HORIZONAL PHENOMENA:
TECHNOLOGICAL MEDIATIONS OF GEOCACHING EXPERIENCE

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762015

This thesis is presented to the School of Social and Political Sciences at the University of Melbourne in partial fulfilment of the degree of Bachelor of Arts (Honours) in the field of Anthropology.

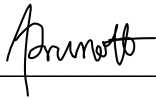Supervised by Associate Professor Monica Minnegal
October 2018
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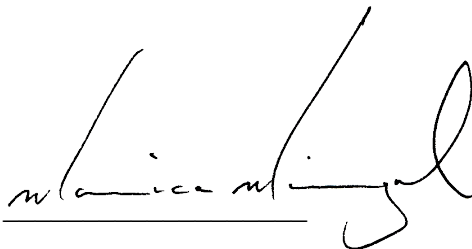# THESIS DECLARATION FORM

Student

I hereby declare that this thesis comprises my own original work and does not exceed 15,000 words (Honours in Anthropology), exclusive of footnotes, headings, bibliography and appendices.

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Alessandra Prunotto

Supervisor

I hereby declare that I have approved this thesis for submission.

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A/Prof. Monica Minnegal

Cover image: searching for a geocache under a bridge (photograph taken by author)

ACKNOWLEDGEMENTS

ABSTRACT

For those who have access to them, locative digital technologies are becoming increasingly pervasive in everyday life. It is therefore important to understand the processes by which such technologies are shaping how people engage with the world. This thesis uses a postphenomenological approach to examine these processes in the context of geocaching, a locative digital game that combines aspects of treasure hunting and orienteering. In particular, this thesis focuses on how technologies *indirectly* mediate how geocachers engage with the world; that is, how technologies might shape experience even when they are not co-present with humans. Interpreting data from interviews and participant observations conducted in metropolitan Melbourne, this thesis discusses how indirect technological mediations shape a geocaching world and a geocaching subjectivity. Firstly, it argues that directly mediated social relations shape the parts of the landscape that geocachers engage with and give rise to a shared mode of interpreting that landscape. Secondly, it argues that differentiated access to digital information creates a divide between the worlds of geocachers and non-geocachers, compelling geocachers to employ distinctive modes of interacting with and being in the landscape while playing the game. Its findings suggest that embodied interactions with technologies may create the conditions for the indirect mediating effects of technologies, but that we require further investigation to better understand the intricacies of indirect mediation. Hence, this thesis not only develops a relatively under-theorised aspect of technological mediation, but also contributes rich empirical data to understandings of geocaching and experiences of public space more generally.

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[All photos taken by the author unless otherwise indicated.]

~ Chapter One ~

INTRODUCTION

We may not often turn our heads to the sky, busy as we are in our immediate lifeworlds. Even if we did, we would be unlikely to glimpse one of the 4500 human-made satellites hurtling silently above us. Yet there are 24 of those satellites that anyone who carries a smartphone in their pocket is put in relation with daily. These are the NAVSTAR satellites, funded by the US Department of Defense, that make up the Global Positioning System (GPS). A constellation of three of these satellites allows a GPS-enabled device to calculate its latitudinal and longitudinal position with an accuracy of up to ten metres. Because of the in-built GPS capabilities of smartphones, users can download a host of applications (apps) that let them access information about the location and movements of themselves and others. On my own phone, I can count ten such apps, including one that helps me navigate, one that lets me "tag" where I took my photos, and one that lets me hail a ride-share within minutes. My iPhone's array of such apps is not unusual. Considering, then, that around 88 per cent of Australians own a smartphone (Triton Digital & Edison Research 2017), it seems that locative digital technologies are becoming increasingly pervasive in everyday life. An important question arises: how are these technologies shaping the ways that people engage with the world?

My thesis addresses this core concern in the context of geocaching, a locative digital game that engenders distinctive forms of interacting with, experiencing and being in the landscape. In this chapter, I introduce the premise and practice of geocaching, before situating my research question within the fields of technological mediation, postphenomenology, and the anthropology of play. I then introduce my research participants and outline the methods I employed to collect and analyse data. Finally, I provide an overview of the structure of the thesis.

Geocaching as practice and community

Although geocaching is played by more than seven million people worldwide (Kettler 2017), when I mention it to those curious about my thesis topic I am usually met with bemused expressions. The aim of geocaching is to use a GPS-enabled device, such as a smartphone or a Garmin handset, to search for "caches" (small containers) that are hidden in public spaces by other players (Fig.1). To do so, geocachers access the geocaching.com platform,[1] a centralised database of cache locations, through an application on their smartphone or their personal computers (Fig. 2).[2] Each cache has a "listing" attached to the location depicted on the digital map, which is a page that includes a description, clues, terrain, difficulty, and other attributes. Geocachers then use their mobile GPS device to navigate to "ground zero" – the cache's coordinates – before using their own senses to search for the hidden cache. Once it is found, they sign their name in the physical log book and can exchange any trinkets that might be in the cache. They then log the cache as "found" on its listing page, with the

Figure 1: A typical geocache.
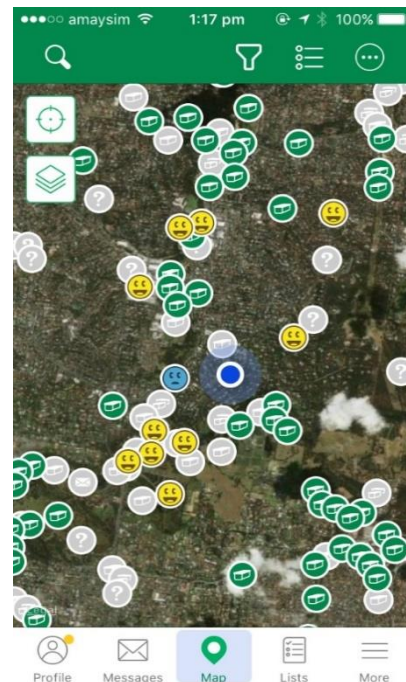
Figure 2: A screenshot of the geocaching.com map accessed through the official app for iPhone.

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[1] Although other listing sites exist, my thesis focuses on geocaching.com because it is used by the vast majority of players in Australia.

[2] When using their smartphones, some geocachers use the official geocaching.com app to access this platform, whilst others prefer third-party apps such as Cachly and c:geo, which fulfil a similar function.

opportunity to write an extended log that is seen by the Cache Owner (CO) and other visitors to that page. They choose another destination, and repeat.[3]

In and around the game itself, a geocaching community has formed. This community is constituted by a mixture of online and offline interactions, as well as linguistic practices that mark belonging. Victorian geocachers are involved in this community to varying degrees. Some play in an individual fashion, interacting minimally online, whilst others regularly attend geocaching events and go geocaching in small groups, turning the treasure hunt into a social occasion (Neustadter *et al.* 2016). Some geocachers I spoke to interact prolifically in the geocaching.com forums and the various geocaching Facebook groups, cultivating friendships primarily through digitally mediated interactions.

The kinds of people that constitute this community are highly diverse in some ways, but not others. Though very few studies have profiled geocachers, and none that I could find in the Australian context, Schneider *et al.* (2011) found that in the United States Midwest cachers tended to be white (96%), had an average age of around 40, were mostly male (86%) and were highly educated. These figures are broadly comparable with my experience and the accounts of my participants, except for the fact that there seem to be as many women as men actively geocaching in and around Melbourne. Despite certain similarities, geocachers tend to have highly varied occupational statuses and interests: my participants ranged from truck drivers to stay-at-home mums, from retirees to pharmacists. They also play the game very differently: they may prefer to cache in rural or urban areas; to complete statistical challenges or cache spontaneously; to pursue "adventure" caches or solve difficult puzzle caches. The geocaching community uses the game as a point of reference to undergird the relative heterogeneity of its members. As one of my participants said about the game, 'We all have this thing that binds us together.'

Linguistic practices are a key ingroup marker of belonging for this community (Baym 2003). Geocachers have developed their own jargon, littered with cryptic acronyms such as CO (Cache Owner), DNF (Did Not Find) and GZ (ground zero), the understanding of which

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[3] This is the typical process for finding a traditional cache. There are many variations of caches that I do not have the opportunity to deal with in this thesis, including puzzle caches, multi-stage caches, EarthCaches, Wherigos and more.

creates a sense of group identity and excludes others (Baym 2003). Indeed, geocachers have a specialised term for those who do not belong to this community: "muggles". Derived from the Harry Potter fantasy series, the word denotes those who do not have magical blood and who cannot access the world of magic coterminous with the ordinary world. By implication, members of the geocaching community position themselves as having a magical capacity to engage with the world that non-geocachers do not.

What are these forms of engagement that give geocachers the sense that they have a distinct, almost "magical", way of experiencing the world? Through my research and personal experience, I found geocaching to be a game that draws geocachers to places they may not otherwise go, and which obliges them to interact purposefully with the environment. It also makes them aware of other members of the geocaching community who act in the landscape, when those others create caches, maintain them and mark them as found. Meanwhile, their thrill comes from the semi-secretive nature of these activities. Yet, without the technologies of GPS, smartphones, and the internet, geocaching in its current form would not be possible. For this reason, my thesis asks: how do geocaching's digital technologies shape the ways in which geocachers engage with the landscape? Such a question situates this thesis in the study of technological mediation, postphenomenology and the anthropology of play.

Conceptual framing

Technological mediation is based on the notion that technologies are not merely "used" as tools to accomplish some task, but that they in fact mediate how people relate to the world and each other (Rosenberger and Verbeek 2015). Theories of technological mediation have been developed within science and technology studies over the last several decades by scholars such as Don Idhe, Bruno Latour and Peter-Paul Verbeek. Many of these scholars have taken postphenomenological perspectives to grapple with the ways that bodily experience is being mediated by technology in the context of the lifeworld. However, as I will expand on shortly, much of this literature is centred on *direct* mediation, or how embodied interactions with co-present technologies shape relations with the world. Whilst I touch on direct mediation in this thesis, I devote most of my attention to the ways in which technology *indirectly* mediates such relations. This aspect has been under-explored theoretically and empirically, but it is an increasingly important phenomenon to understand as digital

technology becomes more and more integrated with everyday life. We should be asking about the less tangible effects of technology.

Given the range of more so-called "useful" locative media out there, why address questions of technological mediation through geocaching? Indeed, when pitching the proposal for this thesis, I felt ambivalent about devoting a year to the study of a leisure activity. I wanted to research something "significant" – and I was not sure that a relatively obscure game fit that description. In retrospect, this ambivalence highlighted the way I had unwittingly absorbed and reproduced materialist assumptions about play – and its associated cultural forms – that negatively define it by its lack of productivity and stakes (Malaby 2009). Malaby (2009) links these assumptions to the rise of modern institutions and their impulse towards efficiency and routinisation of experience, but they also seem to be informed by a Protestant ethic in which moral import is given to hard work and frugality over "indulgences" (Weber 2006 [1905]). It is a similar logic that has seen anthropology neglect the study of play and games throughout the 20th century (Dyck 2004; Malaby 2009). But playing games *does* matter. Games are not "magic circles", isolated havens into which people step to escape the consequences of the real world; they are contextually situated and entangled with other currents of power and experience (Copier 2009). At the same time, they can be distinguished from mundane experience by their unique valence – their potential to grip their players in compelling forms of engagement (Dyck 2004). The current proliferation of digital games is bringing people, places and things into new relations and configurations faster than we can research and understand them. This furious rate of technological development and its concurrently evolving social phenomena creates an imperative to study people playing digital games, and to study them now (Williams 2006).

Indeed, literature on pervasive digital games[4] has flourished in the last decade since the advent of smartphones (but not necessarily literature that takes an explicitly anthropological perspective). Geocaching, as one such game with a consistent following, has received particular attention, especially in the US and Canada. Scholars have mainly studied the potential of geocaching to promote environmental education and tourism (Battista *et al.* 2016; Boulaire & Hervert 2012; Boys *et al.* 2017; Gram-Hansen 2009); understanding geocaching

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[4] Pervasive digital games, such as geocaching, are games that may occur anywhere, have no defined start or finish time and may involve non-players (Leaver & Wilson 2016).

practices and motivations (Golbeck & Neustaedter 2016; Schneider *et al.* 2011); and geocaching as a value-creation and consumption practice (Boulaire & Cova 2013; Scaraboto 2015; Scaraboto & Figueiredo 2010). Neustadter *et al.* (2010) and O'Hara (2008) have also detailed how geocaching must be understood as a practice that gains its significance through its positioning within a community constituted through both online and offline interactions. Themes of embodiment and engagement with the landscape are largely overlooked, with the exception of John Farman's (2009; 2012) work. Farman (2009, p. 1) argues that a 'convening of bodies, technology, and material space' creates a mixed-reality geocaching space, where physical and digital objects co-exist and interact. He also brings together elements of postphenomenology and poststructuralism to propose a '"sensory-inscribed" understanding of the body that is not only conceived out of a sensory engagement across material and digital landscapes, but also incorporates socio-cultural inscriptions of the body in these emerging spaces' (Farman 2012, p. 13). This thesis builds on the work of Neustadter *et al.* (2010), O'Hara (2008) and Farman (2009; 2012) to investigate how geocachers engage with each other and the landscape using a technological mediation framework.

Research design

The initial aim of my research was to examine the kinds of interactions that geocachers had with geocaching digital technologies and how these shaped their practice of the game. While the findings that emerged were more concerned with the mediating effects of these technologies, in line with this initial aim I designed my study with a small, but diverse, sample of primary participants. This allowed me to engage deeply with a range of geocaching experiences during the time constraints of the Honours year. Moreover, a diverse sample accords with postphenomenology's variational theory, which recommends that 'in looking at any phenomenon, one must place it within its possibilities, its variations' (Idhe 2008, p. 6). This aims to highlight the stabilities, or common structures, of that phenomenon, whilst also remaining open to the possibility of "multistabilities", or when a phenomenon has more than one experiential structure (Idhe 2008).

To recruit a diverse sample, I used a purposive snowballing method to find six primary participants with a variety of occupations, genders, ages, styles of playing the game and levels of geocaching experience. I initiated this process by contacting a university acquaintance who

is involved in the geocaching community. He put me in touch with **Geoff**,[5] a retiree, with whom he had often "cached" when he was a teen. Geoff lives in the south-east of Melbourne and is well-respected in the geocaching community, having been active in it for over ten years. Generous and warm-hearted, Geoff went out of his way to help with my research, informing me about upcoming events, sending me information, and introducing me to other geocachers. Indeed, he was the link to all of my subsequent participants. This snowballing recruitment technique shaped my results in certain ways, because it 'relie[d] on and par[took] in the dynamics of natural and organic social networks' (Noy 2008, p. 329). Indeed, my participants were similar to each other in that they were all white middle-aged to older adults, and most of them were active in the geocaching community. With fewer time constraints, I would have sought to increase the diversity of my sample by seeking out geocachers who were younger, identified as people of colour, and who were less sociable, to see whether the stabilities I identified were still relevant for those people.

First, Geoff introduced me to **vividrogers**, a stay-at-home mother of four who immigrated from the UK about ten years ago. Looking for an outdoorsy activity to do as a family, she signed up on geocaching.com around five years ago and became hooked. However, because her husband did not similarly become hooked, she mostly caches while the kids are at school, though her range is constrained by the fact that she does not drive. Next, Geoff gave me **Kirsten**'s contact details. A fulltime administrator, she is an energetic person who loves being physically active and who thrives on completing challenges and puzzles. She enjoys all kinds of caches, from the ubiquitous urban mint tin to the ammo can at the top of a mountain, but whatever the cache, she almost always finds it with friends. **sharkiefan**, Geoff's next recommendation, turned out to be a good friend of Kirsten's. A pharmacist with a New Zealand accent and a matter-of-fact demeanour, she will cache nearly anywhere at any time of day or night, should the urge strike her. She often takes weekend geocaching trips into rural Victoria, as she loves driving in the countryside for the ever-changing scenery. As I was looking for some less-experienced cachers, Geoff put me in touch with **Peter**, a young dad and chemistry teacher who caches with his dog early in the morning. Unlike the others, who had between 3000 and 10,000 finds, he had started caching seriously only a year ago and had

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[5] Primary participants were given the choice to be identified by name, or to provide a pseudonym of their choice. Those who chose a pseudonym gave the name they use on their geocaching.com account. I have quoted informal conversations with other geocachers anonymously.

around 250. He very rarely attends social events, but he already has a reputation in the community for constructing interesting and high-quality caches. My final participant was **Rod**, who enjoys fame in the geocaching community for the commitment that drives him to roll out of bed at 4am to be the first to arrive at a newly published cache. He is a tow-truck driver who often finds caches between the jobs that take him to all four corners of Melbourne. He is a talented storyteller who rendered anecdotes so vividly that I often forgot I was not actually there.

I collected information mostly through interviews and participant observations centred around my primary participants. With each geocacher, I arranged an interview of around 90 minutes at their homes or a café, which was then followed by participant observation of a geocaching trip on the same day or later that week. Through the interviews, I gleaned background information from participants about their motivations for caching, their caching preferences and how their caching style has evolved, allowing me to place geocaching within the context of their lifeworld. This dialogue revealed thoughts, explanations and reflections, and let me understand how their practice has changed over the years. As I gathered more data, the interviews also began to provide a space for participants to reflect on my preliminary findings, developing more fully my understanding of certain phenomena. The participant observation sessions enabled me to understand how geocachers practiced the game and how the body was implicated in interactions with technological interfaces and engagements with the landscape. Partaking in geocaching trips spurred me to ask questions to better understand how geocachers were experiencing their practice, thus destabilising the separation between observation and interviews.

To situate these individuals in their milieu, I supplemented these primary data collection methods by 1) qualitatively analysing listing pages of the caches we found and 2) attending geocaching events where I informally chatted with geocachers and occasionally went caching in large groups. The online analysis opened my eyes to how geocachers interacted asynchronously through technology in reference to specific caches, while attending social events gave me a broader perspective of the kinds of people who engaged in geocaching and the relationships between my participants. Although my use of several methods resembled a "triangulation" technique, these methods were not employed with the aim of "validating"

the data or grasping an objective reality, but rather to add rigor and depth to my inquiry (Denzin & Lincoln 2008, p. 7).

Because geocaching is characterised by extensive movement and both online and offline interactions, my research was not conducted in any one "field site". Rather than delimiting a spatial zone of study, I followed the geocachers themselves as they travelled between sites and as their social interactions slipped between the on- and off-line domains (Marcus 1995). The locus of knowledge co-production rested not in any one place, but in my own subjectivity as the researcher while encountering the phenomenon under study (Coleman & Collins 2015; Pink 2015). Accordingly, I am aware that my positionality as a young, white female undoubtedly shaped my results, most noticeably in terms of how my male participants experienced the public space of urban parks.[6]

The self-selecting effects of my sampling method and my positionality as an individual researcher might be viewed as limitations from a positivist perspective that seeks to apprehend an objective reality. A constructionist perspective, instead, frames all research as inherently partial. It sees 'Truth, and meaning, [as coming] into existence in and out of our engagement with the realities in our world', with the implication that 'different people may construct meaning in different ways, even in relation to the same phenomenon' (Crotty 1998, p. 9). As I discuss in the next section, this idea that subject and object are mutually interdependent in knowledge creation resonates more strongly with my postphenomenological methodology than it would with a positivist approach. An awareness that the field is 'framed by boundaries that shift according to the analytical and rhetorical preferences of the ethnographer' (Coleman & Collins 2006, p. 17) can therefore contribute to a rigorous investigation that engages partially, yet richly, with a phenomenon.

Thesis outline

So far, I have contextualised the core concern of this thesis and detailed how I went about exploring it. In Chapter Two, I outline the conceptual approach that has informed my study, including a discussion of postphenomenology, mediation and virtuality. My substantive discussion then unfolds in two parts. In Chapter Three, I focus on how geocaching's

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[6] I expand on this in my substantive discussion.

technologies shape perception and imagination of the landscape, and thus the objectivity of the world in which geocachers find themselves. I firstly argue that by entering into a direct hermeneutic relation with both the material and digital aspects of a geocache, geocachers are put in relation with each other. These directly mediated social relations subsequently shape the parts of the landscape with which geocachers engage, and also give rise to a distinctive mode of interpreting the landscape. In Chapter Four, I focus on how technologies shape the self and its actions. I suggest that it is the divide between those with and without access to geocaching's digital technologies that gives rise to a distinctive geocaching subjectivity. Because caches are hidden to maintain this separation between the worlds of geocachers and muggles, geocachers are impelled to interact with the landscape in a way that often contravenes social norms governing use of public space. Geocachers are aware that passers-by may interpret their behaviour as deviant due to its incomprehensibility, which, for some, provokes considerable anxiety. I argue that this awareness can lead geocachers to employ a form of self-presentation that outwardly exudes conformity and legitimacy. I conclude by suggesting that embodied interactions with technology may create the conditions for indirect mediation, but that further study is required to better understand this process.

POSTPHENOMENOLOGICAL APPROACHES TO TECHNOLOGICAL MEDIATION

Because my investigation is concerned with the practice and experience of geocaching, and particularly how these involve technology, I have employed a postphenomenological conceptual approach. To explain what this means, in this chapter I outline philosophies of classical phenomenology, before showing how postphenomenology departs from these foundations. One of the key concepts of postphenomenology is technological mediation. I discuss prominent theories of mediation, which have revolved around what I term *direct mediation*, before touching on nascent theories emerging in a less well-developed field of what I term *indirect mediation*. Finally, I argue that a postphenomenological approach to technology requires the virtual and the real to be analysed as part of the same domain of experience when dealing with locative digital technologies.

Phenomenology

Classical phenomenology is characterised by a drive to understand "the phenomenon itself" and how it is experienced, as opposed to how it is understood or represented (Ash and Simpson 2014; Crotty 1998; Vagle 2014). Phenomenology's key concept is intentionality, which is the idea that objects in the world exist in close relation with the perceiving subject (Ash and Simpson 2014; Crotty 1998; Vagle 2014). When this notion of intentionality was first developed in the early 20th century by Edmund Husserl and Martin Heidegger, it offered a way to rethink modernism's radical separation of subject and object. Subjects are always conscious *of* something; they are directed towards and in relation with their world as they experience it (Verbeek 2005). A few decades later, the phenomenological tradition was further enriched by Maurice Merleau-Ponty's bodily account of perception. He too worked against a modernist conception that our minds and selves are separated from the world, the

perception of which occurs through passively receiving and processing "sense data". Instead, he suggests that consciousness is incarnate; to be conscious is to be embodied, and by implication we perceive directly through our active, moving bodies (Merleau-Ponty 2012 [1962]). Our lived bodies do not just occur in the world, but *inhabit* it – they are constantly directed 'in and towards the world' (Merleau-Ponty 2012 [1962], p. 103). Furthermore, by virtue of inhabiting a world, bodies are also reversible. They can simultaneously perceive and be perceived, rendering them subject-objects (Merleau-Ponty 1968 [1964]). Hence, phenomenology has provided a means to re-think our experience of the world in a way that moves beyond reductive Cartesian dualisms.

Postphenomenology and technological mediation

While postphenomenology maintains continuity with its roots, it also departs from them in significant ways.[7] As I touched on in my methodological discussion, postphenomenology suggests that not just stabilities, but also multistabilities, may arise from variational analysis (Idhe 2009). Postphenomenology also uses pragmatism to further develop Heidegger's notion of *being-in-the-world* and Merleau-Ponty's discussion of embodied perception, emphasising that 'experience… entails its embeddedness in both the physical or material world and its cultural-social dimensions' (Idhe 2009, p. 19) – that is, a lifeworld. Furthermore, rather than seeing subject and object as merely "related to" each other, a postphenomenological reading of intentionality sees the two as *mutually constituted*. They are defined by their relationship with each other rather than as pre-given ontological statuses (Idhe 2009; Rosenberger and Verbeek 2015; Verbeek 2005).

One of postphenomenology's most significant departures from phenomenology is its attitude towards technology. Classical phenomenologists Husserl and Heidegger saw the use of technology to be something that interrupts intentionality and alienates us from the world (Idhe 2009; Rosenberger and Verbeek 2015; Verbeek 2005). Postphenomenology suggests, instead, that technology in fact shapes relations between humans and the world through technologically mediated intentionality (Rosenberger and Verbeek 2015). As Idhe (2009, p.

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[7] There is no one "postphenomenology". In fact, there is much contestation and controversy regarding the concepts I deal with here between scholars who call themselves postphenomenological. I outline the version with the most currency, drawing mostly on work by Don Idhe, Robert Rosenberger and Peter-Paul Verbeek.

23) writes, if a subject is conscious *of* the world, 'Technologies may occupy the "of" and not just be of some object domain.' Whilst scholars such as Don Idhe and Bruno Latour locate the mediating effects of technology in the artefacts themselves, Verbeek (2005) suggests that these effects should rather be localised in the technologically mediated *relationships* between humans and the world. By implication, mediating technologies become 'the source of the specific shape that human subjectivity and the objectivity of the world can take in this specific situation' (Rosenberger and Verbeek 2015, p. 12). Not only do mediating technologies shape experience by making a particular world present to subjects, they simultaneously shape action – the way subjects can be present in that world (Kiran 2015; Rosenberger and Verbeek 2015; Verbeek 2005). For these reasons, postphenomenologists study technologies in the context of the lifeworld (Idhe 2009).

Types of technological mediation

Having outlined the premise of postphenomenological technological mediation, I now turn to the *kinds* of mediation that can be experienced. Various typologies and theories of human-technology relations can be synthesised to form the more general categories of *direct* and *indirect* mediation. I define direct mediation as a mediation where one interacts with a co-present technology and simultaneously feels its mediating effects. Indirect mediation, instead, is any kind of mediation where one does not need to interact with or be co-present with a technology in the same moment that it shapes relations between humans and the world to feel its mediating effects.

Most of the postphenomenological and mediation literature has dealt with direct mediation, which indeed directed my attention during fieldwork. This led me to collect much interesting empirical information on direct mediation, particularly regarding how geocachers engaged with digital mapping interfaces, which I do not have the space to include in this work. Along the way, however, I became increasingly aware of the effects that digital technologies of geocaching were having even in their absence. Given the relative scholarly neglect of indirect mediation, I chose to focus on this aspect in my substantive discussion, touching on direct mediation only insofar as it creates the possibilities for indirect mediation. Below I outline the most prominent theories of direct and indirect mediation.

Postphenomenological work on mediation has been dominated by Idhe's (1990) typology of human-technology-world relations.[8] His original typology included four technologically mediated intentionalities that lie on an overlapping continuum: embodiment relations, hermeneutic relations, alterity relations and background relations. Because the relations are all based on interaction or co-presence with technology, we can understand them as direct mediations. I define each in turn, giving the most weight to hermeneutic relations, as this is the aspect of direct mediation that I address in the substantive part of this thesis.

Embodiment relations exist when the technology is incorporated into one's embodied experience, transforming one's perceptual sense of the world and extending the ways the body can act in the world. Idhe (1990, p. 73) uses the example of a pair of glasses, which mediate a particular way of seeing the world, and which "withdraw" from the user's awareness as they transform into 'a symbiosis of artifact and user within a human action'.

(human-technology) → *world*

Hermeneutic relations arise 'when we enter into practices with artifacts in order to ascertain knowledge about the world that would not otherwise be available' (Selinger 2006, p. 5). They call upon our interpretive abilities as 'special modes of action and perception, modes analogous to the reading process' (Idhe 1990, p. 80). Hermeneutics overlap with embodiment relations, because they always implicate the body in some way. Whereas in an embodiment relation the world is perceived *through* a technology, in a hermeneutic relation the technology becomes focus of the perception, 'a visual terminus' (Idhe 1990, p. 82) that refers beyond itself to the world – 'What presents itself is now the "world" of the text' (Idhe 1990, p. 84). Examples of this relation include writing on a piece of paper, or a digital map.

human → *(technology-world)*

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[8] It has since been modified and extended by scholars such as Rosenberger and Verbeek (2015) to better capture the widening spectrum of these relations as technology has become more sophisticated.

Alterity relations are entered when humans engage a technology as a not-quite-human other. Idhe (1990, p. 100) writes, 'Technological otherness is a quasi-otherness, stronger than mere objectness but weaker than the otherness found within the animal kingdom or the human one.' It provokes a sense of interaction with something "other" to one's self, and its most recent iterations includes devices such as GPSs that give verbal instructions, or automated supermarket checkouts.

human → technology- (-world)

The aforementioned three relations are what Idhe (1990, p. 107-8) terms 'direct and focal human-technology relations', meaning that 'The engagements through, with, and to technologies stand within the very core of praxis.' He thus contrasts them with the final relations, **background relations**, which he calls 'fringe and background phenomena'. This is when technologies 'occupy a background position in human experience', yet still affect one's relation with the environment. The examples he uses include lighting and air-conditioning systems, which become 'a near-technological environment… a present absence, [which] nevertheless becomes part of the experienced field of the inhabitant, a piece of the immediate environment' (Idhe 1990, p. 109). Though these technologies do not have any obvious point of contact with humans, background relations are still considered direct mediations, under my definition, because they need to be co-present with humans for their mediating effects to be felt. What I am interested in is how technologies may mediate relations with the world without any concurrent co-presence or interaction. I now turn to nascent theories of indirect mediation.

Indirect mediation

Few theorists have grappled with the kind of indirect mediation with which this thesis is concerned. Verbeek (2005), in calling for technology's mediating effects to be located in the mediated relationship between humans and the world, provides us with the theoretical basis for indirect mediation. When taken to its logical conclusion, his call suggests that technologies do not have to literally and physically "come between" humans and their environment to mediate a *relation* that exists between them. Unfortunately, Verbeek (2005, p. 141) later undermines his own argument by writing that 'Things mediate human-world

relationships when they are used.' Such a statement indeed locates technology's mediating effects in the artefact itself, not a human-world relationship, because it suggests that the artefact must be present and engaged with in order to mediate. To develop the full potential of Verbeek's (2005) initial insight, we must therefore turn to other writers for a deeper understanding of how indirect mediation might work.

Idhe (1990, p. 112) touches on indirect mediation when he points to 'horizonal phenomena', or 'extreme fringe phenomena', following his discussion of background relations. He describes these as phenomena that do not involve technology's 'essential artifactual properties within human praxis' (Idhe 1990, p. 112). While this statement fundamentally articulates what I see to be indirect mediation, Idhe's (1990) examples do not provide additional conceptual tools that are able to deal with these phenomena in the context of geocaching. To illustrate the "extreme fringe" on the human side of the human-technology-world continuum, he uses examples of body implants such as tooth caps and hip joints. On the world side of the continuum, he proposes the development of a 'technological culture', an 'atmosphere' that is textured by technology, which he illustrates through the example of the widespread fear of nuclear disaster post-WWII (Idhe 1990, p. 113-4). The embodiment fringe phenomena clearly require a radical co-presence with the human, whilst the notion of 'texturing' is somewhat vague and operates on a societal scale far beyond what is required to analyse the indirect mediation occurring in the context of geocaching.

Other theorists such as Kiran (2015) and Dorrestijn (2012) have also made initial contributions to the field of indirect mediation. Kiran (2015) writes that through a revealing-concealing action, technological mediation shapes the world in which we find ourselves, and by corollary, how we perceive, act, and see ourselves as being in that world. Though his discussion mostly deals with how this occurs through direct mediation, he acknowledges that what is revealed or concealed is not limited to material entities, but also to non-material phenomena: 'For some technologies, … to grasp their revealing aspect, we need to look beyond the mediations we perform with them, and assess the broader organisational change they produce in a society' (Kiran 2015, p. 127).

Dorrestijn (2012) provides a slightly more concrete discussion of how such changes may occur. His typology of the "points of contact" between technology and humans includes

what he calls the "behind-the-back" relation (Dorrestijn 2012). This is when technologies may 'constitute an environment that directs human history like a river bedding determines the river flow, or may configure self-awareness of user-subjects' (Dorrestijn 2012, p. 223). He briefly uses the example of implementing e-payment cards for public transport in the Netherlands, taking a Foucauldian perspective to discuss how technologies of surveillance and disciplining regimes can organise and enforce action, shaping subjectivities of its users (Dorrestijn 2012; see also Dorrestijn 2011). His example suggests that although people may have direct relations with technology, those direct relations may produce additional mediating effects that lead to a transformed relation with the world, and therefore a mutual re-constitution of subject and object. Of the four theorists that engage partially with the notion of indirect mediation, Dorrestijn (2012) skirts closest to the kind of indirect mediation apparent in geocaching.

Virtuality as potentiality in locative technologies

The idea that technology mediates our engagement with the world, rather than alienating us from it, also has implications for how we understand the virtual and the real in relation to digital technologies. Conventionally, this relationship has been conceived as a dichotomy between the virtual and the real, whereby interactions with the digital are understood as entering a disembodied virtual world divorced from reality (de Souza e Silva & Sutko 2011; Wilken & Goggin 2013). This view recalls the classical phenomenological perspective that sees technology as cutting people off from the world. As discussed, postphenomenology considers technology instead to shape people's relations with the world and highlights that the body is implicated in any interaction with technology. From this perspective, it follows that the digital and the physical should be analysed together, as part of the same domain of experience (de Souza e Silva & Sutko 2011; Farman 2012; Rheingold 2007).

The Deleuzian model of virtuality that de Souza e Silva and Sutko (2011) employ to understand locative technologies provides a means to overcome the virtual/real dichotomy. It sees the physical and the virtual as "folded together", not opposed. They write, 'the virtual and the real are actually synonymous and reality, or physicality, becomes one of the faces of the virtual' (de Souza e Silva & Sutko 2011, p. 31). This conception is possible because the virtual is seen as a "potential" that can be "actualised" through a process of becoming (de

Souza e Silva & Sutko 2011). The real therefore envelopes both the actual and the potential to produce new realities (de Souza e Silva & Sutko 2011). Such an approach allows us to see how digital information can be attached to physical sites and be made part of them, creating a recursive relationship between the potential and the actual (Gordon & de Souza e Silva 2012; Rheingold 2007; de Souza e Silva & Sutko 2011). As the technology connects information to a place, that information 'may also cause *changes to* or *be changed because of* the physical space to which it relates' (de Souza e Silva & Sutko 2011, p. 29, authors' emphasis). Furthermore, this approach allows us to understand how technologies lead people to experience the landscape differently depending on the virtualities, in the form of digital information, to which they have access (Gordon & de Souza e Silva 2012; de Souza e Silva & Sutko 2011). A postphenomenological approach therefore impels us to investigate experiences of locative technologies in terms of a radical interrelation of the digital and physical.

Summary

Postphenomenological investigations are concerned with how the body inhabits the world, the experience of phenomena, and the role of technology in mediating that experience. Perhaps due to their concern with technology's involvement in bodily praxis, postphenomenologists have mostly given attention to direct forms of mediation. Yet some scholars have pointed to the operation of more indirect forms of mediation, suggesting that embodied interactions with technology may have flow-on effects to shape other forms of being in and engaging with the world. In the following chapters, I explore how indirect technological mediation works in the context of geocaching.

~ Chapter Three ~

SHAPING THE WORLD

In this chapter, I deal with how the technologies of geocaching shape perceptions and imaginations of the landscape, and thus the world in which geocachers find themselves. I argue that geocachers come into relation with each other through a direct hermeneutic relation with the technologies of geocaching, and it is this *mediated social relation* that shapes the way that geocachers perceive and imagine the landscape, rather than the technology itself. In the first section, I show how a hermeneutic relationship with the material-digital entity of the geocache puts geocachers in relation with each other. The texts that geocachers produce and read at the cache are interpreted as the asynchronous presence of other geocachers, creating the sense that the landscape is populated by a multitude of others. In the second section, I argue that entering into a mediated relation with the Cache Owner (CO) shapes the parts of the landscape that geocachers engage with by drawing them to particular sites that they would not otherwise visit, and that this has implications for how they imagine the place of the wider region. In the third section, I argue that over time, entering into these mediated relations with other geocachers gives rise to a distinctive mode of interpreting the landscape known as "geosense", which is based on the ability to invoke shared norms that dictate where caches are usually hidden.

Traces and texts: populating the landscape

A geocache can be understood as a material-digital entity. That is, although it is comprised of both digital information (the cache listing that details its location, a description and clues) and a physical artefact (a container, a log book and trinkets), it is taken into use as one thing (Hodder 2012). Though one might consider the digital information to be merely *about* the physical cache, that information is in fact integral to its identity and the way the physical artefact is engaged with and experienced. The listing contains a title that sets up the theme

for the cache, which unifies the online description with the artefact. For instance, I went caching with Rod to find a series called "Coloured Monsters" in a revegetated quarry, which the CO claimed to be the home of monsters (Fig. 3). Sure enough, we discovered squeaky monster toys the CO had placed inside each cache (Fig. 4). The digital information and the physical cache are not just connected, but dynamically interconnected (de Souza e Silva & Sutko 2011). For one, changes to the physical artefact provoke changes to the cache's listing page. When a geocacher signs the logbook, they also log it as "found" online, and when the cache becomes soaked or the logbook needs replacing, geocachers will change its online status to "needs maintenance". At the same time, changes to the listing page will inform how people engage with the physical cache. For example, one of the "Coloured Monsters" caches had GPS coordinates that were more inaccurate than usual. The geocachers mentioned this in their logs and provided subtle hints to its actual location, which most likely led subsequent visitors to rely less on their GPS during their search. Geocaches clearly challenge any kind of dichotomy that seeks to separate digital space from "the real world" – their thingness incorporates both digital information and material artefacts.

Geocache Description:

In this lovely park there lurks a terrible secret - Monsters!
At night they roam the old quarry, but by day they return to their hides.
In three locations the monsters live. I think I have worked out their co-ordinates.

Your task is to find them, and identify their colours. This will allow you to locate their headquarters.
(See cache Coloured Monsters - Final)
But beware, they can make horrible squealing sounds! So be very careful.

If you find the Monster at home, please leave them there - they are not swaps.
Also, do not mention the Monster's colour in your log, else it will be deleted.

Figure 3: From the listing for "Coloured Monsters".

Figure 4: A coloured monster at home.

By creating, interacting with, and modifying both material and digital aspects of the geocache, geocachers leave traces of their movements and actions in the landscape. As Ingold (1993, p. 152) writes, the landscape is transformed by those 'who have dwelt within it, and in so doing, have left there something of themselves'. The first such traces are left when the CO transforms the landscape by creating and placing the geocache. The CO invests themselves

in the cache by conceiving and building it, so that placing the cache can be understood as marking their presence in the landscape. To illustrate this phenomenon, we can look to Peter's experience. When the council recently installed a new bike path along the railway lines near his home, he thought, 'yeah I think this is gonna be my territory, I'm gonna claim along this stretch of bike path.' He sees this process of "claiming territory" as achieved through constructing unique and elaborate caches and embedding them in the landscape. The cache listing page displays his name prominently, and the description allows his personal voice to come through, affirming his ownership of those caches. Once a cache is placed, more traces are left in the landscape by geocachers who search for and find it. Whilst hunting, geocachers tread tracks through the grass (Fig. 5), overturn rocks and test their pens on wooden boardwalks (Fig. 6), signifying the presence of a generalised "other" to those who follow. It is only when geocachers produce a text including their geocaching name (in the form of signing the physical and online logs) that their traces can be associated with a certain individual.

Figure 5: A faint "geotrail".

Figure 6: My pen was not working, so I tested it on the boardwalk.

When subsequent geocachers enter into a hermeneutic relation with the material-digital geocache, they interpret these textual traces as signifying a particular geocaching self, and often one that they recognise. This leads geocachers to experience the landscape as populated

by a multitude of geocaching others. Such an experience is especially acute when geocachers view the physical logbook, emplaced at the site of the cache. When hunting for a series of caches with Peter in Mount Waverley's Valley Reserve, at each logbook we both recognised many of the geocaching names within. They were people I had met at previous caching events, including most of my participants. Reading the logbooks with their accumulation of names, I felt like I was standing in a heavily populated landscape of people, some of whom I knew, and others I did not, but all of whom had now shared a similar experience to me and Peter. Whilst the log book remained the visual terminus, because the hermeneutic relation referred *beyond* that text to the world, Peter and I were made aware of the presence of other geocachers in the landscape. The world of the text presented itself to us (Idhe 1990). But while those geocachers were socially "present", they were not standing there in front of us. Their presence was signified through asynchronous, as opposed to synchronous, engagement (Farman 2009). Whilst conventional Platonian thought construes synchronous engagement (such as dialogue) as true presence, and representation (such as text) as absence, a Derridean perspective shows how this dichotomy is destabilised by something like a signature, which has the cultural weight to signify full presence (Farman 2009). So, when Peter and I stood in the park, flipping through the logbooks full of signatures, we felt that those signatures signified presence, not absence. We were made aware of others acting in the same landscape in which we stood.

When geocachers modify the digital cache listing page, rather than the physical logbook, they put themselves more explicitly in relation with the CO. In writing a log entry, it is etiquette to thank the CO for taking the time to create an experience for others. At the minimum, this contribution is acknowledged with a brief "TFTC" (Thanks For The Cache), but it is appreciated when those who find it write a few sentences about their experiences. In these cases, they often acknowledge the CO by name. A typical example comes from bellatijo, who found Peter's "Tyger Tyger" cache:

> Lucky I had kayguevara here with me or I would have been here for quite some time. Great hide Mister Doctor [Peter's geocaching name], you've done it again!

COs receive email updates every time someone publishes one of these posts, meaning that they are periodically re-oriented towards the cache's digital component, and by implication,

the people who pass through the geocache's physical site. After Peter had "claimed his territory" along the bike path, a group of Girl Guides passed through it, causing his phone to ping berserkly as it received email after email containing merely "TFTC". 'Ok, Girl Guides, thanks for visiting,' he said mock-grudgingly. Even though Peter was not in the area, he was periodically put in a technologically mediated relation with those who passed through "his" sites. As such, the texts inscribed in both the digital and material components of the geocache facilitate an awareness of others emplaced in the landscape.

Accepting an invitation, actualising an experience

> 'It's like someone puts a flag on the map and says, "I really think you should go here and see this thing".' – vividrogers

By creating a cache, the CO invites geocachers to actualise the potential experience they have designed (de Souza e Silva & Sutko 2011). The information imparted on the cache listing page allows geocachers to place themselves 'in *relation* to specific features of the landscape, in such a way that their meanings may be revealed or disclosed' (Ingold 1993, p. 172, author's emphasis). In other words, the information conveyed by the cache coordinates, the digital map, the cache description, the clue, and previous log entries, all serve to orient the geocacher within the landscape in such a way as to find a certain geocache.[9] As I explain in the following, the revealing-concealing process (Kiran 2015) that arises from the geocacher's engagement with the cache listing means that their attention is directed towards certain parts of the landscape and away from others. This leads to distinctive possibilities for encountering and perceiving the landscape.

Unlike certain other locative games, in which potential experiences are created by algorithms, geocaching is notable for the fact that its potential experiences are created by other members of the geocaching community. Placing a cache is thus 'a form of social recommendation' (O'Hara 2008, p. 1180). As Peter said,

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[9] Indeed, the role that these different kinds of information play in drawing the attention of geocachers to certain aspects of the landscape deserves a more detailed analysis, which I do not have the space for here.

> These are living things, this person is a real owner. It's not like Pokémon Go where it's been generated [by an algorithm] and that's the end of it, there's someone who actually cares about this.

Geocaching.com stipulates that geocaches must be placed close to the CO's home, or in a place that they visit often, in order to ensure that the CO can maintain it. This means that the CO tends to share local knowledge about places that they know well. As Rod pointed out,

> Someone in the local area, or they've got family or friends around there, they know about it and they have a nice place to highlight to the rest of the community, so they'll hide a geocache there.

Many geocachers emphasised that this access to another's local knowledge takes them off their usual path, to places they would not otherwise visit. Peter expanded further on this concept:

> I like this idea that you have some local knowledge, basically this idea that someone says "come over here, it's worth the effort". The Sacred Heart of Croydon – there's an old monastery up there that I didn't know, which is now a retirement village. You feel like you're up on the hills in Italy or something, there's a statue of Jesus, this great vista. 'Cause you wouldn't have thought to drive into this retirement village otherwise. But you do and it's a public road and the church is an operating church. I would never have gone there without a cache. That's what I like about finding them.

Caches therefore act as invitations that draw people to sites, with the implication that geocachers begin to develop an intimate knowledge of not just their own local areas, but of a region constituted by knowledge of the local areas of others.

Because places exist 'as nodes in a matrix of movement' that constitutes a broader 'region' (Ingold 2000, p. 219), movement between a different array of sites has the potential to reconstitute that matrix and thus weave a radically different imagination of that region. This process was highlighted by an anecdote of sharkiefan's. In the era BC (Before Caching), she

passed through a town called Omeroo on her way to Duneeden, in New Zealand. She said, 'It was just a bus stop. I had a look around and I thought it was just the ugliest, most disgusting town ever.' On returning to the town after she began caching, her understanding of the place was transformed.

> It was like turning on a light switch, that's how it went from being dark to a light town to me. I would go there in a heartbeat now. And it's still an ugly, weird little town, but the geocaches are amazing. Just the way they're hidden. They just take you to these really quirky things that you would never see, some have got a funky letterbox, or someone's done some really great street art. That town for me it's just more magical. There are a lot of towns that are quite boring if you were just to go there for no reason. But with geocaching it kinda shows you the stuff that you wouldn't see unless you lived there.

In entering into mediated relations with Omeroo COs by accepting their "invitations", sharkiefan's attention was directed away from the aspects of the landscape that for her made the town "ugly" and "disgusting" and toward those that made it "magical". Through this revealing-concealing process (Kiran 2015), her imagination of the town was radically transformed. As such, because technology facilitates the mediated social relations that make certain experiences possible, it indirectly shapes the parts of the landscape with which geocachers engage, with implications for how they imagine the broader region.

Geosense

Over time, entering into mediated relations with other geocachers gives rise to a distinctive mode of interpreting the landscape, emically termed "geosense". It is an essential search strategy for experienced cachers, because the GPS signal's accuracy is limited within close range. Geosense is the intuition that a cache will be in a certain place, as opposed to other potential hiding spots. An attunement of the senses, it is a mode of perceiving and interpreting the environment that directs attention and action in certain ways, with the goal of finding the cache. Through practice and experience, geocachers come to know that COs tend to hide their caches in particular places and in particular ways. By accepting the CO's invitation again and again, geocachers develop an 'acquired world' (Merleau-Ponty 2012

[1962], p. 131), a shared culture of practice and meaning that they invoke as geosense (see also Neustadter *et al.* 2016).

Through my own experience of caching, I have found that typical places for regular-sized caches (which are often painted Sistema plastic containers) tend to be in old stumps (Fig. 7), at the bases of trees, inside bushes, under fallen logs, near rocks and under bridges. One cacher I spoke to called it 'a case of classic conditioning' similar to the parable of Pavlov's dog: if you are in a grassy field with one tree, and you have just found ten caches hidden under trees, you will likely look up from the GPS and head straight for that tree. Certain signs of human action in the landscape also scream "cache", such as a glint of metal amongst the leaves, or an Unusual Pile of Sticks (UPS) that are all mysteriously facing the same way (Fig. 8). For some of the most committed geocachers, this acquired world of meaning permeates their daily lives, so that they interpret the environment using geosense even when they are not searching for a particular cache. Both sharkiefan and Kirsten mentioned that they would sometimes stop and turn on their geocaching app because they had seen a place that would be perfect to hide a cache, and they wondered whether another cacher had already had the same idea. As Kirsten said, 'You start viewing the world through different glasses. I even look at trees differently, like, "oh that would be good for a cache".'

Figure 7: A cache in a stump.

Figure 8: An Unusual Pile of Sticks.

Geosense can be understood in terms of phenomenological notions of sedimentation and habitual body memory. The concept of sedimentation was first proposed by Merleau-Ponty

in *The Phenomenology of Perception,* and it refers to the accrual of past experiences, 'an acquired world' (Merleau-Ponty 2012 [1962], p. 131), that contextualises our present experience. He writes that sedimentation

> allows us to count on our acquired concepts and judgements just as we count
> upon the things that are there and that are given as a whole, without our having
> to repeat their synthesis at each moment (Merleau-Ponty 2012 [1962], p. 131).

Sedimentation thus enables the objects of our perception to have immediate meaning to us, such that they 'emerge at once in a perceptual gestalt' (Rosenberger and Verbeek 2015, p. 7), rather than through a concerted attempt at interpretation. For an experienced geocacher who has "acquired" the world of geocaching semantics, a tree in an open field or an Unusual Pile of Sticks comes to immediately mean "a likely hiding place for a geocache", while a glint of metal comes to mean the cache itself. Kirsten calls this understanding of the landscape "geocacher's vision"; where anyone else might not notice anything out of place, a geocacher would realise that something was amiss.

Geosense can also be understood as a form of "habitual body memory" (Casey 1986), which is a theory that synthesises Merleau-Ponty's idea of sedimentation and Bergson's notion of habit memory. Habitual body memory is a middle ground between what Casey (1986) calls 1) customary memory, which is based on repetition of bodily actions, lacks creative habituation and cannot be indexed as emerging from a particular time or place; and 2) image memory, which is a recollection that can indexed in time and place. Habitual body memory 'combines repeatability with uniqueness; … permanence with transience; … perceptual with motoric action; … and self with world' (Casey 1984, p. 287). This kind of memory engenders habituation, that is, 'being oriented in a given situation by having become familiar with its particular structure' (Casey 1984, p. 283). Habituation implies creativity, the ability to easily adapt oneself to a situation, as opposed to the routine repetition of customary memory. Geosense can be understood as habitual body memory because although geocachers have accumulated a wealth of experience and have an idea of where caches tend to be hidden, each place and each cache's hiding spot is unique. Geocachers are creatively habituated to the process of searching for a cache, and can therefore draw on their "acquired world" whilst also adapting themselves to a particular situation.

Although geocachers invoke this acquired world of shared norms, these norms are open to being subverted by COs. For instance, Rod told me,

> If I'm going to hide a cache, I'll go to a location and go, "where do I put it? Oh, that's fairly obvious… where else is there?" Then when people come they go, "Oh, it's not there, where is it?"

For this reason, some of my participants highlighted that an openness to the subversion of norms is essential to geosense. As one geocacher said, 'There are times where you're more attuned to caching than others. It's about being open to all possibilities.' He recounted the occasion when he revisited a place where he had logged six DNFs (Did Not Finds). On his second trip, he 'kept an open mind' and 'didn't get dragged into a fixed notion' of what he was looking for. Through 'undoing what [he'd] learnt' and remaining open, he found all six within minutes. Another geocacher told me about his five-year-old grandson who had not yet had the chance to develop a habitual body memory of geocaching. While his grandfather searched 'in all the usual spots', the kid shouted 'Grandad I found it!' and pulled up the young sapling it had been buried underneath. That geocacher used this example to illustrate how experience can sometimes lead one astray, because you 'get an idea of what you're looking for and can't shake it off'. The subversion of so-called "classic conditioning" in fact highlights the existence of geocaching norms because of the jolt of confusion that comes from not finding the cache where you expect it to be.

Geosense also involves an act of empathetic imagination, through which geocachers attempt to "get inside the CO's head" to understand what they might have been thinking and experiencing when they placed the cache. It was remarkable how many geocachers echoed the question they ask themselves when they employ the imaginative element of their geosenses: 'If I was going to hide a cache here, where would I hide it?' One cacher characterised this process as 'putting yourself in the CO's shoes', while another called it 'trying to get inside the head of the person that placed it there'. This act of imagination can be considered a kind of emplaced empathy, because it attunes the individual geocacher to an other that has experienced the same landscape in the past.

Whilst affect and care for others is commonly emphasised in common-sense notions of empathy, it is the more rational aspects of empathy that geocachers draw on to orient them towards an imagined other. Rather than feeling what others feel or caring for others, the cognitive aspects of empathy concern the act of imagining yourself in another person's situation and making inferences about their thoughts and experiences (Coplan 2011). I argue that geocachers draw on what Nelems (2017) calls a "passive" form of cognitive empathy as a strategy to find the cache. Passive empathy involves "standing in another's shoes" through imaginative perspective taking (Nelems 2017). As opposed to transformative empathy, which necessitates engaging an other in their alterity, passive empathy merely requires a temporary projection of self onto the other (Nelems 2017). Nelems (2017) points out that this projection means that the other is not required to be present. It is 'an act of imagined occupation whereby I consume and colonise the other's experience… How would an Other remain, with someone standing in their shoes?' (Nelems 2017, p. 24). It also means that the individual's own worldview is taken as a frame of reference, so that passive empathy is only effective between people who are to some extent comprehensible to each other (Nelems 2017).

As Nelems (2017) takes a human rights approach to empathy, she seems doubtful of the usefulness of passive empathy to foment social change. But for geocachers, it is precisely this type of individualistic and passive empathy that facilitates their goals of finding the cache. Geocachers imagine themselves as the CO and try to understand what that other person was thinking and experiencing when they were selecting a hiding place for their cache. Geocachers therefore skilfully and temporarily project their own "acquired world" – the shared norms that inform how geocaches are hidden – to imagine the experience of the CO. This is an effective strategy because, as detailed in the previous section, geocaching is norm-driven, meaning that the actions of other geocachers tend to be comprehensible to other members of the community (Neustadter *et al.* 2016). I came across a prime example of the empathetic imagination that cross-cut my various participant observation and interview sessions. Sitting in a Brunswick café with sharkiefan, she said to me, 'You might walk up to a tree, and there's a big knot on the side of it, and there's a hole in the knot, you kinda go yeah, that's where I would hide it.' On a separate occasion, when I went caching in a large group out in the Yarra Valley, our convoy of cars stopped and we piled out to search for a cache. For some reason, Rod caught my attention as he was poking around. I saw him peering

towards a tree with a large knot in it. Reaching his hand cautiously inside, he pulled out a glass jar: the cache (Fig. 9). Later, when I asked the others on the trip what they thought about geosense, they mentioned Rod and this particular find, saying that this was a classic example of asking yourself, "If I was the CO, where would I hide it?" They said, emphatically, that the cache was just asking to be hidden there. All of these geocachers, sharkiefan, Rod and our "Yarra Expedition" companions, had agreed that seeing a knot in a tree signifies a potential hiding place for a cache. Rod drew on this shared interpretation, shaped by experience and the community's acquired world, in order to project how he imagined the CO was perceiving the environment. His keen geosense prevailed.

Figure 5: The cache that Rod found in the knot of a tree.

Summary

Thus far, I have suggested that direct mediation can set up the conditions for indirect mediation, by arguing that the social relations mediated by caches shape how geocachers perceive and experience the landscape. I demonstrated that hermeneutic engagements with the cache put geocachers in relation with recognisable others, broadening their awareness to include socially (but not physically) present actors in the landscape. Furthermore, I explained

how entering into relation with a CO by "accepting their invitation" shapes the parts of the landscape geocachers engage with, thus influencing how they imagine place. I finally showed that the repeated acceptance of these invitations leads geocachers to sediment an acquired world of shared interpretations of the landscape, which is invoked as geosense. The technologies of geocaching undoubtedly shape the world that geocachers inhabit.

~ *Chapter Four* ~

SHAPING THE SELF

In this chapter, I examine how geocaching's technologies influence the formation of a geocaching subjectivity, by focusing on how geocachers physically interact with the landscape and perform a specific form of embodiment within it. I contend that the distinctiveness of this subjectivity arises from the fact that the potential experience created by the CO (Cache Owner) can only be actualised by those with access to the geocaching.com platform, creating a divide between geocachers and "muggles". In the first section, I show how establishing a geocache not only shapes the parts of the landscape with which geocachers engage, but also *how* they engage with them. To reveal the cache, geocachers need to interact with the environment in a way that often contravenes social norms governing how public space is used. In the second section, I show that geocachers are highly aware that passers-by interpret their behaviour as deviant due to the fact that geocaching remains an unknown potentiality for non-players. I also consider that the type of body one has can affect the degree to which geocachers feel their behaviour is perceived as aberrant. In the final section, I discuss how geocachers perform a purposeful use of space to hide the true nature of their activity.

'You get dirty quick': interacting with the landscape

It is not usually possible to locate a geocache by sight alone. Caches are almost always concealed by some feature of the landscape, or, if they are left out in the open, they are disguised as something else, in order to reduce the likelihood of them being "muggled" (taken away or vandalised by a non-geocacher) (see Figs. 10 and 11). Some sort of disturbance of the landscape is usually required in order to reveal a cache or verify its status as real or fake. For this reason, geocachers interact with the landscape by actively using their whole bodies, unlike the typical muggle walking or jogging along the street. It is common for geocachers to hunt around in bushes, climb trees in the middle of a park or get down on all fours to peer

under a walkway. They pick up logs, overturn stones, brush aside mulch, and prod at chewing gum, all the while avoiding snakes, spiders and used condoms. During my caching adventures, I found my knees covered in soil stains and my hands pricked by thorns. This is why sharkiefan has separate clothes for geocaching. 'You get dirty quick,' she said.

Figure 10: Uncovering a cache.

Figure 11: A cache disguised as a tree branch.

My interview and caching trips with Rod were particularly illustrative of this active mode of engagement with the landscape. During our conversation in the calm of Newport Library, he described his experience of finding a micro cache[10] after completing a trucking job near Rye. It was 6pm and already dark when he arrived. Using his phone torch, with the battery fast running out, he searched among a stand of trees, keeping his eye out for a bit of wire, a fishing line, or a stick out of place. He angled the phone torch's beam, until at a certain point it caught a flash of light reflecting off something that "wasn't natural". He brushed aside some pine needles to find a bison tube[11] tied around one of the saplings. It was thus through an active engagement with the environment, the movement of his light source, that the environment responded in such a way as to visually alert him to the cache. A similar process occurred when we were caching together. On reaching the coordinates, Rod investigated in some bushes before approaching a stone half-buried in the tanbark. When he moved to

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[10] A container less than 100ml, or about the size of a film canister.
[11] A small waterproof metal container on a keyring.

overturn it, his finger knocked against something covered by the mulch behind the stone. It made a "thock", like hollow plastic. 'You hear that sound?' Rod said. 'Cache.' As with the bison tube, it was Rod's movement directed 'in and towards the world' (Merleau-Ponty 2012 [1962], p. 103) that alerted him to the sound of something "not natural", something he interpreted as the cache. This cache could never have been revealed to a muggle glancing around briefly as they walked their dog; it is hidden in such a way as to maintain a separation between the geocaching and muggle worlds. It is therefore not only knowledge of the geocache's coordinates, but also an active sensory engagement with the landscape, that geocachers can actualise the CO's potential experience.

Looking suspicious: being perceived in the landscape

The full-body engagement and seemingly inexplicable behaviour of geocachers can provoke stares from passers-by, because it contravenes the norms governing the use of public space. When caching with sharkiefan one rainy day, we were forced to search underneath a raised boardwalk that butted up to a wall on one side, leaving a steep drop to a creek on the other. With no space to stick our heads between the wall and the boardwalk, we got down on our knees and started feeling with our arms. My fingers brushed against dusty wood and cobwebs. I looked over at sharkiefan to see her flat on her stomach, her arms extended far underneath. As we were on a blind corner, this unusual bodily contortion nearly resulted in an accident with a muggle on a bike. He recovered himself and looked at us bemusedly. 'What are you after there? …Flowers?' he asked, attempting to create a logical explanation for our unconventional use of the boardwalk, in the absence of further information. 'No,' said sharkiefan, 'we are looking for a geocache.'

sharkiefan is a particularly self-assured geocacher, so she is generally not bothered by what muggles think of her. She said to me, 'I kinda feel a sense of entitlement, like I have a right to be here. You can be discreet, while being stealthy.' For others, instead, being aware of "looking suspicious" is something that can provoke unease and anxiety. While caching with vividrogers, we had to squat in some bushes near the side of the path to sign the logbook. She said, relieved, 'I'm glad there aren't a lot of people around, because it looks really strange, like you're doing a wee or something.' She recounted that once she had had to squat in a similar position under some pine trees to sign a logbook, when a family had come past. She

had heard the mother say, 'Let's not go this way kids….' Peter's anxiety about appearing suspicious or odd was even more intense than vividrogers'. He said that as a CO, he would never put a cache in the middle of a roundabout, 'but people do and they're awful, I feel like I'm gonna have a heart-attack just because everyone's watching me'. As a material object, the roundabout contains a certain prescription for action (Latour 1994), which is that it should be circumvented according to particular driving conventions. By treating the roundabout as a destination, geocachers therefore contravene social norms whereby the majority of road users conform to the roundabout's in-built script. Because 'norms have a way of remaining uninteresting, often even invisible, until and unless we find that they have been broken' (Cohn 1999, p. 43), the geocacher on the roundabout becomes a conspicuous object of attention. They become the focus of curious gazes as muggles attempt to figure out their unknown motivations for being on the roundabout. For someone like Peter, the awareness of these curious and judgemental gazes is unbearable, leading him to avoid such situations entirely.

The type of body that one has and performs can amplify or mitigate the extent to which a geocacher's actions are interpreted as deviant. For instance, sharkiefan reflected that although she often wears red, she never stands out because of the aspects of her body that mark her as a white, middle-aged woman.

> You can kinda just do what you like. I like the fact if I want to find a cache in a park, I can. And no mums and dads give me a second look because I'm not a guy and I'm not gonna be some child molester or something.

Indeed, although she mentioned that she might get more stares if she was an 'another-nationality woman', [12] because geocaching is predominantly a white sport, it is her male-identifying friends who tend to feel most uncomfortable. Many feel as though they cannot go to parks alone, because 'it's a bit dodgy for a single man to be roaming around a park with a playground' unaccompanied by a partner or children, sharkiefan says. One time, a male friend had gone to one of these parks and been approached for a hook-up by another man near the public toilets – he had not realised that the area was a popular "gay beat". Hence, single men "lurking" in parks are highly aware that they could be positioned by others as a

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[12] Indeed, it may be this kind of suspicion that discourages people of colour from participating in the hobby.

sexually deviant threat. Indeed, Peter expressed this awareness during our caching trip. After our interview in a café, we drove separately to a densely vegetated park. The winter sun was sinking low in the sky. We parked next to each other and the first thing he said when he got out was, 'Shouldn't you have a chaperone? Going into a bushy park with a strange man, I don't know, if it was my daughter I would want her to have a chaperone....' Similar thoughts had been playing in my own mind, minus the chaperone suggestion, as I had recalled how the ethics committee members had been concerned for my safety as a young female conducting fieldwork alone in parks. Not only had I positioned Peter as a potential sexually deviant threat because he presented as male, he in fact did so to himself, aware of the valences of the situation as they might appear to me or to an outside observer. Peter, the ethics committee and I had all considered the differences in my body and Peter's and how they related to public space. We had all concluded by positioning him as a potential sexually deviant threat.

The salience of sexual difference for experiences of geocaching in public space speaks to the limitations of much of classical phenomenology's tendency to discuss an undifferentiated "body" in the abstract, within a phallogocentric tradition of knowledge production (Colls 2012). Colls (2012) calls for sexual difference to be foregrounded in postphenomenological research without naturalising or essentialising it. To do so, she draws on Luce Irigaray to conceptualise "forces" as providing a contextual backdrop to and also constituting sexually different subjects. She writes that forces

> can pass through and inhabit bodies (metabolism, circulation, ovulation, ejaculation), they are intangible and unknowable and yet are sometimes felt by the body and travel between bodies (fear, hope, love, wonder, hate, confidence) and they are produced by and active in the constitution of wider social, economic and political processes and structures… Force is also imperceptible; it exists beyond the field of human perception; it is affect (Colls 2012, p. 439).

Indeed, while caching alone with Peter after he verbalised his misgivings, I experienced these affective forces that passed between our bodies. Always oriented towards him as we walked and engaged in light-hearted conversation, I sensed an undercurrent of awkwardness, wariness, and a twinge of apprehension whenever the path took a bend into an isolated patch of bushes, even though these concerns were utterly unfounded. I experienced first-hand the

way that the forces of sexual difference can circulate to create very distinctive experiences of being-in-the-world through geocaching, whereby those who identify as men are more likely to feel perceived as a threat, and those who identify as women are more likely to feel threatened.

Many geocachers, both male and female, dislike the curious and judgemental gazes that arise from breaking the social norms of public space. Nevertheless, they keep geocaching. A possible explanation may be that geocachers desire an outlet for behaviour that resembles deviance, but without the social sanctions that accompany it. Hawley (2010, p. 225) suggests that 'Although geocachers see their activities as admittedly deviant, many actively disavow deviant identities and self-identification in their "normal" articulation with the world at large'. Indeed, the geocachers I met presented as somewhat conventional in terms of their self-expression and occupations. These people did not seem to radically challenge social norms in other ways in their everyday lives. But at the same time, several mentioned that they enjoyed the thrill that came with their sneakiness. As vividrogers, an assiduous person who spends much of her time cooking and cleaning, said, 'I literally find it fun, the slightly subversive activity.' In the next section, I explore how geocachers engage in this semi-deviant behaviour whilst appearing to have a legitimate reason for their actions.

Performing conformity

> 'He walked with equipoise, possibly in either city. Schrödinger's pedestrian.' –
> China Miéville, *The City & the City*, p. 295.

In order to hide the true nature of their activity from muggles, some geocachers utilise a distinctive mode of self-presentation that suggests alternative purposes for their actions. Their strategies involve signifying to onlookers that they have a clear and legitimate reason to be using public space in an unusual way, thus dispelling any suspicions of deviance. For instance, if stopped on the side of a bike path, Rod said that he sometimes pretends to be talking on his phone (always ensuring that it is set on silent, in case someone actually rings him). He thus signals a clear reason why he might be stationary in an area that is normally used in a transitory way. Whilst this is one such example, I explore in more detail one of the most common performances of conformity. While searching for a cache, many geocachers

pretend to be carrying out official business by displaying signs of authority and 'acting like [they] have God's given right to be there', as sharkiefan put it. When wandering around playgrounds, for example, both Kirsten and sharkiefan will often take out their high-visibility vests and a clipboard, so that they appear to be inspecting the equipment. One time, sharkiefan was caught by a muggle climbing over the balustrade of a low bridge – she boldly explained that she was a water-tester and that she had left her kit underneath the bridge. Rod's tactics were similar. He used to drive a small tow-truck used for removing cars from underground parking lots, meaning he could park anywhere a four-wheel-drive could.

> Being a tow truck, if I turned on my rotator lights on my roof, no parking officer
> will come near me. And I have a spare key. So I turn that on, leave the engine
> running, lock the door and walk off, and leave the truck sitting over there. It was
> great cover. If the cache was on a sign next to the road on the corner at a park,
> I'd park on the footpath next to the sign, get out and look for it, and nobody
> would look. The more lights you've got flashing, the less likely anyone is to even
> look at you or come near you. "Obviously he's there on official business. We'll
> just leave him to it."

As Rod points out, it is ironic that the more visible geocachers are, the less likely anyone is to give them a second glance. Because they signal a clear and legitimate reason for their behaviour, the gazes of passers-by note their presence and move onward. As no social norms are explicitly being broken, the onlookers do not need to focus their attention on the geocacher to determine exactly what they are doing. By presenting themselves as industriously "at work" in a legitimate occupation, geocachers dispel curious gazes and any interpretations of their behaviour as deviant.

This performance of conformity has been grappled with by some of the geocaching literature. Farman (2009, p. 4) has theorised geocaching's distinctive mode of self-presentation as a manifestation of 'proprioceptive-semiotics', where 'the body of phenomenology converg[es] with the inscripted body-as-text in a world of stimuli and signs'. He defines the proprioceptive-semiotics of geocaching as 'an embodied semiotics users must engage to hide in plain sight through performing a sense of alternate purposes' (Farman 2009, p. 4). Hawley (2010, p. 231) compares geocaching to the "deep structure" of criminal activities such as theft and vandalism, writing that 'Geocachers, like criminal surreptitious

exploiters, have …the ability to present themselves as "normal" people, when in pursuit of a cache.' Both of these authors' insights resonate with Erving Goffman's (1956) theory of self-presentation. Whilst Goffman is not usually cited in the phenomenological literature, he has been called an "accidental phenomenologist" by some because of his concerns with intercorporeal relations (Dolezal 2017). Goffman (1956) uses a dramaturgical metaphor to argue that 'when an individual appears before others he [*sic*] will have many motives for trying to control the impression they receive of the situation' through a performance. He terms this "face-work", where "face" is a desirable social position that an individual aims to achieve and maintain (Goffman 1956). Geocachers aim to preserve face by performing conformity, thus avoiding the social judgement that may come from performing apparently deviant behaviour. Goffman (1956, p. 14) would argue that they do this by creating a 'personal front' made up of 'the expressive equipment' used by the person to 'define the situation for those who observe the performance'. This expressive equipment entails "sign-vehicles" that convey certain information, to which observers apply to their previous experience in order to come to stereotyped conclusions about the performer (Goffman 1956). Some kinds of fronts are not just personal but also "social"; that is, their meaning has stabilised to express a certain social role or position 'apart from the specific tasks which happen at the time to be performed in its name' (Goffman 1956, p. 17). In the performances of conformity described above, these sign-vehicles take form of high-visibility vests, flashing lights and blasé body language that socially signify authority and "official business". Geocachers thus have available to them a distinctive mode of self-presentation in which they perform an alternative use of space to deflect the gaze of passers-by. They are "Schrödinger's pedestrians", walking in two cities.

Summary

COs hide geocaches in such a way as to maintain a separation between the worlds of those who can access the digital information of the geocaching.com platform and those who cannot. Therefore, geocachers must not just attend the site of the coordinates, but must be-in-the-landscape in a tactile and full-body way in order to actualise the CO's potential experience. I have argued that this mode of engagement can draw the attention of muggles, who, in the absence of other information, interpret it as deviance. Geocachers thus do not just act as subjects in the world, but experience being perceived by others (Merleau-Ponty

1968 [1964]). Perhaps due to a desire to avoid social sanctions, geocachers are acutely aware of "looking suspicious". A common avoidance strategy is to "perform conformity", a mode of self-presentation whereby geocachers embody themselves simultaneously within the coterminous geocaching and muggle worlds. Accordingly, I suggest that it is the divide between those with and without access to geocaching's digital technologies that gives rise to a distinctive geocaching subjectivity. Geocaching's digital technologies therefore indirectly mediate a way of being-in-the-world.

~ Chapter Five ~

CONCLUSION

In this thesis, I have examined the ways in which geocaching's digital technologies indirectly mediate relations between geocachers and the landscape. To do so, I have explored how these technologies shape a geocaching objectivity, or perception of the world, and a geocaching subjectivity, or way of being-in-the-world. I have made an artificial distinction between these two facets of geocaching experience for purely analytical purposes. As per a postphenomenological approach, the two are seen to be mutually constituted, and indeed, while I focused on one facet within each chapter, I always implicitly dealt with the other.

In Chapter Three, I focused on the objective side of geocachers' indirectly mediated engagement with the landscape. By theorising geocaches as material-digital entities that mediate asynchronous interactions between geocachers, I illustrated the falsity of a dichotomy that seeks to separate digital space from physical space, showing that the two are radically interrelated. These mediating entities orient geocachers towards other actors in the world by rendering those actors socially present, creating an experience of the landscape as densely populated. I also discussed how geocachers come into relation with the CO (Cache Owner) by accepting the invitation they extend in creating the cache, and that this mediated relation shapes the parts of the landscape geocachers move between. I argued that as geocachers repeatedly come into relation with each other in this way, they come to acquire a shared world of meaning that informs their interpretations of the landscape.

In Chapter Four, I shifted my focus to the subjective side of geocachers' indirectly mediated engagement with the landscape. I argued that differentiated access to the digital information on the geocaching.com platform creates a divide between the worlds of geocachers and those they term "muggles". COs hide caches in such a way as to maintain this divide; therefore, geocachers must interact with the environment in an unusual way to actualise the potential

experience that the CO has constructed. In fielding the judgemental stares of muggles, geocachers experience their reversibility as a subject-object (Merleau-Ponty 1968 [1964]). I also showed how the forces that circulate in everyday life also circulate through spaces of play, in that sexual difference can influence experiences of public space. Applying Goffman's (1956) theory of self-presentation, I finally discussed how geocachers "straddle two worlds" by performing a purposeful use of space, seeming to conform to the expectations of muggles whilst carrying out an activity that is incomprehensible to them. A postphenomenological approach has proved indispensable to investigate how technologies are engaged and experienced in context, always centralising the body in my analysis.

Whilst the material technology recedes from human praxis in the phenomena detailed above, it is nevertheless impossible to understand these phenomena in isolation. They are only made possible by the technological infrastructure of geocaching. Through my empirical discussion, I have therefore argued that technologies do not have to be "used" in the same moment that their mediating effects are felt. Rather, I have suggested that technologies can mediate modes of engagement with the world as an indirect effect of one's embodied interaction with them. This somewhat counterintuitive interpretation of "mediation" – which comes from the Latin *mediatus*, meaning "placed between" – is possible when we conceptualise the mediating effects of technology as residing within the technologically mediated *relationship* between humans and the world, rather than the technology itself (Verbeek 2005). I have demonstrated that technologies can mediate without literally coming between humans and the world.

There are several aspects of my discussion that would benefit from further investigation. Key among these is a more detailed examination of the relationship between direct mediation and indirect mediation. Chapter Three suggested that directly mediated social relations create the conditions for indirectly mediated modes of engaging with the landscape, whereas Chapter Four suggested that these indirectly mediated engagements were shaped by differentiated access to digital information. But we need to better understand the processes by which embodied interactions with technology inform indirect mediation by examining a wider variety of technologies.

Another aspect for further study is the varied experiences of public space and locative games that are engendered by bodily difference. My research touched briefly on the role that sexual

difference plays in shaping experience of geocaching; however, due to a racially homogenous sample, I was unable to comparatively examine the potential role played by racial difference. What are the factors that make geocaching such a "white" hobby? Why is it diverse in some ways but not others? Another aspect of geocaching's diversity to which I was unable to attend was the experiences of people with a disability. For instance, it came to my attention that there are several members of the Victorian geocaching community who use wheelchairs. How might people who have available to them particular senses and movements engage with the landscape whilst geocaching? Postphenomenological research with a greater diversity of geocachers than I was able to reach could identify significant multistabilities in the experience of the game and contribute to understanding what it means to inhabit public space more generally.

As Farman (2012) points out, studying any kind of rapidly changing technology means that almost as soon as one's work is published, the technology described within is perceived as kitsch and quaint. What this research aims to do is therefore make itself significant beyond the specific kinds of technology themselves (iPhones and Android mobile phones, Garmins, touchscreen interfaces, GPSs, digital maps) or the particular use of them (the practice of geocaching), by rather pointing to the broader phenomenon in operation. That phenomenon, in this case, is technology's potential to influence human-environment relations "from the horizon", to use Idhe's (1990) metaphor. By understanding the processes that inform the more inconspicuous effects of technology, we can better make sense of our shifting relations with the world in a climate characterised by constant technological innovation.

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