* (that an action—cause, can lead to an outcome—effect) and instead insist that all matter and phenomena “mutually constitute entangled agencies” (Barad, 2007, p. 33). Barad (2007) illustrates this emergent causality by exploring the mechanisms and processes with which we can ‘define’ reality—light, for example, is either a particle, a wave, *depending on its related determinants of measurement*. This aligns with Law’s (1999) ‘ruthless’ application of the semiotics of materiality; not only are signs, symbols, concepts, ideas, and texts considered and enacted only in their relationships to one another, materials themselves are constituted this way as well. The making of meaning is not only relational languages; it is the relation of *all* materials (Law, 1999).

Relational materialism inherently disrupts dualist theories of nature/culture, bridges the human-nonhuman divide, and demands the acknowledgement of assemblages, hybrids, quasi-objects and quasi-subjects (those which are both and neither), and more-than-human volatility (Bennett, 2010; Latour, 1993; Law, 1999). Our work in relational materialism is to move beyond the “thing-life binary,” while maintaining a vibrant, uncertain ‘understanding’ of materials (Bennett, 2010, p. 20). Our wild materials constitute and perform relationships and orderings by collaborating and interfering with one another; they are dependent on one another while indeed maintaining their own *conatus* (van der Duim et al., 2017). This is the brilliance of the network—so much of it is mess and multiplicity. A relational materialism does not relegate us to the physical, it only brings into focus the power of considering an alternative symmetry of the material and the social (Latour, 1993). Attending to matters of matter (and truly engaging with

relational materialism) has the power to, in the words of Donna Haraway (1985), *rework* nature and culture, such that “the one can no longer be the resource for appropriation or incorporation by the other” (p. 293). This is a powerful ontological stance—one that is aligned with posthuman work—and one that contributes to a broader push toward posthumanism.

1.2.2 Posthumanism and anxiety.

There is a notable history of humanist bias in research which lends us to the prioritized consideration of the human perspective and human subjective experience over the agencies of all other matter(s) (Bennett, 2010; Berbary & Boles, 2014). The moves from positivism to post-positivism (and further to poststructuralism(s)) have worked to acknowledge the multiplicity of truths, and the uncertainties of knowing-or-not-knowing (Berbary, 2017). Posthumanism is (and is not) an onto-methodology; it fits no carefully constructed scaffold and resists previously outlined conceptions of humanist research paradigms (Berbary & Boles, 2014). To pull from Barad (2007), “posthumanism ... is not calibrated to the human” and “doesn’t presume the separateness of any-“thing,” let alone the alleged spatial, ontological, and epistemological distinction that sets humans apart” (p. 136). Instead, posthumanism occupies itself with boundary making, and continuously demands a reckoning for how humanist practices continually separate ‘knowing’ from ‘being’ (Barad, 2007). Further, posthumanism moves to encompass the more-than-human, the hybrid, the other-than-human, and many other iterations—some ontological, some historical (Panelli, 2010). Braun (2004) suggests that posthumanism’s many meanings can be thematically separated into those that are deconstructive of humans, those that position humans as an emergent part of the world, and those that seek to recognize a *vital topology* that re-prioritizes the agencies of nonhumans. Each of these positions is necessary, and each has its

own strengths—Braun (2004) cautions us to not collapse them together. For the purpose of this thesis (and with the intent of carefully attending to my beliefs both relationally and materially) I subscribe to Braun’s (2004) third definition as I work to consider the many messes of climbing naturecultures.

Posthumanism aims to overthrow our humanist occupation by welcoming the ‘mess’ of adding nonhumans to our considerations—this is where relational materialisms arise (Picken, 2010). Instead of adhering to traditionally ‘arborescent,’ from-the-ground-up understandings of the spread of possible knowledge(s), Deleuze and Guattari conjure the image of the rhizome, such that knowledge branches every which way, void of hierarchy (Law, 1999). This vital posthumanism ‘flattens’ our onto-epistemology; it “removes human beings from the apex of existence [as] the arbiter[s] of meaning” (Kumm & Berbary, 2018, p. 74), and instead opens our work and world to the interventions and actions of nonhumans. When nonhumans are ‘allowed’ to act, it destabilizes humanist understandings of the constitution of our realities: our social worlds become all the more vibrant when matter *matters* (Bennett, 2010; Kumm & Berbary, 2018). And to limit our understandings to our humanist platforms is truly exhausting; “post-humanism revitalizes the over-burdened ‘human agency’ by questioning ‘the limits of control that it can attain’” (Franklin, as cited in Picken, 2010, p. 259).

Additionally, there is a push within posthumanism to “creatively imagine, *at every stage*, methodological possibilities,” such that methodological considerations are part of the ongoing, reflexive, and emergent renegotiation of imaginative research (Kumm & Berbary, 2018, p. 79, emphasis added). This emphasis on the worldmaking of methodological process is for me, a personal and ethical priority, a process that Grimwood (2015) encapsulates as moral,

transformative, political, and positively productive. Indeed, research methodologies *enact* our social and material world by restraining, fixing, and defining possibility (Kumm & Berbary, 2018). Posthumanism does not ask us to create a new and ‘better’ methodology, but rather asks us to embrace creativity, uncertainty, and a restoration of balance to material-discursive practices (Kumm & Berbary, 2018). Consequently, doing posthumanist work continues to challenge traditional conceptualizations of research through prioritizing experimentation, risk-taking, and problematizing subjectivity, while injecting any resulting writings with increased transparency as to *how* our worlds (and research) are constructed (Law, 2004; Whatmore, 2006). I am deeply inspired by the strange, ingenious, and theoretically rigorous work of Evers (2019), Ren (2011), Ness (2011), and Barry (2017) in my own push toward creative, honest research.

Finally, wrestling with posthumanism may be messy, unclear, uncomfortable, and frustrating for researchers trying to renegotiate their (possibly long-held) humanistic views (Berbary & Boles, 2014). For myself, part of my fascination and preoccupation with climbing and tourism orderings is a personal and necessary need to embrace uncertainty, discomfort and anxiety as part of my research experience. Research orderings, much like climbing and tourism, are messy, precarious, improvisational, and emergent (Stinson & Grimwood, 2018). The conjured image of orderings is almost a contradiction: an ordering is not an authoritative structuring, just as an assemblage is not the neat fitting together of pieces—both are rife with mess and multiplicity (van der Duim et al., 2017). Mess, vagueness, and uncertainty should not be considered methodological problems, but instead be understood as part of the process or enactment of ordering (Bille, 2015). And so working to dismantle my self-centred, humanist research position is a lesson in surrendering absolute control, while simultaneously allowing

myself to sometimes *be wrong*. It involves deconstructing the position of the human as a *knower who knows* (Kumm & Berbary, 2018); it means renegotiating my subjectivity, my actant ability, and allowing myself to be part of the “slight surprise of action” of the assemblage (Latour, as cited in Bennett, 2010, p. 27).

Thus, to consider research with mess and uncertainty is to consider accepting anxiety itself as a point of increased understanding. Crouch (2010) suggests that uncertainty gives us space to feel new joys, to flirt, to explore, to be messy, to consider new juxtapositions of materials. Uncertainty means being open to confusion, crisis, isolation, and anxiety (Berbary et al., 2017). I am working through this, both personally and professionally. I am open to the possibility that surrendering to the wildness of uncertainty will produce a more illuminative understanding of truth(s); I align myself with posthumanism as a test, a trial, a therapy. I am starting to believe in the positivity of this uncertainty, in the re-assigning of anxiety from *value negative* to *value expansive* (Stinson & Grimwood, 2018). Considering Berbary et al.’s (2017) exploration of onto-epistemological crisis, I have some comfort in knowing that my uncertainty will not prevent me from participating in relevant inquiry (Caton, 2016). I feel as if I am in good company.

1.3 Actor-Network Theory

Despite its somewhat misleading name, Actor-Network Theory (ANT) is not a theory, but an onto-methodology that defies conceptualization as a singular, unified approach (van der Duim et al., 2017). The emphasis of a flattened ontology within ANT—as well as ANT’s acknowledgement of the agency of nonhuman actors—means that ANT as a methodology is very much housed in the world of posthumanism (Kumm & Berbary, 2018). Conversations around

ANT first emerged in the 1980s in France through Science and Technology Studies (STS) scholars Bruno Latour, Michael Callon, and sociologist John Law (Ren, 2011; van der Duim et al., 2013). ANT employs tenets from Science and Technology Studies, as well as poststructuralist concepts like discourse, multiplicity, and semiotics (Berbary & Boles, 2014; Law, 1999). In this section I will outline ANT and its uses, languages, and possibilities for my research process.

1.3.1 Assembling assemblages.

The context of my own onto-epistemological alignments stem from my interactions with the methodology of ANT. While there is a suggestion that in research it is helpful to be clear about our ontological affiliations before we can make epistemological claims (Pernecky, 2016)—or, we must know ‘how things are’ before we can talk about ‘how we know what we know’ (Berbary & Boles, 2014)—this experience was not quite straightforward for me. Within my own academic journey, my introduction to ANT firmly moved me from the realm of poststructuralism into the strange and complicated worlds of relational materialism, ecological vibrancy, and posthumanism. (Yes, true to form, I started in the messy middle of things.) Considering a methodology that does not prioritize the human subject forced me to confront my own humanist bias in research, and this renegotiation and ‘flattening’ of my onto-epistemology remains an intentional, ongoing process. Consequently, ANT emerged as the ideal methodology for allowing me to illuminate the assemblages and orderings of *beta*, and how these orderings contribute to the storying and re-storying of places like the Niagara Escarpment in Southern Ontario, Canada. There are orderings, assemblages, and relational materials embedded in the many makings of our world—using methodologies like ANT is how we acknowledge them.

1.3.2 How ANT works.

Using ANT allows us to explore the relationships within networks, as well as how networks are performed, ordered, assembled, established, and reestablished—it encourages us to attend to the complex, interwoven networks of both human and nonhuman agents, braiding together acknowledgements of facts, power, and discourse, such that networks themselves are seen as real, collective, and discursive (Latour, 1993). Ren (2011) explains this shift in focus as highlighting the importance of doing, as opposed to that of being, such that we are enabled to more aptly see how “materiality and metaphor, discourse and performance all engage in the creation, enabling and workings of ... actors, objects and realities” (p. 861). ANT, at its best and most useful, “positions the world as an outcome of a process of inquiry” one that is relational, ontological, and decidedly generative (Ruming, 2009, p. 425).

Law (1999) suggests that ANT is a “semiotics of materiality” that continues the poststructuralist line of thought surrounding the relations of textual meaning, and “applies this ruthlessly to all materials” (pg. 4). ANT is the marrying of relational materialism and performativity, such that action is seen not a human intention, but as a property of relationships between all actors (Law, 1992; Ren, 2011). Law (1999) explains this best: “if relations do not hold fast by themselves, then they have to be performed”—material semiotics are stabilized (or destabilized) through their continued performance. (p. 4). Routledge (2008) refers to ANT as the “methodology of following,” citing its purposeful attendance to the actions of nonhuman agents within the multiple constructions (and deconstructions) of reality (p. 205). Through any definition, within posthumanism, materials and “matter [to] no longer [be] thought to be dumb,

mute, or inert;” ANT provides us a methodology with which we can honour these claims (Kumm & Berbary, 2018, p. 74).

Indeed, ANT allows us to access the tools with which we can challenge a humanist ontology of many things, including climbing and tourism. This provides necessary theoretical and methodological clout to the ways in which climbers already speak of and act alongside rocks and nonhuman agents to assemble *beta*. Climbers speak of climbing *with* the rock, or attributing a distributed agency to a rock, piece of gear, or feature, all resulting in the ordering of a line; ANT furthers the philosophical discourse with which we can understand this practice as that of ordering *beta* (Barratt, 2012; Bennett, 2010; Ness, 2011; Rossiter, 2007). In tourism, Rene van der Duim (2007) has introduced the aforementioned *tourismscape* with the intention of harnessing ANT to describe the many local and translocal processes by which tourism places assemble a heterogeneity of actors in order to achieve themselves. Potentially, orderings of *beta* may result in broader orderings of *tourismscapes*. By using ANT to attend to the many relational presences, messes, and vibrancies that are engendered by nonhuman actors, we have the possibility to encourage performances of climbing, nature, and tourism that are diverse, emergent, and abundant.

1.3.3 Further operationalizations and clarifications.

The language mobilized by ANT can be somewhat complicated. In order to facilitate the translation of this thesis, I want to provide a short list of operationalizations and clarifications.

- i. *Agents* are *actors/actants*, though Bennett (2010) argues that this distinction is one of subjectivity. Latour (1999) suggests these can be human, nonhuman, or perhaps both and neither. Actors are interveners; action is not a property but an association (Bennett, 2010; Ren, 2011).

These associations are outlined quite excellently by Sayes (2014) as “a condition for the possibility of (human) society... as mediators ... as members of moral and political associations ... and as gatherings of actors of different temporal and spatial orders” (pg. 135). In climbing, and as explained previous by Barratt (2012), these can encompass gear, rocks, weather, and many other things.

ii. *Symmetry* refers to the idea that human and nonhuman actors should be treated the same; that there exists no separation between the physical and the social (van der Duim et al., 2017). This does not mean *exact* symmetry, as in ‘interviewing rocks’ or any such thing, but instead prompts the removal of any *a priori* assumption of differences between human and nonhuman actors (van der Duim et al., 2017). All entities share active impulsion, *conatus*, or a vibrancy that persists (Bennett, 2010), and this should be acknowledged through careful methods choice and practice (Beard et al, 2016). Latour (1993) suggests that symmetry is only possible from the standpoint of first considering *quasi-objects*—those things which are both and neither human and nonhuman, what Haraway (1985) calls *hybrids*. In climbing, engaging symmetry is often seen with practices of *onsighting*, a practice of attempting to disallow any ‘human-given’ *beta* before attempting a rock climb.

iii. *Orderings* are everywhere (Franklin, 2004). They are the how we establish larger and ‘more fixed’ *assemblage(s)*: mini-discourses that are carried out in ways that define practices or notions about specific realities (van der Duim et al., 2013). Orderings can be multiple, and coexistent, but any is “precarious achievement” (van der Duim et al., 2017, p. 142). Bennett (2010) uses Deleuze and Guattari’s definition to suggest that assemblages are “ad hoc groupings of diverse elements, of vibrant materials of all sorts” (p. 23). An assemblage is thus comprised of

actants and orderings, but maintains its own agency unique to its distribution as well (Bennett, 2010). As far as climbing is concerned, orderings and processes of ordering are continuously and obviously enacted with regards to practices of safety in sport climbing. For the purpose of this thesis, I am pursuing certain orderings, as describing broader assemblages of climbing is outside my scope of possibility.

iv. *Punctualisation* is related to *blackboxing*; while both refer to the ordering of networks into stabilized assemblages that are then simplified, blackboxing holds the additional requirement that the simplification itself then must be hidden from view (van der Duim et al., 2013). Blackboxes tend to show up as integrated technologies, objects, or systems that are frequently encountered but never questioned—in climbing, a good example is an outdoor route itself, as the process of creating of outdoor climbing routes is rarely disclosed to their users.

v. *Translation* is that which is central to ANT itself: the analysis of ordering struggle, or the process by which ordering is (precariously) achieved (Law, 1992). Processes of translation are closely tied to research presentation and network description—translated networks often remain decidedly different than those that are untranslated (Ruming, 2009). Essentially, translation is closely tied to reflexivity in ANT, and is a positioned, partisan, and political act (Ruming, 2009). Translation speaks to how networks are built, and relations of power are generated between many actors (van der Duim, 2007).

1.3.4 Summarizing ANT and its potentialities.

As a final aside to these operationalizations, I must further clarify that ANT in general provides no specific theory or *explicit* definition of the agency it so desperately seeks to acknowledge. It does, however, allow us to incorporate nonhuman agents into our accounts of

how reality is constructed, describe and deconstruct those multiple possible orderings of reality/ objects, identity and ‘open’ blackboxes, consider processes of translation and symmetry, and reconceptualize how power and social agency are enacted (Routledge, 2008; van der Duim, 2007; van der Duim et al., 2017; Sayes, 2014).

Of course, Actor-Network Theory is not without its critics. First, its language and terminology—perhaps through its relationship to poststructuralism—is often considered esoteric and impenetrable (van der Duim et al., 2017). However, we do not need the language of ANT itself to find its tenets useful, as my own foray into ANT was partially led by the already-present representations of some of its ideas in and through climbing (though these ideas are commonly communicated in climbing lay-language).

Second, ANT’s confusing name and inadequacy of methodological bracing lends some scholars to think of it more as a theory than a methodology (Sayes, 2014). Though some of this is just a shallow reading, there is a valid point raised in that strengthening “the manner in which assumptions, ideas, or stipulative claims are incorporated into analysis” could encourage a better understanding and application of ANT as a methodological practice (Sayes, 2014, p. 136). I believe that writings focusing on practical methods choice (Beard et al., 2016; Law, 2004) and application (Ruming, 2009) can assist in supporting ANT’s methodological clout.

Third, there is a line of thought that ANT is built upon weak theory, as it purports resistance to the explanatory powers of various social forces (Elder-Vass, 2008). This resistance can be explained as a factor of ordering; that the group itself is not the defining factor, but is that which is defined by the network (van der Duim et al., 2017). Power is not ignored within

ordering spaces, as token actors, processes of translation, and performances of relationships are heavily and carefully considered (Ruming, 2009).

Finally, certain rigid readings of ANT leave no room for what Muller and Schurr (2016) refer to as ‘cross-fertilizations’ from other similar theories. These exceptionally STS-fueled enactments of ANT leave little room for creativity, generative networks, resistance, potential, or desire (Muller & Schurr, 2016; Vikkelso, 2009). Accordingly, though I take methodological direction from ANT by way of its languages, methods suggestions, and concepts of *tourismscapes*, I also leave space for becomings of affect, surprising research translations, and the capacities of (human) embodied positions with respect to the emergent landscapes of both climbing and tourism (Deleuze & Guattari, 1987; Muller & Schurr, 2016).

1.4 Purpose statement and research questions; An ordering of orderings

In summary, the purpose of this research is to draw upon Actor-Network Theory to illuminate how orderings of and interactions between climber, rock, gear, weather, and other nonhuman actors manifest as *beta*. Engaging *beta* as a more-than-human ordering has the potential to rework climbing natures, climbing tourisms, and facilitate different understandings of sustainable practice. Drawing on relational materialism work within a posthumanist onto-epistemology, I seek to detail, diagram, and delve into the ever-changing ways in which climbers and the routes they climb produce emergent and entangled relationships through *beta*, continually storying and re-storying *tourismscapes* like the Niagara Escarpment. This purpose is reflected in the following research questions:

1. How does *beta* manifest as an ordering (or assemblage)?
2. Who or what are the actors that form the ordering of *beta*?

3. How do the orderings of *beta* shape and/or change the broader discourse of climbing?

1.5 In Conclusion

Climbing clearly resists many of my attempts to pin it down; any previous attempts I have made to do so read flat and unfocused when I revisit them. (Shoes. Rubber. Rock. Fear. On and on and on.) Climbing remains both and neither—precarious and powerful; its orderings hold room for both uncertainty and action. I am always negotiating with and holding space for climbing in my life, be it through work, study, pleasure, adventure, avoidance, literature, or any other possible manifestation. I am always, as an actor, deeply within climbing's mess (Ren, 2011).

With this thesis I seek to describe the multiple coexisting networks that are ordered as *beta*, the processes of their ordering, and the resulting *tourismscapes* of the Niagara Escarpment. These orderings may be blocks of movement, pitches, routes, or areas; they may be ideas or tokens; they may reverberate everything, nothing, or some rhizomic meshwork of every possibility. *Beta*. The diagramming of these orderings and the storying of climbing places like the Niagara Escarpment are of course in part textual (through guidebooks and documents), but these discourses are enacted through relational materiality as well (Law, 1999). Climbing areas are assembled of routes; routes are assembled of *beta*. And because our world is constituted of these material-discursive orderings, so are our experiences as well (Law, 1992). This is a storying: the assemblage of the assemblage (of the assemblage, of the assemblage...) along the Niagara Escarpment. The push of localized *beta* to encourage broader *tourismscapes* that rework climbing's relationship to nature, culture, and damage. This thesis is my attempt to translate some of the mess.

Chapter Two: Review of Relevant Literature

2.1 Introduction

In the following section, I will detail the literature that is relevant to my academic pursuit of the assemblage of *beta* as constituted through relational materialist, more-than-human work on climbing. This conversation could not begin without a deeper exploration of rock climbing and its relationship to spaces and natures as supported by the tourism scholarship referenced in the introduction. This literature presents and situates my position and intention to contributing to these fields by probing their overlaps and identifying their gaps. Additionally, I will detail climbing literatures pertaining to both the (human) body and the (more-than-human) assortment of gear, texts (like guidebooks), and other symbols or relational materials, as many movements of these academia areas show the paths and potentials for how *beta* can mess with them. Finally, throughout the above sections, I will detail certain conceptualizations of affect, ethic, defacings, and territory within the context of the pursuit of climbing, with the intention of providing a background for each of my forthcoming narrative orderings. Each of these individual bodies of knowledge is vast and far surpasses the contents of the following review; I have chosen to select literatures as they pertain specifically to rock climbing as an ordered, more-than-human occurrence with the intent of bolstering my research position, and highlighting that there is room to welcome messes of *beta* into further conceptualizations of tourism and nature/cultures.

2.2 Rock Climbing

The practice of modern rock climbing began in the late 1900s with the British consideration of mountaineering (Barratt, 2011). This pursuit quickly moved from being one of science to one of both languid past-time and the search for the unknown—an adventure and

leisure pursuit (Nettlefold & Stratford, 1999). As the number of unclimbed mountains dwindled, climbers instead focused their efforts on reaching summits by different faces, lines and routes; this de-stabilized the summit itself as the ultimate pursuit and shifted climbers' practice toward the climbing of lines and faces of increasing difficulty (Nettlefold & Stratford, 1999). Bouldering initially existed as a means of training for harder, longer route climbing, but gained popularity in the 1970s—specifically in Yosemite Valley—as its own unique pursuit (Frauman & Rabinowitz, 2011; Ness, 2011). Rock climbing is continually and furiously evolving and growing more popular as a leisure and tourism pursuit; in 2014 there were an estimated seven million active climbers in the United States (Lee et al., 2017). Climbing now takes many forms: alpine mountaineering, aid climbing, traditional (trad) climbing, sport climbing, free-soloing, bouldering, speed climbing, and deep-water soloing (Kulczycki, 2014). This thesis primarily considers the practice of sport climbing.

Climbing has been studied with regard to flow experience (Csikszentmihalyi, 1975); lifestyle, identity, and serious leisure pursuit (Lee et al., 2017; Rickly-Boyd, 2012; Rickly-Boyd, 2013; Wilson et al., 2014), feminism and gender (Appelby & Fischer, 2005; Dilley & Scraton, 2010); urbanity, modernity, and technology (Barratt, 2011; Barratt, 2012; Brighenti & Pavoni, 2018; Kulczycki & Hinch, 2014; Phillips et al., 2012); social resistance and community (Beedie, 2015; Cailly, 2006; Kiewa, 2002; de Léséleuc, 2004); embodiment (Barratt, 2011; Humberstone, 2011; Rickly, 2017a); management (Bogardus, 2015; Schuster et al., 2001); and environmental practice (Frauman & Rabinowitz, 2011; Thompson et al., 2006; Wilson et al., 2014).

Additionally, there is a vast amount of literature concerning climbing places and spaces, and the unique manifestations and makings of these within climbing practice and climbing communities

(Cailly, 2006; Hutson & Montgomery, 2010; Kulczycki, 2014; Kulczycki & Hinch, 2014; de Léséleuc, 2004; Ness, 2011; Nettlefold & Stratford, 1999; Wilson et al., 2014). These categories are by no means exhaustive and are offered not to suggest that I will entertain literature from all angles—this is only to show that my work is building off of a broad variety of work on climbing spaces by introducing ANT concepts including those pertaining to orderings, materiality, and the more-than-human.

2.3 Climbing Spaces

Historically, in Eurocentric sociology, leisure, and tourism literatures, there is a dominant binarist view of *space* compared to *place*; a space is an empty and ‘meaningless’ physical location until humans make it a place through site-specific experience and emotional attachment, often including the development of *place meaning* or *place attachment* (Allen & Lukenbeal, 2010; Smale, 2006; Tuan, 1977; Wilson et al., 2014). Many climbing scholars reiterate this view specific to the practice of climbing: because climbing is a unique activity, the meaning its practice brings to spaces (making them places) for certain individuals is unique as well (Hutson & Montgomery, 2010; Kulczycki & Hinch, 2014; Thompson et al., 2006). Climbing is inseparable from place; climbers can be considered and further understood in relation to the place of their practice (Beedie, 2015; Lewis, 2000).

In more recent leisure and mobilities literature, there is a separate push to consider that landscapes are created *through practice*, and that place is not and never is static (Allen & Lukenbeal, 2010; Rickly-Boyd, 2013). This means that the emergence of places is caught up in what is determined by Henri Lefebvre to be the social production of space: a conceptualization of spatial ‘moments’ that relate to the process of ascribing meaning to *spatial practice* (perceived

space), *representations of space* (conceived space), and *spaces of representation* (lived space) (Glover, 2017). Rickly explores this approach in her 2017 paper, applying a Lefebvrian analysis to place and climbing: space itself is (re)produced through human action, with a more intentional material and bodily consideration that is performative in nature. If multiple individuals perform the same climb, the climb is reinforced—climbing places are enlivened by the way in which their geology translates into performance (Rickly, 2017a). This practice-based emergence of space is further noted when Rossiter (2007) considers that climbing is the production of new spaces through the interactions between humans and non-humans. In this way, climbing spaces are relational, and always in process; they are emergent and dynamic, and do not reiterate boundaries that separate humans and natures (Castree, 2003; Crouch, 2010).

There is an excellent critical foundation in tourism literature that suggests that both spaces and tourisms are emergent—much of this is encapsulated in the aforementioned concept of *tourismscapes* (van der Duim, 2007). *Tourismscapes* refer to the process by which practices of tourism are achieved through *orderings*: the assembling together and constant reworking of people, objects, ideas, metaphors, and materials (van der Duim, 2007). As Deleuze and Guattari suggest, spaces are constantly *becoming*, and exist beyond human limit (as cited in Crouch, 2010). Much is the same of tourisms—they engage and entangle “the body, materialities, rhythms, politics, and imagination” (Rickly, 2017b, p. 225). Indeed, the materiality of space is unavoidable (Beard et al., 2016), as it is a mess and entanglement of substances that inevitably encompasses humans (Lund & Jóhannesson, 2016). Indeed, “to achieve a ... place, there needs to be consensus among interested humans and then the harmonious enrolment of non-humans to achieve it” (Picken, 2010, p. 257). These relationships are not singular, and different actors

contribute to the ordering of multiple spaces and tourisms within ‘one’ physical location (Cailly, 2006; Picken, 2010; Ren, 2011).

Though *tourismscapes* have yet to be considered through the practice of climbing, there is a wealth of climbing literature that could support the melding of these ideas, and the forefronting of climbing as an ordering, or an assemblage of many actors (Barratt, 2011; Barratt, 2012; Rickly, 2017a). As Rossiter (2007) and Ness (2011) reveal, climbing is emergent, intercorporeal, and more-than-human: a relationship and ordering reciprocal and continual. Considering both spaces and tourisms as heterogenous assemblages changes the ways in which we can consider management, histories, and practice (Ren, 2011). The multiple alterings of a single object can change the broader *storying* of a space—the way in which single items intervene materially and discursively in the dramatics of our realities (Barratt, 2012; Picken, 2010; Ren, 2011). *Beta* thus has the potential to encourage these multiple, larger place orderings as well, as Ness (2011) considers that the enactment of a rock climb is both localized to the material features being climbed, but also to the practice of climbs before it—seemingly, the ordering is broad and the assemblage complex.

2.3.1 Territories.

As an aside, within literatures on climbing spaces there is an underlying discussion of climbing territories: practices that delineate how certain spaces are carved out for certain climbing (or non-climbing) individuals. These discussions generally centre around community and belonging, and what types of symbolic performances engender each (Beedie, 2015; Kiewa, 2002; Kulczycki, 2014). However, they are also often considered from perspectives of authenticity and exclusion—what types of experiences, behaviours, and spaces are made for and

by ‘real’ climbers (Bott, 2013; Heywood, 1994; Lewis, 2000; Rickly, 2013; Vidon & Rickly, 2018). Much of this overlaps with what types of climbing and practices are considered ethical, and therefore which practices are bounds by which to exclude certain individuals (Kiewa, 2002)—ethics, more broadly, will be discussed in an upcoming section. Access to climbing and its spaces is continually made and ordered through referential, historic assessments about bodies, identities, practice, and skills (Heywood, 1994).

Further, climbing places are sites of resistance, (re)territorialization, and (re)establishment of social order (Cailly, 2006; Kiewa, 2002; de Léséleuc, 2004). Climbing sites can be ‘anti-non-places,’ enacted through social performances—spaces that exist in direct contrast to viewpoints held by a societal majority (de Léséleuc, 2004). Some of this resistance borders on chaos, as climbers (and the spaces they enact) consistently navigate and determine the limits of uncertainty (Kiewa, 2002). But Ness (2011) argues that climbing does not solely work to establish counterspaces; its innate physicality brings about new ways of understanding meaning-making at a very base level. Places—and thus crags—are made not only by what is present within them, but also what is absent or made absent, such as certain bodies, ideas, or others (Ren, 2011). Territories operate by virtue of them being reworked, remade, and reestablished—reordered—possibly through the practice of climbing.

2.4 Climbing Natures

In their 1999 paper, Nettlefold and Stratford outline the two predominate, humanistic ways in which climbing has been intertwined with nature since its first conceptualizations. First, they discuss the position of the human as rational, dominant, and ultimately controlling of nature (Nettlefold & Stratford, 1999). Without climbers, unclimbed spaces are *terra nullius*—they are

blank canvases set for human mastering (Rossiter, 2007). Second, they note the human's attempt to intertwine with nature through creativity, self-expression, and presence (ibid.). This makes nature less of a subservient presence, but still only a 'setting' in which climbers achieve poetic, animate 'immersion' (ibid.). In both of these constructions, Nettlefold and Stratford (1999) note persistent discourses of nature as the setting for humanity's dramas, the celebration of humanity's achievement *over* nature, and the continued reference to the false dualisms of nature as 'female' and humanity as 'male'. This dualism is persistent in many climbing literatures, especially when extended to position climbing as a natural pursuit through which individuals could escape the automatic, desensitized, rational effects of modernity (Heywood, 2006; Lewis, 2000). Climbing provides an immersion into a natural, 'chaotic' physical space where individuals are able to test their logical, rational reasoning and skills (Kiewa, 2002; Holland-Smith & Olivier, 2013).

And nature, too, is not simply natural; it is made, ordered, and practiced (Castree, 2003). Both the conservation and preservation of nature are challenged when the binary of nature/non-nature is disrupted or troubled (Panelli, 2010). Recent writings have repositioned the making of landscape and place from a human action to one that is vital in its materiality, with a subjectivity that is not *personal* but distributed 'in the world' (Bennett, 2010; Whatmore, 2006). This trend is also present in certain recent climbing literatures which rework tired binaries—indeed, Ness (2011) speaks to the subjectivity of a climber being “situated in between the multiple human and nonhuman elements now integrally connected by the attempt [to climb the boulder]” (p. 82). Climbing does more than transform natural spaces into technocultural spaces, it changes the very way by which both are intertwined, relational, overlapped, and simultaneous—climbing encourages *lively natures* (Rossiter, 2007).

2.4.1 Ethics.

Discussions of climbing are incomplete without some conversations regarding climbing ethics. Typically, climbing ethics refer to delineations of practices that work to define both the type of climbing (including style and purity), its safety protocol (including risk assessment and gear placement), and its relationship to the environment and nature (like Leave No Trace, or other codes of environmental ethics) (Holland-Smith & Olivier, 2013). These ‘ethical codes’ tend to be overwhelmingly personal, yet are often suggested or ‘implemented’ by federal-level climbing authorities like the Access Fund (in the United States), or more local authorities like the Ontario Alliance of Climbers (OAC) (in Ontario) (Access Fund, 2019; OAC, 2019).

With regards to practice, ‘good’ ethics or morals often refer to the perception that fixed gear (like bolts), increased movement toward safety, and the acceptance of new technologies are in direct opposition to the true spirit of ‘real’ rock climbing (Eden & Barratt, 2010; Heywood, 1994; Kiewa, 2002). Essentially, the increased commercialization of climbing is noted as being unwelcome, immoral, and certainly corrupt, as it ‘commodifies’ nature in a way that is unappealing in contrast to traditional practices of climbing (Eden & Barratt, 2010). This is most frequently exemplified in discussions of bolting practices (Schuster et al., 2001), but also has implications as to how climbers value their tourism experiences (Bott, 2013; Caber & Albayrak, 2016; Vespestad et al., 2019).

Kiewa (2002) explains that in general, traditional climbers stand by two ethical precepts: to avoid damaging the rock, and to leave climbing routes unaltered or unchanged. Consequently, many discussions of climbing ethics continually incorrectly position nature as something fixed, something external: sometime able to be altered by humans that is inert, or what Bennett (2010)

would designate *un-lively*. Further, this focus on reducing damage to the environment (or an externalized nature) is frequently mentioned as being a primary focus of many climbers, and one that climbers are ‘more skilled at mitigating’ than non-climbers (Bogardus, 2012; Frauman & Rabinowitz, 2011; Kiewa, 2002; Thompson et al., 2006; Wilson et al., 2014). In their 2018 article, Rickly and Vidon explore that while climbers are indeed attuned to the many environmental ethics of their crags, they use their levels of experience to leverage certain ethical positions and/or refuse to abide by the strict ‘ethical behaviour’ of inexperienced others. Heywood (2006) summarizes climbing ethics with the sentiment that “what is important is not, of course, that climbing’s ethical code is never broken, particularly by those forcing up standards, but rather the widespread belief that the community of climbers knows more or less what the norms and values are” (p. 463).

2.5 Climbing Bodies

The body in climbing is positioned as being natural, organic, and free from the demands of modernity and consumerism (Lewis, 2000). Indeed, the practice of climbing itself makes a certain *type* of body, as kinaesthetic sensibility changes by virtue of the demand of certain movements, sensitivities, and skills (Eden & Barratt, 2010). Climbing necessitates embodiment, while simultaneously erasing the fleshy form, turning it into numbers, statistics, or text (Brighenti & Pavoni, 2018; Rickly, 2017a). There is, as I have discussed, a mutual defacing and erasure of body and rock in climbing (Rossiter, 2007). But this erasure is not just a surrendering to the network; it is the very real historical exclusion and decentering of certain individuals—and environments—from the histories of climbing. Climbing bodies remain constructed as overwhelmingly male, strong, dominant, and adventurous (Nettlefold & Stratford, 1999);

climbing bodies are risk-taking bodies that seek to escape the oppressive rules of modernity (Bott, 2013). Certain marginalized bodies are consistently underrepresented and made absent in rock climbing, though there is some suggestion and evidence that this is (slowly) changing (Appleby & Fischer, 2005; Dilley & Scraton, 2010; Rickly-Boyd, 2012; Rossiter, 2007).

Spinney (2006) suggests that the limits of the body cannot be disentangled from the machines and technologies that so alter them. This is *hybridity*—the blending of the human and the non-human to result in the more-than-human assemblage (Latour, 1993). The recent sophistication of climbing technologies (shoe rubber, performance chalk, etc.) has blurred the traditional body/technology boundary and instead suggests we consider the imminence of hybridity and more-than-human assemblages in the world of rock climbing (Barratt, 2011; Barratt, 2012; Rossiter, 2007). Instead of considering the ‘purity’ of traditional forms of climbing without ‘assistance,’ (and here we run in with certain conceptualizations of ethic) we instead must consider that “there is no pure space beyond gear” (Rossiter, 2007, p. 301). Considering hybridity has implications for the boundaries that separate certain types of climbing, specifically ‘aided’ versus ‘unaided’ climbing, as well as what ‘modifications’ are allowed (Rickly, 2017a). Certain items and pieces of gear are actants that change the orderings of environments, shifting what is possible and what *beta* is enacted (Barratt, 2011). Through repetition of usage, gear contributes to the performance of *beta*. Gear and climber are an inseparable hybrid; some of these assemblages are more-than-representational, welcoming risk and tradition into the ordered mess (Barratt, 2012; Brighenti & Pavoni, 2018).

But the body is multiple and objects are multiple, and thus their performances are also so (Bille, 2016). Performances enacted by many bodies-and-gear(s) is not one thing or another but

many. *Cascades of affordances* are allotted to the climber—features of materiality and the consequential decision of movement, an instance distributed across a network of actors (Gibson, 2000; Rossiter, 2007). And climbing, to Deleuze, is a practice of the climber participating in relation to an environment, rather than in relation to another human: the climber is part of the assemblage, and the environment (holds, rocks, etc) are the extension of that practice (as cited in Brighenti & Pavoni, 2018). Heywood (2006) employs Heidegger to deem this integration of specific knowledges *techne*: a “deliberated, embodied action on the basis of knowledge, training, experience, and technical refinement” (p. 456).

2.5.1 Affects.

Predominately, climbing affects are recognized as those relating to emotions: fear, joy, catharsis, guilt, anxiety, alienation or any far-reaching spread of others (Caber & Albayrak, 2016; Ness, 2011; Vidon & Rickly, 2018). Indeed, climbing is very much a case of navigating fears of death or chaos—a practice of what Lyng calls *edgework*—that give their practitioners a feeling of control (as cited in Kiewa, 2002). Vidon and Rickly (2018) purport that anxiety is in direct relation to authenticity and alienation, meaning that this experiential affect has much to do about certain (possibly territorial) boundaries in climbing communities. Further, affective emotions are frequently also interwoven with identities, as embodiments and subjectivities relate to how adventurous or immersive an experience of climbing might seem (Bott, 2015). Such existential processes also necessarily overlap with those territorial and ethical, and are frequently seen as high motivations toward types of tourism like climbing (Bott, 2015; Caber & Albayrak, 2016; Rickly, 2013; Vidon & Rickly, 2018).

Climbing also succeeds in creating affective spaces, emergences, or qualities that are more-than-representational—it generates experiential and relational moments of affect (Ness, 2011). By this, Ness (2011) contends that climbing ontologically reworks ideas of the human and the nonhuman through the creation of affective fields. This is altogether different from human-specific emotional capacities, and instead aligns with the atmospheric, vague, more-than-representational capacities of affect as found in tourism work by Bille (2015), Lund & Jóhannesson (2016), d’Hautesserre (2015) and others. In his 2015 article, Bille describes the affective potential of light—*hygge*—as cosiness, and that the relationship between light and cosiness, in this case, is *contemporaneity*: simultaneously both cause and effect. Further, Lund & Jóhannesson (2016) explore how the magical quality of certain Icelandic tourist destinations creates an affective field in which humans and nonhumans enmesh in the ‘poetic making’ of the world. In d’Hautesserre’s (2015) work, she explores how positive or negative affects influence destination attractivity, and how these energetic dimensions control much of a destination experience, despite their only partial perceptibility. In each of these instances, affect is positioned as liminal, forceful, interconnected, partial, and provisional (Latimer & Miele, 2013). Through encouraging affective understandings of climbing, we allow the mess of doubt, reworkings of safety and assurance, and more diffuse, complex understandings of climbing’s many emergences, including how those can possibly map onto *tourismscapes*.

2.6 Im/material Representations of Climbing

It is perhaps not a surprise that the material presence of rocks has some weight in the practice of rock climbing, though it is only recently that literatures have begun to represent this certain presence (Brighenti & Pavoni, 2018; Ness, 2011; Rossiter, 2007). Howett suggests that

the story of materiality—indeed the very history of rock formation—is written on the rock, and rewritten with the practice of climbing (as cited in Rossiter, 2007). The hardness, edging, porosity, sheen, and stability of the rock contribute to the performance of the line; schist orders differently from granite, and so on (Kulczycki, 2014; Rossiter, 2007). Body and rock are inscribed on one another, and both are materially written (Barratt, 2011; Rossiter, 2007). Craggs are multiplicities, as even a single hold enacts and is ordered within many discontinuous assemblages (Brighenti & Pavoni, 2018). Though the materiality of climbing is seemingly obvious, it may be difficult to truly understand; in other areas, Waitt and Cook (2007) explore the anxiety we find when embracing materiality, as despite our very present ‘being in the world,’ we are hesitant to engage with material matters, especially when they are seen as a ‘nature’ on which we are told to leave no trace. Consequently, Ness (2011) describes the route path of a climber as a material-discursive performance of climbing that also factors in certain aforementioned affects; routes are not a built or natural environment, nor are they constituted solely by human or nature, but instead enacted as something else in-between (and here in-lies our definition of *beta*).

Additionally, climbing areas, crags, and lines have multi-dimensional textual histories, though guidebooks and online listings now represent the primary historical representations of routes and crags (Alexandropoulos & Dwyer, 2016a; Nettlefold & Stratford, 1999; Rickly, 2017a). Traditionally, much of the information about crags, lines, or problems was distributed orally, as guidebooks and texts were seen as ‘shortcuts’ for new climbers, and thus dismissed by the old guard (Kiewa, 2010). Lines are discovered, climbed, and named—thus they become ‘official’ (Rossiter, 2007). Historically (and currently), the majority of first ascents were enacted by men, and men therefore often get to name, grade, and normalize what is documented in

climbing (Nettlefold & Stratford, 1999). Despite much pushback, these patterns continue to proliferate masculinized conceptualizations of climbing (Bott, 2013; Nettlefold & Stratford, 1999). Indeed, naming practices are verbal manifestations of orderings—who and what is named or made visible through naming practices speaks to who is allowed to participate in certain spaces. Climbing guidebooks routinely neglect Indigenous histories, perpetuate colonial narratives of ‘conquering’ nature, and focus textual documentation on white, male, able bodies (Bott, 2013; Nettlefold & Stratford, 1999; Rickly, 2017a; Rossiter, 2007). If women or women’s bodies are considered in the textual histories of climbing, it is often as an afterthought, or a joke—consider the named climbs like Nemo’s ‘Female Belay Slave’ 5.11d, the Glen’s ‘Nice Set of Jugs’ V1, or the Glen’s ‘Blow Chicks Clothes Off’ V3 (Alleman et al., 2010).

Naming processes and specific language bring about the semiotisation of space—features in the rock are identified by climber-specific jargon and so *beta* is constructed through this language (de Léséleuc, 2004). Or, “language creates landscape” (Folch-Serra, as cited in Nettlefold & Stratford, 1999, p. 131). Multiple climbing groups can produce unique spatio-temporal assemblages depending on their gestures, language, and material-discursive practices such as bolt placement and chalk usage; these can be multiple, but the dominant become normalized (Cailly, 2006). Rock climbers also generally share a common language: climbers use an informal yet consistent wealth of terminology for describing climbing holds and moves (Phillips et al., 2012). This language considers not only how holds or features afford to be grabbed, but also details important movement information between holds, or within larger sequences (Phillips et al., 2012). Further, climbers reduce routes and problems to their numeric grade, which shifts the focus of climbing to a preoccupation with difficulty; this practice exists

simultaneously to function as a gatekeeping mechanism, a comparative language, and a simplification of the natural environment (Nettlefold & Stratford, 1999). Grading also works to situate the position of a climb within the ‘social topography’ of the climbing world; a numerical mapping practice (Ness, 2011).

2.7 Conclusion

The reviewed literature outlines certain broad trends in understanding climbing, including discussions of climbing spaces, natures, bodies, and im/material documentations of climbing. Further, this literature situates concepts of affect, ethic, and territory with regard to the practice of climbing, though it is clear that many of these are quite limited. Though the focus of this thesis is on climbing as a practice of tourism, much of the reviewed literature pertains to climbing as it is mobilized in both tourism and leisure literatures, as certain more-than-human understandings of climbing tourism also remain limited. However, there is clear precedent to mobilize climbing as a more-than-human, emergent, and worldmaking practice of tourism that succeeds in prompting certain *tourismscapes* and disruptions of ordered binaries (like those of nature/culture) through using the methodology of Actor Network Theory. This review of literatures pertaining to climbing shows that there are broad possibilities with regard to blending many ideas in order to prompt rethinkings of how climbing might succeed in ordering certain spaces; contribute to climbing scholarship on affect, ethic, and territory; and encourage conceptualizations of how *beta* (and, more broadly, *tourismscapes*) might manifest as a material-discursive ordering.

Chapter Three: Methods

3.1 Introducing Many Methods

This section presents the many methods that were used in order to facilitate my ordering of *beta* as it emerged along the Niagara Escarpment. Though Actor-Network Theory allows us to attend to the vital vibrancy of nonhumans (such that we may “listen” to them in new and exciting ways) it does not outline specific methods with which to use (Beard et al., 2016). In this section, I detail my processes for selecting and engaging methods, including notions of responsibility, research translation, and the interworkings of analysis. The resulting section is highly detailed, which is intentional; though many works in tourism rely on ANT as a methodology, few present documented outlines of exactly *how* methods practices have occurred. Therefore, this section aims to present an exceptionally specific instruction for the purpose of advancing methods practice using ANT—and for possibly directing future research in climbing, ANT, and tourism—with the intention of encouraging transformative worldmaking practices (Grimwood, 2015).

To me, this detailed documentation remains important to the transformative power of research-worldmaking for two reasons. First, if we consider again Karen Barad’s (2007) concept of intra-action, all phenomena are expressly related and made emergent through the mechanism used. Without clarity on how we are ‘measuring’ or ‘collecting’ our data, we run the risk of continually blackboxing our research processes and decisions, normalizing certain ‘reality making’ processes over others and hiding the political and moral implications of these decisions (Law, 2004). This is not to say that we have to ‘legitimize’ our data in humanist ways, but rather that we can attend to how certain phenomena (and not others) *become* data, “and [are] made to be brute, evident, evidential” while holding rigid definitions of ‘data’ in suspension (Kumm &

Berbary, 2018, p. 79). Second, while using ANT in tourism research has gained popularity over the past number of years (van der Duim et al., 2015), many ANT-based works restrict their methods choices to interviews, document analysis, and participant observation. In my case, though I indeed conducted interviews and analyzed documents, I also wanted to provide record of attempts to engage alternative, less frequently-used methods—like engaged witnessing and diagramming—with the dual intention of encouraging further creative research practices and possibilities, and demystifying the reality of welcoming mess and improvisation into the research process (Kumm & Berbary, 2018).

3.2 On Research Ethics

Before beginning any data collection, I obtained ethics approval from the University of Waterloo Office of Research Ethics. All individuals who were interviewed, video recorded, and photographed signed a written consent form which made them aware of their privacy rights, abilities to withdraw consent, and options for participation (i.e. if they agreed to be photographed, but not video recorded). All audio files, video files, and photographs were captured through iPhone6 and transferred to be stored on a password-protected, encrypted hard drive, wherein they were removed from the iPhone. All participants were assigned pseudonyms, the master list of which was kept separate from anonymized data.

3.3 Engaging a Methods Assemblage

3.3.1 Beard et al.'s (2016) guidance.

Though Actor-Network Theory does not dictate specific steps for actioning methodological practice it guides us on how to use the methods we so choose (Beard et al., 2016; van der Duim et al., 2017). Law (2004) suggests that engaging a methods assemblage is a

process by which some things are silenced, and some are allowed to emerge. This process is deeply tied to the materials generated by and made emergent through the researcher, as “all research findings are the product of networks created by the researcher through, first, the objectives and framing of a research project and, second, the methods used to create and follow the research network” (Ruming, 2009, p. 452). As a result, ANT is a forum within which we can allow into our research (deliberate) mess, imprecision, partial connections, affective effect, wonderings, wanderings, and explorations (Law, 2004; Stinson & Grimwood, 2018). However, Berbari and Boles (2014) caution us with minding our intentionality through this messiness—the welcoming of these many outcomes of our processes of inquiry must, at this point, remain somewhat strategic in order to assist us in navigating “the politics of academia, post-positivist legacies, student success, and cross-paradigm acceptance” (p. 402). Indeed, despite my insistence on creative boundary-pushing and the want to welcome many strange actors into my research process, institutions and theses require certain bureaucratic processes, for better or worse. In order to heed Berbari and Boles (2014) warning, I decided to employ Beard et al.’s (2016) outline of character traits related to methods selection while using ANT as a methodology.

Beard et al. (2016) suggest the following five considerations when selecting methods to use within ANT:

- i. To rethink ‘the field’ by tracing orderings through space/time/non-spacetime environments,
- ii. To move beyond researcher reflexivity and into ‘acting in the network’,
- iii. To ‘follow the actors’ as an approach to (human) sampling,

- iv. To ‘embrace materiality’ within method choices by employing considerations of symmetry, and
- v. To identify and trace *tokens*, key actors that both construct and constitute an emergent network.

Each of Beard et al.’s (2016) suggestions has implications toward researcher responsibility, our understandings of materiality, and a demand for us to be constantly considering our practice within the challenging world of posthumanism. Indeed, research design itself can be considered as a method assemblage, bringing a curious layer of consideration into the practice (Beard et al., 2016). As Law (2004) explains, “The argument is no longer that methods *discover* and depict realities. Instead, it is that they participate in the *enactment* of those realities” (p. 45). Methods assemblages are therefore enacted in a way that is about more than processes of representations—they are performative, and inherently productive of our world (Law, 2004). With this productive capacity in mind, in the following section I will outline my use of each of Beard et al.’s. (2016) steps, and how these steps informed my subjectivity, field, human and nonhuman populations, and analysis as I moved to generate and perform specific orderings of rock climbing.

3.3.2 Rethinking the field; Time and space.

My plan in engaging with my research field was, broadly, to restrict myself to the Niagara Escarpment. I intended on beginning with centralizing my processes around one sport climbing route and one boulder problem, which I identified as *Swan Song*, 5.10c at Mount Nemo and *Maha V5* at the Niagara Glen, respectively. Loosely, my data collection (and therefore my temporal interaction with the field) began on Wednesday, October 10, 2018, with a field-trip to

Mount Nemo focused around the climbing of *Swan Song* with one of my participants, Bea. After much anticipation and despite excellent weather, our initial visit was thwarted by a strange front of humidity that covered the entire rock in a thin film of water, rendering all climbing impossible. In my field notes from the day, I recorded the following excerpt:

As soon as we got to the base of the cliff everything changed. The rock face was completely and utterly soaked, even though there had been no rain for about a week. We continued to pick our way down the slippery, treacherous path of rockfall and crossed our fingers that our destination of *Swan Song* would be dry—it wasn't. The first, nice jughold was dry and covered in chalk... everything else was literally glistening. I was in complete shock; I didn't expect that bad of humidity at all, and especially so late in the season. ... We watched it vanish before our eyes. Despite the light breeze, the wetness didn't seem to be going anywhere. I kept looking up at the line and imagining it drying in front of my eyes. I was genuinely angry—I could feel my heart beating and my hands sweating with anticipation. Not quite believing my senses, I climbed up toward the chalked-up first hold and ran my left fingers and palm down the black-streaked limestone. It came away covered in moisture and mud and the remnants of lichen. I wiped it on the front of my shirt, and sat back on my haunches, defeated. (October 10, 2018)

My first reaction to the rock being wet was anxiety—anxiety that things outside of my control were going to dictate my ability to collect that 'real, good' data. From the outset, then, the scope of my field was dictated by weather, anxiety, and a preoccupation with 'losing time'—all things that climbers generally struggle with as they work to complete their projects or lines.

Ren (2011), Rickly (2017a), and Barratt (2011, 2012) all detail in their work lengthy field visits which included interviews, document analysis, and creative observation and participation with human and nonhuman agents. Considering the 'failure' of my first major field visits, I deepened my reliance on interview, internet, and guidebook analysis to lead me through the expansion of my network. Repetitive themes of *beta* interrupted or changed by crag closures, retrobolting, access, rock quality, chipping, and bolting ethics continued to trace themselves

through all of these media. Broad and intense presences of bolt hangers and of defacings quickly began to surface as possible tokens, something that I will explain and explore more fully in the final methods section detailing my analysis. Consequently, many of my network bounds of time and space became drawn by the pursuit of bolt hangers and defacings—I began to seek out routes that were bolted with contention and/or well bolted, problems that were damaged or chipped, and crag spaces that were ‘spoiled’ or irreparably damaged, not only along the Escarpment but in other times and histories of climbing. My subsequent field visits (all to Mount Nemo, and all detailed in Appendix A) were undertaken with the intention of pursuing specific areas (the Zoomba wall area, which is known to be incredibly ‘defaced’) and routes (*Hiromi’s Route*, an ‘overbolted’ route; and *Swan Song*, a ‘well bolted’ route) that had emerged in my pursuit of the network.

Just prior to the commencement of my field work, a crag in close proximity to Mount Nemo—The Turtle—was shut down. The Turtle was introduced as a moderate sport crag on April 9, 2018 and was closed by September of the same year, with its private landowner citing incredible physical and auditory disturbance to the area (Ontario Climbing, 2018). The Turtle, controlling climbing crowds, and area access were all hot-button issues as I began my field work, and the Turtle emerged as a relevant research site, despite my inability to visit it (as crag access was completely removed). Stories of the Turtle were deeply woven throughout the emerging network, and the site became both an exemplar of ‘what not to do’, and a direct, negative comparison with practices at Mount Nemo.

Finally, I never ended up participating in any field visits to the Niagara Glen. Despite thinking that, at the outset, a bouldering area would lead to many thick, rich interactions with

beta, the prominent traces I began to encounter were predominantly centred around sport climbing crags, their creation and maintenance, and their access. Though I made a couple quick visits to certain boulders that were ‘known to be defaced’ in order to touch, rattle, grasp, and explore these sites, my network orderings were more and more defined by practices of sport climbing, and so these smaller visits were not considered beyond their use in drawing me into close interaction with the rock.

In conclusion on consideration of time and space: my resulting network encompasses the present day Niagara Escarpment... sort of. The three orderings of *beta* that I present in the next chapter are pervasive, evasive, and have a surprisingly slippery history—each expands throughout local and translocal climbing spaces, and seem to reference alternative sites and different times, as “the cliff and the wall are multiplicities” (Brighenti & Pavoni, 2018, p. 66).

3.3.3 Moving beyond reflexivity; Researcher subjectivity.

Researchers interfere with the world (van der Duim et al., 2017). So, in research using ANT, the engagement of the researcher with their work and field is conceptualized as a political act, and one which shapes the resulting account and assemblage (Beard et al., 2016). The researcher surrenders control as they move into *acting in the network*, to a place where their decision making “shape(s) data collection and narrative output” (Beard et al., 2016, p. 103; Routledge, 2008). We become not a singular, knowing subject, but part-object and part-subject, relegated to the heterogeneous, ‘symmetrical’ network, a relationship of our (vibrant) materials (Kumm & Berbary, 2018; Law, 1992). Following this, it is thus the purpose of the researcher to *generate materials* rather than to collect data; this difference is minute but important, as the

network itself is ongoing and emergent both within and outside of the research process (Beard et al., 2016).

As an actor-researcher, I must enroll myself in the network as much as I acknowledge that the network is one of my personal translation (Ruming, 2009). As a human in an ordering of human-nonhuman capacities, I must be *doubly reflexive* as to not overstate my own causality, or essentialize the actant capacity of agents who do not use language in the same ways that humans do (Beard et al., 2016; Rossiter, 2007). Some of my many identifiers and subjectivities became more or less salient, relationally, as I moved through processes of both translating and acting in my network—my gender, my height and strength, my whiteness, my education, and my occupation, to name a few. Part of navigating this was recognizing if and when my language, feelings, wants, needs, or direct relationships to gear, rock, bolts, or weather changed. My personal agency is many, multiple, contextual, and relational; it is not a singular conceptualization of solely my intention, but an accomplishment of many things jumbled together (Rossiter, 2007).

Finally, “the ethical responsibility of an individual human ... resides in [their] response to the assemblages in which [they] find [themselves] participating” (Bennett, 2010, p. 37). In both generating and translating research networks, I move through creating and reproducing the types of realities, futures, and spaces that I wish to see. Necessarily, in the writing and construction of a thesis, I speak on behalf of actors that do not engage with language in the same way that I do. This is my power: I do not need to represent them, and the stories I tell about them are woven for my own purposes (Ruming, 2009). This is not a pitfall of ANT, but a strength: research itself is a network performance, not a direct representation, and even engaging it has the potential to enact

bountiful, multiple, imaginative futures (Law, 2004). It is through transparency of these processes and our conceptualizations of translation that ANT research may reach an excellent quality (Beard et al., 2016).

3.3.4 Following the actors; Human population, sample, and methods selection.

Actor-Network Theory suggest that we ‘follow the actors’ as a form of snowball sampling in which networks are identified and traced by the researcher (Beard et al., 2016). Ren (2011) explains that,

As an object of study cannot be found encased within a fixed geographical frame according to ANT, network descriptions are made through a meticulous and empirical grounded tracing with specific attention to how humans and objects, discourses and technologies work and are made possible in the network. (p. 865)

Essentially, following the actors (and thus engaging a [human] population and sample) is deeply intertwined with rethinking the field, and also with tracing tokens. As such, despite having some suspicions as to the orderings of possible networks from the outset, it is impossible to identify how and where certain actors will make themselves known (Beard et al., 2016). Instead, this process is very much linked to data analysis from the beginning of the research process: followed actors and networks attended to are recursively and continuously negotiated as the researcher moves through and reconstitutes the field, generating materials until a point of consideration of cutting the network (Beard et al, 2016; Ren, 2011).

Unstructured interviews.

To illuminate the assemblages of *beta*, I began with what I thought I knew: that the enactment of *beta* involves both human (climbers) and nonhuman actors (rocks)—so constitutes ‘rock climbing’. Considering my geographical proximity to the Niagara Escarpment, my plan

was to have preliminary conversations and conduct unstructured interviews with human individuals solicited through convenience sampling that detailed their experiences with *beta*, rock climbing, and the Niagara Escarpment broadly. (Basically, I was going to go to climbing areas and try to get people to talk to me.) My intention was for these initial conversations to ground my research at a singular, material location as a point of departure (i.e., a boulder problem), from which I intended to follow nonhuman actor(s) and rethink my field as the opportunities emerged.

This did not go as planned—Ontario had an exceptionally strange fall in 2018 with regards to its weather patterns, and the combination of bizarre meteorological events, personal anxiety, and strained timing meant I had to go another route for identifying my “sample”. Throughout this process, I had been engaging with in-depth document analysis of many of the climbing guidebooks detailing the Niagara Escarpment, which led me to the targeted, purposive sampling of my former coworker and guidebook author Ryan. After this initial interview, I opted to use my own convenience network (as a climber and employee of a climbing gym) and the additional word-of-mouth snowball suggestions to purposively sample participants who I expected would have unique and/or diverse experiences of climbing and *beta*—my sole criterion was that any participant had to have climbed outdoors on the Niagara Escarpment. This alternative, purposive sampling resulted in interviews with individuals representing a diversity of ages, years of experience, perspectives, strengths, genders, and vocations. All participants were solicited in person.

Though decidedly humanist in nature, interviewing is a common method within studies using ANT as a methodological lens (Barratt, 2012; Ren, 2011; Routledge, 2008) as it provides

us with useful preliminary information with which we can start to identify the bounds of a network of interest (Beard et al., 2016). Much of this interviewing is ‘ethnographic’ in nature and manifests as “highly unstructured ... interviewing [relying] on the researcher’s ongoing analyses of data generated via field notes of observations, participation in the research setting, [and] development of rapport with informants” (Roulston, 2010, p. 19). Though conversational in nature, these interviews also relied on myself introducing “‘ethnographic elements’ to ‘assist informants to respond as informants’” (Spradley, as cited in Roulston, 2010, p. 19). In the context of ANT-informed interviews in which I intended to trace the many and multiple orderings of *beta*, this meant personally developing a rich, detailed, descriptive knowledge of Escarpment histories and climbing language, and further using that language and history to prompt materially-specific conversations about specific routes, grading histories, closures, movement sequences, and bolting processes. Finally, unstructured, ethnographic-style interviewing allowed me to trace the use, meaning and terminology associated with *beta* throughout the Niagara Escarpment, and ultimately prompted my reworking of its very definition to align with Ness’s (2011) aforementioned translocal conceptualization. This specific re-ordering emerged from the consistent (and initially baffling) pattern of my participants answering questions about specific sequential *betas* with broader, more discursive answers that centred around climbing’s general culture and practice.

In total, I participated in seven interviews and one focus group discussion with a total of twelve different individuals—basic demographic information about these individuals is detailed in Appendix B. These interviews were conducted both in the field and in other, pre-determined locations with human participants solicited through the aforementioned purposive-convenience

sampling (i.e., through my personal network, and through word-of-mouth as this network expanded) and cautiously followed the interview guide attached as Appendix c. During some of the interviews, I provided ‘tangible prompts’ in order to encourage material engagement and depth between climbers and their environments, much like Barratt (2012). Barratt (2012) found that allowing his climber-interviewees access to pieces of climbing equipment enabled them greater representational ability, as they could gesture and embody certain movements facilitated by gear without trying to verbally explain the entire process. I found these prompts especially useful in my interviews completed at Mount Nemo, where participants were temporally and spatially close to the rocks, and had been very recently climbing.

The resulting interviews took many forms. The interviews with Ryan, Clark, Tiera, Bea, Jared, and Matthew were one-on-one, conversational interviews—my one-on-one interview with Matthew was the shortest of the lot, at just under 17 minutes. My interview with Nathan and Douglas fell closer to 120 minutes; my focus-group style interview with Krista, Ike, Alex, Chad, and Matthew was around 60 minutes. The times and locations of these interviews were suggested by the interviewees themselves after initial contact with the sole exception of the focus group at Mount Nemo Conservation Area, in which the location was chosen by myself. Interviews occurred between October 22, 2018 and November 15, 2018, and took place in areas ranging from participants’ own homes, to private rooms at bars, to climbing crags. Interviews were recorded using a iPhone6 equipped with SuperNote, and saved under pseudonymic information. Immediately after being transferred to a safe, password-protected hard drive, these files were permanently removed from the iPhone. All interviewees were reminded of their ability to

withdraw their consent at any time, as well as the assurance that they would remain anonymous via the use of pseudonyms.

Diagramming.

Due to the physical, embodied nature of climbing, I felt that my (human) actors required representation that moved beyond language, and that allowed a visceral, grounded look into the possible orderings of *beta*. Initially, I pictured this being certain video-recording gestural expressions of *beta* away from boulder problems/lines in question, asking individuals to draw or sketch their lines of travel, video-recording the practice of climbing—and subsequent enactments of *beta*—both from the perspective of the climber and the vantage point of the belayer, and many possible other weird and wild representations. Between all of these practices, *beta* would thus be traced on paper, gesturally, and visually from multiple perspectives; it seemed so easy, and such a simple solution to problems of non-representation (Barratt, 2011). With this in mind, I turned to practices of *diagramming*.

Diagramming is technically a methodological practice described by Barry (2017) as a creative approach that can “assist in tracing experiences and relationships that emerge in everyday ... practices,” and further encourages movement away from strict categorical data collection, placing researchers in the messy middle of things (p. 329). However, I operationalized diagramming at the methods level to encompass a variety of creative documentation practices (Barry, 2017). Diagrams are not only visual—they are tools that can take many and variable forms (Barry, 2017). Methods-level practices of diagramming align easily with the methodological considerations of ANT: diagramming allows us to both generate materials and to continue acting in the network (Barry, 2017; Beard et al., 2016). I was interested, conceptually, in

diagramming because I felt there was some necessary relationship between diagramming and tracing—that allowing a/diagram(s) to unfold would provide me both with visuals and tools to proliferate my networks in a way that moved these visuals/representations beyond basic practices of photography and videography. I predicted *beta* to be easily diagrammed—it rises as a tool, but also is made recordable. Simple.

I collided with a mess of diagrammatics. Within my interactions with my human participants it was neither easy nor simple to ask for sketches (no one seemed to understand how to do this, including me), or to solicit gestural *beta* that was ‘genuine’. When this gestural *beta* did emerge in an organic manner, I often did not have a camera on hand, or I was preoccupied with an act *being in the field*, like belaying. Useful gestural *beta* was spontaneous and unbidden—asking for its solicitation resulted in many half-hearted throws of the hand-mimicking-the-rock; tendons were not taut and the movement generated seemed to lack vibrancy and life. It didn’t persist; it contained no vibrancy (Bennett, 2010). This was a key point of frustration for me, as I linked my inability to capture what I felt were necessary or essential representations of *beta* to my own failings as a ‘good’ researcher, and not to the fact that the way I was seeking representations of *beta* lacked an anchor-point—I still was trying to force a specific, humanist perspective.

Upon reflection, as I was entering my data collection period, my reliance on and understanding of diagramming as a method was still deeply linked to the diagram’s ability to result in visual representation. I was committed to the diagram in its formal, ‘objective’, mathematical manifestation—the diagram as the *Matheme*—robbing it of its ability to relationally draw together unique and emergent versions of space and time—the diagram as a

tool for *world building* (O’Sullivan, 2016). I was preoccupied with using practices of diagramming to alleviate my own ‘crisis of representation’ in my work (Berbary, 2015), when diagramming was more-so useful to me as a practice of

The “drawing” of lines between different times, the building of circuits and the following of feedback loops ... [detailing] the way a different kind of future can work back on the present (and [determining] how we act or make in the here and now). (O’Sullivan, 2016, p. 24)

Diagramming, to me, became a reminder to use ANT to encourage a creative, resistant push toward “doing research differently” (Berbary, 2015, p. 40). When I finally practiced diagrammatics that I felt were useful, my previous ‘flat’ video recordings, photographs, and maps became alive with tracings—side by side digital comparatives of movement practice, the frantic strangeness of the point-of-view camera-movement itself as I repeatedly scanned a rippling limestone landscape. A video accidentally-recorded from the depths of my pocket loudly chirped crag-speak, while many shoddily-shot photographs of chipped holds, chalk-marks, and polished edges started to cast the livelihood of the human-limestone relationship in sharp relief.

In summary, I was able to effectively use video-recording to diagram certain sequences of *beta* on two separate field visits. On Friday, October 19th, 2018, I recorded numerous small sequences of Douglas and Clark climbing *Big Bolts for Daddy*, a 5.10a route at Mount Nemo. These recordings detail two very discrepant workings of the same bolted route from an ‘outsider’s’ vantage point. On Thursday, October 25, 2018, I recorded myself and Matthew swapping climbs on *Hiromi’s Route*, a 5.10a graded climb also at Mount Nemo. These two (quite long) recordings were enabled through affixing my phone to my climbing helmet with a length of duct tape—an assemblage that I wish I had been savvy enough to document, if only for the

strangeness of it. These video recordings were supplemented by a variety of photographs, as well as a single sketch of the crimp-traverse at Mount Nemo, provided by Bea. All media were recorded with the camera feature on the iPhone6, and were subsequently transferred to a safe, password-protected hard drive, wherein these files were permanently removed from the iPhone.

3.3.5 Embracing materiality; Nonhuman population, sample, and methods selection.

As for my other-than-human participants, in aligning with the methodological suggestions of ANT, I attempted to be open and creative when engaging in methods choices. Kumm and Berbary (2018) suggest that adherence to methodologies need not be completely rigid or fixed, especially if we allow ourselves the creativity and play that posthumanist onto-methodologies encourage; flirting with research in a world where we are undoing humanist structurings means we must depart from traditional methodological formats, as long as we are serious in our departure. My attempt at a symmetrical methods selection and my urgency to embrace materiality was somewhat led by my emergent networks; upon termination of my network-engagement it had primarily involved engaged witnessing (Bell et al., 2017) and artifact and document collection/analysis (Barratt, 2012; Berbary & Boles, 2014; Ren, 2011; Scarles, 2010). I will detail each of these methods in the following paragraphs.

Engaged witnessing.

Bell et al. (2017) detail the process of using engaged witnessing in order to consider the relationships between human and nonhuman actors, including how these relationships are entangled, interconnected, and co-created. Indeed, “the ‘how’ of more-than-human research is ... strange, improper, messy, [and] experimental”; engaged witnessing emerges as a being-in-the-field that allows for the generation of materials alongside nonhuman agents (Bell et al., 2017, p.

136; Whatmore, 2003). Engaged witnessing involves a dynamic, highly intentional openness to the possibility of being altered, shifted, or changed by an ongoing immersion in more-than-human assemblages, a more materialistic and situated version of participant observation (Bell et al., 2017). Engaged witnessing is messy, vulnerable, non-static, and uses all of our human senses in new and sometimes frightening ways—careful sensual attenuation to the numerous ways in which humans and nonhumans continually re-shape and re-order themselves, one another, and reality truly allows us to ‘hear’ the materialities around us (Bell et al., 2017; Whatmore, 2003).

With regard to my work, engaged witnessing manifested in a few strange ways. Most obviously, climbing itself is as close to engaged witnessing as I believe is possible for this type of situation. In fact, I had some hesitation as to whether or not engaged witnessing of rocks was even possible without climbing—as this was the entire focus of my work, study, and process of detailing *beta*. Bell et al.’s (2017) detailing of the engaged witnessing process is limited to plant and animal agencies, and they express some skepticism as to whether or not it can be facilitated with non-plant, non-animal, other-than-humans. Knowing this, I was pressed to discover and attend to new and unique ways to engage affectively and ‘response-ably’ with the many agencies of rocks and other materials, including noting that Bell et al. (2017) suggest traces must be both in-the-moment (i.e. non-gradual) and provide a discernible trace (i.e. able to be seen/heard/felt by researchers). As an overlap with my practices of diagramming, the point-of-view videos I took from myself rock climbing show my practice of climbing-as-engaged-witnessing from a bizarre and frantic perspective. Throughout the videos, I am heard breathing heavily; touching-and-retouching certain rocks; interacting emotionally and affectively with the

line; and flirting between multiple atmospheres as certain rock features, lichen, and mud interfere and create the climb over and over again.

Rock climbing is naught without the rock and the climb itself: feeling, smelling, handling, rubbing, prodding, groping and *experiencing* the rock and related materials of lines and routes were essential in embracing materiality (Beard et al., 2016; Rickly, 2017a). In addition to climbing, I participated in a specific field visit to Mount Nemo specifically to sit and *be with* the rock on a very cold, dreary November day. This visit brought me into close contact with the beginnings of many routes, first bolts, and the sly, slippery personality of limestone. On this occasion I tried to use every possible sense in isolation and combination—tracking stillness and sweat, affect and ambiance. Here, I tried to listen very closely to the quiet reverberation of Mount Nemo as a space, and especially the base of *Swan Song*, seeking salience through a *being* and a many-paged, messy spattering of field notes. This engaged witnessing also resulted in the drafting of a poem that was later culled, crafted, and spliced with other video and auditory data to result in part of the described affective assemblage of *beta*.

Artifact and document collection.

Artifact and document collection are key practices and process for many researchers using ANT, especially when seeking to trace objects, stories, ideas, allegories, or concepts that might transcend certain aspects of time or space (Ren, 2011). By supplementing interviews, field visits, and other types of methods with artifact and document collection, materials and their relations emerge with increased ease. Part of this engaging with internet webpages, books, iPhone apps, brochures, signs, and other artifacts is to undertake what Lash and Lury call the

‘sociology of the object’—finding out as much as possible in as many ways as possible about one thing (as cited in Beard et al., 2016).

Climbing is a mess of texts—they are mapped and meander throughout the very landscapes of the practice. (Nettlefold & Stratford, 1999). Climbing texts, while diverse in their scope and quality, generally take the form of guidebooks: organized, topographical manuals that depict and describe certain developed areas so that they can be accessed and climbed.

Guidebooks also record how and when routes were established, archived, changed, and altered.

The guidebook history of the Niagara Escarpment is both rich and hidden, and most of it has been documented by a very small number of people (Alexandropoulos & Dwyer, 2016a/2016b; Alleman et al., 2010; Bracken, 1991; Gilbert, 2013; Oates & Bracken, 1997; Stubbs, 2010; Wong, 2016; Wong et al., 2016). I was diligent in collecting as many iterations and installations of local climbing guidebooks as I could find, and attempted to track down rarities through my personal network, libraries, and online archives. I also collated novels, magazines, internet archives, Facebook comments, Instagram posts, YouTube videos, instructional signs at gyms, information and safety pamphlets, handwritten directions, and spray-painted signs. These many documents were useful in allowing me to draw together, trace, and document the types of climbing histories recorded, note ‘statistics’ about grading and grade changes, and identify key individuals and objects to trace throughout the Escarpment. Guidebook analysis also allowed me access to historic documentations of climbing histories, shaping my resulting network description as certain discourses and absences were made clear.

3.3.5 Identifying and tracing tokens; Processes of analysis.

Tokens.

The generation of materials and the process of analysis are highly interrelated in research using the methodological considerations of ANT, and indeed cannot be considered entirely disparate processes (van der Duim et al., 2013). In truth, and as discussed prior, much like ANT's explicit lack of guidelines toward choosing methods, ANT also does not explicitly offer advice as to how processes of analysis proceed, and much of the inspiration is again drawn from ethnographic-style methodologies (van der Duim et al. 2017). Beard et al. (2016) speak to the importance of identifying *tokens*, which can occur at the outset of any research project (or later), and allow researchers to truly engage with ANT as a methodology of following (Routledge, 2008). This tracing of tokens extends the practice of all four prior methods considerations into the world of data analysis, and is often one of the first 'signs' of analysis process (though enacting networks does, by all accounts, 'begin' analysis from its very conceptualization). Povilanskas and Armitiene describe tokens as "a semiotic representation of an actor-network, which circulates and is translated in the course of circulations performing the actor-network" (as cited in Beard et al., 2016, p. 105). Tokens are held together through their specific performative practices in enacting, creating, reiterating, and deconstructing the networks to which they belong; the discourses of tokens are either taken up, or rejected by individuals (and materials!) when translation is found to be appropriate (Latour, 1993; Beard et al., 2016).

I had assumed, when this thesis began, that *beta* itself might manifest as a token. It is both an assemblage itself, but further contributes to the further and larger assemblage of the storying of climbing places and *tourismscapes* (Beard et al, 2016; Hutson & Montgomery, 2010;

van der Duim, 2007). As I began to work through my interviews, diagrammatics, engaged witnessing, and document analysis, certain repeated objects, interventions, and themes became more salient than others—it became clear that while *beta* was not itself a token, its composition was both heterogenous and repetitive. Instead (and somewhat surprisingly) it began to emerge that conversations of *beta* were routinely and consistently described in relation to bolt hangers—small, folded pieces of metal permanently affixed into rock walls—and their related defacings. Identifying, listening to, and prodding bolt hangers as a token revealed many overlapping, layered orderings, of which some became increasingly hard to ignore. This was the beginning of my tracing—my positioned analysis—and led me to the analytic decisions outlined as follows.

After recognizing the emergence of bolt hangers as a token, I began to sort again through my many interview transcripts, video transcripts, photographs, field notes, sketches, poems, memories, and documents. I engaged repetitive, deep, readings of each individual transcript, taking note of and ‘coding’ for actors (places, ideas, objects, metaphors, dramatics, discourses) contained in each as they pertained to bolt hangers. Through careful readings and watchings, I was able to trace the bolt hanger through each individual transcript, distilling these down into relevant sections and instances where the actor clearly emerged, either in partial or complete ways. This process was extremely recursive, as I mapped, gathered, diagrammed, and traced the bolt hanger through many possible stories and conceptualizations of *beta*, and saw its interactions with other actors become more or less prominent in climbing practice, areas, documented histories, and materials. ‘Listening’ for and attending to the bolt hanger, its inconsistencies, its partialities, and its many modalities was sometimes bizarre, and often happened in fits and starts—it appeared surprisingly, and tracking it down was not about

systematic, grounded coding, but erratic scribbles, physical encounters, conversational startlings, and messy documents (Law, 2004). While resisting certain explicit categorical expressions, I did find it useful to physically diagram and map possible network assemblages as the bolt hanger emerged in my data. Additionally, through the literal practice of tracing, I drew inspiration from narrative style analysis (Glover, 2003), such that my results were constituted as descriptive (and productive) accounts where I sketched possible realities as overlapping and storied accounts of networks—a further discussion of this narrative incorporation can be found in the next section.

Ultimately, through watching the bolt hanger jump between and flicker within individual audio and video transcripts, and I was able to track its path toward assembling three distinct modes of ordering and enacting *beta*: affectively, ethically, and territorially. Each of these resulting networks describes how bolt hangers construct specific types of *beta* along the Niagara Escarpment, and further “reveals the heterogeneity of discourses, materialities and performances which partake in the construction of [climbing]” (Ren, 2011, p. 860).

On ‘narrative’ in ‘analysis’.

ANT-based resultant descriptions of networks are truly powerful, rich, narrative descriptions and interventions in and of possible realities (van der Duim et al., 2013). Beard et al. (2016) explain that “reports of ANT research are often lucid, highly readable and detailed accounts, in the form of stories with single or multiple threads which draw together the different themes of their study, presented as a narrative on how the ideas of ANT are translated through the chosen research topic” (p. 105)—with data identified through direct quotes from interviews, documents, or visual evidence—but offer very little information on how to get from identifying

tokens, to producing these accounts. Even incredibly rich, narrative documents (see Ren, 2011, or Picken, 2010) provide little methods-level information regarding analysis. My analysis and resulting network translation and description rely on my ‘language’ as a researcher and a citizen—in my case, this language is something that is decidedly narrative.

Climbing is a process of storying—it is meaningful, thematic, and material-discursive. Rickly (2017a) explains that the “discussion of routes climbed, in particular, includes recitation of portions or even the entire route, from the starting holds through the crux to the anchors, thereby illustrating the essential elements of narrative – setting, plot, characters, and so on” (p. 77). These narratives of climbing are not restricted to recitation, but are also embedded in the performative action of climbing processes, the drama of sending routes, and the ‘corporeal knowing’ of *beta* (Rickly, 2017a). Much like the poetics inherent in the making of tourism spaces (Lund & Jóhannesson, 2016), climbing writes a metaphorical and yet relationally-material story of space.

But storytelling is also necessarily performative (Glover, 2003), as are actor-networks (Law, 1999). It seems that networks, climbing, and stories truly have a lot in common—they are all both productive and performative, caught somewhere in the spaces between. It is this gathering and overlapping of meaning which renders storied analysis and representation, to me, the most elegant way of respecting and integrating the many material-discursive manifestations of *beta*. Consequently, in order to produce the following network descriptions, I relied on a combination of analytical techniques for blending and presenting my many types of data. In order to maintain fidelity to my narrative-heavy position as network translator, I used modified versions of descriptive tracing, adapted to be narrative-focused over and across multiple materialities. As

Beard et al. (2016) explain, “the production of the account becomes an activity in which analytical tools are applied to narrative knowledge produced by the researcher” (p. 106). Though using similar language and characteristics to narrative analysis (and while engaging similar processes) this descriptive, narrative tracing differs from the human-focused orientation of traditional narrative analysis in a certain way: its theory of narrative capacity (Glover, 2003; Lewis, 2011). Primarily, this difference stems from a certain refusal that narrative expression is specifically human (Glover, 2003), as many narrative and poetic communiques are earthly (Lund & Jóhannesson, 2016), animal (Deleuze & Guattari, 1987), landscape (Nettlefold & Stratford, 1999) and stuff (Bennett, 2010). Noting this difference in narrative emergence, the resulting narrative style analysis is still, obviously, facilitated by my human position.

I want to return for a moment to notions of research translation, because it is through my specific operationalizations of this concept that I have chosen to follow the paths of analysis here contained. Law (1992) explains it as follows: “So, ‘translation’ is a verb which implies transformation and the possibility of equivalence, the possibility that one thing ... may stand for another” (p. 386). Research translation (especially in ANT) considers “a single narrative ... told by a particular person, at a particular time and to a particular audience” (McDowell, as cited in Ruming, 2009, p. 455), and is not explicitly the empirical, isolated representation of observed networks, but the *translated performance* of them that attends to some and dismisses others (Law, 2004). Essentially, while processes of ordering are many, multiple, and often discrepant, it is performance that engenders and supports the salience of certain connections and assemblages. In translating the network that I have chosen to identify, generate, and intervene in, I am

presenting not only the story of how things are, but also performing how I want them to be (Law, 2004).

My personal accounts of the resulting networks of *beta* are slightly atypical to ANT: though based on empirically collected data, their narrative style is integrated with decidedly more creativity, expression, poetics, integration of individuals into ‘composite, thematic’ characters, and certain license with collapsing space/time environments. This is not to say that these stories are ‘made up’—I strongly resist any claim that my resulting network descriptions are inaccurate, lack fidelity, or do not accurately describe the many vibrant, grounded, complex conceptualizations of *beta* as I have outlined them. Instead, I attempt to engage what Law (2004) and Haraway (1991) consider the blurring of the dualism of reality and fiction—or literal and metaphorical—such that our practice of methods also works to re-work our worlds. Essentially, “reality and fiction relate to one another. They are included in one another” (Law, 2004), p. 69).

Therefore, the resulting are processes of translation that,

... are not to be seen as maps seeking to document or represent a stable, unchanging reality. They cannot be used to identify, or even less retrace, the trails which were walked in their compilation. Rather, they must be seen as charts tentatively sketching fluid networks, outlining ongoing events and recollecting stories and seeking to convey not one, but many versions of object realities. (Ren, 2011, p. 865)

These networks are a possibility, an interference, and a world-changing fiction (Haraway, 1991). I am particularly inspired by the 1994 work of Soile Veijola and Eeva Jokinen—as well as Ingold (2008), and Dixon and Jones (1998)—and their brilliant integrations of theory and narrative to facilitate exploring a broad spread of perspectives. As Veijola and Jokinen (1994) walk us through a week of travel to consider the place of the body in tourism scholarship, they present us with numerous vignettes wherein they discuss current theory and literature in

(fabricated) 'face to face' conversations with prominent writers in tourism, like John Urry and Chris Rojek. This weaving and pulling together of many theoretical positions, times, and spaces, is a remarkable shift from traditional academic writing, and works to reposition the tourist body as *being in tourism*, allowing the paper a substantial theoretical and ontological impact (Veijola & Jokinen, 1994). This lighthearted, argumentative (and yet deeply theoretical) style is also reflected in Ingold's (2008) comparatives of ANT and another 'social theory' deemed SPIDER, as well as Dixon and Jones' (1998) hypothetical lunchtime-situated conversation about poststructuralism and spatial analysis. Central to all these papers is a creative, narrative thread that allows the authors to communicate rich, complex theory while also pushing the boundaries of what research and writing can *do*. It is from this work that my inspiration for my network descriptions was drawn.

3.4 Conclusively

It was my intention to present a highly comprehensive, detailed section on engaging a methods assemblage for a few specific reasons. First, despite a wealth of literature on ANT's methodological usefulness, I found very few literatures that detailed specificities on *how* to use ANT with regards to methods selection—Beard et al. (2016) and Law (2004) are the notable exceptions, and I have obviously relied heavily on their guidance. Second, because research using ANT as a methodology has the potential to be easily written off with regard to its apparent 'lack of rigour' and 'weak theory' (Sayes, 2014), I wanted to ensure any possible threats of this were in my case minimized to the best of my ability. Third, it is my intention to expand upon the available documentation with regard to potential interpretations of analysis, as I believe that the current literature is vague in these areas. This is especially clear when incorporating specific

tools and processes to analyze and trace tokens through diverse media and sources; there is a potential here to pull from other examples of analyses processes in order to demystify this process (see: using ‘narrative’ ‘analysis’). Finally, I wanted to encourage more ANT researchers to take advantage of their unique positionality to encourage diverse and imaginative translations, enjoy partial connections, and occupy the incredibly bountiful spaces between reality and fiction (Law, 2004). This is an explicit reading of my networks as ‘interventionist’ as opposed to ‘descriptive’ (Vikkelso, 2009). Despite its STS origins, I believe that ANT’s true power lies in its generative, creative, and political ability—it is my hope that my theoretical support for this position has been made clear throughout this chapter.

Chapter Four: The Orderings of *Beta*

4.1 Introducing Orderings

This chapter presents detailed, narrative descriptions of the resulting orderings of *beta* as they have been storied throughout the Niagara Escarpment. This process is facilitated by the introduction of a key token actor: the bolt hanger. This actor succeeds in intervening with climbing *beta* along the Escarpment, facilitating the emergence of three overlapping networks: orderings of affect, orderings of ethic, and orderings of territory. Each ordering has its own section in which I draw together theorists, accounts of lively materials, interview transcripts, videos and photographs, and document analysis in order to fully allow the bolt hanger to speak. Going forward, a combination of vocabularies are used: some philosophical (Foucault, Deleuze and Guattari), some actor-network, and some pertaining to climbing. In order to ease the reader through these many, potentially-murky languages, I have created a list of commonly-used climbing terms, which can be found attached as Appendix D. Philosophical and methodological terminology will be primarily defined in-text.

4.2 Bolt Hangers

Bolt hangers are small, folded circles of metal that are permanently affixed to rock walls in order for climbers to place a quick-draw device, and then further attach a rope. This is done to ensure safety, so that falling climbers do not hit the ground, and are instead caught by this ‘permanent protection’. In Southern Ontario, modern bolt hangers are generally 3/8inch thick high-corrosive resistant (HCR) stainless steel, despite the fact that our conditions do not necessarily require this HCR material (Nathan, personal communication). Bolt hangers protect force generated up to 40kn and are generally affixed to the wall which 3 inch, 3/8 thick

expansion bolts that are drilled into the limestone using a power drill. Most of this is done on rappel (Alexandropolous & Dwyer, 2016a). There are other methods and practices of attaching permanent protection, including both ground-up and glue-in bolting, but on the Niagara Escarpment, rappel bolting is now the most common. In hand, bolt hangers have a slight weight, rounded edges, and a transmissive, cool touch, like the back of a hand on a feverish forehead.



Figure 1. Bolt hanger with quickdraw attached. This is a screen-capture from my iPhone helmet camera.

Even when not affixed or attached, bolt hangers emit a curious draw—“the mysterious metal object continues to attract attention” (Alexandropolous & Dwyer, 2016a, cover).

Loosely, bolt hangers determine the bounds of space of a sport climb, or a line, explaining visually to a climber some information about the intended route or path (Rickly,

2017a). Bolt hangers mark not only where certain climbs *are*, but also how climbing should *feel*, who climbing is *for*, and what climbing should *be*. Additionally, an exceptionally interesting thing about bolt hangers is that using them physically for their manufacturer intended purpose—or, *bringing them into being* within the rock climb—renders the climb itself unsuccessful: a successful triumph of climbing—sending—is moving to the top of the wall without falling or weighting your rope.



Figure 2. Bolt hanger with ring. This is part of a teaching anchor.

The intermittent presences and absences of bolt hangers is one way that *beta* is ordered along the Niagara Escarpment, as bolt hangers contain and relationally enable specific narratives about the natures and cultures of climbing. While successful practices of climbing (i.e. sending) ensure that physical use of the bolt hanger for its ‘intended purpose’ (i.e. falling) is not performed, bolt hangers nevertheless embed considerable *beta* and subsequently enact pervasive orderings that shape material-discursive realities of climbing. These orderings are *affective*,

ethical, and *territorial*. In the next section, I will detail these orderings as they have assembled around and through the Niagara Escarpment, identify the positions and agencies of the (human and non human) actors that participate in these orderings, and discuss how these specific orderings of *beta* enable and interfere with the broader discourses of climbing.

4.3 The Affective Ordering of Bolt Hangers

Bolt hangers intervene in (and subsequently constitute) the affective assemblage of the sport climb. This has always been my experience: I feel confidence, anxiety, fear, hope, or security in relation to the position of bolt hangers as I navigate vertical terrains. My *beta* is forged by their placements and properties through ability, position, and quality. Bolt hangers are a presence, and tether my body (literally and figuratively) to the enactment of a sport climb—the drawing of my corporeal being into the gathering of an affective space (d’Hauteserre, 2015). In the section below, I have attempted to document the emergence and diffusion of affect as prompted and embedded by the presence of bolt hangers on *Hiromi’s Route*, a 5.10a graded route at Mount Nemo, and *Swan Song*, a 5.10c graded route at Mount Nemo (and one that I have not yet successfully ‘sent’). Through ordering affect, bolt hangers reveal many things about *how climbing should feel*. For me, both of these routes embody and relationally engage many discrepant, simultaneous, and overlapping versions of affective orderings of *beta*, and so they are co-currently the spatio-temporal setting for this section.

4.3.1 A note on belayers.

While physically climbing *Swan Song* during my data collection, I spent a great deal of time standing on a ledge, trying to convince myself to move far beyond my last bolt and across an exposed prow, toward my next position of safety. I was trying to set myself up for success

both mentally and physically by breathing deeply, warming my hands, and repeating lengthy mantras of various effectiveness. Much of my success was motivated and supported by my belayer, Andrew, and how our communication and connection enabled me certain possibilities of success on the climb. Similarly, in order to undergo this next traverse into affective orderings with at least some success, I want to position Anne-Marie d’Hautserre as my belayer for this section: I want to substitute the usual array of climbing encouragements for the supportive psalms of affect theory. This is an intentional, deep breath of theory, which will hopefully lead to mantras of more consistent effectiveness. Much like there are decisions about our anchor-points in research and climbing, there are also decisions about our belayers, or those whose shoulders we stand on—sometimes these are not necessarily the most experienced or the most strict, but those that make us the most comfortable, or allow us to climb in a way that is attentive, perceptive, and *held*. And so I choose d’Hautserre.

4.3.2 d’Hautserre on affect.

It is late fall at Mount Nemo, and I’m wearing three jackets, my hood tied tight around my wind-burned face. Despite the terrible weather I am trying to outrun an even worse sport climbing season, and so am desperate to stretch these too-cold days into the far reaches of November. The rock is damp and forbidding and I’m pulling quickdraws off of a length of cordelette and racking them onto my harness as my belayer, d’Hautserre (2015), brings in Spinoza, and Deleuze and Guattari to explain our path forward: “Affect here ... is a line of force, a capacity to act, though to some extent it is derived from that original desire” (p. 79). She double-checks my figure eight knot and looks me in the eye. *Do you really want to climb this route? Is it what you desire?* We are at the Cat’s Tail wall, and I’m preparing to dance the *Swan*

Song. I shiver and nod, feeling the cool cajoling of the wind, my palms still sweating, my body weighted under all of its action potential. d’Hauteserre (2015) seems pleased at my relational position, confident that we are within something diffused both socially and materially. I linger at the base of *Swan Song*, poised to climb, suspended with possibility, and I feel the raw, enriched, agentic hum of my body; I am Latour’s (2004) transmitter, a capacitor, with my many senses open to the swift emergence and diffusion of affect prompted by the un/stable overlaps of my corporeal self in and among other bodies and bodily constituents (d’Hauteserre, 2015). I press my thin skin onto lichen-rich limestone and I flood the crag with possibility; I wear away and repopulate hundreds of thousands of years of presence; I pass through my perspiration the anxiety of this tenuous new mattering (of me and the rock) and together d’Hauteserre (2015) and I and the many minglings of minerals assemble an encounter of surprising affectiveness—I almost let go of the wall.

As my belayer, d’Hauteserre is quick to remind me of my terrain. Her hand steady on the brake line, she coaches me: “Affect is beyond the senses that can be signified and is not consciously directed by actors upon others” (d’Hauteserre, 2015, p. 80). I prepare myself, steadily, and yet I remain completely unprepared—the climb itself, its bolts and bulges, is bound up and bursting, “intensely interrelated in the (affective) movements of the attempt” (Ness, 2011, p. 82). The rock around me is emergent, responsive, “an atmosphere [that] must be apprehended ... [and] reworked as experience” (d’Hauteserre, 2015, p. 82). I unfasten a quickdraw from my harness and connect it with the first bolt hanger, suddenly remaking my body in the performance of the climb (Ness, 2011). As I step onto the the rails of dirty limestone, I both remember and re-matter *Swan Song*, drawn in by and drawing memory, experience, and influence into the affective

execution of *beta* (d’Hautesserre, 2015). It is from here that many other climbs I have engaged suddenly begin to assemble once again.

4.3.3 Affective bolting.

Bolt hangers are a beacon of relief—much of the *beta* of any climb involves learning to manage incorporations of fear, anxiety, and insecurity. Affective experiences of anxiety are consistently referred to in relation to bolt placement, presence, or perception: how run out lines are (i.e. how much space there is between bolts), how ‘bomber’ the bolting is (i.e. how good the quality of the bolts is), or if clipping stances are in good relation to the hard parts of the movement sequences (i.e. if clipping is the crux). Despite the intended purpose of the bolt hanger as a physical assurance of safety, it functions as an assurance of psychological safety as well (Barratt, 2012). This is to say that bolt hangers allow and intersect with the more-than-human identity of the climber, along with shoes, chalk, specialized clothing and gear—the ‘archetypal’ climber-as-cyborg extended beyond the functional purposes of technologies (Barratt, 2012).

Climbers, for the most part, have a limited ability to assess through visual inspection how ‘good’ a bolt is (i.e. whether or not the bolt has been affixed to the rock safely and effectively), but will frequently feel emotional relief after clipping ‘bad’ bolts or ‘rotten’ fixed gear even if said gear is not physically useful (Wong, 2016). As I approach the fourth bolt hanger of Swan Song, I feel my anxiety building—a fall from this position will result in quite a whipper. The fourth bolt, though, is rusted and off-centre, and the hanger spins when I go to clip. (It moves within the rock, erratic and clearly unhelpful.) It will blow if I fall, but my body doesn’t care: I clip and immediately feel relief course through my limbs as the climb shifts into focus. The relief

draws me onto another climb (a memory of *Hiromi's Route*) and suddenly I hear my friend Greg complaining,

Sport climbing we intuitively all just trust... those anchors are fucking solid. But you know less about that anchor than the one you put in the wall yourself. ... Yet we all tend to trust that bolted anchor way more, right? [10]

He shakes his head, completely sarcastic, “There are anchors in the walls. ... They’ve gotta be good. I don’t need to check. [10]” Clipping bolt hangers, for me, is purely Barrat’s (2012) psychological protection—an immaterial, affective enactment of a material action. I do none of the protective work with my own body, something that would happen if I was climbing using impermanent gear. To Greg, because of his years of practice placing his own gear, a bolt hanger represents an unknown, a detraction from the experience [10]—it draws him out, offering fear and skepticism, instead of drawing him in, through stasis and security.

Fighting my way up between the fourth and the fifth bolts on *Swan Song*, it is both easy and laughable to further remember Greg: hunched over his shoes, untying them after coming down off *Hiromi's*—a long, leisurely 5.10a often used as a warm-up—shaking his head as he lambasts modern bolting practices. “Gone are the days of two, three, four metre run-outs,” he complains, “And it’s at a cost to who? To [crag developers]. [They’re] personally pocketing this shit. ... And it’s giving people a false sense of security. [10]” My current section on *Swan Song* is only slightly run out, and despite my experience and climbing history, I still feel unprepared to complete it effectively, especially when my height and strength necessitate physical *beta* sequences that take me even two inches above my bolt—the fear is palpable in my body, and it refracts off the rock, ricocheting through the climb, rendering the entire performance of the line shaky and unstable [12]. (d’Hautserre is patient and calm.)

Stylistically, bolting practices are changing to accommodate *beta* more reproductive of indoor climbing spaces. Essentially, routes are being ‘over-bolted’; *Hiromi’s* is a prime example with its notorious 17 bolt hangers, when most routes at the crag have less than 10 (Wong, 2016). Newer crags and more recently-bolted climbs are equipped with this ‘gym-style’ grid-bolting, equipping that mirrors the relative accomplishment of climbers and makes assumptions their levels of anxiety, confidence, and experience climbing though generous, frequent bolting (Alexandropoulos & Dwyer, 2016a). This is in contrast to the older style of sport bolting, wherein easier grades were more sparsely equipped—easy bolted routes, historically, were for warming up, not for the pleasure of weaker climbers [11]. Nick—Greg’s belayer while we climbed *Hiromi’s* that day—agrees. As an equipper and route developer who believes steadfastly in using modern bolting when at all possible, he explains that not everything is controllable. He scoffs, “What’s wrong is the person who’s climbing ... isn’t able to assess [difficulty]. They’re coming in with a perspective with at the gym the bolts are every four feet and there’s going to be perfect jugs at every clipping stance and it’s going to be easy. And it’s like no, welcome to the outdoors. [11]”

Though this newer, generous bolting style is increasingly practiced and sanctioned by route developers, many ‘old school’ climbers (like Greg and Nick) still believe the process means that newer climbers are being robbed of the mental capacity to progress to harder climbing through learning to manage their stress while clipping and moving between bolts, completely changing the way that fear is integrated in relation to the bolt hanger. I’ve heard from many climbers that *Hiromi’s* is truly over-bolted—that some of the bolts could be removed (Jared, personal communication). Andrew, too, expressed this position as I belayed him up the route in

the fall, legs shaking, until he came into physical proximity with the notorious section of grid-bolted limestone and whispered “Thank god. [2]” I remember laughing up at him panic-clipping, *You want all those bolts now that you’re up there?* And his wavering voice replying “I want every single one of them and more. [2]”

4.3.4 Affective atmospheres.

Mount Nemo, specifically, is a “forbidding and intimidating crag,” (Gilbert, 2013, p. 13) with a dark atmosphere that dramatically displays the unique personality of Escarpment limestone (Oates & Bracken, 1997). Intermittently described by the many guidebooks as having



Figure 3. Looking up at *Swan Song*.

a “distinctive flavour ... which makes each ascent an adventure” (Bracken et al., 1991, p. 35) or an “alpine character” (Alexandropoulos & Dwyer, 2016a, p. 14), many of Nemo’s routes are

characterized by inconsistent bolting, complicated routefinding, stiff grading, and unpredictable rock. The dispersed, embodied feel of the crag remains overbearing, dangerous, and imposing—a proving-ground (Chaundy-Smart, 2015)—a place rippling with ego, pressure, and fear.

However, as d’Hauteserre (2015) so dutifully reminds me (with my feet precariously perched on limestone nubbins) affect is not solely an emotion or an emotional response, but something unpredictable, relational, and tactile—something beyond the representational scope of language. She feeds me rope as I prepare to move into space, and I have a sudden vision of Nick explaining to me how a climb is particularly altered by bolt hangers—not his feelings *toward* the climb, or even the sequence of movement (though those might change), but how the climb became and un/became for him in relation to the bolt hanger’s presence. I asked him point-blank, fumbling with his GriGri, if he thought bolting changed the climb, and his response was an enthusiastic, “Absolutely. . . . It changes the aesthetic of the climb. It changes how the climb feels. [9]” He went on to relate these experiences to bodily positions and demands, feelings of immersion, and the tactile sense difference in the assembling of gear—how the route emerged differently through the collisions of these many factors (Barratt, 2012), or how his body, through bolt hangers (or trad gear), co-constitutes the climb (Barad, 2007).

As a trad climber, Nick’s responses were echoed by Greg, whose affective experiences were interrupted by the presence of bolts as well. During our strange parley with *Hiromi’s Route*, Greg explained to me that his unfolding experiences of climbing were holistic, a place to be ‘turned over’ (Latimer & Miele, 2013),

[Climbing] is where I find myself. This is the zen moment, where my mind slides out and I don’t think of anything else at all. . . . This brings me true happiness. It was just . . . it quiets the soul. . . . And only trad does . . . sport doesn’t do that. Genuinely. [10]

Here, the presence of bolts was a flickering, intermittent intruder—while he could easily ignore them, and complete the route without affixing any gear to them, they showed up in his experience like an annoying splinter or a grain of sand—each small, but truly a catalyst.

And yet, I think of Greg still pulling joy from the presence of bolts while sport climbing alongside myself, or Nick, or another similar partner “There’s so much unspoken,” he says, stoic and too-serious, “Even if you’re across the buttress and I can’t see you, I can feel it and I can hear it... hear that click and that snap. And you *know*, right? [10]” Quickdraw carabiners attaching to bolts became a communicative mechanism between Greg and I, something enabling closeness, the click of metal-on-metal reverberating through the atmosphere, tying together our affective worldings, the metallic snap the unfolding of possibilities (continuing) up and into our vertical and temporal relationship. As I lost him over the bulges at the top of *Hiromi’s Route*, I considered the bass of the fossilized dolostone, the sweeping treble of chalk marks, the metal staccato of our commitment to the drama of Nemo’s unstable and orchestral lines. Together, Greg and I ‘nudged’ one another toward creating our connected, performed world (d’Hauteserre, 2015) —a world entangled with bolt hangers and by their bright, confident closures.

As I approach the final few clips on *Swan Song* the difficult climbing tapers off a touch and I find myself stretched across and throughout movement—the depth and process of shaking out my forearms, the rhythm and rush of white-grey limestone, the tiny texturing of my fingertips and palms enclosing-and-reopening against the rough/polish of limestone. There is simultaneously an immense clarity and a heady vagueness gathered around the tenuous touch of rubber-on-rock—when I reach for my rope to clip the anchors I notice I have somehow missed my last clip [9]. I am dis/connected through this omission—I feel and emit fear, confidence, and

astonishment—and the climb has been rendered and has simultaneously rendered me something else, something un-present before. Through missing the bolt the *beta* (and emergence) of *Swan Song* forever changed—an affective dis/ordering through surrender—“neither pure cause or pure effect but part of the world in its open-ended becoming” (Barad, 2007, p. 150).

I feel d’Hauteserre’s satisfaction from thirty metres below, her connected confidence through our belay system, and I recall with some fondness Nick speaking to me weeks before, strangely contemplative, “... I don’t think this is the right language. But there’s something much more qualitative about climbing outside because there’s... the feel, the emotion, the weather, the temperature. ... The *beta* as well is much more dynamic outside. [5]” He says this with such care, removing the rope from his belay device, and I have to stop and look for d’Hauteserre (2015) because I can practically hear her nodding in agreement, citing how affect emerges and diffuses to create such different qualitative experiences of space.

4.3.5 Brightness—bolts and blood.

Instead of offering a traditional conclusion for this section, I want to instead present a series of passages that partially (but never completely) re/render the affective quality of *Swan Song*. Though d’Hauteserre warns me that “the world expresses itself in numerous ways that cannot always be grasped with language” my personal worlding is consistently storied—I have been clear about my translation via narrative and poetics in other sections of this thesis (p. 81). Thus, though representing the non-representable is limited (and will very much always fall short) I seek to draw attention to the resonant, amplifying ability of affect by using the closest, most repetitive re-enactment I can muster without simply taking my reader climbing (Law, 2004).

What follows is my translation of a purposive and grounded (re)assembling of the affective ordering of *beta* as present within and enabled though bolt hangers on the Niagara Escarpment.

Swan Song.

*Limestone is
soft—so soft, too soft to last
sliver and slippery like a
frustration, glassy, glossy,
knobby and smooth,
bubbling (Like a
ripple? Like a quicksilver?)*

*Limestone is
a slick and smothering smirk... smirk smirking,
throwing out gear and
silly soliloquies. Like a
vast varnish vanishing
at a point painted onto
the precipice.*

*Limestone (it tastes:
like dirt and mezcal and
minerals and pepper.
It tastes thin and metallic,
and rings inside of my head.)*

White white white at the bottom, like alabaster, like bone, like eggshells. (Like some verb/age)

*Swan Song: the lines! Lost and languid
and lulling me laboriously...
Limestone. Like a laughing-stock.
Limestone like... larger than life,
(laughing)
locked in lines,
of edges and eager (Easy, now...)*

*Limestone is
loud.
A wicked
and wild wily windy summit.
A small, strange and
suspect series of slow,
slanted slopes.*

A temptation.

*It's a trap! It's an absolute
travesty. With my hands out searching, fumbling, trying
with earnestness and sweat
to connect ridge-line of fingertips*

*to crystalline/micro fossils
the rock a mottled pollock spray of
yellow black and lichen gray.*

*The lines so easy: bolts like the spine of a sleeping animal,
still but heaving (How? How is it heaving? How is it heaven?)
It haunts me, the spectre of
its reading, the marks of
the combination of climbers
running its length. Chalk and chips and bolts and breaks.
The accumulation of features—
I cannot possibly know
(The catch, the cold
the too, too much.)*

*The beckon of bolts: trust. Trust.
(Your secret/s safe)*

*Limestone is a trap.
Limestone is
(trust)
(trust)*

And:

Moving:

There's a good two-finger pocket in the roof that looks amazing but only feels good laying back to the left and using it with the right as an undercling. In the dihedral above me there are two cracks that split like a trail or a tributary and they meander lazily in separate directions up the centre of the feature. Both have surprisingly good holds—in-cut and cupped and they make my hands into talons—but getting yourself into a position that feels secure means hiking your left foot up onto the side of the dihedral roof and pushing as hard as you can with your leg, pushing like you are being buried (why does it feel this way?) bumping your right hand up the bad crack. It's strange and burly but very fucking scary because of the ledges below me (the size of a car or a coffin [some impact that kills you, lays you to rest]) and I have to figure out how to get even more inside of the dihedral and sort of half-stem my way into it... I finally get my hands into position with my left on a good hold, like skipping my hand in a door jamb, the thought of losing my fingers, and I cruise out of the dihedral toward the fifth bolt, gleaming/glinting/glowing, and I lean into a good-but-not in-cut knob to place my quickdraw and clip, that crisp clasp, metallic, echoing off the cliff toward nothingness, the sound a gift, a guardian referencing my belayer below. (What else is there?) I am still afraid. I'm suddenly above the last bolt not even by very far, but my shoes skate searching for stability on sloping ledges; the fear (and cold) have left my body feeling depleted and I blindly continue to creep up the crack weakness with the good flakes toward the ledge above. I pull myself onto the ledge with a desperate grasp at grace and try to step onto it without alpine knee-ing but I'm tired and my hands aren't working (it's so cold) so I try to shove my entire body over the ledge and into the strange, deep crack, an arm and a knee as I use pressure to push my shoulder into the deep groove and jam my body into the fissure without using any of my fingers at all. There are no crimps—the rock is smooth and soaked and solid ice. It feels absolutely awful, the body-jamming, and inside of the fissure I stand and look across at the next section, of rock shaking out my hands, chalking and re-chalking for the sake of security and not because I need any help at all. My breath ragged, the cold chasing the fear down into my chest and stomach, my lower guts a mass of knotted tangled trash. From the ledge you can stand and rest with no hands, still, stasis, looking out over the farmland that surrounds Nemo. And I am feeling ecstatic, untouchable: to be up here, on this ledge, cold and frustrated and unable to keep in check my fear. In front of me there is the crimp traverse: there are numerous, endless hold options as the prow creeps away from me toward a blunted arête and clipping position about ten feet left. The rock drops steeply down toward the ground and the feet are a series of micro-divots, tiny nubbins that somehow I

have to hit while I press the pads of my fingers into frozen, glassy, greasy edges, the bolt winking at me, teasing and taunting from across the face. Trust. (Trust.) I am paralyzed with possibility. I shake out and I put my hands in my mouth for warmth (taste of chalk, rust, shame) and I weight the first few crimps, where is the bolt? I feel the tension rise into my forearms which are taut and burning, and I move my hands by bumping, infused with fear, rife with absolute terror as I creep across the traverse. At the arête I'm shocked and lean my body onto the rock, gasping, and I reach for my knot at my harness's centre, pull rope frayed and chalk-thick toward the bolt, but I haven't placed the quickdraw and I blink the bolt blinds me, winking, knowing (a secret),

and I fall.

((space))

Climbing.

A sacred space changeable.

A scared space mobile.

It truly wrecks me,

it completely throws me. It's weird, because

in isolation:

none of the moves are that awful, but...

the endless hustle,

the sustained stretch toward the bolt,

the run-out

the rush

and that exposed crux—

the 'reality' of falling, (really)

qualitatively,

really—

drawing blood, and

just scraping at the edges of comfort.

The demand is bright.

((Bright bolts bursting from

burnished bulges

brash...))

But...

That hectic hum!

That rampant, running rush!

That silly, slippery slash

of smoke...

I step on catnip and the wind

sends

skunk

and still-sage and that

(secret) sweet smoke smell.

The (iron/y) of catnip: a relief.

Calm

instead of anxiety, fear, hands sweating.

(Running after bolts like beacons)

and climbing.

*It comes and goes and I put my cheek against it. Limestone.
Still my tongue is thick
with that brash and coppery film.
But tasting the rock does nothing
when all I taste is
brightness:
bolts/blood.*

4.4 The Ethical Ordering of Bolt Hangers

Practices of bolting are also inherently a question of ethic—never has there been a time in climbing history when choices of protection, style, or ‘permanent intervention’ were uncontested (Bogardus, 2012). Accordingly, bolt hangers order climbing ethic through perpetuating assumptions about purity, style, ownership, and developmental practice. By choosing to navigate bolted (or unbolted) lines, my *beta* (and the *beta* of others) is altered and shaped by an intentional, moral-material declaration. Bolt hangers translate (by way of intervention) “a set of values and rules of action that are recommended to individuals through the intermediary of prescriptive agencies,” (Foucault, 1984, p. 25)—individuals such as (in the case of the Escarpment) developers, guidebook authors, citizen climbers, and the Ontario Alliance of Climbers (OAC). Bolts are ethically partisan, and rarely render sport climbs uncontested or uncontroversial. Climbing ethic (i.e. what types of protection and intervention are allowed), “style” (i.e. how the climb was completed from the ground up), or the rules dictating proper and correct ways to climb (i.e. what stances or objects are allowed inside of the climb), serve not only as a metric by which to judge climbers’ abilities and character (Bogardus, 2012), but further works to delineate the boundaries of ‘real’ climbing in itself (Kiewa, 2002).

In this section, I detail the obvious, concealed, and often insidious ordering of ethic as enabled by the presences (and absences) of bolt hangers on various routes and walls along the Niagara Escarpment. Through ordering ethic, bolt hangers divulge one of many secrets about

what climbing should be. This detailing is mobilized through the comparative textual and practiced histories of Mount Nemo at large, with specific attention to recently altered areas like Retroland. This focus is intentional—while there is endless opportunity for the discussion of bolting practices, areas with recently-contested ethical histories allow me to access more immediate, personal, overlapping ethical orderings that simultaneously expand to other routes and crags along the Escarpment.

4.4.1 A note on blended beta.

Much like my choice of Anne-Marie d’Hautserre as my affective belayer, here I want to speak to the ideas of ‘crowdsourced’ *beta*, or ‘blended’ *beta*. Typically, and as discussed previously, the use of *beta* as information about a climb renders any hope of an ‘onsight’ impossible—having information about how to complete a climb means that you aren’t coming up with anything new or revolutionary without the help from your peers, guidebooks, or historical documentation of routes (Wong, 2016). An onsight infers that there is one single interaction—that it’s just you and the rock. This is one certain position, and while onsighting is an incredible feat (and an interesting exercise in limiting information), I fully believe that just as Rossiter (2007) insists that there is no pure space beyond gear, truly there is no “pure” onsight. We are intrinsically bound in climbing and academia to stand on those (increasingly muscular) shoulders of those that have gone before us.

However, very infrequently will *beta* solicited from a single source get you all the way—bodies (and theoretical needs) are unique, and often success will only follow from a blending of suggestions from an informed, articulate gathering of peers and perspectives. The study of ethics denotes an entire philosophical field unto itself, one with a myriad of conceptualizations that far

exceeds detailing in this thesis. That being said, much like accessing blended *beta*, I have chosen to pull from sources that complement both one another, as well as my own assemblings and arguments. In this section, I rely primarily on Michel Foucault's (1985) discussion of ethics in relation to the self and Karen Barad's (2007) ethics of mattering. Through the intertwined and sometimes (un)complementary assertions of these scholars, I present an ethical ordering of *beta* through the presence of bolt hangers.

4.4.2 Foucault and Barad on ethic.

It is a strange week that follows my day with d'Hauteserre, and when I get back to Mount Nemo the next time I am slightly scattered and unfocused. The still-late-fall has brought us back to the crag with a little desperation, and now Foucault, Barad and I sit in the humid warmth of my truck (all piled in too close for comfort) as we argue about the day's plan. I explain to the Foucault and Barad that my intention is to meet up with Keenan and LJ to climb a few easy sport routes... but that in no way, shape, or form was I prepared to climb with the two of *them*. *It's too risky*, I whine, *navigating the many moral and ethical fissures that constitute what is 'real' climbing. I don't know where I stand. I am sure it doesn't matter.* They're miffed. Matter! Barad is reeling. But Foucault (1985) is the first to speak up, explaining that with regard to ethics under the first (aforementioned) prescriptive definition of morality,

[Sets of moral] rules and values are plainly set forth in a coherent doctrine and an explicit teaching. But it also happens that they are transmitted in a diffuse manner, so that, far from constituting a systematic ensemble, they form a complex interplay of elements that counterbalance and correct one another, and cancel each other out at certain points, thus providing for compromises or loopholes. (p. 25)

So, a moral code? With regard to sport climbing? He nods and continues with gusto.

[Of course], morality also refers to the real behaviour of individuals in relation to the rules and values are recommended to them ... [including] how and with what margins of variation or transgression individuals or groups conduct themselves in reference to a prescriptive system that is explicitly or implicitly operative in their culture, and of which they are more or less aware” (Foucault, 1984, p. 25).

So, subjectivation? How my self is made iterative within (and without) explicit ethical distinctions? I think I understand, this time. Once again, Foucault confirms with a nod. If each morality contains both codes of behaviour as well as forms of subjectivation, it follows that some will rely more so on strict sets of rules, while others will rely on forms of relation to the self (Foucault, 1985). Whether or not I climb ethically is a relational relay, held between certain sets of rules and my constituted self.

Climbing practice, too, has these moral arguments. Despite climbing’s (and specifically traditional climbing’s) historic lack of establishment as a formal or governed past-time (Bogardus, 2012), the Ontario Alliance of Climbers (OAC) remains the primary point of reference for all prescriptive interactions with Ontario climbing, and is frequently referenced as the ethical arbiter of the Escarpment (Wong, 2016). The OAC Code of Ethics, as well as the ‘Climber’s Code’ promoted by Rock Respect—a Canadian initiative promoting the respect of danger, environment, ‘others’ and access (Rock Respect, 2019)—say much about ways to *encourage ethical behaviour surrounding climbing practice*, while expressing limited opinions on what constitutes *ethical climbing*. This means that many suggestions or ‘Codes’ refer more to how to be in the outdoors, rather than how to be an ethical climber. These outdoor-based suggestions range widely in terms of their explicit asks of human actors, yet all can loosely be couched within the practice of impact reduction or the principles of Leave No Trace (Ryan, 2002). *Ethical climbing* itself is vague, inconsistently rendered, and impossible to pin down.

But climbing ethically, to Foucault (1985), would mean not blindly following rules of the OAC for the sake of conformity or rule of law, and instead would be constituted as a balanced practice between both the rules-based practice of climbing and the climbing self. It is not enough to climb ethically through fear or enforcement—one must climb ethically through practices of “setting up and developing relationships with the self . . . for the decipherment of the self by oneself” (Foucault, 1985, p. 29). Though confident in my own ability to practice climbing that is self-reflective and transformative, I am unsure how my personal *beta* is reflective of ethical climbing—this question seems to linger between spaces of permanence and (non)human intervention that are variably drawn. (The rules shift.) I still don’t think I want Foucault to belay me. In my lap, my collection of quickdraw wink sun at me, knowing.

But Barad intervenes, explaining that there is another way. She has been patient this entire time, save from her strange and radiant energy—light flows through and around her like a solar flare. She hints that there is a flaw in Foucault’s considerations. “Ethics,” she explains, “is about accounting for our part of the entangled webs we weave” (Barad, 2007, p. 384); she summons Emmanuel Levinas to explain that “the ethical subject is not the disembodied rational subject of traditional ethics but rather an embodied sensibility, which responds to its proximal relationship to the other through a mode of wonderment that is antecedent to consciousness” (ibid., p. 391). Barad (2007) agrees that to climb ethically must be about more than adhering to certain rules and restrictions, but also explains that the self is muddied through truly moral climbing. “Ethics,” she accentuates once again, “is therefore not about right response to a radically exterior/ized other, but about responsibility and accountability for the lively relationalities of becoming of which we

are a part” (Barad, 2007, p. 393). The im/permanance of interventions like bolts (and their related *beta*) are allowed to be continually made and re-made.

I feel slightly more at ease with Barad’s position and its relational, refractive, emergent quality (it even seems to jive with d’Hauteserre...). However, it seems that climbing ethically, as it stands in Ontario, still takes an explicit, ruled position that aligns with Foucault’s (1985) balance of moral codes and subjectivication—this is the OAC’s Code of Ethics coupled with the relative in/action of citizen climbers—and despite Ontario’s plethora of bolted lines, aligns with traditional climbing ethics. I am uncomfortable with this. (To me, the OAC’s Code of Ethics somewhat speaks about *who climbing is for*, and so also furthers certain territorial orderings I consider in the next section. There is indeed some overlap here.) Instead, what Barad is asking is about the constitution of *beta* as the mattered ethic of climbing as it relates to intervention and certain understandings of ‘purity’—Barad’s materialist position easily accepts the hybrid, distributed agencies of sport climbing (and bolt hangers). With my guts in a twist, I finish arranging my crag pack for the day and move to leave both Barad and Foucault in the car, yammering on to one another. (It is important to note that I bring only quickdraws.) I set off to meet with Keenan and LJ.

4.4.3 Ethical bolting.

The presence of bolt hangers embeds a certain ownership and a lingering presence of the developer of the route—a way to “allow an actor that is no longer present to exert a palpable influence” (Sayes, 2014, p. 140). Through a series of aesthetic, safety, and grading choices, a bolted line (re)iterates the ethical position of the developer, and literally inscribes a relational ethic of climbing ‘purity’—a choice about what climbing should *be*. Climbing purity denotes

many things, but is at its most basic used to refer to the *style* by which a climb is completed, which often (but not always) has to do with fixed protection, and questions of ascent. Traditional (trad) climbing is often cast as the binary position to sport climbing, as trad climbing was used as an escape from rationalized, modern, consumptive society and positioned as an adventurous, spontaneous, chaotic dance with ‘freedom’ (Kiewa, 2002; Lewis, 2000). In trad climbing *beta* becomes prescriptive by way of what is available through ‘natural means’—“If there are no natural fissures or points of weakness in the rock, then there is no protection. Nature dictates” (Lewis, 2000, p. 62). In contrast, sport climbing (and bolting, by proximity) was (and is) seen a controlled, exceedingly safe method of ‘consuming’ rock climbing by virtue of ‘creating’ points of protection where there formerly were none (Kiewa, 2002). Sport climbing is, from many perspectives, ‘climbing consumed’. However, as one might assume, it is messier than this. Though trad climbing apparently assumes certain ethical positions that sport climbing doesn’t—like that one should climb ground up, in a single push, without permanent intervention (for purposes of adventure and sustainability)—modern equipping practices, advances in gear technology, demand for routes, and changing definitions of climbing have re-positioned ‘pure’ climbing to that of myth or legend (Rossiter, 2007).

In Retroland, I finally collide with Keenan and LJ, and the three of us stand looking up toward *Judy’s On the Drug Squad*, a retrobolted 5.10a in the Retroland area. *Judy’s* has, over the years, morphed from a 5.8 trad climb to an either 5.9 or 5.10a sport climb, depending on the guidebook (Aleandropolous & Dwyer, 2016a; Wong, 2016). Though retrobolted and re-graded with the permission of the first ascensionist, the route persists in occupying a greyish area of ethical development: which routes should remain un/alterd? Which routes should retain their

(humanist) histories? LJ seems stoked to climb it, but hesitant, questioning how much of the grade is interpretive [1], and how much is Ontario's notoriously stiff grading (Alexandropolous & Dwyer, 2016a). Instead, they defer to Keenan, and motion for him to lead. I clip in to belay.

Bolting at Mount Nemo (and along the entirety of the Escarpment) has always been controversial. Nemo's first partially-bolted route was *High Society*, a 5.10d erected in the mid-Atlantic style—a mixed-ethic style allowing the placement of bolts where there is no 'natural protection' (i.e. cracks) for trad gear—by Dave Smart (Alexandropolous & Dwyer, 2016a). This route “opened [Smart] up to controversy and ridicule by fellow climbers who thought placing fixed gear was akin to murder” (Oates & Bracken, 1997). Bolting, to many traditional climbers,

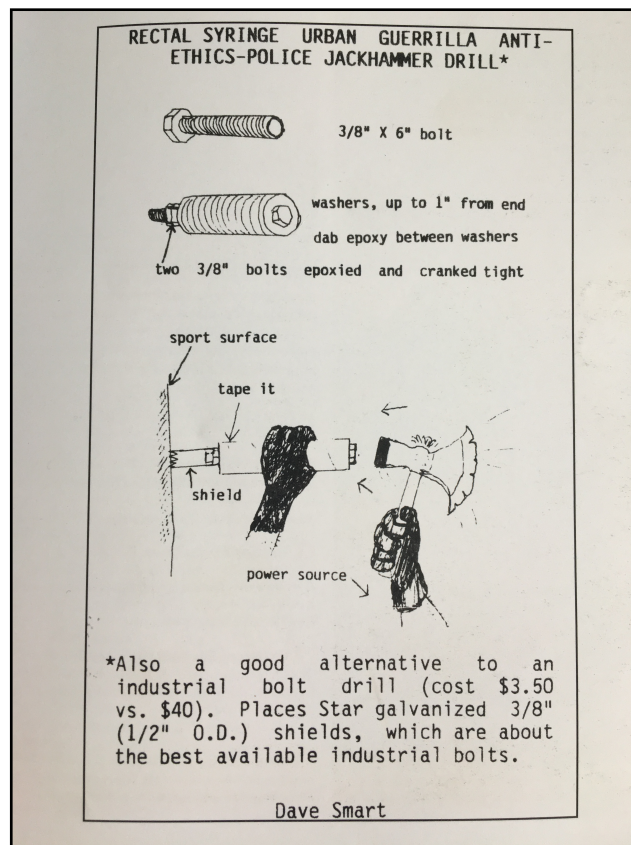


Figure 4. Dave Smart's DIY guide to 'anti ethics, locals-only' bolting equipment. (Alexandropolous & Dwyer, 2016a, p. 63)

opens up routes that cannot ‘really’ be climbed (Lewis, 2000). Indeed, and despite Ontario’s quick acceptance of ‘sport ethics’, the way in which bolting practices swept the Escarpment was rife with certain turf wars, partial acceptance (for example, bolted routes with no fixed anchors), confrontations, and ongoing discussions about which types of climbing should be allowed (Chaundy-Smart, 2015). In Southern Ontario, best practice dictates that when bolts are moved, chopped, replaced, or altered, the developer and/or first ascensionist must be consulted (OAC, 2019). If they are no longer alive this responsibility is ‘redirected to the community’ (OAC, 2019). Helmut Microys, a prolific Escarpment climber and route developer, puts it succinctly:

I recall with some amusement the self-righteous arguments of climbing styles many years ago. As far as I am concerned everybody can climb the way he (she is understood) wants. I don’t really care. If you want to bolt, then bolt. If you do not like the bolts, then by all means, climb without them, but do not chop them. (As cited in Alexandropolous & Dwyer, 2016a, p. 20)

Despite the existence of the OAC, in Southern Ontario, bolting is mostly unregulated and not organizationally funded—the money for fixed gear comes straight from the pockets of citizen equippers and is donated through processes like Ontario Climbing’s *The Hardware Fund* (though it is sometimes supplemented by donations from other climbers, co-op or corporate bodies like MEC or Arc’teryx, or the OAC) (Ontario Climbing, 2019). On their website, Ontario Climbing (2019) explains that in order to avoid issues of liability when it comes to placing fixed protection like bolts or anchors, that they provide no transparency as to when or how these practices are accomplished (though it is common for re-bolters to share photos of ‘rotten’ gear they have removed). Further, bolting practices are apparently restricted by local conservation authorities and cautioned by the Ontario Alliance of Climbers, though this information is unavailable through websites and other media. Indeed, the Land Use Planning Policy Document provided by

Conservation Halton (the body that oversees Mount Nemo) contains not a single mention of rock climbing at all (Conservation Halton, 2016). Despite this, current guidebooks state that,

Anyone climbing on the Niagara Escarpment should be aware that there is still a healthy discussion regarding the placement of bolts. Fixed protection and the development of new routes has become controversial at some areas, such as Mount Nemo, which, at the request of the local Conservation Authority, now has a moratorium on new routes. (Alexandropolous & Dwyer, 2016, p. 20)

Routebuilding remains shrouded in a certain elite secrecy, despite its position in literally determining how climber's perform routes—determining their *beta*.

Keenan shakes his head, kind of pissed off as he starts up the route:

Anybody who wants to break in and do route-making on their own is disallowed for the reason that they don't have the experience, but the only way to get the experience is to be grandfathered in. ... [Doing rogue routebuilding] is unethical now. But anyone who is a route-builder *now* started that way. ... And then the doors were closed. So people are given a status of being able to do it—no one else gets to create a route, and those people decide what the routes are, and where they are. [7]

I feel like Keenan is getting louder as he makes his way up *Judy's*, and I glance over toward two climbers beside us to see if they're paying attention. Keenan continues, fiddling with the second hanger and checking its tightness, pulling out a wrench to fix a slight spin.

“Following the conventions of safety, I don't see the ethics of having ... to be a route-builder or having this experience or that [experience]. [7]” He doesn't understand why he can't bolt his own routes, and honestly, I don't know either. For an unregulated sport, climbing's inexplicit rules are many. Routebuilding remains restricted to a specific, experienced sub-set of people—often those who perform climbing at a high level of expertise (i.e. those who send hard routes)—that also occupy a position of power in documenting and publishing said routes (frequently, those who build, grade, or name routes are also guidebooks authors) (Alexandropolous & Dwyer,

2016a, 2016b; Nettlefold & Stratford, 1999; Wong et al., 2018). This process assumes two things: first, that climbing expertly assumes you will bolt expertly [7]. And second, that those who climb expertly know which types of routes those who do not climb expertly will want to climb (and which should be recorded) [9]. In this case, “power operates through the specific constitution of bodies and subjectivities” (Foucault, as cited in Barad, 2007, p. 362), as bodies that are ‘better climbing bodies’ (and so have ‘better’ *beta*) continue to dictate how climbing is materially made, in reference to themselves and others. Or, more accurately, power in building, grading, naming, and documenting routes and *beta* is distributed through (and disguised as) a process of bolting ethic. This remains embedded in many Ontario guidebooks that consistently list only ‘notable’ or ‘historic’ first ascents (Wong, 2016; Wong et al, 2018).

By now, the two guys climbing to the right of us have tuned into Keenan and his raucous complaining. Both appear to be mid-twenties, lithe and strong, and confident in their climbing. They have a decent rack of nuts, and seem to be about to head up *Ein Kleines Nacht Klettern*, a mellow 5.7 trad route at the far end of the Retroland area. The shorter of the two, sandy haired and smiling smugly, walks over and yells up to Keenan as I continue to belay. *Hey man!* Keenan stares down at him, a little shocked, as the guy continues to yell. *I’m not sure I agree with you!*

I want everybody to have the ability to bolt. ... I just want the people who do it to always be aware of the impact of them bolting. Not just the impact of the access... but also of the impact on the climbers. Like, what route are you bolting? Do your thorough research; maybe there was a first ascensionist for this climb. Paying respect to that person with retrobolting, right? [9]

The sandy-haired guy goes on to point a weird, unfamiliar line of bolts two routes down from where they’re climbing, and said he was there the afternoon the equipper—an

inexperienced, citizen climber—put it up [9]. The sandy-haired guy, who finally introduces himself as Jesse, looks disgusted as he recalls this moment.

You know what bothered me? It wasn't the fact that he bolted it. It's the fact that when I was like, 'Oh, who did you talk to about this?' he's like, 'Oh, I talked to some old guys.' ... Didn't know their names. Didn't know who he had chatted with. [9]

Jesse examines his rack of nuts, thoughtfully stroking the webbing on their ends. "If he had asked some other people I think the consensus would have been 'Don't bolt that, that climb is shit. It's not worth it. [9]" Here, the *worth* of a climb, its goodness, usefulness, and value (and its being)—though somewhat related to its material quality—is more saliently assembled in direct relation to the notoriety of its equipper, or its context relative to other, more 'classic' climbs (Ryan, personal communication).

LJ cuts in, "[Yeah, but] do you own the climbs that you have bolted? [That's] the question. My answer is no. [12]" Climbs, in general are seen to be 'owned' by the community (Nathan, personal communication). Part of modern re-equipping is supposed to involve going back and correcting any ego-fuelled, underbolted routes with regard to their sparse bolting, sandbagged (sexist) grading—easy routes are for 'the girlfriends'—or sketchy placements [11]. Though this does happen, frequently these practices are still limited to 'second rate' routes without deeply-acknowledged humanist histories, or newer routes—'classic' routes are harder to retrobolt [11]. At LJ's interruption, Jesse is about go off on them again when his climbing partner (introduced to us as Roman) intervenes instead as the voice of reason. (Keenan is still somewhere on the route, fuming). Roman speaks slowly, intentionally:

The sport has acknowledged ... as the first ascensionist you get to name this route, so we know what we're doing. So we can go and repeat the route you climbed so we know what

it is. ... Do you own it? No. If it's a significant route should you have a say in how it's altered? Yes. Is yours the only say? No. [11]

He looks at both of them, patiently explaining his position, giving Jesse a steady, half-scolding side-eye.

The reason this used to be ownership was because everybody risked something when they climbed. ... Everything was ground up with shitty gear. So you know what? If you climbed this 5.10 ground up, with shitty gear, not knowing how hard it was, not knowing if it was even climbable? ... Guess what? I'm not going to fuck with it. You did a pretty badass thing, right? ... But nowadays this is not what's happening. ... So we need to temper ownership, right? ... And the notion that we can't alter stuff. [11]

I turn away from the argument just in time: as Keenan moves towards the top of the cliff he pulls his body beyond a slight bulge, his forearms taut with extensive effort, his left foot stabbing blindly for some stability. He is messy in his frustration. In the midst of many distractions, three things happen: he stands (ever so slightly, and only for a second) on a bolt hanger, LJ lets out a small gasp of *oh no, the bolt...* and Foucault shows up, peering over the top of the Escarpment. Keenan, realizing what he's done (despite not intending to do it) steps off the climb and weights the rope, defeated, his on-sight vanishing before his eyes the moment his incorrect *beta* made the climb ethically unreal. Foucault (1985), satisfied with Keenan's willingness to relate climbing's moral code to his ethical self, retreats over the cliff edge once more.

4.4.4 Ethical spatialites.

I'm paying out slack to Keenan (who wanted to finish the line despite his lack of send), but Roman and Jesse keep distracting me. Contrary to his apparent patient, focused trad ethic, Jesse moves around the crag with an erratic energy. He edges slightly too close to me as Keenan fumbles with an awkward clip, muttering away about polish and traffic and the decrease in

quality escarpment routes. Roman, in another moment of discontinuous contemplation, takes off on Keenan's tangent about the Escarpment's rock quality.

As I've mentioned before, the rock along the Niagara Escarpment (including Mount Nemo) is dolostone—a type of limestone—which is constituted of pockets, bulges, edges, fossils, tufa, and ledges. In the Nemo area, Gilbert (2013) explains that,

The rock is quite broken, with cracks and solution pockets creating a very blocky cliff face. There is a lot of loose rock, and each year the freeze-thaw cycle, as well as climber activity, results in numerous large and small pieces of the escarpment coming loose. The resulting cracks are useful for placing gear, but there is a constant exfoliation of the cliff face, and climbers should be constantly on the lookout for dangerously loose rock ... [especially] after the spring thaw. (p. 8)

Limestone cliff-sides are also home to a wealth of flora and fauna, notably the Eastern White Cedar, *Thuja occidentalis* (Kelly & Larson, 1997; Kuntz & Larson, 2006; Lorite et al., 2017). Access negotiations throughout the Niagara Escarpment were abruptly cast into sharp relief after the publishing of Kelly and Larson's (1997) paper detailing the myriad of ways in which rock climbing was damaging these incredibly ancient trees, some of which were suggested to be more than 1,000 years old. The density of cedars of all ages is markedly less along climbed areas of the Escarpment, where climbers routinely used to remove branches in the way of ascents through chopping and (allegedly) Agent Orange (Kelly & Larson, 2007). Specifically, the cedars were often used as anchors for slings for climbers topping out onto ledges and cliff tops, acting as assistance in places the rock could not provide (Bracken et al., 1991).

Much of this knowledge and lore is integrated into climbing guidebooks as warnings, sets of rules, and manifestos (Oates & Bracken, 1997; Alexandropolous & Dwyer, 2016; Wong 2016). Additionally, the OAC and other advocacy bodies like Rock Respect provide ongoing

information about the *thuja*, integrating its protection under the looseness of its Code of Ethics (OAC, 2019). Slings cedars remains exceptionally taboo, though interacting with them is still extremely common where routes frequently travel on and through ledges where the trees are living—climbing in close proximity, you can see scars and breaks where entire branches have been removed.



Figure 5. Climbing near cedars. Though there are many routes where you climb in even closer proximity, the cedar in this shot (down and to the right of Clark, the climber) remains alive despite a visible root mat where a protective flake of rock has come off the wall. It is unclear if this damage is due to climbing.

The presence of bolt hangers, however, offers a reprieve from ‘nature’s lacking’— they ensure hybridity much in the same way that other types of climbing aid do (Barratt, 2011). The presence of bolts and anchors have ensured that slinging cedars has become mostly irrelevant, and instead has promoted an alternative style of development *beta*: ‘cleaning’ and equipping routes that is entirely rappel-based, as a way to ensure debris, loose rock, lichen, and certain plants are completely removed from the path of oncoming climbers as they work their way up increasingly small crimps and bad edges. This is in contrast to older styles of equipping that were, in aligning with (irrelevant) trad ethics, done ground-up on lead, ensuring that bolt-spacing and quality of fixed gear was suspect at best (Oates & Bracken, 1997).

Bolting practices have become increasingly contested as developers must come up with solutions to meet the increasing demand for climbing routes to consume [11]. This has led some developers to choose to ‘chip’, or manufacture climbing holds along blank stretches of wall, with the intention of ‘artificially creating’ more crags [11]. In general, chipping, ‘aggressively cleaning’, glueing, or artificially manufacturing routes in any way is not accepted practice on the Escarpment, and this is made explicit in many current and former guidebooks (Gilbert, 2013; Oates & Bracken, 1997) and by the OAC and Rock Respect (OAC, 2019; Timms & Nacua, 2019). Roman explains to us that, “Everyone thinks that, like, [chipping] is a bad thing. But they don’t know that they climb on climbs that are manufactured. It’s a tale as old as time, like... everyone does it. I don’t know what’s so taboo about it. [11, as quoted by 12]” He goes on to point out a number of more obvious instances of ‘human intervention’ in rock climbs and problems, bringing up the chipped crimps of Crazy Doctor (a 5.12b at Nemo) and the glued start-hold of Bonfire Rodeo (a Niagara Glen V6), which are generally accepted [1]. “[Chipping] is

climbing's best kept secret. Well, at least route developers' best kept secret... They think that people know about it. Now it just changes your whole perception of the climb. [9]"

Due to the taboo nature of chipping, as it pertains to recent Ontario crag development, chipping is never explicitly revealed, but is instead incorporated into the 'natural' *beta* of the line by virtue of being part of the process of bolting and cleaning (Nathan, personal communication). As far as I can tell, the OAC either has no understanding that chipping is happening on the Escarpment, or they are quietly sanctioning the process by virtue of not calling it out: though they condemn it on their website, there is no active mention against it in their media (OAC, 2019). This way, the presence of bolt hangers coupled with an ongoing focus on route-development works to hide unwanted material alterations while simultaneously bringing into being routes that are 'unethically' made, as chipping remains extremely controversial (Kardaleff et al., 2019; Timms & Nacua, 2019). Bolt hangers, in the context of these new routes, blackbox the use of what is considered 'appropriate' levels of human intervention into the 'natural' world of climbing. By literally inscribing sequences along the wall, chipping both increases and diminishes the possibilities for *beta* locally and trans-locally (Ness, 2011).

Jesse, seeing how angry LJ is getting, tries to calm things down once more. "Listen," he says, "The question isn't whether [chipping] is happening or it has happened. The question is what is the motivation of the route developer? [11]" In Ontario, part of this motivation is demand for new routes, but part of it is also the preservation of humanist histories of climbing—which routes are considered historical, notable, or valuable (Ryan, Nathan, and Jared, personal communication). Instead of directly tackling issues of damage and 'crowding' at certain Nemo walls, developers have used processes of chipping to redirect novice climbers away from routes

or areas of ‘historical value’ by instead bolting lower quality or less desirable areas with high densities of easy routes (Nathan, personal communication).

LJ looks absolutely disgusted by this entire conversation—they have been quiet while re-racking their draws and taping their finger, and now fix Jesse with an impenetrable stare, clearly annoyed. “Just don’t. ... Like, leave it alone! [12] Not every cliff face that ever has been put up by nature needs to be climbable! [12]” This gets Roman fired up, and his patience vanishes.

People will always think ‘oh, [a route is] always there’. It’s like... ‘well, maybe’. But how you develop [a route] determines whether people will ever want to climb the fucking thing again. [Limestone has] this horrible problem of having really moderate climbing to fucking V14 cruxes to really moderate climbing. ... And in a place like Ontario, where you don’t have a lot of rock, you don’t have a lot of new cliffs, and you have this huge demand from a community for climbing, right? ... What do you do? You may then start examining manufacturing holds, right? ... Is it the most fucking phenomenal climbing in the world? Probably not. Is it climbing? Yeah. Could it be fun? Absolutely. [11]

I am somewhat flabbergasted by Roman’s aggressive championing of certain utilitarianism, that he believes developers “can break moral rules, and justify this, if they can create greater happiness by doing so” (Fennell, 2006, p. 69). This is so outside of climbers’ habits of minimizing their own overuse that I laugh in his face (Rickly & Vidon, 2017). His composure regained, he responds to me with a certain calm.

[Look, I’m] not saying that chipping is a good thing to do, but we need to be clear about what it means and what other things with respect to it mean, like... when you’re cleaning a route, does that count? When you’re pulling loose rock? When you’re removing plant life, which is technically more damaging than putting a chip in a rock, as opposed to pulling *life* out? [12]

Suddenly, out of nowhere, Barad shows up, her rope neatly and dutifully carried on her shoulders. She intervenes in the argument:

Ethics is not simply about responsible actions in relation to human experiences of the world; rather, it is a question of material entanglements and how each intra-action

matters in the reconfiguring of these entanglements ... it is a matter of the ethical call that is embodied in the very worlding of the world. (Barad, 2007, p. 160)

I think about Roman's assertion. Cleaning. *What counts?* Chipping. *Is it climbing?*

Chipping and cleaning, both as parts of bolting, do more than physically change climbing *beta*: both rework what climbing *is* by virtue of determining which human and nonhuman agencies are considered more or less valuable by virtue of their usefulness to climbing itself. How must I ethically consider myself in relation to my climbing if the very constitution of my climbing is anarchic, messy, hybrid, and changeable (Barad, 2007; Foucault, 1987)? What is an ethical climb?

As we pack up to move on (Keenan has finished, cleaned, and is finally on the ground), abandoning Jesse and Roman and their constant bickering, my eyes are drawn back to a bolt hanger near the turn of a ledge, right beside a warped cedar missing a couple of its lower branches. I remember that Kelly and Larson (1997) suspect that both the physicality of the trees and their unlikely longevity can both be attributed to their vertical limestone world: the rock both restricts root expansion, and similarly for many years protected them from harvesting, damage, and attention. In turn, the cedars send their roots and anchors deep into the limestone's slippery fissures. Over time, this restricts and contorts the bodies of the *thuja* as they reach their limbs into pockets and behind notches, gnarling themselves into thick, knotted mats that push back against loose flakes, breaking them off, and eventually exposing these root systems to the open air (Kelly & Larson, 2007). (On our way out of the crag I hear the common yell of 'rope!' and turn back to see Roman yank their protection from the anchors and proceed to tangle it in the

branches of the very cedar I was just communing with. He pulls it, and the cedar bends and twists, finally breaking and showering foliage everywhere.)

Ultimately, the finicky nature of limestone allows and orders *beta* much the way that it allows for the life of the *thuja*: if the rock is too featureless, there is nowhere for climber or tree to become secure (through root, hand, or gear), and so neither is supported in their livelihood. In contrast, if the rock is too permeated with cracks and crevices, the growth of the cedars and the increase of scrabbling hands and gear placements further pushes it apart and renders it weaker—again both practices cannot be sustained. The inherent unpredictability of limestone (its flaws and fissures) protects both climbers and trees, so long as those flaws are not too pronounced or disrupted. The thing is, the Niagara Escarpment is a place of persistent flaws. Here, bolt hangers must intervene: an ethical choice (already) promoting hybridity that changes both what climbing *is* (and what its contained *beta* can be) and one which speaks to Barad's (2007) gentle urging toward a proximal, relational ethic of wonder and being.

4.4.5 Affording certain cascades.

I do not, as Sayes (2014) does, believe that the discussion of morality and ethic is irreconcilable within the framework of ANT. Conversely, I align with Barad's (2007) assertions that the intra-action of the mattering of the world is an ethical stance, and that to ignore the material-discursive entanglements that constitute this process is both a foolish and a grave mistake. Through exemplifying the bolt hanger as an actor which both embeds and facilitates ethical orderings of rock climbing, I am not suggesting that the bolt hanger acts as a method of transporting human symbolism or the burden of meaning (though this intentionality is nevertheless included in its installation) (Rossiter, 2007). Rather, bolt hangers themselves

become “visible actors in our moral [and ethical] associations” (Sayes, 2014, p. 138) by restricting and expanding the possibilities of our climbing being, and the cascades of ethical affordances that follow (Rossiter, 2007). If humans (and their bodies) are not the sole constituents of certain realities, neither are they the sole proprietors of certain ethics (Barad, 2007). Rock climbing has always been narrated as a place of contested ethical terrains: those that assume moral codes and subjectivations (as in traditional climbing), and those that delight in the relational becomings of matter (as in sport climbing) (Barad, 2007; Foucault, 1985). It is my hope that through the previous paragraphs detailing my personal (and political) struggle with ethical matterings, that my translation of an ethical ordering of *beta* facilitated through the presences of bolt hangers on the Niagara Escarpment has been rendered appropriately.

4.5 The Territorial Ordering of Bolt Hangers

Finally, the presence of bolt hangers also allow and constitute certain territorial orderings of sport climbing. This is to say that territories (spaces that are limited, bordered, or bounded) and processes of territorializing (marking “lines, strata, and segmentarities”) (Deleuze & Guattari, 1987, p. 4) are drawn in part by bolts and acts of bolting. Routes themselves—lines—are marked territory. Bolt hangers assemble certain allowances of *access* (to climbing as a community and identity) and *Access* (to physical spaces, as officially ensured), and precipitate socio-material norms in climbing, many of which are discrepant from explicit views of climbing ethic. Issues of *access* and *Access* are similar yet discrepant, and my use of ‘capital A’ to refer to the ‘securing’ of spaces is an (incomplete) delineation based on acts of authority by landowners, conservation authorities, and the OAC. Accepted constructions of many physical and practical

beta are governed, drawn, and re/worked through the position, quantity, location, and function of bolt hangers and their relational territorial processes.

In this final section, I work to describe processes of ordering (and bordering) territory as engendered through the presence of bolt hangers along the Niagara Escarpment. Through ordering territory, bolt hangers elucidate much about '*who climbing is for*': their position in relation to crag status, accessibility, and other im/material marks ensure certain spaces are reserved for 'real climbers' while others are left to 'gumbies' (novices). In order to facilitate this final description, I turn primarily to consider the Zoomba area at Mount Nemo—an area with a high concentration of low-grade sport routes—and the history of the Turtle crag—an area in close proximity to Nemo which was opened and closed within the span of six months. Though still closed, the Turtle remains a curious and unique 'marked' space within which bolt hangers encouraged certain *beta* that de/territorialized the crag (and Escarpment) as a climbing space.

4.5.1 A note on bolt-to-bolt climbing.

Things are getting complicated. There are numerous enlightened and useful perspectives on territory and processes of bordering (much like there are conceptualizations of affect, or definitions of ethic), and so once again, theoretical positionality is a matter of suitability and choice. Here, I must admit something: I had some hesitation in truly settling into choosing Deleuze and Guattari (1987) as my theoretical belayers for this section. Despite their suitability in speaking about territory, assemblages, and materiality, I was unsure if I would be able to 'handle' their methods of instruction and truly understand their philosophical expression.

Once again, I have taken some inspiration from my climbing practice, and so in this section employ a 'bolt-to-bolt' or 'projecting' method of applying theory. 'Projecting' (in climbing:

PRAW-jecting, not pro-JECT-ing), is the process by which a climber ‘works’ a route that is beyond their ability (Rickly, 2017a). Projecting is often practiced by moving slowly, from one bolt to the next, using specific types of ‘aid’ and/or hanging on the rope for lengthy periods of time as the climber carefully and dutifully inspects the route and practices varying *beta*. Though projecting rarely involves sending a route, it does take a considerable amount of effort, and is a faction of climbing in which repeated failure is considered acceptable (or at least the norm). In short, while I have landed on Deleuze and Guarrati (1987) as my belayers, this section has involved quite a bit of projecting—I position myself and my understanding of territory as one that is incomplete and in-process, but one that will ultimately get me through.

4.5.2 Deleuze and Guattari on territory.

As the season draws to a close, I am drawn from the cozy comfort of my home (once again) to the rash and rugged walls at Mount Nemo. This time, the catalyst was an invite from a very old community—climbers that I, in essence, ‘grew up’ alongside at my former place of work, Grand River Rocks climbing gym in Kitchener, Ontario. The inhabitants of my (former?) (current?) home. As I drive toward the crag I let the radio jump channels, and am somewhat thrown when it settles (without my complete consent) onto a broadcast of heavily accented voices speaking in disjointed and enchanting metaphor (or is it metamorphosis?) (Deleuze & Guattari, 1987)? I’m swept up.

The broadcast begins: “The territory is first of all the critical distance between two beings of the same species: Mark your distance. [With mannerism.] ... It is a question of keeping at a distance the forces of chaos knocking at the door” (Deleuze & Guattari, 1987, p. 319). I turn up the radio dial; everything seems fuzzy. How can I delineate this? “For it is true that a territory

has two notable effects: a reorganization of functions and a regrouping of forces. On the one hand, when functional activities are territorialized they necessarily change pace”—this is their emergence as an occupation, or a trade (Deleuze & Guarrati, 1987, p. 321). “ [And] that other effect ... consists in this: the territory groups all the forces of the different *milieus*, [surroundings, middles,] together in a single sheaf constituted by the forces of the earth” (ibid, p. 321). A territory. *A trade and its earthly forces.*

I’m speeding, trying to pay attention. I didn’t realize it—as I’m moving toward a full day of climbing with my old crew, I’m caught in a pressing need and a bewitching rhythm, a hunt for my home, a want to draw myself back into the *refrain* of climbing, within a comfort couched in chalk. Deleuze and Guattari (1987) crackle back through the speaker: “Territorialization is an act of rhythm that has become expressive, or of milieu components that have become qualitative” (p. 315). I think of my surroundings, of my immersion, of the silly slang and casual conversation I am barreling toward, something categorically different and yet familiar, the certain material, gestural, and auditory rhythms that allow my belonging in certain spheres and spaces. These *refrains*, as Deleuze an Guattari (1987) discuss—their “aggregate of matters of expression that [draw] a territory and [develop] into territorial motifs and landscapes”—these refrains sound like *beta*, like climbing (p. 321). That the territory itself seems to be both a function *of* and a function *itself*...it is no wonder that I am caught in certain recursive, responsive assemblings. It is marked—these *marks* are motifs, reminders, borders. (Mark the distance.) As I move toward my people I move toward my spaces, but that neither are constituted or owned by me. I am in the middle, the milieu, of many territories (Deleuze & Guattari, 1987).

4.5.3 Territorial bolting.

As move closer to Mount Nemo, I am thinking about the Turtle Crag and its specific organization: Just off of Walker's Line, in Burlington, with an approach of about five minutes walking. Straightforward and easy to navigate. The Turtle—on private land, with the homeowner less than 100 metres away—with its generously-bolted sport routes, its teaching anchors, its shored-up belay stations. Its unique density. Its material constitution. Its communicated configuration as a climbing space.

The Turtle, as I've mentioned previously, was a climbing area that opened in April 2018, consisting of a high density of closely-bolted moderately-graded routes. The Turtle's extremely straightforward approach, short walls, and friendly equipping meant that it was the perfect location for novice climbers to earn their stripes. In this, its bolting was a territorial choice (to move new climbers away from Nemo) by virtue of offering the space as a gift [9]—a territorial sacrifice, a demarcation of *critical distance* between climbers that were allowed and disallowed (Deleuze & Guattari, 1987). The bolting of the Turtle was an olive branch from the 'old guard', an expression of charity and community service directed at newer climbers, welcoming them into the fold, while simultaneously re-territorializing Nemo (and other, more 'monumental' crags) as a space for the 'elite'. But now there was space for them, the novices. (They, too, could be *real* climbers.) The Turtle came with pre-chipped, pre-conceived *beta* [11]. And the rules were simple, posted at the crag on a metal sign: *No overcrowding. No dogs. Use stick-clips. Wear helmets. Don't be loud. Don't shit at the crag* (Ontario Climbing, 2019). Things that climbers are asked to do all the time, at every crag, by the OAC, guidebooks, and by virtue of being good

stewards (Wong et al., 2018; OAC, 2019). Things that were ultimately ignored, as the Turtle was closed in September of 2018.

Over the few months of the Turtle being open, routes rapidly became polished from rope-run, the wearing of quickdraws, deposition of rubber-residue, and imprints of chalk. Climbers, from the insertion of the first bolt, began to territorialize the space as a climbing space, their matters of expression swift and material. Eager to draw and be drawn by their territory, new climbers followed lines of bolt hangers up paths of limestone ledges, quickly transforming ‘good quality’ routes into marked, marred places (Rossiter, 2007). Rocks were accidentally kicked off of ledges, X-d out (allowed to remain on the wall but deemed ‘too unstable’ to be ‘used’ on-route, and marked with chalk X’s as spaces to avoid), and intentionally pulled and launched off the wall.



Figure 6. A loose block ‘X-d’ out.

I suddenly think of my friend Wes, hanging from his harness on a route called *Too Tall for Small* (graded 5.10c) a route we were climbing together last year. Strange and serious, he laments: “Right, so I don’t think [it’s necessary to bolt routes for the masses]. Right? Because all we did [was] turn another beautiful landscape ... into a shitty [mess]. We showed how shitty we are. [10]” The act of territorializing a climbing space meant that bolts, in this instance, were a catalyst, a *condition* for the climbing society (Sayes, 2014): not only did they open the space to the potential for easier climbing, and presume a certain type of sanctioned *Access*, they also lowered the bar for *access*, opening space in the world of climbing to *the masses*, those who did not belong in Wes’s imaginary. Wes continued as he felt around for his next holds. “It’s more private outside. It’s a private club out here. Like... you need to *know* shit. [3]” He pulls his body up onto the wall, his left hand gaston, his right moving with learned and specific *beta* to come in and cup a rounded edge. “We do a self-selection process [at Nemo]. ... The accessibility to a degree does that. Whereas that was perhaps lacking at the Turtle because you could just .. you could walk right up there and you’re like ‘here are the bolts.’ ... You need to be a *climber* to get down [to the routes at Nemo]. [5]” High densities of easy routes—especially if those routes have a straightforward approach—attract climbers who may know how to climb, but are not *climbers*. *Bolting is super intrusive*, [2] Wes continues, grunting, hiking his foot near his chest, “The fact that [outdoor climbing] is a private club ... keeps [crag and climbs] from degrading to that point [where they’re closed]. ... Whereas [the Turtle] was so accessible that anyone who wanted to go could go. And it was none of that [accountability]. [2]”

He pulls to his next bolt, the hanger still winking, still knowing. As he meets the metal with the hanger he lets out a small grunt of relief, and pulls to a cluster of overly-chalked holds. As he

moves to pull on a chockstone it wiggles loose and blows from the wall, showering me in a cloud of dust and missing my head by about six inches. Wes laughs, *close call*. I'm a little scattered. He rests back on the rope, taking without asking. "I would like to see [the Turtle] reopen. But at the same time I think it's going to be one of those 'don't ask, don't tell' things. Maybe... the owner is going to let ... certain people climb. But I don't think it's going to be like it was. [8]" He puts his fist into the space where the chockstone was, feeling around, pulling dirt out of the void, muttering.

If people want to enjoy the thing that I do, I want everybody who wants to do that to do it too. But at the same time, like look at the Turtle. It seems so cut and dry because the landowner was like 'here's what I don't want you to do' ... [and] even when it is that cut and dry people still don't care enough. [8]

He moves to climb again, and is finally out of earshot, leaving me with a quandary.

Because there is a catch, and a weirdness to how climbing spaces are (de/re)territorialized, one which has been exceptionally difficult to trace, a blind and blurry bordering, a "vast array of affective and transformative material processes in which social and spatial orders and disorders are constantly reworked" (Woodward & Jones, 2005, p. 239). Though access is dependent on Access, access means not having to worry about Access. This ordering is iterative and relational. Let me explain.

Wes has hinted at this interrelating of (A/a)ccess: when he's referring to how intrusive bolting is, he's discussing the physical practice of placing bolts in rocks, how the act of affixing permanent gear is a claim, an appropriation, a condition that allows the possibility of climbing and the making of climbers (de Léséleuc, 2004; Rickly, 2017a). Yet, he alludes to a hesitation about lowering the bounds of entry, and what this can mean toward sustaining climbing spaces,

about keeping them marked as territory; this opening up means climbing's many symbols, semiotics, and strata are rapidly deterritorialized. The climbing body, territorialized—the *being-a-climber*—is based on having spaces in which to express relations of climbing, of *beta*, and (often, on the Escapment) bolts with which to assemble climbing. And yet once one is established, territorialized as *being-a-climber*, those expressions that continue to enact this territory are *less dependent* on rock, chalk, gear, and space. A climber needs secure Access, secure spaces to continue being made. And yet, once imbued with certain markers of *being a climber*, certain adherences to processes of territorializing become less important—the climber begins to move away from *the masses, the gumbies*, ordering themselves more in relation to self-expression of climbing, and less in relation to climbing space. Re-bordering.

So, bolting interferes with climbing by (de/re)territorializing and altering narratives about which people or stories are seen as 'belonging' in certain climbing spaces. Bolt hangers act to lower the bounds of entry for newer and less experienced climbers, both by acting as physical cairns, as it were, and by affording climbers access to vertical spaces with greater ease and fewer skills. As climbing becomes more heterogeneous and less clearly delineated it deterritorializes, eventually facilitating "new, inventive forms of bordering" (Woodward and Jones, 2005, p. 240) as certain sub groups (those with more experience, money, better 'ethic' or skill, or more highly attuned *beta*) work to close themselves off from novices (de Léséleuc, 2004). This distancing is a distress signal.

Here is where (A/a)ccess starts to overlap, and also where the OAC's Code of Ethics becomes more about reiterating *territorial* boundaries than it does about truly 'climbing

ethically’; indeed, ethics becomes positioned as part of the territorial refrain (Deleuze & Guattari, 1987). For ease of consideration, The OAC (2019) code of ethics is as follows:

- Aspire to climb and boulder without leaving a trace
- Maintain a low profile
- Use existing trails
- Dispose of human waste properly
- Understand and respect historical ethics and restrictions
- Respect the rules
- Park and camp only in designated areas
- Climb and boulder safely
- Be more aware of sensitive plant and animal species

Climbers frequently position themselves as more environmentally-conscious, better stewards, and as engaging in more sustainable practices than non-climbers—these behaviours tend to correlate with years of experience (Frauman & Rabinowitz, 2011; Wilson et al., 2014). Despite the OAC promoting learn-to-climb days, advertising their Code in guidebooks, and publicly sanctioning only certain behaviours, ‘expert’ or ‘ingroup’ climbers routinely reterritorialize climbing spaces and practices through knowingly ignoring, rebuffing, or acting contrary to suggestions from the OAC (Ryan, Jared, Alex, Nathan, Douglas, personal communication). This is an altogether different position than novice climbers territorializing areas through overcrowding, polishing, and eroding, but one where certain climbers—finding climbing itself to be less clearly marked as a territory and a particular practice of certain *beta*—push certain rebellions further by virtue of their territorialized bodies (Deleuze & Guattari, 1987). I think about Wes, back on the ground once again, still fuming.

People who climb feel like they’re in an exclusive club and once they get to a certain skill level or a certain knowledge of places or *betas* they want to protect that—they want to keep the club as a club. . . . Some people get to decide on the rules, and those people feel like they’re in a counterculture and they’re being inclusive. But inherently, all kinds of people are being excluded. [7]

The sun is going down, and I can see it disappearing into Lake Ontario from high on our vantage point, the wineries flooded with golden light. We are alone, with no crowds, no dogs, and no noise, save from the clinking of our quickdraws and the sudden, crisp release of Wes's beer. We talk about the languid, lyrical *beta* of *Too Tall for Small*, its high quality, the fact that it has not been over-trafficked into an absolute mess. (Yet.) The Escarpment is silent in my memory, with Wes fresh off the climb, as we weave the end of our day into a stopper knot and retreat (quietly, secretly, slowly) away from Campden, one of the OAC's designated closed crags (OAC, 2019).

4.5.4 Territorial capacities.

I am about to shut the radio off when I hear one last refrain. “There is a territory precisely when milieu components cease to be directional, becoming dimensional instead ... [T]he reorganization of function implies... the component under consideration has become expressive and that its meaning ... is to mark a territory” (Deleuze & Guattari, 1987, p. 315). Bolt hangers order climbing *beta* by territorializing spaces—they change our interactions with our many worldings by anchoring us into a climbing space. Deleuze and Guattari (1987) remind me that despite appearances, we are not going in circles. These words follow me down and into the Zoomba area—an easy, modern, bolted wall where many local climbers go to participate in their first outdoor climbing experiences—as I move to meet Steven, Georgie, and Mariah. I think about this iterative behaviour with Access and access: this way that bolt hangers draw in and push out climbers by virtue of having Access (territorialized), by way of allowing access (deterritorialized), and by blurring the boundaries of (A/a)ccess (reterritorialized). I realize: there

are many marks. And “the territory is not primary in relation to the qualitative mark; it is the mark that makes the territory” (Deleuze & Guattari, 1987, p. 315). Here, I want to describe this back-and-forth process of (de/re)territorializing spaces in relation to the *beta* surrounding im/material marks. Like many of my current orderings, it begins with bolts. But bolts *lead* to more.

A mark—cold: I am headed toward the climbing area, with the intention to climb, with the intention to clip bolts (my quickdraws vibrate from within my pack) and the weather does not phase me, I climb beyond the gym (a climber, territorialized). I touch the rock, and suddenly my fingers are numb—I complain about the cold (not a climber, deterritorialized). I will climb anyway (a climber, reterritorialized). [2]

A mark—signage: My relationship to Mount Nemo is different, as I am allowed to renegotiate space(s) and maps because I know where the bolts are hidden, I belong to a faction of climbers—I move vertically, I do not heed the warnings of gravity like other people do—and so other rules do not apply to me either (a climber, territorialized). The Bruce trail leads climbers west, to the Easy Way Down into Nemo’s climbing spaces, and it is more simple to follow the signs (not a climber, deterritorialized). But I know a shortcut—when the blazed trail becomes too inconvenient I step off into the brush to take a (signed, restricted) desire path down through the Falling Tom gully (a heady, technical, and over-polished 5.2 downclimb) (a climber, reterritorialized). [3]

A mark—root exposure: I pick my way west along the bottom of the Escarpment through the motherwort and catnip (a scrub of shrubbery and old friends) suddenly coming up along toward the Zoomba wall, as the thin, densely-overgrown trail spreads out into a worn, dusty span of exposed roots and lichen-less rock—the physicality of the area itself is clearly delineated, and

so I have arrived at the crag (a climber, territorialized). Steven is already on the wall, leading a 5.8, and I tell him not to grab roots while he clips the bolt (not a climber, deterritorialized). I take a belay position leaning against a tree, lackadaisical, a snarl of roots under my errant feet (a climber, reterritorialized).

A mark—chalk: Later, on the wall myself and fumbling for the correct *beta*, I envelop my hands in chalk, leaving that strange mineral trace across many depositions where it does not belong (a climber, territorialized). I deadpoint to what I think is a large, positive jug rail but it's a sloper and I fall, surprised at myself (not a climber, deterritorialized). I yard back up the rope and swing over with a tiny piece of chalk, leaving a long tick at the divot where I need to hit the sloper, and I retry with success, forgetting to wipe my tick away (a climber, reterritorialized). [9]

A mark—polish: I wipe the dirt off my shoes onto my pants, run my hands over glassy limestone, stare up at the next bolt (a climber, territorialized). The route I'm on is slipperier than I remember, and it makes it feel the headiness of the line, the polish pushing it up a few grades (not a climber, deterritorialized). As I'm working, I hear Georgie complain on the route next to me about how insecure everything is—I tell her to get over it (a climber, reterritorialized). [2]

A mark—blood: I haven't been working very hard on my power endurance and I'm finding it challenging to make it more than five clips, but I am working, though the crux on *Twist* is near the fourth and I'm already getting pumped (a climber, territorialized). I move to make a bad clip with my rope far above my head and I catch my hand on the rock edge, sketchy (not a climber, deterritorialized). My hand rips open as I make the clip, my blood splattered all over the wall (a climber, reterritorialized).

A mark—beer: I send, the route enfolded in a space that has now *made* me, and from below Georgie shouts up *Allez! We will have to get a beer!* (a climber, territorialized). I start to clean the route and Steven reveals that we don't need to go anywhere—he pulls two glass bottles of Bud Lite from his backpack as Georgie shakes her head, *glass and booze isn't allowed at the crag* (not a climber, deterritorialized). The Escarpment sweeps out around me in all directions, and the sun bleeds warmth directly into my chest; when I finally lower, five minutes later, I remember I have a can of Pabst in my backpack and shotgun it with gusto, licking my lips as I comment to Georgie *at least it isn't glass* (a climber, reterritorialized). [6]



Figure 7. Krista on top-rope at the Zoomba wall. Note the massive light-coloured space where flakes have been pulled off by climbers.

A mark—top rope: This one is easy. I lead the next route (a climber, territorialized). I can't make it up, so Mariah finishes it for me (not a climber, deterritorialized). I pull the top rope and try it again, skipping the last bolt to save energy—I send (a climber, reterritorialized). [2]

Refrain—bolt hangers: The marks of climbing territories are not vectors, they do not move in one direction. Instead,

Expressive qualities entertain variable or constant relations with one another (that is what matters of expression do); they no longer constitute placards that mark a territory, but motifs and counterpoints that express the relation of the territory to interior impulses or exterior circumstances, whether or not they are given. (Deleuze & Guattari, 1987, p. 318)

Bolt hangers, like many other actors, work as gatherings and clusterings, pulling together marks of expression that are indicative of certain *beta*. These attributes are multiple and many, and how the hanger (de/re)territorializes bodies and spaces also changes how blood, helmets, chalk, beer, and polish (among other marks) work.

4.5.5 Considering access and Access.

The interesting thing about engaging a network translation is that we, as imperfect beings, will inherently translate an imperfect network—through assembling we have no choice but to engage in practices of bordering. I have made intentional choices to omit and redraw the very territories that I occupy in this document, for the sake of exemplifying fuzzy bordering, overlaps, and partial territories, especially with regard to certain 'allowances' of de/territorialization as made manifest by bolt hangers. The bolt hanger, as it has been made to 'speak' in climbing, has become quite talkative, especially with regard to how territories are drawn, worked, changed, materially altered, and documented in order to delineate and re-prioritize certain orderings of *beta*.

While the presence of bolt hangers is necessary, in many cases, to mark territorial orderings of climbing *beta*, it has been rendered an actor with a dual purpose: there is now “a margin of deterritorialization affecting the territory itself,” (Deleuze & Guattari, 1987, p. 326). This, in the discussion our many types of refrains—aren’t there so many ways we can sing songs?—means that bolt hangers are omens of *confrontation*, of both gatherings and departures (ibid.). As *beta* is territorially ordered, bolt hangers allow actors to both move away from and move toward certain assemblages of climbing, sometimes simultaneously, and sometimes contradictorily, a reworking of authenticity through a bordering of rhetoric and action (Rickly & Vidon, 2018). This act of bordering does not neatly lie between binary conceptions of nature/culture, or human/nonhuman, but is re-worked and active (in sometimes hidden ways) to secure areas and (A/a)ccess for certain human purposes (Woodward & Jones, 2005). This is the main purpose in illuminating the multiple descriptions of *marks*, as each territorialized expression continually becomes a part of a larger ordering of *beta*.

Chapter Five: A Mess of Orderings

5.1 Revisiting Our Initial Questions

Finally. Finally, we have been led to a point and positioning where it is time to bring together an ultimate ordering, a mad mattering of the Niagara Escarpment. *Beta*, in all its minutiae, has emerged in a remarkable, relational capacity, strung between patches of dirt wiped onto cuffed jeans and the trunk scars of cedars that bear striking resemblance to certain inconspicuously-chipped holds. (I am still caught, somewhere, between curtains of falling ants, my tie-in knot held fast with extra chalk, my palms pressed (vibrating) against the rolling-run out of a blunt arête...) Truly, *beta* employs many actors in order to facilitate its grand and material-discursive storying of the Niagara Escarpment, and many of them have been named in this thesis in persistent (humans, limestone) and fleeting (nylon, tape, quarrying) ways. In order to facilitate the emergence of this chapter, I want to revisit for a moment the intention of this thesis. In summary, the purpose of this research was to draw upon Actor-Network Theory in order to explore the many relational, entangled orderings of *beta* as they work to story the Niagara Escarpment in ongoing, emergent ways. This is further detailed in my research questions, which consider:

1. How does *beta* manifest as an ordering (or assemblage)?
2. Who or what are the actors that form the ordering of *beta*?
3. How do the orderings of *beta* shape and/or change the broader discourse of climbing?

In this final chapter, I want to touch on each of these questions before summarizing the many possible ways forward from where we've found ourselves (still, somehow, in the messy middle of things). However, as aligned with many other manifestations of ANT, the answers to

these questions are a little bit jumbled together. Accordingly, the first and second question will be answered in the same section, regarding the presence of bolt hangers in facilitating orderings of *beta* that are affective, ethical, and territorial. Finally, the third question will be considered in terms of how the orderings of *beta* (as prompted by bolt hangers) promote material-discursive defacings of the Niagara Escarpment, and of climbing more broadly.

5.1.1 Beta and bolt hangers.

The ordering of *beta* is populated, dictated, prompted, and facilitated by a (sometimes unlikely) jumble of many actors. (It is here that I, as the translator of the network, once again must be clear in positioning my certain shaping of the ongoing assemblage of *beta*—while it is true that the bolt hanger emerged as a dominant and token actor in my interviews, field visits, and document analysis, there were many other loud and talkative actors to which I could have attended) (Ruming, 2009). Despite these many other interferences, the persistent and defiant influence of the bolt hanger was ultimately too powerful to ignore.

Bolt hangers are active in shaping and embedding affective, ethical, and territorial orderings of *beta* along the Niagara Escarpment. Materially, bolt hangers are a presence, an anchor, something that physically alters the spaces of climbing (Bogardus, 2012). However, the bolt hanger also intervenes by establishing other relational matterings far beyond the use of their intended, physical purpose. This interference is eloquently explained by Law and Singleton (2005), who explain that “we cannot understand objects unless we also think of them as sets of present dynamics generated in, and generative of, realities that are necessarily absent” (p. 342). As demonstrated by the contained narratives, bolt hangers both generate and are generative of affective, ethical, and territorial worldings of the Escarpment. Further, bolt hangers work, as

Sayes (2014) explains, as gatherings, bringing together actors and agencies from many different temporal and spatial locations, in order to make visible the relations of these many realities. Bolt hangers gather many of the other actors present along the Escarpment—the OAC, equippers, chalk, quickdraws, for example—and draw all of them into orderings of affect, ethic, and territory as storied in the thesis.

Through engaging the perspectives of my many belayers, I have attempted to describe the three (sometimes overlapping) orderings of *beta* that the bolt hanger revealed to me. This narrative-style, interspersed description is consistent with the methodological demands of and previous works using ANT (Beard et al., 2016; Ren, 2011; Ruming, 2009). Though the integrated perspectives of various theorists—d’Hauterres (2015), Foucault (1985) and Barad (2007), and Deleuze and Guattari (1987)—are considerable, through their careful mentorship and patient (theoretical) belaying I have felt supported in describing these networks outright. These networks show the specific, relational capacity of the bolt hanger in intervening with certain ideas about who climbing is *for*, how climbing should *feel*, and what climbing should *be*—all of which are infiltrated with certain tensions about actors, networks, and distributed agency (Law, 1999). Bolt hangers are both resultants and catalysts; it is my hope that the previous network descriptions engage and display some of this precarious ordering. The enactment of the bolt hanger is one that determines certain im/possibilities (Law, 2002). Though objects themselves are networked and reconfigured (Ren, 2011), I nevertheless feel that some sufficient storying has rendered the Niagara Escarpment in rich, *beta*-intensive detail.

What I want to emphasize is that while bolt hangers *say* and *make* much about climbing on the Niagara Escarpment, this is not the entire reality—that would be well outside the abilities

of not only this thesis, but of any possible documentation. Considering certain aspects of network relations are more-than-representational, the action of representing orderings of *beta* as written descriptions of affect, ethic, and territory is already somewhat tenuous. This does not have to do with any fear of reducing the discursive to the material, but rather with a discomfort toward uncertainty, in-betweeness, partiality, or incompleteness (Law, 2004; Netto, 2016). Borrowing from space syntax, I do not feel I am at risk in describing an *isovist*—a quantifiable, topological description of bounded space—I am not bound *solely* to materiality (Benedikt, 1979). Rather, the described networks as ordered through *beta* also have the potential to *continue to work*, and *contain workings*, as they are political interventions invested with situated, translated theories of multiplicity, productivity, and mattering (Barad, 2007; Vikkelso, 2009).

In summary, *beta* manifests as affective, ethical, and territorial orderings. The token actor that forms this assemblage is the bolt hanger, but there are many human and more-than-human ‘voices’ as well, some of which—like the OAC, limestone, and certain crag developers—are more dominant than others. Though the answers to the first two research questions are decidedly more descriptive—and thus further discussions are somewhat limited to the theory and relations contained in each network—all are wrapped up in the diffractive, relational world-making process of ANT (Doucet, 2018; van der Duim, 2007). Accordingly, the performance and presentation of these orderings is consistently and carefully rendered in the narrative-style network descriptions, as they describe but also enact *beta* across the landscape of the Niagara Escarpment.

5.1.2 Material-discursive defacings of natures/cultures.

We have, however, a third question, and it is this one which requires a certain amount of further attention and discussion. Accordingly, in the described networks, *beta* has been ordered through the bolt hanger as a material-discursive *defacing*. Essentially, orderings of *beta* as affective, ethical, and territorial shape the Niagara Escarpment by both materially and immaterially altering and damaging the Escarpment and the stories we tell about it, both inside and outside of climbing; the Escarpment's *tourismscapes* are bound up in *beta* rife with defacing that is material-discursive. This has unique implications for Escarpment climbing, climbing tourisms, and understanding of climbings' relationship to nonhuman natures.

Returning to our earlier definitions, we know—based on work by Rossiter (2007)—that climbing involves inherent and unavoidable defacings that are *necessary* to elaborating a climb. The defacing present in climbing directs certain energies, alters attention, causes cascades, and allows certain types of landscapes to emerge (Rossiter, 2007). Indeed, though many defacings of climbing are material, these processes of defacing move beyond the climber-cliff interrelations suggested by Rossiter (2007), out through Ness's (2011) translocal ethnoscapings of *beta*, and land somewhere in the realm of the material-discursive, once again challenging the tired dualism of natures and cultures.

Defacings suggest blurrings and rubbings: areas and landscapes of destructive change. (It is hard to determine the bounds of a defacing.) This is to say that while defacings are crudely identifiable as patches or noun-determined swatches of damage (spray-paint, polish, mistrust), they also have an active, vibrant, and 'ecological' quality that *works*—they are liminal, they have a verbage, they are ongoing (Bennett, 2010; Evers, 2019). Defacings, as one of the ways in

which *beta* shapes the broader landscapes of climbing, work to enact a befuddling change, both to the materiality of climbing, and to conceptualizations of what climbing *is*. Much like Evers' (2019) discussion of the intermingling of surfers and pollution, climbers are archetypically drawn as having unique interactions with nature (Brighenti & Pavoni, 2018; Lewis, 2000), though inquiries rarely move beyond this and into questions of the inherent destruction and damage present in these interactions, and how these damages manifest. In my resulting network descriptions, this process of broad defacing is facilitated by the overlapping, reconstituting, and blurring of affect, ethic, and territory as it works to disrupt binaries of human/nonhuman and nature/culture. Bolt hangers make it clear to us that climbing is *already infiltrated* with these muddyings of certain binaries, but are nevertheless consistently posed by climbers and coalitions as both problems and solutions to questions concerning the constant (re)bracketing of nature, and ideas surrounding access and damage.

Focusing on the possibilities embedded and facilitated by nonhuman actors like bolt hangers redirects attention away from conceptualizations of climbing that are over-focused on 'direct interaction' with nature via the human body, as if the body is always assumed to be unmediated (Lewis, 2000). We know this to be incorrect: climbing welcomes hybridity, cyborgs, and bodily-technological mediation of all kinds (Barratt, 2011; Barratt, 2012). Indeed, "selves are attached—in both senses of the word—to materials and other beings through relations that are both partial and provisional" (Latimer & Miele, 2013, p. 9). However, considering the bolt hanger's position in storying the Niagara Escarpment further expands this attachment, allowing a description of and an inquiry into the relational capacities of materials and actors that are 'not used by' 'human' bodies (like Barratt's (2011) cams or shoe rubbers). The bolt hanger works not

to make or alter bodies in situ, but instead *relate* them in ways that reconfigure and illuminate ‘covenants’ of the human, by exposing and subsequently defacing performances of affect, understandings of ethic, and boundaries of territory (Picken, 2010).

So, how do these defacings work? Attending to the orderings of *beta* as facilitated by bolt hangers (and their many interventions) prompts a relational materialist reworking of ‘reducing impact’ and ‘sustainable climbing’ that disrupts traditional understandings of nature, including ideas about what nature should be (Collard et al., 2015; Evers, 2019; Lewis, 2000; Ryan, 2002). Most importantly, bolt hangers are loud in their reiteration of Ryan’s (2002) questions regarding the power of discourses that promote the continued separation of natures and cultures: “Are all ‘unnatural’ impacts negative and all ‘natural’ ones positive?” (p. 272).

Bolt hangers embed specific information about destruction and change, and work to direct processes of defacing in specific, ‘acceptable’ ways via their presences or absences. These defacings do not have a positive or negative valence, but project both *ironic* and *complementary* performances of *beta* as they re-render the relational, emergent landscapes of climbing (Crouch, 2010; Ryan, 2002). These ironies refer to the ways in which certain types of damage (like the smoothing and polishing of edges by ropes and hands) are absorbed and accrued as ‘acceptable’ parts of the affective, ethical, and territorial orderings of climbing, and are discrepant from changes to *beta* that result from ‘unacceptable’ damage like glueing or chipping.

To exemplify, let’s consider the relationship between limestone and the bolt hanger. (Lyrical, laughing...) Inherently, the glassiness and slipperiness of limestone means that over time, while it is used to climb, alternative holds and sequences must be found within the rock in order to maintain the grade along the bolted line, until the path of the route is worn down such

that routes are no longer ‘readable’ in ways prior (Rossiter, 2007; Rickly, 2017a). Damage expands beyond its ‘intended’, bolted path, until assigned grades and route descriptions (and route *beta* itself) are over time worn, polished, and reworked. Here, limestone material becomes resistant to climbing (Rickly, 2017a)—the more a specific *beta* is enacted, the more difficult it becomes to enact said *beta*, and the less physically salient it becomes, despite the lingering symbolic mappings of guidebooks, photographs, gestures, and memories (Nettlefold & Stratford, 1999). On the Niagara Escarpment, this defacing becomes material-discursive, and has lasting affective, ethical, and territorial effects.



Figure 8. Chalk and polish on a limestone hold in the Niagara Glen.

First, these material alterations intervene in affective orderings of *beta* by once again defacing certain securities and ‘psychological’ protections (Barratt, 2012), despite climbers not having any concrete reinforcement as to the physical properties of the bolt. While bolt hangers change how climbs feel (by offering security), their spatial mapping prompts the degradation of limestone, injecting insecurity into the line by way of decreased texture, ‘bite’, or tactile sensation. This further prompts a dis/ordered emergence of certain routes that is generated as more or less ‘real’, ‘present’, or ‘secure’—an *affective defacing* that works to change climbers’ relationships to ‘natural’ outdoor spaces. As the bolt hanger both encourages further defacing, and also means that protection is more secure, it is once again the ‘problem’ and the ‘solution’ (Picken, 2010). Additionally, though bolt hangers co-constitute the emergence of the climb alongside limestone (and chalk, and dirt, and cedar, and weather, and...) their continued presence works to rubbing away at certain saliences of physical *beta*, resulting in qualitative, changeable, material-discursive reworkings of the basic emergence of each climb. Like Andrew and Greg suggested in my network descriptions, bolt hangers qualitatively and fundamentally alter the experience of a climb, whether or not they are used.

Second, the poor quality of limestone for traditional (not sport) climbing means that limestone prohibitively interferes with climbing that relies on gear for protection, necessitating that bolting practices are more lenient in Ontario. The presence of bolt hangers mark the erosion of certain climbing ethic and discourse by way of interference—despite being able to ignore them, or perform the same *beta* without them, bolts represent a damage to the ‘purity’ of the line, ethically recontextualizing the way climbing is done. Additionally, the ‘secret’ introduction of chipping into newer crags, without disclosing accurately the level of human intervention

represents an *ethical defacing* by which the installation of bolt hangers and the process of cleaning is mobilized to disguise unacceptable processes of damage as acceptable—how are we to know which traces to leave none of if we are not clear about those we are leaving (Ryan, 2002)? These ‘advanced tactics’ (i.e. chipping) were performed on areas of decreased desirability for climbing (like the now-close Turtle crag) with the intention of aiming to ‘rework’ ideas of what Escarpment routes could be like—one of these routes is even named ‘*Twenty Feet of France*’, an homage to the area in which chipping was popularized (though as an area for novice climbers, this reference would go unnoticed). I am skeptical that the OAC is unaware of this practice. What does it say, then, about our ethical climbing behaviour, when the arbiter of what is ‘correct’ is inherently corrupt (OAC, 2019)?

Finally, ignoring or integrating polish, damage, and erosion redraws the bounds of entry, and restricts newcomers by insisting that degraded routes maintain their initial physical form and related (graded) difficulty. This ensures that territorial orderings of *beta* are degraded by virtue of their textual and numeric encapsulations (Nettlefold & Stratford, 1999). Discursive practices of climbing are degraded by virtue of material alteration—despite the climb ‘changing’ the insistence remains that the climb is the same in guidebooks, gestural *beta*, and gradings. This tendency for Escarpment routes to remain numerically-unchanged despite ongoing physical transformation is reflected in Clifton Evers (2019) explorations of polluted leisure, and how damage is used to border areas, bolster ego, and keep newcomers away—a *territorial defacing* of the Niagara Escarpment that flits between *Access* and *access*. Damage is absorbed by the climbing community as an obstacle that must be overcome in order to secure access, despite making Access insecure. Additionally, certain re-territorialized climbers (those with elite status

or skill) are ‘allowed’ to access closed areas, use distinctive marking tactics (like ticking holds) and take convenient shortcuts, ensuring that the ability to ‘do’ damage is not equally distributed across human climbers, despite contradictory guidebook information. Rickly and Vidon (2018) define this practice succinctly as “exclusionary politics [that] are performed in the name of environmental sustainability” (p. 1423).

Defacings operate by reworking affective, ethical, and territorial orderings of *beta* along the Niagara Escarpment, effectively blurring the (ever-lessening) boundaries between nature and culture, and instead inviting messy, disruptive manifestations of climbing naturecultures.

Through using Actor-Network Theory to follow the bolt hanger, I have been able to both describe and intervene in certain storyings of the Niagara Escarpment. These descriptions do not stop here, but welcome a set of abundant possibilities—“The future is not the end point of a set of branching chain reactions; it is a cascade experiment” (Barad, 2007, p. 394). Our responsibility in describing these orderings is to provide a platform from which to begin these cascades. In the next section, I probe some of these possibilities as they manifest practically, theoretically, and methodologically. (We are almost there).

5.2 Moving Forward

5.2.1 A blurring of boundaries; Possibilities for theory.

Considering and illuminating the orderings and (endless, precarious, powerful) assemblages of *beta* within the climbing world contributes to a broader body of ANT (Barratt, 2011; Barratt, 2012) and critical, relational-materialist work on climbing (Brighenti & Pavoni, 2018; Ness, 2011; Rickly, 2017a; Rossiter, 2007). By detailing *beta* as an ordering by which certain actors facilitate processes of defacing, this work opens up possibilities to further consider

the ways in which climbing can interfere with, disrupt, or challenge constructions of assemblage theories, ANT, more-than-representational orderings, and emergent worldings. This is especially fruitful in discussions of affect—while there are ongoing and thorough discussions (even amongst the climbing communities) on ethics and territories (Bogardus, 2012; Cailly, 2006; de Léséleuc, 2004; Kiewa, 2002; Rickly & Vidon, 2018), conceptualizations of affect retain expansive possibilities in understanding climbing’s ability to produce and permit certain unexpected relations (Ness, 2011).

Further, this work seeks to outline and continue the careful use of posthumanism through working to destabilize human-centred narratives of climbing and *beta*, and to resist conventional, oppressive, and hegemonic humanist regimes of thinking (Kumm & Berbary, 2018). This critique and work is important—theoretically, but also practically—as our adherence to and participation (or refusal of participation) in networks shape our social (and academic) lives (Law, 1992). To draw from Brighenti and Pavoni (2018), “It is interesting how a new form of ‘horizontal’ (instead of having the subject “above” the object) can be achieved by pursuing an uncompromising verticality” (p. 69). These academic and theoretical pursuits cannot be understated: while it seems easy to brush off ANT work as an exercise in theory, the suggestion of distributive agency and the de-stabilizing of the hierarchical human subject continue to allow messy, material matter to *matter* (Bennett, 2010; Elder-Vass, 2008; Kumm & Berbary, 2018). This continues to bring critical attention toward the importance of more-than-human relations in our assumptions about ontologies (and epistemologies) (Latimer & Miele, 2013). The uncertainty and anxiety that comes alongside the recognizing, and reenacting our human

position(s) inside a now more-than-human assemblage is an important exercise (Berbary et al. 2017). There is potential, in re-working these narratives, for new and exciting types of praxis.

Additionally, describing orderings of *beta* as they work to enact and extend localized, embodied acts of mattering into broader, assembled ethnoscares (Ness, 2011) furthers a line of thought in tourism studies considering the broader understanding of how to integrate relational materialisms into our workings of the open-endedness of tourism(s) and place(s) via *tourismscares*, and the vibrant more-than-human materials that occupy them (Picken, 2010; van der Duim, 2007; van der Duim et al., 2013; van der Duim et al., 2017). Tourism orderings have been more frequently considered as emergent, “contingently assembled and interdependent socio-material configurations consisting of people, organizations, objects, technologies, and spaces” (van der Duim et al. 2017, p. 139). Positioning orderings of *beta* in a similar way to *tourismscares* continues to expand our possibilities for integrating an abundance of actors in considering acts of tourism, while simultaneously challenging theorists and individuals to rethink what tourism *does* by once again bringing the (sometimes-human) body and many more-than-human entities back into stark, relational relief (Rossiter, 2007; Veijola & Jokine, 1994). This is also to say that alternative actors, objects, or landscapes may ‘use us’ (Brighenti & Pavoni, 2018) through methods and modalities of emergence that are embedded, inferred, connected, inhabited or performed in tourisms like rock climbing. The relational becomings of *tourismscares* may “seem to emerge in the poetics and expressivity of engaging space in complex, uncertain and widely affected ways” (Crouch, 2010, p. 11). This positions us to consider the power of specific, localized acts of tourism as generated through and ordered spatiotemporally by specific objects, through bodily practices, and ‘defaced’ landscapes (Evers, 2019).

Finally, considering the certain defacings of affect, ethic, and territory inherent in the ordered *beta* of climbing opens up a broad set of questions regarding the incorporation and acceptance of damage, destruction, or pollution in relation to nonhuman natures (Collard et al., 2015; Evers, 2019; Ryan, 2002; Vannini & Vannini, 2019). Material discursive defacings, as they persist in establishing the network of *beta*, “complicate predominant discourses about stewardship, sustainability, communion with nature, and wellbeing” among other things (Evers, 2019, p. 7). By acknowledging and promoting *living with* these defacings, we confront and diminish the irony inherent in past conceptualizations of nature as discursively constructed by humans as entirely *human-less* (Ryan, 2002). Defacings of nature/culture do not solely represent a depressed, deserted future (and present) not worth saving—they also shape the possibilities for emergent (tourism) landscapes, and futures. Defacings, engaged as a relational process of *possibility*, encourage hope (Lueck, 2007), abundance (Collard et al., 2015), and rethinking of ‘ecological communion’ (Evers, 2019). If our current ways of being are not enough, we must move toward acts of mattering, becoming, and emerging in the very messy middle of things (Barad, 2007). This is possibly the only way forward.

5.2.2 Assembling many *betas*; Possibilities for method.

In further accordance with promoting theories of more-than-human agency in tourism, this work seeks to contribute to pedagogical and practical advancements in research methodology that forefront nonhuman agency, messiness, and the use of anxiety (Law, 2004; Stinson & Grimwood, 2018). In using ANT with careful methods I aim to reduce instances of asymmetry, recognize nonhuman agency, open blackboxes, and further promote its use in

describing both micro and macro orderings (like *beta* and *tourismscapes*) as well as their key actors and objects (Law, 2004; van der Duim et al., 2017).

Additionally, with this work I want to promote and encourage the use of creative methods within ANT, including those that (though not yet experimented with) offer the potential for new perspectives, strange matterings, and wild responses from any number of actors. This thesis uses both engaged witnessing (Bell et al., 2017) and diagramming, (Barry, 2017), neither of which (to my knowledge) had been used in conjunction with an ANT-style methodology before. While both of these methods required certain reworkings, reconceptualizings, and a great amount of researcher failure, they both offered unique potentials for encouraging strange data and broadening my personal understandings of how to effectively trace nonhuman actors. Further, I also aim to ‘cross-pollinate’ my use of ANT with theories and perspectives that are potentially fruitful, leading to the included poetic descriptions, ‘narrative’ style ‘analysis’, and integrated theories (Muller & Schurr, 2016). Though such experimentation with method is suggested and encouraged by Law (2004), Berbarry and Boles (2014), Beard et al. (2016), and other ANT and posthumanist scholars, there remains little documentation of any experimentation within the processes of ANT analysis, creative or otherwise.

I also want to stress the potential for incorporating certain affects into ANT, especially those that are frequently deemed ‘negative’, like anxiety (Stinson & Grimwood, 2018). ANT’s relational materialist position does not necessarily bind us solely to the realm of physical things; rather, tracing actor networks moves us through many discursive realms of yes, materials, but also of ideas, metaphors, languages, and affects (Law, 1999; van der Duim et al., 2013). In order to prevent a focus on ANT’s STS beginnings, I want to reiterate that its greatest strengths lie in

its application toward encouraging ontological multiplicities, especially those that overlap and manifest in more-than-representational ways (Barratt, 2012; van der Duim, 2013).

5.2.3 Abundant defacings; Possibilities for climbing practice.

Finally, there remains a huge discrepancy in the current ‘theory’ and the practice of rock climbing in Southern Ontario, including how prioritizing the expansion of humanists legacies of climbing continues to suppress certain materialist ones. This disconnect is present throughout guidebooks, climbing encounters, conversations, alternative records, and the physicality of equipping routes, not to mention in my own personal practices of climbing. Generally, if nature and nonhumans are considered, it is by virtue of being ‘othered’ through discourse of purity, wilderness, naturalization, or the value of certain natures over others, with priority landing on those that are ‘alive’ (like trees over rocks) (Vannini & Vannini, 2019). Much of this disconnect exists under the guise of conservation (of spaces for the *sole purpose* of climbing) and preservation (of only *certain* climbing spaces due to their humanist/ascent histories). To do this, climbers frequently use rhetoric of ‘Access’ in order to ensure the ongoing existence of climbing as a pursuit by deploying binarist assumptions of natural climbing spaces as separate from the human practice of climbing (OAC, 2019). This is despite both obvious and insidious ‘construction’ of climbing spaces through performing, bolting, and chipping routes, and the proliferation of related affective, ethical, and territorial *beta*. Accordingly, steps taken to actualize ‘Access’ are entangled with many types of material and immaterial damage, and often ignore the very intertwined naturecultures (Haraway, 2003) that climbing produces by continuing to favour rhetoric of fear control (affect), minimized intervention (ethic), and reducing overcrowding (territory) (Ryan, 2002).

And yet, the presence of bolt hangers already interferes with how climbing should *feel*, who climbing is *for*, and what climbing should *be*. Climbers insist that they know their practice is not ‘pure’, but still continue to push for and perpetuate constructions of climbing that position humans far, far away from nature (Rossiter, 2007). Climbers, for whatever reason, remain “unable (or unwilling) to recognize the nonmodern condition of their existence” as enmeshed with many natures (Latour, as cited in Castree, 2003, p. 206). However, by installing fixed gear where climbs are ‘naturally un-protectable’, chipping ‘unclimbable’ limestone faces as a method to control crowding, and excluding polishing (i.e. traffic wear) from grading establishments, many types of beta are already being reworked by bolting and its related processes—many practiced types of beta already include hybridities of naturecultures. Why do we continue to insist on these chasms of difference? Why aren’t we listening?

Considering, performing, and proliferating *beta* remains a practice of acting in the network: it is the choice or refusal, the countering of binaries, a “mattering of involvement and effect” and a “matter of concern” (Kumm & Berbary, 2018; Picken, 2010, p. 260; van der Duim et al., 2017, p 142). By choosing to perform and enact *beta* in certain embodied, affective, ethical, territorial, and material ways, climbing is continually affirmed as a specific collection of discourses and practices. Right now, the local climbing community is ignoring (or at least incorrectly identifying) the *nature* of our defacings—that it is not as simple as abiding by LNT, or simply ‘shutting down’ certain crags. Part of this practice of honest entanglement might mean working toward ‘engaging more materially’ and ‘living with’ our defacings (Ryan, 2002)—coming to an acknowledgement of the ebb and flow of the rubbings and erosions of rock, dirt, grading systems, territorial distinctions, bolting practices, and affective responses within our

climbing systems without becoming jaded or giving up. ‘Living with’ defacings in climbing should not be a ‘screw it’ attitude of consumption and continual harm, but an ‘ecological’ vibrancy present in carefully attending to the persistent presence of climbing damage (Evers, 2019). This again aligns with Collard et al.’s (2015) suggestion that our futures must be abundant, and that efforts toward conservation must not remain humanist, utilitarian, or positioned to optimize the use of ‘natural’ spaces for the ‘greatest number of people’.

As of recently, there have been a number of changes and new conservationist efforts on the Niagara Escarpment, many of which have been spearheaded by or done in tandem with the OAC (OAC, 2019). First, Rattlesnake (a highly-trafficked top-roping crag), has recently been fully equipped with teaching anchors and a number of low grade sport routes in order to further draw novice climbers away from Nemo (since the Turtle remains closed) (Ontario Climbing, 2019). Though this continues the perpetuation of the valuation of certain areas over others, it represents the community using an already-‘degraded’ crag instead of expanding the ‘footprint’ of damage through chipping or bolting new areas. (It is unclear if these ‘new’ routes at Rattlesnake are manufactured or not—would it matter if they were?) Second, there have also been rumours that certain areas of Nemo—namely the Zoomba wall area—will be stripped of their bolts in order to discourage traffic and overcrowding. Though this will have the ultimate effect of moving (novice) groups away from this area specifically, the effect of this action on other areas remains unclear, as this may motivate large groups to find other areas to climb that are currently less-trafficked *within* Nemo, and not move toward the areas deemed ‘appropriate’ at Rattlesnake. (Here in-lies another territorial marking on the Escarpment). It is unclear how long it will take for (or even if) signs of erosion, rock-scrubbings, or polishings to be reversed. Third,

the OAC has been testing out certain types of processes to remove spray-paint from ‘unclimbable’ problems in the Niagara Glen (OAC, 2019). This has the dual-result of both reopening older problems (and so redirecting traffic) and also openly allowing processes of restoration (which may lead to a similar practice in other sport climbing areas for problems of polish or rubber deposition). However, the removal of spray-paint is once again positioned as *for the purpose of climbing*, will inherently invite people back to areas of high degradation, and does very little to attend to nonhuman conservationist efforts (Collard et al., 2015). Finally, there have long been rumours of certain crags (namely Campden) opening to the public, while others like Devil’s Glen and Lion’s Head are in danger of being closed (OAC, 2019). This, once again, has the potential to draw traffic to different areas, but ultimately it remains to be seen whether the redistribution of human bodies will do anything to mitigate or complicate ‘damages’ across the Escarpment (or even if these rumours are true—the OAC page listing crag closures has not been updated since 2015) (OAC, 2019). An information panel regarding these closures is slated for some time in the summer of 2019.

If climbers want to continue climbing in Southern Ontario, especially on the Niagara Escarpment, ‘living with’ our defacings might become exceptionally complicated. We may need to take aggressive restriction on the development of new crags, to the detriment of older ones. We may need to implement policies of waivers, body-counts, or ticketing, to the unattractive exclusion of those with less time or money. We may need to facilitate honest grade changes with respect to continual traffic wear, to the diminishment of ‘easy’ routes. We may need to look outside the Escarpment entirely, stop climbing, and focus on indoor climbing, or the climbing of ‘built’ buildings and structures (Brighenti & Pavoni, 2018). Or perhaps we may need to have an

open conversation about the possibilities that come alongside manufacturing, chipping, and modification of climbing areas, especially with regard to already-established or damaged routes. Defacing is inherent in Southern Ontario climbing; 'sustainable practice' means that we might have to be open to creative, emergent, and very material solutions to our ongoing problems of access, lest we fall into the trap of once again positioning nature as a blank slate—this time a used one (Collard et al., 2015). However, the only way we will facilitate these conversations is through an honesty that (so far) seems to be absent in the voices of many of the human actors.

5.3 Broad Conclusions; “This Careless Challenge in the Ordinary Landscape”

In *Ontario Climbing Vol. 1: The Southern Escarpment*, Dave Chaundy-Smart pulls from Alice Munro's 2011 story *Axis* in order to describe “what it feels like to encounter the Escarpment as an interruption not just of the landscape, but of your life” (Alexandropolous & Dwyer, 2016a, p. 4). One phrase embedded in the paragraph jumped out at me: the painting of the Escarpment as “this careless challenge in the ordinary landscape” (Munro, as cited in Alexandropolous & Dwyer, 2016a, p. 4). Respectfully, it seems I disagree with the lot of them—the Escarpment is not an interruption, but an emergence. And its challenges are not careless, but deeply and truly relational. We are nothing without care, and we should not be interrupted. This is where we need to go.

Indeed, our ethical responsibility lies in our response to the assemblages we find ourselves a part of (Bennett, 2010). With this in mind (that we are within the mess and the milieu), Collard et al. (2015) warn that “when considering how to intervene responsibly and ethically, an ongoing and active reckoning with the past is crucial” (p. 327). This means that if we want climbing to persist in its many matterings, we must pay mind to its humanist histories,

but also begin to attend to the hidden histories of more-than-humans that have interwoven themselves throughout and into our current state of ‘ruination’ (Evers, 2019). Responsibility toward encouraging this specific, abundant honesty “entails an ongoing responsiveness to the entanglements of self and other, here and there, now and then” (Barad, 2007, p. 394). We must better consider the potentialities of cedars. We must attune ourselves to the spaces bordered by chalk. We must welcome the loud and languid laments of limestone. We must look at the possibilities provided by bolt hangers.

As Chaundy-Smart’s fondness for Munro’s quote suggests, many climbers still believe that walls are *for* climbing—that there is no other agent so deeply immersed in the emergence of a line than the person pushing for the send (Alexandropolous & Dwyer, 2016a). Though it might be a stretch to suggest that climbing could *be* for any other agent, it does not mean other agents should be quieted, stifled, or ignored in the many makings of climbing, its landscapes, and its tourisms. The ordering of *beta* is a practice and enactment that has discursive implications in terms of which stories are presented, preformed, and proliferated within climbing areas—this leads, more broadly, into the way climbing can work to produce and order larger worldings like *tourismscapes*, or rework ideas of nature and culture. The way *beta* is ordered speaks to whom and what is present in that very making, who and what decidedly *belong*, who and what control climbing narrative(s), a traditional belonging is restricted to human bodies that ultimately ‘modern’, and ‘separate’ from nature, but that we know is no longer accurate or affordable (Nettlefold & Stratford, 1999; Rickly, 2016).

Conclusively, and instead of Chaundry-Smart’s suggestion, I want to offer a different vision. Of the Escarpment, wrapped up in explosive potential, lingering in its fractured and

fascinating form. (Like) a landscape, looming. Sardonic and sacrosanct. Built from and still unconstituted with so much damage that makes matterings possible, especially those of climbing. It's true: you don't bolt areas of strength—to climb you must bolt and use lines of weakness. It is the damages and the ruins, the cracks, the incompletenesses that allow the Escarpment to be storied, over and over, by climbing. If we want climbing and the Escarpment to continue to encourage fascinating futures, we must truly consider what this means not only for humans, but for more-than-humans as well (Rossiter, 2007). A description, diagram, or directional of the (messy, precarious, powerful) orderings of *beta* in places like the Niagara Escarpment allows us as more-than-human climbers to reconsider our humanist legacies and storyings of our climbing places, and to work to rewrite these in ways that better reflect our very urgent, very material considerations. Being in the mess, we may want to start getting out of the way.

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Appendix A

Field visits to Mount Nemo Conservation Area

Date	Activity	Accompanied by
Wednesday, October 10, 2018	Intended to climb—rock wet	Bea, undisclosed escort, dog
Friday, October 19, 2018	Climbing and diagramming (video recording)	Clark and Douglas
Thursday, October 25, 2018	Climbing and interviewing—group/conversational	Ike, Alex, Matthew, Chad, and Krista
Tuesday, October 30, 2018	Climbing, diagramming (video recording), and interviewing—conversational	Matthew
Tuesday, November 27, 2018	Engaged witnessing, hiking	Undisclosed escort

Appendix B

Human participants and their associated information

Participant transcript reference number	Name*	Date of Interview	Interview location	Age	Gender	Years climbing on the Escarpment
1	Ryan	October 22, 2018	Ryan's home, Kitchener, ON	23	Male	8
2	Matthew	October 25, 2018	Mount Nemo Conservation Area, Burlington, ON	23	Male	First time
3	Krista	October 25, 2018	Mount Nemo Conservation Area, Burlington, ON	37	Female	2
4	Ike	October 25, 2018	Mount Nemo Conservation Area, Burlington, ON	38	Male	2
5	Alex	October 25, 2018	Mount Nemo Conservation Area, Burlington, ON	31	Male	3
6	Chad	October 25, 2018	Mount Nemo Conservation Area, Burlington, ON	42	Male	First time
7	Clark	October 27, 2018	The Queen's Coach, Niagara Falls, ON	30	Male	3
8	Tiera	October 29, 2018	Grand River Rocks climbing gym, Kitchener, ON	25	Female	1
9	Jared	October 29, 2018	Abe Erb, Kitchener, ON	N/A	Male	7
2	Matthew (second interview)	October 30, 2018	Mount Nemo Conservation Area, Burlington, ON	23	Male	Second time
10	Douglas	November 5, 2018	The Winking Judge, Hamilton, ON	41	Male	16
11	Nathan	November 5, 2018	The Winking Judge, Hamilton, ON	N/A	Male	32
12	Bea	November 15, 2018	Researcher's home, Hamilton, ON	28	Non-binary	2

Appendix C

Interview guide

Intro: “Thank you for choosing to participate in this interview. As we discussed earlier, this interview is about your experience rock climbing on the Niagara Escarpment. We will start with a general question about your experiences doing so, and then I’ll continue to ask questions and prompt you about specific instances, experiences, or explanations. Please remember that you don’t answer any questions that you don’t want to, that this interview will be anonymized, and that we can stop at any time.”

- The interview starts by asking participants to talk about how they got into rock climbing, including any experiences relating to specific people, practices, locations, routes, or notable situations that acted as catalysts to their climbing experiences.
 - i. How and when did you start rock climbing? What about outside?
 - ii. Who taught you to climb?
 - iii. What was that process like?
- Prompts will be used to elicit increased detail from participants regarding specific routes and experiences climbing those routes, especially regarding how they looked, felt, smelled, etc., the physicality of the route, and what types of emotional responses the routes encouraged
 - i. What is your favourite/least favourite route/problem?
 - ii. Can you describe for me your beta for completing (problem or line)?
 - iii. What did you find to be the crux of the (problem or line)? Why?
 - iv. Can you describe the process by which you figured out your beta for (problem or line)?
 - v. What was it like climbing (problem or line)?
- Prompts will also be used to encourage discussion of specific issues in climbing that might affect *beta* more broadly, including access, inclusivity, ethics, practices of bolting, and crag damage.
 - i. What do you think about (issue *ie. the closing of the Turtle Crag*)?
 - ii. How do you think we should manage the increased want for climbing?
 - iii. How does climbing’s increased popularity change your interactions with climbing spaces?
 - iv. How does traffic affect your beta?

All of the above are suggestions only, and may change/be altered depending on the pace/focus/unfolding of the interview, emerging tokens and/or actors, the interruptions or guidance of other co-interviewees, or any other number of climbing-related possible paths.

Appendix D

Climbing terminology

Belay	The process of safely allowing a climber to ascend a line while attached to a rope. The belayer uses a mechanism (commonly a camming device called a GriGri, or a smaller piece of metal called an ATC) to control the rope at a steady pace in order to minimize the fall potential of the climber.
Beta	The sequence of movements that construct a rock climb (Phillips et al., 2012). <i>Beta</i> denotes the choreography which marks the ‘best’ or ‘most efficient’ way to complete a rock climb. Often, there is a specific, known <i>beta</i> , that a climber can ‘have’ or ‘do’; however, <i>beta</i> is not universal and indeed depends on things like height, flexibility, bodily construction, specific strengths, and other factors (Rickly, 2017). <i>Beta</i> can be ‘broken’, or ‘alternative.’ <i>Beta</i> can be ‘multiple’ or ‘micro.’ ‘Short person’ <i>beta</i> or ‘girl’ <i>beta</i> are common terminologies for ‘alternative’ <i>beta</i> .
Bolting	The practice of drilling and further affixing glue-in or expansion bolts into rock in order to permanently protect a sport climbing line. (Schuster et al., 2001).
Bouldering	Smaller routes/lines—called <i>problems</i> —completed without a rope, where climbers fall onto foam pads closer to the ground (Frauman & Rabinowitz, 2011; “Understanding Rock Climbing”, 2017). Bouldering often features climbing that has fewer movements that are more powerful and gymnastic in nature.
Choss	Bad rock. A ‘chossy’ route is one where the rock is low quality—possibly loose, dirty, or uninspiring.
Crags	Climbing areas. Crags can be quite broad, and extend for multiple pitches (rope lengths) on routes, or be relegated to only a couple of small boulders (“Understanding Rock Climbing”, 2017). Many crags have their own unique best practices (environmental and non-environmental suggested ethical behaviours) (“Understanding Rock Climbing”, 2017).
Dab	“Touching a rock that is not part of the problem and ruining your send.” (Wong et al., 2018, p. 46).
First ascent (FA)	The very first time a route is climbed without falling. Typically, the first ascensionist gets to name and grade a route, though grading is further established through consensus after repeated ascents (Nettlefold & Stratford, 1999).
Gear/kit/rack	Often a climber’s harness, shoes, and chalk bag. <i>Kit</i> and <i>rack</i> refer more to quickdraws, cams, nuts, or other mechanisms that either attach to fixed bolts placed in the wall or jam into cracks that make up a rock climb (Barratt, 2012). Sport climbing generally requires only quickdraws, while trad climbing might necessitate a more complicated assortment of other mechanisms.
Hueco System (V-System)	A grading measure that details the difficulty of boulder problems. The V-System is denoted from V0 to V17, with the number representing the technical difficulty of the problem.

Climbing terminology

Lead (climbing)	The ‘sharp end’ of the rope. Ground-up climbing where the climber carries the rope up with them, attaching the rope to the wall by either placing protection (in trad climbing) or affixing quickdraws (in sport climbing). In contrast to <i>top roping</i> , where the climber is attached to a rope affixed somewhere above them, often to a permanent anchor system. A <i>send</i> does not ‘count’ unless it is completed on lead.
Rappell	Rappelling is a controlled practice for lowering off the top of a cliff or rock face using a rope and protective equipment.
Route/line/problem	The rock climb, or, the place which <i>beta</i> is enacted. A <i>route</i> is a bolted or non-bolted, single or multi pitch ‘path’ up a rock face, sometimes called a <i>line</i> (“Understanding Rock Climbing”, 2017). A <i>problem</i> is a smaller version of a route or line that is specific to bouldering, which is generally shorter and thus has less movement (Frauman & Rabinowitz, 2011).
Sandbag	When the difficulty of a route is much more steep than the numeric grading suggests.
Send	To finish a route or problem without falling—essentially the purpose of pursuing climbing. A climber can ‘send’ or ‘get the send’ of a line.
Sport climbing	Scaling a rock face with a rope and harness while clipping quickdraws into permanently fixed bolts as a safety precaution (“Understanding Rock Climbing”, 2017)
Spray	Providing other climbers with either unsolicited <i>beta</i> —‘ <i>beta spray</i> ’—or talking at length about one’s own climbing accomplishments.
Traditional (trad) climbing	Similar to sport climbing, but climbers place cams/nuts/other ‘protection’ directly into the rock via cracks and features (“Understanding Rock Climbing”, 2017)
Yosemite Decimal System (YDS)	A grading measure that details the difficulty of routes or lines. The YDS is denoted from 5.0-5.15, with the first number representing the class of the route, and the second representing the technical difficulty. Above 5.10, each numeric grade is assigned a sub grade of a, b, c, or d. This means that 5.10a is three grades easier than 5.10d—the next grade in the sequence following 5.10d is 5.11a.