Geographical Applications for Sound Walks

Warren Jenkinson, Master of Arts

Geography

Submitted in partial fulfillment of the requirements for the degree of Master of Arts

Faculty of Social Sciences, Brock University
St. Catharines, Ontario

© 2015
Abstract

Geography has long been a predominantly visual discipline, but recent work in geography has sought to explore the multisensory, embodied, emotional and affective dimensions of people’s relations with places. One way to engage this type of exploration is through the use of sound walks: walks along a specified route accompanied by a soundtrack (on headphones or stationary speakers) that conveys information, enacts a story, produces an ambience or atmosphere, or illuminates certain aspects of the environment through which the listener is walking. This thesis aims to show how geographers can benefit from using sound walks as thinking tools, representational tools and teaching tools.

Drawing on my own experiences producing sound walks, I first examine the ways that sound walk production processes help generate productive geographical thinking for those producing sound walks (Chapter Two). The various stages of producing a sound walk require different skill sets, pose different challenges, and require different sorts of environmental awareness, and therefore present novel opportunities for developing geographical insights about specific places or spatial relations.

Second, I focus on four experientially-oriented aspects of sound walks – using multiple senses, walking, contingency, and moments of interaction – to argue that sound walks can be useful representational tools for geographers, whether those creating sound walks subscribe to a representational or non-representational theory of knowledge (Chapter Three). The value of sound walks as representational tools is in the experience of ‘doing’ them. That is, audiences discover for themselves through interaction what is being represented, rather than having it delivered to them. The experiential elements of ‘doing’ sound walks recommend them as potentially helpful representational tools for geographers.

Third, by examining the work of a small sample of fourth year “Advanced Geography of Music” students, I develop the argument that sound walks can be effective tools for teaching students and for creating circumstances for students to learn independently (Chapter Four). Sound walks have potential to be effective pedagogical tools because they are commensurate with several key pedagogical schools of thought that emphasise the importance of requiring students to engage actively with their environment using a combination of senses.

The thesis demonstrates that sound walks are a worthwhile resource for geographers to use theoretically, representationally and pedagogically in their work. The next step is for geographers to put them into practice and realize this potential.
Acknowledgements

I'd like to begin by acknowledging my research participants. Thank you all for donating a part of your selves to this project and providing me with insights that made this thesis possible. Thanks also to my supervisory committee: Dr. Phil Mackintosh, Dr. Mike Ripmeester and my supervisor Dr. David Butz.

Thanks Phil, for allowing me to feel normal about starting my academic career at twenty-six years old. This has been such a crazy ride and I want to thank you for your calming presence and also for availing yourself as an academic, a human being and, someone who gives great advice for overcoming writer’s block (you once told me “there’s no cure for writer’s block – just make sure you write like hell when you are writing”) and, you might be the best bass player I’ve ever known. Thanks Phil.

Thank you Mike, for kicking this thesis in its backside. You challenged me in ways that really upped the quality of this thesis. Your critical edge and refusal to stop pushing for quality writing are what takes grad students to that next level. Thank you for that, and thanks for letting me know that one can be a serious academic AND an avid sports fan.

Last but certainly not least, thank you David. I feel most fortunate to have had access to your mind on a regular basis. In my humble estimation, you are without peers. During our meetings I would combat the urge to try and find a step stool to reach your level. Hopefully a bit of you rubbed off on me... Thank you for giving me the space to create this thesis in my own way – that took courage, foresight and above all, faith in me. Thanks for all of that, and thank you for introducing me to the ‘one-drop’ riddim. My drumming will remain forever changed.

Thank you, Dr. Walter Peace, for being such an encouraging and kind external examiner. I was quite nervous at my defense and you immediately put me at ease with your enthusiasm for my work and your positive energy. I can’t thank you enough for that. Thank you Dr. Jeff Bogs for taking such an energetic interest in my work. You gave me an opportunity to make a sound walk for your class and that experience paid off in terms of this thesis, sound walk production skills and, entrepreneurial experience. Sincere thanks also to Jennifer Thiessen for being such an available and helpful liaison librarian. Geography is interdisciplinary and writing this thesis took me to some far-off conceptual places. Jennifer, you helped me immensely on some of those journeys – thank you.

Thanks to everyone else in my life who took an interest in my work – this includes my friends, family and any musicians I have played with during the making of this thesis. You know who you are...

Finally, I want to acknowledge my family. Without your support, I wouldn’t have had the time to work on anything, never mind an M.A. degree. Marlene, you’re simply the best. Olivia, thanks for your continued support and willingness to proofread my work – it has always meant a lot to me. Dad, thanks for all the time, effort and encouragement during my time at Brock. Ged, you have been the yard stick to which I measure success against – it is my aspiration to honour your example by inspiring someone else in the ways you have inspired me. Mom, what can I say? Without your undying, death-defying love and endorsement, I wouldn’t have the courage to push myself. Thank-you.

Finally, and most importantly, thank you Missy. I share all of my life with you and that means involving you in endeavours that test your virtues. You amaze me in the ways that you always ace these tests. You are amazing. I had to sacrifice time in order to write this thesis and you stood with me the whole time, picking up all of that slack. This finished product belongs to you as much as it does to me.

This thesis is for Lyla Clementine and...
# Table of Contents

Abstract.......................................................................................................................................................... i
Acknowledgements .............................................................................................................................................. ii
Table of Contents ............................................................................................................................................... iii

1. Introduction .................................................................................................................................................. 1

Sound Walks.................................................................................................................................................. 2
  Acoustic Ecology........................................................................................................................................... 3
  Sound Art..................................................................................................................................................... 4
  Social Science............................................................................................................................................. 5
Layout of the Thesis ....................................................................................................................................... 6
  Theoretical Tools ....................................................................................................................................... 7
  (Re)presentational Tools ............................................................................................................................ 8
  Pedagogical Tools ........................................................................................................................................ 9
Conclusion ..................................................................................................................................................... 10

2. Sound Walks as Thinking Tools .................................................................................................................. 11

My Sound Walks ........................................................................................................................................... 12
  The Grocery Store Sound Walk .................................................................................................................. 13
  The University Campus Sound Walk ........................................................................................................ 14
Brainstorming ................................................................................................................................................ 16
Route Walking ............................................................................................................................................... 22
Storyboarding ............................................................................................................................................... 25
Map Making .................................................................................................................................................. 26
Content Research ......................................................................................................................................... 29
Audio Engineering ....................................................................................................................................... 32
Proofwalking ................................................................................................................................................ 34
Conclusion ..................................................................................................................................................... 37

3. Sound Walks as (Re)presentational Tools .................................................................................................. 40

Multiple Senses .............................................................................................................................................. 41
Walking ......................................................................................................................................................... 43
Contingency ................................................................................................................................................ 46
  Sound Walk Producers ............................................................................................................................. 47
  Sound Walk Audiences ............................................................................................................................. 51
  Sound Walk Routes ................................................................................................................................ 53
Non-Representational Theory ....................................................................................................................... 54
Conclusion ..................................................................................................................................................... 59

4. Sound Walks as Teaching Tools .................................................................................................................. 62

Student Sound Walks .................................................................................................................................. 63
Student Essays .............................................................................................................................................. 64
Student Interviews ...................................................................................................................................... 65
Pedagogical Literature ............................................................................................................................... 66
  Active Learning ....................................................................................................................................... 66
  Student Differences ................................................................................................................................. 67
  Multi-Media Learning Theory .................................................................................................................. 70
  The M.A.I.N Model ................................................................................................................................ 72
Sound Walks and Pedagogy .......................................................................................................................... 74
Teaching Geography with Sound Walks ...................................................................................................... 81
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Sounds</td>
<td>82</td>
</tr>
<tr>
<td>Music</td>
<td>84</td>
</tr>
<tr>
<td>Narration</td>
<td>86</td>
</tr>
<tr>
<td>Sights</td>
<td>87</td>
</tr>
<tr>
<td>Touch</td>
<td>88</td>
</tr>
<tr>
<td>Embodiment</td>
<td>89</td>
</tr>
<tr>
<td>Motion</td>
<td>91</td>
</tr>
<tr>
<td>Conclusion</td>
<td>93</td>
</tr>
<tr>
<td>5. Conclusion</td>
<td>96</td>
</tr>
<tr>
<td>Summary</td>
<td>96</td>
</tr>
<tr>
<td>Applications as a Whole</td>
<td>98</td>
</tr>
<tr>
<td>Future Directions</td>
<td>100</td>
</tr>
<tr>
<td>Bibliography</td>
<td>104</td>
</tr>
<tr>
<td>Appendix 1a</td>
<td>112</td>
</tr>
<tr>
<td>Appendix 1b</td>
<td>113</td>
</tr>
<tr>
<td>Appendix 2</td>
<td>114</td>
</tr>
<tr>
<td>Appendix 3</td>
<td>115</td>
</tr>
</tbody>
</table>
Chapter 1: Introduction

“Human geography students should have to make something, and not just write, as human geography is a spatial, as well as cursive activity”
(Nigel Thrift 2004: 98).

In recent years geographers have started to consider sound in their work. This is significant as geography has traditionally been, as Susan Smith (1997: 503) notes, “a quintessentially visual enterprise”. Smith argues for a more multi-sensoral geography, and that incorporating more than one sensual modality in geographical research may benefit geographers because other senses may construct and experience geographies differently than vision alone. Paying attention to information gleaned from all senses affords opportunities for new spatial discoveries and articulations about a place. One way to accomplish this is through the use of sound walks.

The term sound walk has been used to describe a variety of things. One understanding is any expedition where the goal is to listen to the environment (Westerkamp, 1989). This is a broad understanding of what a sound walk is, and could include simply walking down the street listening to the surrounding environment or soundscape. There is nothing wrong with such an open understanding, however, for the purposes of this thesis a more particular understanding is required. This thesis aims to demonstrate the usefulness of sound walks for geographers. To do this I must first delineate precisely what qualifies as a sound walk in this context in order to articulate specifically how geographers can benefit from using them.

1 Murray Schafer (1994: 8) coined the term soundscape and describes it as follows: “A soundscape consists of events heard, not objects seen” (see also Truax 2002, Smith 1994).
Sound Walks

The purpose of this thesis is to demonstrate how sound walks are useful to geographers for thinking through specific ideas about a place or spatial relations (i.e., as theoretical tools), for presenting specific ideas about a place or spatial relations (i.e., as representational tools), and teaching specific ideas about a place or spatial relations (i.e., as pedagogical tools). Before this can happen, there needs to be a clear understanding about exactly what is meant here by the term sound walk.

I am referring to a type of sound excursion where ‘listening to the environment’ becomes ‘listening to a sonically manipulated environment.’ While sonically manipulated environments could include walking somewhere while listening to the radio on a personal listening device (PLD), or walking with sound-cancelling earplugs, I am referring to something even more particular. In this thesis, sound walks are understood to be recorded sounds played along a specific route with the explicit intention of creating a particular, spatially-embedded sonic experience (Butler and Miller, 2005). Sound walks, as I understand them here, typically have some combination of aesthetic, didactic, evocative or representational purpose, often for their creators and for those who participate in them (Butler 2006, 2008). Still, even with a definition of sound walks as particular as this, the possible forms this type of sound walk can take are many. In order to understand what these possibilities may resemble, it is helpful to understand the different contexts for sound walk production. As I understand it, there are three. They are acoustic ecology, sound art and social science.
Acoustic Ecology

Acoustic ecology refers to relations between sounds in a sonic environment as well as how those sounds relate to nature and society (Westerkamp, 2002). Acoustic ecologists, such as Westerkamp, have used sonically-oriented exercises as a way to raise awareness regarding ecological issues. In 1989, Westerkamp released her work entitled *Kits Beach Soundwalk*. This sound walk features the quiet sounds of water lapping upon the shore, and the tiny sounds of barnacles feeding, as well as the more distant acoustic backdrop of a busy city. Sound walk participants walk along the beach as the soundscape transforms by trading dominant sound events for quieter ones. In this soundwalk composition, the city is eventually faded out and replaced by the tiny acoustic realm of barnacles (Westerkamp, 1989).

Sound walks with ties to acoustic ecology origins make use of naturally occurring sounds to evoke connections with nature usually resulting in some type of awareness-raising. Westerkamp aims “to create audio pieces that refer to everyday worlds, and to imagined alternatives, by dwelling on and with the ambient sounds of daily life” (McCartney 2002: 45). Westerkamp uses recording technology to bring quieter background sounds to the forefront in an attempt to establish a close connection to different environments through sonic means. Soundwalk producers who use microphones to record and manipulate naturally occurring sonic environments are using a technique that has origins in acoustic ecology. That is not to say that recording a soundscape will necessarily result in an acoustic ecology-type sound walk. If environmental recordings are used together with or are replaced by other sonic recordings for creative purposes then those sound walks may more closely resemble mobile acoustic art, or sound art.
Sound Art

Sound walks, as I am defining them here, have features that mark them as descendents of a larger category of sonic expression known as sound art. The genre of sound art is difficult to define (Licht 2009: 9). Although sound art is not usually understood to include performances of conventional concert music, the designation does include any artistic exhibition or installation that uses sound as its medium of expression (see Bain 2003, Chapman 2009, Paine 2003, Brandt 2003, Rudi 2003). Sound walks inspired by sound art are usually made for aesthetic purposes to create sense-heightening or troubling experiences.

Artistic sound walks typically have a narrative arc that is meant for aesthetic satisfaction. Janet Cardiff’s (1999) *The Missing Voice* is a fitting example of this type of sound walk. Cardiff takes her audience on a thrilling journey where they try to solve a mystery while being followed. The experience generates a type of exciting paranoia. Adding to the paranoia, this sound walk takes place in Whitechapel in London (a place associated with Jack the Ripper). While the narrative listeners hear via a PLD is fictional, Cardiff makes use of actual features in the landscape to compliment imagined geographies and fictional narratives and give the sound walk experience a degree of believability or authenticity. Pinder (2001: 1) reviewed this sound walk and notes that Cardiff has raised,

> Important issues about the cultural geographies of the city relating to subjectivity, representation and memory. Cardiff’s audio-walk in particular works with connections between the self and the city, between the conscious and unconscious, and between multiple selves and urban footsteps. In so doing, she directs attention to the significance of dreams and ghostly matters for thinking about the real and imagined spaces of the city.

Cardiff generates an embodied, fictional experience of a place – that is embedded in that place – that would be difficult to achieve without using a sound walk. Sound art types of sound walks
are typically fictional where narrative is concerned, or else are sonically abstract works that are meant to evoke emotions and aestheticize experiences of a place. The third type of sound walk has origins in social science.

**Social Science**

An example of a sound walk used for social science purposes is Toby Butler’s (2008) *Memoryscape*. For this project, Butler proceeded with his work, as many social scientists do, by conducting interviews, in his case with participants who shared their personal experiences of life along the Thames River in London. What qualifies this work as audio social science is the focus on sound. Butler’s (2008: 11) objective was to use recorded interview material from locals to evoke a particular sense of place: “My aim was to explore the potential of the audio medium to locate oral history in the landscape, make it reverberate publicly and in doing so give a more nuanced, complex and open sense of place”. Butler’s sound walk takes the listener along the banks of the Thames River in London while listening to the sounds of ‘riverbank life’ and testimony from the people who have lived or had experience along the route. The sound walk uses narratives describing past events to describe the riverbank in a way that transcends the visual present.

This sound walk makes use of recorded voices of locals speaking as audiences walk along the river bank. Audiences imagine the events they are hearing about as they gaze upon and kinaesthetically experience corresponding venues. Sound walks used for social science purposes tend to include a significant amount of direction given (where to be and when to be there) and tend to be non-fictional. This is typical of empirically or conceptually-based, sound walks.
There are similarities between these three contexts for sound walk production. They all manipulate naturally occurring soundscapes with recorded ones. PLDs are required for each context and they all undergo similar production processes. Furthermore, acoustic ecology, sound art and social science sound walks all attempt to communicate or evoke something. Together, these three contexts for sound walk production contribute to the ‘family’ of practices that I am calling sound walks. My research attempts to demonstrate how this ‘family’ of sound walks is useful for geographers. More specifically, I am interested in how geographers can use sound walks to think through, (re)present, and teach specific ideas about a place or spatial relationships. The next section outlines the layout of this thesis including the purposes for each section and how I set out to achieve them.

Layout of the Thesis

With an understanding of what type of sound walk this thesis focuses on, it is possible to argue how sound walks can be useful for geographers. I have identified three ways that geographers can benefit from using sound walks. They are theorizing, (re)presenting and teaching. Through the acts of sound walk production, geographers can use sound walks as a theoretical tool to think through specific ideas about a place or spatial relations. Once a sound walk has been assembled, it is ready to have people listen to it. This is an opportunity for geographers to (re)present their ideas to others. Finally, beyond simply presenting ideas or information, geographers can use sound walks to teach students; that is, to help them come to their own understanding about specific places and spatial relations.

These are heuristic or analytical distinctions, useful for taking apart potentialities that are, in reality, blurred, overlapping, and mutually-constitutive. I shall address the issue of the
relationships between theorizing, (re)presenting and teaching at the end of the thesis, after I have dealt with them separately. Each of the three sound walk applications is dealt with in its own chapter, followed by a concluding chapter. The chapters unfold as follows.

**Theoretical Tools**

My purpose in Chapter Two is to demonstrate how the process of making a sound walk generates productive ways for geographers to think through specific ideas about a place and its relation to other places. To gain an understanding of how sound walks can do this, I have produced two of my own sound walks. Because thinking specifically about a place occurs during the production of the sound walk, it was important that I experience the processes of sound walk production first-hand. Since other people’s sound walks are complete, by the time I can assess them, there is no opportunity for me to gain much insight into production processes unless they have written about the process as some geographers have (e.g. Butler 2006, Butler and Miller 2000). By producing sound walks myself I have been able to document my thoughts in detail, and not lose anything in translation (e.g. having somebody put their experience in terms that I can understand). In this chapter, I use first-hand production experience in combination with lessons gleaned from others to explain the various stages of production and demonstrate how they generate specific insights about a place. I start with this chapter because production processes reveal the constitutive components of sound walks, which helps in understanding how to (re)present and teach ideas via sound walks, on which the next two chapters focus.
(Re)presentation Tools

The purpose of Chapter Three is to show the potential sound walks have to be productive tools for (re)presenting specific ideas about a place. I will utilize other people’s sound walks (Westerkamp’s Kitts Beach 1989, Butler’s Memoryscape: Drifting 2005, Miller’s Linked 2003 and, Cardiff’s The Missing Voice 1999) to develop an understanding about how sound walks can be used to communicate and evoke. Listening to sound walks as representations gives me insight into their potential to present specific ideas about a place. I examine other people’s sound walks to understand how sound walks diverge from other forms of representation, and what can be communicated in a sound walk that cannot be conveyed in solely visual or textual terms.

To answer such queries I listened to a number of sound walks while paying close attention to the purpose of each sound walk. I considered how I understood each sound walk in relation to its purpose. I also noted various techniques employed and how I reacted to them. I compared all of this to the experiences I had with visual representations of research to arrive at an understanding of how sound walks may be used to present ideas about specific places and spatial relations.

These strategies help me to understand sound walks as (re)presentations, which helps me to achieve the goal of demonstrating how sound walks can be used as productive means for presenting ideas, even in a non-representational theoretical framework. Sound walks are productive resources for representations because of their unique experiential characteristics. I identify four of them: engaging multiple senses, walking, contingency, and moments of interaction (a central component of non-representational theory). This chapter examines the representational benefits of each aspect. As it is the experience of ‘doing’ a sound walk that
bears representational potential, each of the four experiential aspects comprise the subsections of this chapter. The final substantive chapter discusses sound walks as useful teaching resources for geographers.

**Pedagogical Tools**

The goal of this chapter is to demonstrate how sound walks may be used as productive pedagogical tools for geographers. To investigate pedagogical potentials of sound walks I use two types of data. First, I review some schools of pedagogical thought related to the ways students learn and teaching with multi-sensoral technology. I relate this literature to various experiential sound walk elements to inform my analysis. Second, I analyze sound walks, essays and in-depth interviews gathered from a sample of 4th year Advanced Geography of Music (4P51) students. Nine students consented to let me use their course-submitted sound walks and accompanying essays. Four of these students agreed to let me conduct one-on-one interviews (approximately one and one half hours each) with them.

The 4P51 interview material, essays and sound walks are valuable sources of data because of their individual and collective attributes. The interviews offer direct access to student perspectives about sonic geography, making and participating in sound walks. The term papers provide insight into rationales behind sound walk production decisions, as well as reflections about using sound walks in general. The student-made sound walks offer insight into the ways that students achieve (or did not achieve) their goals, as laid out in the interviews and term papers. Together, these data sources demonstrate how students work with, make, participate in and reflect on working with sound walks. These sources combine to generate insights into how
students evaluated their own sound walk experiences and the extent to which they were able to accomplish the goals of their sound walk projects. Chapter Four outlines each 4P51 data source in more detail.

Conclusion

The purpose of this chapter is to establish what is meant by the term sound walk and to provide contexts for sound walk production. As I understand it, there are three contexts for sound walk production in general; acoustic ecology, sound art and social science. The purposes for making sound walks include some combination of aesthetic, didactic, evocative or representational purpose. Geographers may apply sound walks in these contexts and for these purposes when theorizing, representing and teaching ideas about a specific place or spatial relations. The next three substantive chapters aim to demonstrate the potential for sound walks to be used as tools for thinking, representing and teaching geography.
Chapter 2: Sound Walks as Thinking Tools

I begin my three substantive chapters with a discussion about the making of sound walks. This ensures that a fundamental understanding of what sound walks are made of is established in order to set up subsequent discussions about how to (re)present and teach ideas using them, on which the next two chapters focus. The purpose of this chapter is to demonstrate that producing a sound walk is a productive way for geographers to think about their work. Each production stage has potential to help sound walk producers gain insights and think through specific geographical ideas about a place or spatial relations.

This chapter aims to achieve its purpose by identifying and explaining each production stage including practical examples of exactly how each stage may generate specific insights about a place or spatial relations. There are seven production steps identified in this chapter. They are Brainstorming, Route Walking, Storyboarding, Map-making, Content Research, Audio Engineering, and Proofwalking. Between them, they cover all the requirements necessary to making a sound walk. Some of these steps are ongoing, some recur periodically during production, and they are not necessarily mutually exclusive. The progression of these steps is one way to go about producing a sound walk, but the order of the steps is less important than the benefits each step provides for geographical thinking. This chapter dwells on each step to explain the processes involved in detail and also to provide empirically grounded examples of how each stage of sound walk production generates productive thinking about a place or spatial relations.
In order to provide practical examples of how producing a sound walk is conducive to productive geographical thinking, I decided to make my own. Since the value is in *experiencing* the production process, the only way to capture the experience is to make a sound walk. I made two. My sound walks were made for different purposes, yet both provided me with data to use in this chapter. The next section explains this in more detail.

**My Sound Walks**

Early on in the planning stages for writing this thesis I decided that I needed to make a sound walk in order to write about them. I had previously made a sound walk during my undergraduate degree, but that was with a partner and it was a course requirement. This time, I wanted to make one by myself and make it about something fundamentally geographical. This eventually developed into a sound walk about commodity chains located in my local grocery store. Later on during my thesis work, I was presented with an opportunity to make a sound walk for use as course material for a second year economic geography course. I leapt at the opportunity. I was eager to attempt producing a sound walk for a specific purpose, and I wanted to make another sound walk now that I was deeper into my program and had more ideas about how to express myself via a sound walk. This sound walk focuses on different labour markets at Brock University and takes place on campus.

After making the sound walks, it occurred to me that even though they both had different purposes, the potential application as a thinking tool for geographers remained comparable. This means that the purpose of a sound walk might not affect its potential as a thinking resource for geographers. I shall refer to both sound walks in this chapter as a way to illustrate the stages of
sound walk production. In order for the references to each of my sound walks to be effective, there needs to be a detailed sense regarding the content of each.

The Grocery Store Sound Walk

This sound walk takes place in a grocery store about two kilometers from my home. Prior to making this sound walk, I had shopped there many times and was very familiar with the store. The goal of this sound walk was to help me better understand sound walks in general for the purposes of this thesis. Beyond that, there was no specific purpose regarding what it should be about.

Eventually (I will explain how this came to be later on) I decided on making the sound walk about food commodity chains. The aisles, sections and shelves of the grocery store acted as the final geographical link in each chain. I included a list of instructions and a map (drawn on a note pad with the intention of resembling a shopping list one would carry around with them while grocery shopping) to ensure that participants were at the right places at the right times. The sound walk begins outside in the parking lot and then into the main entrance. The audio track consists of mostly narration (my voice) with an ambient musical backdrop, and I included various sound effects.

After walking from the parking lot into the main entrance, participants are asked to make their way through the produce section and stop periodically to pick up and smell various fruits and vegetables. Participants are then asked to walk to the refrigerated meat section with sounds of cattle mooing eventually being silenced by an aural collage of buzz saws, and then on to the section in the store with the most unmistakable smellscape in the store, the seafood section.
Next, participants are asked to find their way down the aisles where they pause and pick up any canned good they see while they listen to how various links are involved in canned good commodity chains. Finally the sound walk concludes with participants leaving the store (without buying anything) and back into the parking lot.

This sound walk is about twenty minutes in duration and can take place any time that the store is open (although some times are busier than others and that can affect the experience of the sound walk). This ends up being a fairly constrained sound walk in that participants need to stay on track in order to pick up produce and tin cans, hear cattle dying and exit the store when they are supposed to. In this way, the sound walk is more social science than it is acoustic ecology or sound art. It also has a didactic purpose in that it is meant to be informative about commodity chains (even though it attempts to be evocative when it asks participants to pick up some garlic, close their eyes and smell it and imagine the labourers working in a Chinese agricultural production facility, for example). This blending of didactic and evocative purposes was made possible by my freedom to decide what this sound walk could be. That was not the case for the other sound walk I made.

The University Campus Sound Walk

This sound walk takes place on Brock University’s campus. This campus is in St. Catharines, Ontario, the city I was born in and have resided in ever since. Prior to making this sound walk, I had come to the university many times in my childhood because Brock is used in the community for a variety of events (theatrical productions, sports camps, public swims, and convocations). As an adult, I continued to visit Brock’s campus. I did my undergraduate studies
at Brock (as well as this graduate degree). Despite its ever changing and expanding landscape, I was very familiar with this site before I made a sound walk there. The purpose of this sound walk was to be course content for a second year economic geography class. I received instructions that the sound walk was to highlight various labour markets on campus. The duration was supposed to be around thirty minutes and I needed to include specific components (universities as landscapes of opportunities, task evidence, and universal access). These conditions meant that I had to follow specific guidelines regarding content. In this case, my focus had to be on different occupations at Brock; I did have license to select *which* jobs to focus on.

I decided on a route that begins in the main entrance of Schmon Tower (Brock’s defining feature), along a path that takes about thirty minutes to walk and finishing back toward the Tower at a performing arts theatre. The buildings, corridors and sidewalks on campus act as workplaces for various labour forces. I included a list of instructions and a map to keep students on course. The audio track consists of mostly narration (my voice) with an ambient musical backdrop with various sound effects and commercial jingles included too.

After the Schmon Tower entrance participants are asked to make their way through the main lobby and stop to look around at the various work places and think about the people who work there (librarians, academic advisors, administrators, help desk employees and Tim Horton’s employees). After that, students are asked to find their way to the elevator (this sound walk route is universal access only) and up to another level. From there, students are asked to walk along a pedestrian bridge, down an elevator to the bookstore, outside into a courtyard and toward the Tower, back inside to a theatre. This sound walk has students looking for task evidence in the landscape while listening to a voice narrate what they are seeing.
The sound walk is about thirty minutes and is meant to take place during peak hours in the day (this way there is more chance of seeing workers and students en route) but has different evidence of tasks depending on the season (e.g. snow removal versus lawn maintenance). This ends up being an extremely constrained sound walk in that students not only need to stay on track and hear narration when they are supposed to, but they need to pay close attention in order to write about and discuss what they learned from the sound walk. This sound walk is social science rather than acoustic ecology or sound art. It also has an entirely didactic purpose in that it is meant to be informative about occupations at Brock. This didactic purpose was determined by the guidelines I received from the course instructor. For both of the sound walks I produced, I followed a similar production sequence. The following portions of the chapter will explain what happens in each production stage, and provide practical examples of how sound walk producers can generate specific insights about a place and/or spatial relations.

**Brainstorming**

Brainstorming is a technique used for creative problem solving (Rawlinson, 1981). Brainstorming helps generate ideas, which makes it useful to include in research design (see Isaksen and Gaulin, 2005). There are two types of brainstorming that can happen at the onset of sound walk production. The first type is *pre-purpose*. This means that sound walk producers who wish to make a sound walk, but do not yet have a purpose, must brainstorm to come up with one. Brainstorming for a topic can take numerous forms. Potential sound walk producers may consult existing sources such as academic literature, fictional literature or movies for ideas. The goal of pre-purpose brainstorming is to come up with an idea for a sound walk that is possible to
produce and not something that is so difficult to conceptualize that it stifles each production stage thereafter. Since the experience of sound walk production is beneficial for geographers, it may be helpful to make a sound walk solely to experience the production process. This was the case for my grocery store sound walk.

I knew that I wanted to make a sound walk, but I did not know on what specifically to focus. The first step in sorting this out was to brainstorm. I knew that I wanted a focus that was fundamentally geographical. I wanted it this way because a fairly well-researched topic in geography would have more literature at my disposal. This would ensure that the challenge of making the sound walk would be more about articulating an argument through the sound walk and less about researching and trying to find scholarly work pertaining to an obscure geographical topic.

One of the most effective 4P51 sound walks I studied was Lyla’s. Part of what made her sound walk successful was her unambiguous geographical topic. Her goal was to map private soundscapes of suburbia. Lyla’s sound walk consists of walking along a sidewalk in a subdivision, turning around and walking back to the starting point. The first leg features sounds of dogs barking, children playing, and lawnmowers mowing, all public suburban sounds. On the second leg, the sounds consist of modem dial ups, conversations and even heated domestic disputes, all private suburban sounds. In Lyla’s term paper accompanying her sound walk, she remarked how her straightforward topic and design worked to help audiences receive her message: “Beyond the relatable premise and the straightforward route, the basic composition of the soundwalk ensures that the listener(s) can grasp the goal of the soundwalk”. This sound walk is simple and effective; precisely the characteristics I was hoping for in the sound walks I produced.
To get some ideas, according to these guidelines, I spoke with some geography professors. These conversations proved very helpful and one professor suggested commodity chains (as a well-researched topic) as my focus. From that point, I brainstormed to figure out a specific commodity, and an appropriate site for the sound walk. I eventually decided on food as the commodity and my neighbourhood grocery store as the location. The purpose of the sound walk is to evoke the places that represent the links in the commodity chains before the commodities arrive at the last link before retail sale, the grocery store.

The second type of brainstorming is *after-purpose*. This type of brainstorming pertains to thinking through ways to use a sound walk to achieve the (already determined) purpose. In the case of my grocery store sound walk I engaged in both types of brainstorming. After I figured out the topic and purpose, I then needed to think about how to use a sound walk to evoke the places of food commodity chains. I knew that I would ask participants to walk into the store, around sections and up and down the aisles, but I needed to determine exactly what participants could do in the store to evoke places from around the globe. To inform this after-purpose brainstorming stage, I needed to visit the site.

It is a useful discipline to visit a location for the purposes of producing a sound walk because we force ourselves to evaluate places for how they might feature in a sound walk. As I walked the grocery store, I noticed that my behaviour was slightly disruptive to some of the other patrons. While they were all shopping, I was evaluating the sections and aisles for sound walk purposes. I found myself being looked at, almost policed, by the shoppers as if I did not belong there. In an attempt to blend in, I started to act as if I too were shopping. I started picking up fruit in the produce section and inspecting it as if I was choosing the best specimen to purchase. When I did this I realized two things. First, I would continue this act for the duration of my visit
(and any future visits during production), and second, I would instruct the participants for this
sound walk to stop and pick up products as a way to evoke the places where these products came
from.

During this brainstorming exercise, I found a way to incorporate tactility as a way to
compliment any audio in the sound track as well as the visual experiences associated with
walking around a grocery store. From that point on, I was ready to do some additional
brainstorming about which commodities in particular to focus on. To sort this out, I plotted a
route that would take a certain amount of time (I intended for this sound walk to be around
twenty minutes) and I selected points of interest (the places in the store that get specific attention
in the sound walk) that were spread out across enough space for narration and walking to happen
between them. After deciding on concepts for a route and points of interest, I was ready to
continue on in the production process.

In the case of my university campus sound walk, I was given a topic and purpose with
particular content requirements, so the first step in this production process was after-purpose
brainstorming. Since this sound walk was meant to be a component of an economic geography
class, I was given some well-defined guidelines. This was both liberating and constraining. It
was liberating because I was free from having to decide on a topic, purpose, and on the kind of
content that needed to be included. This freed me to spend my time and energy on ways to use a
sound walk to achieve the purpose of this project, which was to highlight a variety of on campus
labour. It was constraining because I could not veer outside of the guidelines which meant I had
to abandon any ideas I had during brainstorming that were off-topic. I wanted to include
something about students attending university in order to find a job after graduation, while
simultaneously not noticing all the work that happens on campus in order for them to attend
university in the first place. I also wanted to include political factors that I felt were relevant to some of the on campus labour markets such as unions who support other unions during a labour dispute, and I also thought about commenting on the number of male administrators versus female administrative assistants. In the end I decided that this type of commentary was not appropriate or necessary for the purpose of this sound walk, so I concentrated my focus elsewhere.

Producing a sound walk under these conditions was also constraining because of the completion deadline. I had an undetermined deadline for my grocery store sound walk and so completion time was never really a factor during the brainstorming stage. In the case of the university campus sound walk, I was approached to make it about three weeks before the course started. This meant I had to sort out what content to include, where the route would be, how to use the sound walk to achieve its purpose, produce and engineer the audio track, proofwalk it, and get approval from the course instructor (which included a revise and resubmit process) all in about twenty days or so. While this was certainly possible, it meant that each stage of production had a time limit and I could only dedicate so much time to each element of sound walk production.

Still, there was some degree of freedom within these constraints. For example, I had to feature different occupations on campus, but it was up to me to decide which ones and how I would treat them. Making these decisions would also inform the route I chose, so I still was able to be creative within these guidelines. This sound walk was more difficult to produce than the grocery store project because of the constraints. I imagine that any geographers who decide to produce sound walks are more likely to encounter similar constraints because using sound walks
for presenting and teaching ideas is likely to happen more frequently than producing sound walks simply to experience production processes.

Brainstorming helped me to generate specific insights about places. When I began pre-purpose brainstorming for the grocery store sound walk, I generated insights into the geographies of commodity chains. For example, there are entire industries (such as tin can manufacturing) that are made profitable even if they only represent a portion of one link (canning processes) in the chain. This helped me realize that commodity chains are not necessarily linear and may resemble more of a web of geographical interconnection.

Additionally, during the after-purpose brainstorming stage for the university campus sound walk, I realized that university campuses have many overlapping workplaces. For instance, a given building on campus serves as a place of labour for educators, campus security, food vendors, custodial staff, and administrators. All of these occupations have different jobs to do in the same place.

Brainstorming is the first stage of production and does not promise very detailed insights into sound walk locations. The above two examples are evidence of this and the insights during this stage usually have to do with the topic of the sound walks (e.g. places of commodity chains and workplaces on a university campus). However, even during this first stage of production, there is still opportunity to develop insights beyond the topic of the sound walk.

For instance, when I was brainstorming for my Brock University sound walk, I knew the route would be somewhere on campus, yet I did not have a specific location in mind. On the other hand, brainstorming for my grocery store sound walk had a different beginning. I knew that I would employ a route that meandered through various food sections and aisles, but I
neither knew exactly where nor within which particular store it should take place. This prompted me to think of conventional spatial organizations of grocery stores and particular spatial arrangements of University campuses. Most grocery stores follow a similar spatial layout while university campuses often do not. Even though university campuses have common sites (registrar’s office, libraries, gymnasiums), we often need a map to figure out where they are located. Grocery stores may differ slightly in where certain sections are, but the staples (produce, meat, bread, and dairy) are usually located along the perimeter with non-perishables located in the aisles.

I had to visit the grocery store in order to brainstorm ideas for my sound walk. The insights gathered during that exercise were technically during brainstorming (the stages discussed here have considerable overlap at times and are not mutually exclusive) but relate closely to the discussion in the next section, Route Walking.

**Route Walking**

Once brainstorming has yielded specific ideas and a coherent sense of the sound walk, the next task is to determine a specific route and then go there in order to get acquainted with it and imagine the sound walk taking form. Route-Walking simply involves visiting a potential route(s) and assessing its ability to serve as a venue for an intended sound walk. At this point, sound walk producers will usually walk without a PLD and aim to figure out route characteristics such as starts and finishes, areas to focus on, and how to plan an accessible path suitable for audiences to follow (see Michon and Denis, 2001).
Route-Walking is particularly useful for geographers because it is necessarily done in situ (being present in a particular location) or more aptly, en route, which cultivates thoughts of interconnectedness. Deciding on how to create a route is one of the first significant challenges in sound walk production (Butler 2006: 902). It is during these types of thought exercises that geographers may find relationships between seemingly unrelated places. Creating a sound walk route sometimes reveals commonalities between places that otherwise remain unnoticed. This occurred to me during the route walking stages of both sound walks I produced.

I went route walking for my university campus sound walk a few times. I repeated this step for a couple of reasons. First, I needed to decide on the best places on campus for this sound walk route (one that was universally accessible as well as one that passed through places with a dense concentration of task evidence and people working). Second, I needed to decide what time of day this would work best. I went route walking on a weekday during regular daytime class hours and also at night when there was less of a student presence. While I decided that daytime worked better for the purpose of this sound walk, a specific insight about Brock’s campus occurred to me while route walking at night. Brock University’s performing arts theatre sometimes holds productions at night. On campus at night, the hallways and classrooms are usually empty, but when there is an event at the theatre, parts of campus (and parts of my campus route) stand out as places of business and activity. For instance, the theatre, parking lots, parking lot booths and campus security cars emerge as places of activity on campus at night. It was as if my sound walk route lay dormant at night except for these select places. Walking my route at night revealed a network of places that probably would not have occurred to me without this experience.
Route walking for my grocery store sound walk generated insights into how people flow through this space. As I mentioned earlier, I initially visited this route to help with brainstorming and promptly learned that if I acted like I was shopping, I would be less conspicuous. When I returned for route walking purposes I discovered the ways that people shop and flow through grocery stores. Shoppers linger in areas such as produce sections, refrigerated meat sections and bread sections, because they examine the food before they decide to buy it. For this reason, shopping traffic is dense (which usually results in dedicating open areas of the store for these products) and slow moving. Shoppers also seem to have more patience for browsing in these areas. In the aisles, products are usually non-perishable and in cans or jars. This food requires less physical examination, which results in brisker shopping tempos. I realized this when I stood with a can of Chef Boyardee in my hand thinking about how my sound walk would incorporate it into the narrative. I felt the same feeling of being policed as I did when I failed to act like a shopper in the produce section. This time I appeared to be shopping, except if I was really shopping I would have selected a can and quickly moved on. I only realized these things because I was in those places to produce a sound walk and not to shop.

Even though neither of the above examples featured in my sound walks, they are both specific ideas about places that were generated from the process of the route walking stage. Once sufficient information is generated from route walking, the next step is to start sketching out the series of events or narrative of the sound walk in the storyboarding stage.


**Storyboarding**

The next step in sound walk production is storyboarding. Storyboarding can have many incarnations and may be used for research and teaching (Law 2009). In a traditional sense, storyboarding may involve illustrated segments depicting various scenes from a projected sound walk. However, this stage may also be entirely conceptual. That is, sound walk producers may imagine various scenes and corresponding soundscapes during or shortly after the previous stage of production (Route Walking). Storyboarding requires sound walk producers to describe places by drawing them, or imagining them by the ways they look, sound, feel, taste and smell. This can be a fruitful activity because it compels geographers to articulate their understandings of places outside the more typically familiar parameters of language, because storyboarding is supra-linguistic. It is an opportunity to think through impressions and ideas about places from a non-linguistic and non-textual perspective (see Knauf, Sakurai, Tsuruta and Jantke, 2010).

Storyboarding is valuable for geographers because it facilitates thinking about relationships between visual, tactile, olfactory and aural geographies. This is the first stage where producers must confront the challenge of achieving the purpose of the sound walk by using sounds, smells, embodiment, motion, tactility and subjectivity. This challenge is also a useful opportunity for geographers because it offers alternative ways to think about relationships between different sensorial geographies. Attempting to produce a scene for a sound walk that features smells, sounds, motion, sense of place and tactility requires intensive thinking about how different sensorial geographies are experienced, and then trying to create a picture of that experience. For example, do we see a place differently when it becomes noisy, odourous or cold? Is it possible to look at a storyboard and feel similar to being there? If so, how come, if not, then why? Storyboarding facilitates different ways to think about geography. How well this
can be done is secondary to the thought exercise itself. It is the process of trying to think through these challenges that develops the ways we think about places, and not necessarily if we arrive at a resolution.

For example, in my grocery store sound walk I decided to focus on Peruvian asparagus. When I was imagining the scenes (conceptually storyboarding) for how this would play out in my sound walk, I needed to think of a way to represent Peru sonically. When I was thinking about sonic representations of Peru, I remembered a television program featuring Peruvian flute bands in the United States. This helped inform strategies for representing Peru sonically. When I thought about how to do this I made some discoveries about shared attitudes towards particular geographies such as stereotypical or imagined geographies (see Said, 1978). It also revealed my lack of knowledge about particular geographies. Whether or not Peruvian flute band music is a successful representation or not is beside the point. The point here is that even our inability to think through ideas about a place easily (e.g. sonic representations of Peru) is part of what makes us better thinkers. The benefit is not what one thinks but rather, how one thinks. After a sound walk has been storyboarded (materially or conceptually), sound walk producers are now equipped to map the route.

Map-Making

Cartography is a significant element of geographic practice. Map-making is a helpful way for researchers to address the task of engaging the places where they work (see Kitchin, 1994). In order to make a route map for a sound walk, geographers must familiarize themselves with the geography of the route. This process usually begins with a site visit (visiting a site for the purposes of mapping it is a different type of site visit from site visits during brainstorming.
and route walking because knowledge and observations required to make a map are different than those required to generate ideas or identify points of interest) and sketching out a map. The objective of this production stage is to create a map for participants to follow.

Some sound walk producers may design a sound walk and deliberately omit having a map in order to achieve some purpose that requires equipping participants with very little in terms of instructions. However, sound walk route maps can help participants understand where they are going prior to starting the sound walk. This allows for more focus on the experience of the sound walk and less distraction from participants figuring out where to be.

Map making for a sound walk is different from most other cartographic exercises (e.g. Slocum et al., 2009). Sound walk route maps are designed with the intention of having others walk the route. Sound walk route map makers also have to walk through the place they are mapping. There is a consideration of embodiment that goes into making a sound walk map in this way.

When I was making my grocery store route map, I did so with the consideration of potential participants in mind. I remembered the emotional experiences of being ‘policed’ in the aisles, and what it was like to find my way through the check-out lines without buying anything. I used a dotted line in my map to represent the route participants needed to walk and when I was drawing that line in certain areas, I re-lived the anxiety I felt when I was in those places. In this way, producing a map for a sound walk helped me to understand scales of emotional geographies (e.g. Pile, 2010). Even though the anxiety of leaving a grocery store without buying anything pales in comparison to the geographic emotional experience of visiting Ground Zero for example, the lesson is still resonant (see Urry, 2005). Emotional geographies are not necessarily monolithic and they may only sometimes qualify as emotional geographies (when I returned to
shop at the grocery store, I was no longer anxious when pausing to look at a canned good or wandering aimlessly in the produce section). Producing maps for sound walk routes generates specific insights about a place because of the embodied elements and intimate connections inherent to this production stage.

When I produced my map for the Brock University sound walk, I sketched the route as I walked it, and then took the sketch home to work on later. When I finalized subsequent drafts of the map away from campus, I supplemented the site sketches with how I recalled the route in my mind. When route maps are drawn from memory, achieving the correct scale is challenging. Geographical discrepancies emerge between points of interest along the route. These discrepancies demonstrate how we experience and perceive the spaces we move through. This occurred to me when I produced route maps both from site visits and memory, and then by tracing a published map to scale (see Appendix 1a and 1b); comparing the two maps unearthed insights about my own sense and perception of the campus. For instance, the dimensions of campus features on the mental map are consistently inaccurate, as are the distances and directions between them (Kerst, Howard Jr, & Gugerty, 1987 see also Gould and White, 1974). However the ways places are organized in relation to each other is correct. For example, the Tim Horton’s is in between Schmon Tower and Taro Hall (see Appendix 1b). This suggests that I am more consciously aware of destinations than the routes between them. There are times when we occupy geographies without connecting to them, being present without engagement. This notion is reminiscent of liminal space theories, non-space or transitional landscapes (Andrews and Roberts, 2012: 2) because when we travel to a place, we sometimes disregard the places along the way. Map making is a way for geographers to engage with ‘the field’ (Dodge, Kitchin, & Perkins, 2011). Cartographic processes provide ways to discover geographies. Route map
production is especially helpful to this end because it yields embodied considerations of walking in a particular place and compels sound walk producers to acknowledge distances, dimensions and proximities of a place. By the time route maps have been completed, sound walk producers will have fleshed out a fairly specific focus, visited potential routes, figured out a storyboard as well as a route map. Sound walks continue to take shape when detailed content is added.

**Content Research**

As mentioned earlier, the sequence of steps presented in this chapter is not meant to imply a rigid ordering of isolated processes. These stages are not discrete and sound walk producers may engage any stage (more than once) when they need to. This condition applies especially to content research. Content research may very well be the first step in sound walk production and continue throughout the entire production process. This chapter situates content research between map making and audio engineering because at this juncture in production, geographers already have a concept and a route map, and now need to generate content for the sound track. The *content research* portion of the production process includes researching and writing up a schematic for the content of the audio track.

Sound walk producers often need to do secondary research to develop the substantive content they wish to convey in the sound walk. Secondary research for a sound walk is no different than secondary research for any other scholastic project. This is an important point because it positions sound walk production on equal terms with other, more conventionally accepted forms of academic work. This stage includes writing as well as research. However, sometimes writing processes during the content research stage of sound walk production generate unique styles, a sort of new writing genre altogether.
For my grocery store sound walk I started writing narration about asparagus industries in Peru and aspects of the garlic trade in China. I made notes all over the page where various sound effects (in red) and music (in blue) would start and finish. The result was a colourful, baffling document that represented audio overlap in the sound walk (see Appendix 2). Producing this type of written document helped me to discover how fluid and polytonal sonic compositions (and geographies) can be. It also helped me to think through my own ‘voice’ as a sound walk producer. This page represented the narration, ideas, and sounds that work together to constitute that ‘voice’. As Richardson and St. Pierre (2005: 970) point out, “Sometimes I wrote something so marvellous it startled me. I doubt I could have thought such a thought by thinking alone”. This definitely was the case for me.

The entire sound walk production process may be thought of as a method to collect data; in the same ways writing may be considered a method. Writing has been described as a method of knowing (Richardson and St. Pierre 2005). Qualitative researchers engage writing processes for the duration of a given project, and not just as something that happens at the end when researching has concluded. Instead, writing is a way of knowing, a method for collecting data (DeLyser et al., 2010: 343). The act of writing includes inner dialogue, an introspective conversation about what to write and what has been written. Writing combined with reflection afterwards creates a method of discovery while writing and even during other activities. For instance, conducting field work may be interrupted with thoughts about what to write (Crang and Cook, 2007: 152). Much like sound walk production, there is constant metacognitive thinking during all phases of composing. When we interpret or gather data in the field, we also think

---

2 Metacognitive thinking involves reflecting on thought processes (see Kolenick and Hillwig, 2011). It is thinking about thinking. My interview participant Lyla introduced me to this concept during our interview when she said, “the composer must think about what they are producing and if it will help the listeners come to understand the
about how to express this in composition; likewise, “we do not stop interpreting in order to write” (Crang and Cook, 2007: 152). There is reciprocity among each step in composing textual accounts. Sound walk production is similar. Whether new ideas are made writing scripts, walking a route, creating a map or a storyboard, or editing audio tracks, the entire production process is a method of discovery. Research and writing during sound walk production can be challenging because it sometimes involves new techniques and approaches, because sound walks, as a compositional genre, are relatively new and are still acquiring conventions.

Research participant Clementine reflected on this challenge in her term paper: “I had to carefully choose musical compositions and ‘natural’ sounds to compose an audio track that fit the route perfectly” (my emphasis). Clementine produced a sound walk that spanned three distinct areas. It begins in a suburban neighbourhood, continues through downtown St. Catharines and concludes in another suburban neighbourhood. When she remarks about the fit of her sound track, she is describing two things. First, Clementine is concerned with coordinating the time it takes to walk a route with the elapsed time of the audio track: “I had to choose a specific route and walk it multiple times to see timing and if the route worked”. Second, Clementine wanted to make sure the music and environmental sound effects she chose would achieve what she intended. She says, “During this process I learned to appreciate the relationship between sound and the environment, because if my audio track was off by a bit, it could change the entire experience of that specific landscape”. Part of Clementine’s purpose was to make a sound walk that communicated her ideas to audiences in a way that limits opportunities for contingency and alternative interpretations of her sound walk’s purpose. This may be futile because music or other sounds that ‘fit’ with one person may be totally lost on another.

---

intended goal of the sound walk. So it’s a multi-step process that requires continuous metacognitive thinking and revision so that all listeners can understand”. 31
This metacognitive process of sound walk production is valuable to geographers because it opens up opportunities to think and make discoveries about shared understandings about particular geographies. It may also reveal a lack of knowledge about particular geographies (e.g. when I decided to use Peruvian Flute bands as representative of Peru). This applies not only to music but to recorded environmental sounds too. This may involve researching the constituents of various soundscapes, and it may also involve going out and recording sounds yourself. The former is valuable because it unearths geographies that may not be apparent; the latter has value because it offers researchers a chance to connect with places sonically by paying close attention to soundscapes and their sonic economies.

**Audio Engineering**

Audio engineering skills are geographically relevant because sound exists in and constitutes space. Specific places are known in part through the ways they sound; developing skills to deepen sonic understandings may also result in deepening geographical understandings (e.g. Gallagher and Prior, 2013). My participant Mookie gets at this understanding when he communicated his experience engineering the audio for his sound walk: “I attempted to use cross-fading techniques to provide a sense of distance and directionality in the sound walk”. Sound walk production involves using sound to represent spatiality. Mookie manipulates sound to express distances and direction. Working with sound this way broadens his spatial awareness by focusing on the ways that sounds imply and constitute spatiality. There is also the element of timing. Sound engineers need to tailor sound tracks according to the time it takes for audiences to travel certain distances. Thus sound engineering allows us to engage relationships between space and time.
Sound engineering also permits innovative expressions of geographical information. Most academics express themselves largely through textual accounts; sound walk production presents opportunities for expression in different ways. Learning to record and to work with sound in a studio allows sound walk producers to speak and communicate ideas with sound. (Westerkamp, 2002: 51). Additionally, sound walk production processes allow geographers chances to discover just by engaging in the process. Sometimes aesthetic values emerge from the recorded soundscape (Westerkamp, 2002: 54). The same can be said for academic values. That is, sometimes new ideas emerge when sound walk production elements meet during compositional practices. Certain ideas may come to light only when particular sounds interact with one another; when new soundscapes are composed, mixed and heard.

In producing my Brock University sound walk certain ideas came to light when musical accompaniment was mixed in with narration. I selected some instrumental music to aurally supplement the sound of my narrating voice. Occasionally, the timing of the music would sync up with the cadence of my words and sentences. The result was a powerfully compelling audio effect that emerged from the process of mixing tracks. This serendipitous circumstance also worked to give my words an aesthetic value that was unintended. This type of aural aesthetic impacts the landscape of the route too. In the case of my sound walk, it provided a certain feel to a section of Brock’s campus (a hall featuring former University Chancellors’ portraits). This unforeseen (unfore-heard?) effect helped me realize that geographies, like my sound walk, are subject to change at any moment when particular elements ‘rub up’ against one another. Adopting a ‘geographies in flux’ perspective applies not just to the presence and actions between actors and environment, but also the contingencies interaction yields. This epiphany is potentially beneficial in that it generates insights and tangible examples of geographies in flux.
that are only possible in spontaneous moments of interaction, but also limiting, because geographies in flux are difficult to anticipate and therefore limit the ability to achieve intended outcomes for audiences.

These types of serendipitous moments are common to all sorts of compositional practices and in the context of sound walk composition, these moments may hinder intended outcomes for audiences, but may also generate new ideas about geography for sound walk producers (in my case, the perpetual and contingent yield of interaction). Sound engineering helps initiate this. Once the audio portion of the sound walk has been engineered, it is possible to test the sound walk by walking the route with the audio track.

**Proofwalking**

Testing the sound walk happens during the last stage in the production sequence, Proofwalking. I call this stage of production proofwalking because it is an evaluation of one’s own sound walk. Much like the proofreading that happens when examining written compositions, geographers proofwalk their sound walks to evaluate efficacy and finalize any issues. At this stage, sound walk producers test the audio effects as they relate to the timing of the route, as well as audio quality and overall experience. This stage is the first time the finished product (a ‘rough’ finished product at least) is experienced. Sound walk producers get their first practical sense of how their work during each step has come together. This is a valuably unpredictable step in the production process for geographers. Lyla found proofwalking to be valuable when she made her sound walk and mentioned it in her term paper: “Upon completing my sound walk and I realized that the pace of my soundwalk was too slow in regards to the soundwalk route”. Lyla went through each production step but made an important observation at
the end of her process that required her to go back and adjust the tempo of her work. For Lyla, the proofwalking stage revealed a previously unknown characteristic of the sound walk she just made. Still, proofwalking is limited in its capacity to reveal potential issues.

Anticipating how a sound walk will turn out is made unpredictable and constrained by some contingencies that proofwalking will not be able to sort out, because they will not happen the same way every time. First, there are circumstances along the route that cannot be predicted (weather, personal interactions, various events, etc.) and second, subjectivities and dispositions of sound walk users are varied and in flux.

A large part of making a sound walk is doing the sound walk. In fact, a sound walk is not a sound walk until one does it – sound walks only exist in their performance. Butler (2006: 896) offers an elaboration of this:

stories mix with your own thoughts and memories as you wander [...] the ‘melding’ between the artwork and the consciousness of the participant also means that the walk is a highly specific experience that will differ according to the mood and circumstances of each listener on a particular day; it will clearly not be experienced by people in the same way.

Even sound walk producers themselves may not experience their own sound walk the same way twice. This limits the potential effectiveness of sound walks, but it also reveals subtle geographical variations in ways that are easily detectible. For example, if a sound walk producer strives to construct and shape their sound walk to express some geographical idea, they do so by considering the geographies of their route. Certain visual and aural features are emphasized and perhaps narration is used to deliver supplemental emphases. When sound walk producers try their own compositions they may find that the ideas they receive during the walk do not resemble the ones they intended to communicate. Proofwalking my grocery store sound walk revealed some
effects that I had not intended. For example, in explaining commodity chains of canned
pre-made pasta entrees, my intent was simply to communicate information.
Proofwalking my own sound walk helped me to think about how many resources are
exhausted in order to get that tin of ravioli to the grocery store. Instead of passively
being informed by my narration, I started thinking about the politics of mass production
and consumption. I had not intended this effect. This may be due to contingencies such
as my own mood and focus at that particular time.

Sound walk producers may experience exactly what they intended on an initial run-
through, and then have a much different impression a second time. This may be because of
different degrees of engagement between initial, second, third and fourth tries, yet it also may be
related to geographical variances. By geographical variances, I mean changes in route
populations, weather, landscapes, smellscapes, and so on. They are easily detectible because as
sound walk producers we become very familiar with the routes and various points of interest in
our sound walks. We have become comfortable with mediating these, now familiar, geographies
in ways that are meaningful – as our very own creations. Yet even when geographies are
familiar, the outcome is always somewhat unpredictable. People and places exist in a perpetual
state of flux. Producing a sound walk and walking it more than once demonstrates this most
vividly. For example, David Pinder (2001: 7) notes how experiencing Janet Cardiff’s The
Missing Voice opens up opportunities to discover layers of geographies that exist inside one
another. While geographers may be aware of plurality among places, proofreading sound walks
is an effective way of discovering simultaneous, multiple geographies.

Although exposing these types of multiplicities (multiple selves experiencing multiple
geographical layers) makes for tricky goals to accomplish, it is during post-production processes
where strategies to achieve these goals may become clearer. For instance, during proofwalking stages, it may become evident that the instructions need adjusting, or narration needs to be more or less explicit. In my own proofwalking experiences, I decided that the route map I made for my university campus sound walk was too confusing, because it incorporated too much detail. My route map needed to be concise but simple enough to discern easily. This realization only occurred to me during the final stage of production, proofwalking.

**Conclusion**

Sound walk production creates an intimate familiarity, it sensitizes sound walk producers to characteristics and relations they would be unlikely to recognize otherwise, it facilitates thinking from an embodied perspective, it helps generate productive thinking about contingency, and it challenges producers to imagine appropriate visual and sonic signifiers, or affordances.

Each step generates intimate familiarity and awareness about the route, the subject matter of the sound walk and spatial relations. For instance, production steps helped me to think specifically about the routes in my sound walks. I needed to consider how grocery stores follow similar spatial arrangements whereas university campuses do not. I also considered spatial relations among sound walk routes that may not be apparent otherwise. Additionally, I contemplated the ways that walking in certain places along a sound walk route become liminal and do not receive the same kind of attention or engagement that other places do. Sound walk production also generates productive thinking about the subject matter of the sound walk. I had to think about the geographies of commodity chains and campus work places in order to evoke and (re)present them in a sound walk. Finally, sound walk production facilitates valuable thoughts about spatial relations. When I generated written documents with colour schemes and
overlapping text, it helped me to think through notions of acoustic space (see McLuhan and McLuhan, 1988). Similarly, audio engineering helped me to think through the ways sound constitutes environments and different ways to express geographical information.

Sound walk production generates productive thinking about embodied spatial experiences. Producing my sound walks helped me to understand how to behave, act and walk in certain places. Making route maps helped me to consider the ways that participants would move their bodies along the routes and how different senses would experience the sound walks. This led to considerations about how participants would experience my sound walks in different ways due to various contingencies.

Sound walk production requires metacognitive exercises in order to achieve the goal of the sound walk. Sound walk participants introduce contingencies in the ways they will understand content, the mood they are in and how they use their bodies and senses to focus and experience elements of a sound walk. Additionally, the route itself introduces contingencies in terms of weather, other pedestrians, traffic patterns, and so on. While contingency is inevitable in sound walks, producers can assess possibilities for contingency and design their sound walks according to their objectives. This requires thinking about affordances (see Gibson, 1977 and Chemero, 2003).

Route walking is the first stage of production that identifies affordances. Different times of day, material features, proximities and dimensions play a key role in determining route affordances. In my grocery store sound walk, I thought about incorporating the environment, products on the shelves and the ways shoppers are directed through the aisles to produce my sound walk in a way that evoked commodity chain geographies. We think about a place differently when it is evaluated for affordances in the context of sound walks.
While the above production steps do not necessarily happen in a linear and orderly fashion, they are critical to the production process. Producers may go about making sound walks in a variety of ways. However the production process unfolds, elements of all seven stages will necessarily take place. Once geographers have a completed sound walk, it is ready to be presented to audiences. The next chapter aims to show how sound walks can benefit geographers in (re)presenting specific ideas about a place or spatial relations.
Chapter 3: Sound Walks as (Re)Presentational Tools

The purpose of this chapter is to demonstrate how sound walks can be productive resources for evoking or presenting ideas, even in a non-representational theoretical framework. The previous chapter attempted to demonstrate how sound walk production yields productive geographical thinking, this chapter aims to show how that type of thinking may be used to represent or evoke through sound walks. Sound walks have potential to do this because of their unique experiential characteristics. This chapter investigates four experiential characteristics. They are multiple senses, walking, contingency, and moments of interaction (a central component of non-representational theory). This chapter examines each characteristic in terms of representational benefits. Since it is the experience of ‘doing’ a sound walk that provides representational potential, each experiential characteristic shall comprise a subsection of this chapter.

I treat (re)presentation as a creative process, the production of something new, a representation of some fragment of reality (Duncan and Ley, 1993: 10). This creative process of re-presenting requires a co-operative, somewhat unconventional effort (see Jacobs, 2009) between sound walk producer and participant. The role of sound walk producers then, is to initiate evocative moments whereas the role of sound walk participant is to receive and experience these moments and in a way, co-produce and complete geographic evocations or (re)presentations.
Multiple Senses

Sound walks involve tactility, sight, sound, taste and smell. Multi-sensorial engagement is an asset for evoking places because different senses apprehend different fragments of reality (see Nicholls et al. 2004). For instance, we see a firework flash in the sky and then hear its explosion. We use both senses to understand what has occurred. Listening, seeing, smelling, tasting, and touching our surroundings gives us an understanding of reality that is informed by multiple senses. When senses are combined to apprehend our world, we gain deeper understandings and connections (see Schuler et al., 2012). Geographers can use these combinations of senses to strategize about representational approaches. Engaging multiple senses at once is one way that sound walks may go beyond other forms of representation.

Sound walks engage multiple senses in two ways. First, there are the events occurring along the sound walk route. David Pinder (2001: 4) explains the multi-sensorial experience at the start of Janet Cardiff’s *The Missing Voice* (1999): “As you turn into a narrow archway off Whitechapel High Street, the rhythm of walking is accompanied by everyday observations: a plane passing overhead, dogs barking, cold wind round the neck”. The sight of the plane, the sound of the dogs and the chill of the wind are all contingencies supplied by the environment of the sound walk route. This multi-sensory experience is exterior to the sound track. When the sound track is introduced, additional multi-sensory experiences transpire.

When route sounds intermix with recorded sounds, it becomes difficult to identify where sounds originate and therefore difficult to discern which sounds are occurring naturally along the route and which ones are artificially introduced (Pinder, 2001: 5). This gives geographers opportunities to ‘play’ with conceptions of reality. Even if geographers decide not to distort
reality and representations of it, there is nevertheless potential in the engagement of multiple senses.

Toby Butler (2006) describes the multi-sensory experience of sound walks as all-embracing. This is beneficial for representational approaches because reality is all-embracing. Sound walks can communicate this and evoke reflection simultaneously. For example, venturing out into the streets of Whitechapel maintains that ‘all-encompassing’ condition and, with the narrative, emphasizes presence of sound walk users’ self. Not only is there potential for an all-embracing representational effect, but ‘the self’ is present also.

Cardiff’s sound walk is fictional. Its paranoia-inducing mood only works in relation to the subjectivity of the participant. Sound walks do not operate in a vacuum; rather they operate on the people who ‘do’ them. David Pinder (2001) argues that the effect of Cardiff’s sound walk is to heighten your senses: the narrative mixes with your own thoughts and memories as you wander the streets. He mentions heightened senses and presence of the self, suggesting that sound walks have potential to engage senses and heighten them, while emphasizing notions of self in relation to that which is occurring in the surrounding environment. Maintaining awareness of self is important in representational approaches, because our own understandings of self are central to the realities we interpret (see Kobayashi, 2003; Finlay, 2002).

Engaging multiple senses in sound walks has potential to cultivate a type of sense-heightening, self-aware representational experience. As audiences move along sound walk routes with senses engaged and heightened, the experience emphasizes the sensuousness of walking as a mode of engagement that is tactile, aural and olfactory as well as visual (Pinder 2001: 5). It is important to note that despite incorporating multiple senses, sound is the one
resource over which the producer has control and it is this control that makes it a sound walk rather than a sense walk. The next sub-section examines walking as an aspect of experiencing a sound walk that can be utilized for representational purposes.

**Walking**

Walking through space offers a dynamic and embodied experience of an environment (see Edensor, 2012). The terrain is felt underfoot and motion introduces a temporality to space as we move out of one location into another. We experience reality through our bodies. As Valentine (2001: 44) points out: “Our bodies are what people react to; we read into them stories of people’s age, lifestyle, politics, identity, and so on [...] our bodies make a difference to our experience of places”. Since our bodies are central to the way we experience reality, it may be worthwhile to include embodied experiences in representational strategies. Conventional forms of representation are usually stationary experiences (reading articles, watching downloadable content, sitting in an auditorium listening to presentations, etc.). Sound walks enhance these forms of representations by incorporating self-propelled movement through space.

Walking is an elementary human rhythm (Hall et al., 2008). It is percussive; the ways we breathe and regulate pace tend to repeat during walking, establishing patterns and cadences. Walking is an embodied way to connect to environment; it is fundamentally geographical as its execution links people to place. Putting one’s feet down to move about places creates an intimacy between walker and environment. Walking (even with no destination in mind) is a way to understand place significance. Walking helps to ‘harness the power of place’ (Anderson, 2004: 257) for a couple of reasons.
First, walking (even if aimless) opens up possibilities for interaction. When sound walk audiences are confronted with interaction, opportunities arise for more contingency, which might appeal to sound walk producers depending on the purpose of their sound walk. Second, walking in public places might mean sharing personal space with strangers, or feeling an emotional response in certain spatial contexts. There is also a physicality or kinaesthetic element involved in pedestrianism that positions audiences amid (and not above) the places they are experiencing.

The embodied experience of putting feet down on the ground offers a perspective that might be difficult to replicate without the act of walking. This is part of the reason why sound walks may harness ‘the power of place’. 4P51 participant Lyla acknowledged this ‘power’ when she commented on how being physically immersed in a given geography leads to understanding that place:

“I think it could be huge movement for geographers to make sound walks of places to show their understanding of place – make individuals more aware of their understandings, you can sit and explain to someone your understanding, but until you listen to it, hear it and submerse yourself in it, you aren’t going to understand”.

Lyla emphasizes the significance of being immersed in place. One way to become immersed in place is to walk through it. When a body walks through a place, there is a sensation of movement, a physical interaction between feet and material surfaces and also emotional shifts as people feel certain ways about occupying particular places among other people. Being immersed en route, and moving about, engenders connections between people and places that has potential for evocative representational effects.

In the context of academic Geography, walking qualifies as a type of mobile, in situ scholarship. Researchers benefit from in situ research (such as participant observation [see Crang and Cook, 2007]) because the experience of constructing knowledge comes literally from
the ground up. That is, being self-aware and embedded in ‘the field’ help to construct knowledge from a place that is not conceptually detached from researchers.

In terms of audiences benefiting from in situ experiences, Toby Butler (2006: 904) reports that many people who have done his sound walk “particularly enjoyed the personal stories that made the landscape more resonant by listening to them in situ”. In an older work, Butler (2006) uses testimonial recorded en route to help represent the landscapes of his sound walk route in personally unique ways. In Butler’s sound walk along the Thames, hearing testimonies of locals as corresponding landscapes are experienced and sensorially consumed en route creates ‘resonant’ geographical experiences for audiences.

Butler interviewed people associated with various points of interest sampled along his route. The final product showcases various geographies constituted by vocal testimony from local residents. Additionally, Butler presents route landscapes in a way that enriches meanings by playing with temporality. Audiences occupy a visual, corporeal present while listening to testimony that represents past events. The voices telling various stories along the route are recorded at a time prior to audiences hearing them, but more importantly, the stories refer to even earlier times. Sound walk audiences look upon a vacant grassy hill while listening to a former bride reminisce about posing for pictures with her wedding party and then tumbling down the hill and spoiling her wedding dress. Listening to the actual voice of the bride tell her story, and cognitively processing it all to imagine the scene while being there creates a personal relationship between audiences and this place. It is no longer an anonymous place – there may now be some ‘new’ impression of it. This impression would not exist without experiencing

---

3 Self-awareness here refers to an acknowledgment (from researchers) of being a narrating subject who “is positioned within academic knowledge, claims a degree of academic authority, and is therefore necessarily preoccupied with the epistemological and methodological implications of positionality, experiential knowledge, and narrative voice” (Butz, 2010: 139)
Butler’s sound walk. In this way, new understandings or relationships are created mutually out of the content of the sound walk and the imagination of the sound walk user, as they come together walking en route.

The rhythm of walking combined with listening to recorded sounds can produce compelling effects (Butler, 2006: 904). Engaging multiple senses and walking are necessary elements of experiencing a sound walk. That is, when geographers produce sound walks, sensorial engagement and movement along a route are guaranteed to occur. Additionally, there are possibilities for contingencies to contribute to sound walk experience. Contingencies in sound walks are inevitable. This raises the question, how do sound walk producers address contingency in representational approaches?

Contingency

Contingency is an aspect of sound walk experience that has representational potential. Contingency can be understood as “the opposite of necessity” (Simand, 2010: 389) but for the purposes of this chapter, contingency is treated as one end of a continuum with certainty at the other. Contingency introduces uncertainty into how sound walks will be experienced. Soundwalk producers can deliberately or accidentally introduce this uncertainty/contingency, how audiences experience soundwalks is contingent on the characteristics of audience members (i.e. producers cannot know with certainty how audiences will respond to various cues), and the soundwalk route itself has contingent qualities, in that producers cannot be absolutely certain about the characteristics of the route, in terms of weather, possible interactions, density of traffic and so on.
Total contingency occurs if the experience is so open-ended that there is no purpose to the sound walk (at which point it would cease to be a sound walk by definition). Complete absence of contingency (or total certainty) occurs if no variations exist between audience experiences and the intentions of the sound walk producer. Sound walks usually occupy a position between these extremes. Sound walks are therefore not particularly useful for representing ontologies that assume reality is singular and universally accessible.

Since we live in a world of contingency (Thrift, 2000), contingency is an appropriate representational resource for sound walks. There are three constitutive elements of sound walks responsible for generating contingency: sound walk producers, sound walk audiences and sound walk routes. Sound walk producers generate strategies to communicate ideas, sound walk audiences come equipped with varying interpretational capacities with which to discern these ideas, and sound walk routes are sites of ever-changing possibilities. Sound walk production typically begins with some brainstorming about a general purpose for a sound walk. This initial step encounters the challenges and possibilities of contingency immediately. The degree to which sound walk producers decide to encourage or discourage contingency is largely determined when the purpose of the sound walk is established.

*Sound Walk Producers*

Sound walk producers invite contingency with decisions about content. In other words, the overall purpose of a sound walk, focal point(s) of a route, and sound track material contain unrealized potential for contingency. In terms of audio content, contingencies arise in the interpretation of recorded sounds. This includes how certain voices, sound effects and musical
selections are interpreted. In terms of music and audiences’ interpretational contingencies, research participant Mookie makes an astute point when he remarks about the representational qualities of music in a sound walk he peer reviewed:

“It actually transported you momentarily into a place – or a space, no place I’m going to say, in time. The only problem with this, I had this in my review, and Professor Butz actually went off with this as well – is that you were basing your perception of that space upon what you knew from war movies – because of the music that he was using. It was soundtracks of old war movies, or documentaries – so ... Is this really representative of the actual place or is this representative of the movies that we have come to know?” (My emphasis).

Indeed, aural film conventions may influence our relationships with sound. Typically, films deploy pitch, volume and tempo to give meaning to particular scenes. Climaxes are usually accompanied by sounds that begin lower pitched and crescendo into a high pitched sonic event at the moment of climax. Similarly, volume and tempo are used to create tension. Quiet sounds indicate delicacy and weakness. Loud volumes stand for forcefulness, intensity or some type of threat. Tempo gives similar meanings. The faster the tempo, the greater the tension level in the listener (Gianetti and Leach, 2005: 222). Sounds are used in films to give meaning to scenes and to help audiences interpret these meanings. Filmic sound conventions may also apply outside of the cinema in other contexts, including sound walks. Music may come to represent film genre conventions rather than the subject matter of the film. In other words, with respect to Mookie’s statement, the music in the sound walk represented films about WWII Europe rather than WWII Europe itself. The lesson here is to be mindful of the sound walk features used for representation. If sound walk producers are after certainty rather than contingency and want to use music to present an idea, it is important that there is a clear understanding of what the representational attempt is.
The effect of using music in sound walks is inevitably contingent. If we think of how subjectively music is interpreted, it may be troublesome to try and use it to represent some version of reality. This absence of necessity applies to other senses and their potential combinations. Smells, sights, sounds and tactile sensations may be able to represent disparate realities only if each participant experiences them in the same way. For example, designing a sound walk route to traverse the smellscape of a bakery may represent a comfortable domestic reality for some, and at the same time, a laboursome shift at work for others. The actual effect of sound walk content is contingent on audiences’ interpretations of it. A starting point for dealing with this is to determine how much or how little contingency will work best with a sound walk’s purpose.

Sound walk producers may attempt to limit contingency through scripting and detailed, voluminous instructions. When sound walk audiences are ‘micro-managed’, there exists less room for contingency because focal points and movements are dictated via detailed instructions. If the goal of a sound walk requires certainty in terms of participant experience, then limiting contingency is appropriate because the intended communication needs to remain unchanged by any prior circumstance. Contingency is the result of realized possibilities that alter and diverge from initial intentions. Contingencies must therefore be controlled or limited enough to keep specific goals intact and achievable. Without careful consideration of this, sound walk producers may intend on having a sound walk situated at one end of the spectrum (between necessity and contingency) but create a sound walk experience that ends up being on the other. Clementine’s sound walk demonstrates this point.

In her 4P51 paper, Clementine reflected on her motivations when producing her sound walk and wrote that the cars on Highway 406 were meant to represent mobility trends. She
explains how she made use of her sound walk environment to represent her ideas: “The cars passing quickly underneath the user on Highway 406 are meant to represent the hectic lifestyles of people and how quickly they go from place to place”. However, after I had done the sound walk, the cars did not come to represent that for me. The reason for this is important.

Clementine’s sound walk relied too heavily on certainty. The intention was that the cars passing underneath me would represent something. This may be a justified expectation if the cars passing underneath impose themselves in the visual content of the sound walk. What happens if someone does the sound walk and there is a lull in traffic? In this way, the traffic required to communicate her idea is not necessarily going to succeed. It is contingent on a number of possibilities.

It may have been more helpful for a narrator to cue sound walk users to the highway below (there is even a possibility that sound walk users would miss this entirely if they happen to not look down), or select a musical piece that overtly draws attention to the cars on the 406. Clementine’s sound walk serves as a reminder to include an appropriate amount of instruction according to the purpose of the sound walk. The goal of her sound walk is to communicate a clear argument about differences between downtown and suburban St. Catharines. The execution resulted in a much more open-ended and contingent experience for her audience.

Sound walk producers may try deliberately to limit contingency or encourage it depending on the purpose of the sound walk. Additionally, producers may build contingency into their sound walks accidentally. For instance, when I produced my university campus sound walk, I attempted to limit contingency (or facilitate certainty) by providing detailed instructions, an easy to follow map, and plenty of narration that overtly explained what to look for and what those features meant. Despite this effort, I encountered contingency with a group of students
standing in front of an entrance. I needed to use the automatic door (this route was designed to be universally accessible) they were standing in front of and when I advanced upon them they gave me disapproving looks as if to deter me away and use another door. It was during this interaction that I realized that another challenge (aside from simply finding a route) to using routes of universal access was that people can act as unsympathetic barriers, and create geographies of exclusion: a contingency realized through proofwalking and interacting with route populations. This particular interaction created an experience that was unintended, and there can be no certainty that this would not happen no matter how much I tried to design this type of interaction out of the sound walk. Part of the contingent experience from this example was related to the group of students and part was my reaction to it. In this way, uncertainty about how audiences will respond (which can be managed or lessened to some extent) also introduces contingency into a sound walk.

**Sound Walk Audiences**

Sound walk audiences are responsible for contingency in sound walk experiences, in two ways. First, relating to Clementine’s sound walk, audience perceptions and representational effects take place in the experience of the sound walk. So, audiences are responsible for contingency in representational efforts based on how a sound walk is experienced. Clementine was responsible for communicating her ideas in her sound walk, but it is the audience who receives, experiences and makes sense of them. Clementine’s classmate Lyla seemed to be mindful of this when she told me during an interview that she aimed to cater to her audience during production: “that was my goal, I was thinking about what others would think when they
heard it [...] It can’t really be about you when you want to portray something – you have to tend to your audience”.

Audiences introduce contingency through the idiosyncratic experience of participating (Livingstone 2013) in a sound walk. Audiences come with a host of personal circumstances (e.g. subjectivity, mood, comprehension level, interests, learning style) that will impact representational effects prior to even starting a sound walk. The difference between producer contingency and user contingency is in the communicative direction of ideas. Sound walk producers introduce contingencies through decisions about what is included and excluded in a sound walk, while users introduce contingencies in the different ways they interpret sound walk content. The personal circumstances sound walk audiences engage sound walks with are ever-changing. This contributes to the impossibility of experiencing a sound walk the same way more than once. While sound walk producers may attempt to control contingency with instruction and direction, there is little that can be done about audience pre-dispositions. On one hand, sound walk producers can hope that contingencies are limited enough so the purpose of the sound walk is achieved through the ways audiences experience the sound walk despite idiosyncratic moods and circumstances. On the other hand, audience-born contingencies will overwhelm the representational goals of the sound walk. If sound walk producers are aware of this, and are explicit about what they expect from audience members, then the former outcome is more likely than the latter. Audiences will begin a sound walk in a certain mood with particular attitudes, yet audience contingency sometimes takes effect during the sound walk because of contingencies or events that occur spontaneously along the route.
Sound Walk Routes

Sound walk routes are sources for contingency because environments, like audience moods, are always in flux. As in the example of the group of students obstructing my path through the entrance on campus, unplanned human encounters introduce contingency. This example is key because most sound walks take place in public places, or private places that are open to the public, and this means that sound walk producers cannot be certain that any human interaction will be planned.

For sound walks that take place outdoors, the weather can introduce contingency that impacts sound walk experiences. For instance, when I was studying one of the 4P51 sound walks, I visited the site multiple times (first to visit the route and take notes and the next time to ‘do’ the sound walk and a last time to listen and take notes) and every time I visited the weather was cold, wet and overcast. This particular sound walk took place on a boardwalk spanning a reedy section of a small lake. The poor weather (which was not meant to be a focal point in the sound walk) impacted my experience of this sound walk in ways that would be different had it been sunny and warm.

In Clementine’s case, the amount of traffic on the highway partly determined the experience of that sound walk. The traffic was intended to emerge as a significant feature for audiences to notice, yet whether or not this happens is contingent on the characteristics of the flow of traffic. It is impossible for Clementine to have any certainty that this would occur as intended. Relying on contingency or uncertainty can jeopardize chances of achieving the purpose of a sound walk.
So far, this discussion has covered some advantages to representations that address multiple senses, walking en route, and contingency. This has all been presented under the assumption that reality can be represented. If we eliminate this assumption, there remain aspects of reality that elude representations of it. It is challenging to identify what sorts of strategies researchers might employ to deal with those aspects of reality that are not or cannot be represented. The next section will discuss the potential of sound walks to be used as a representational tool for geographers who subscribe to non-representational theory.

Non-Representational Theory

Moments of interaction are aspects of sound walking experience that have potential for presenting geographical ideas. Non-representational theory argues that reality only exists in moments of action (see Anderson and Harrison, 2010; Thrift, 2000). Sound walks have potential for non-representational theorists because of the numerous opportunities for moments of action. It may seem paradoxical that sound walks have potential for incommensurate theoretical approaches. I will demonstrate that it is neither a contradiction that sound walks are useful for representational and non-representational approaches, nor is it incongruent that they can be designed for more or less contingency; it is demonstrative of the representational versatility of sound walks. It all depends on how geographers approach sound walk production.

Up to now, this chapter has treated the task of representing reality in a particular cognitively-oriented way which involves reflection and careful consideration about how to engage multiple senses, walking, and contingency. Non-Representational Theory takes a
different approach, one that values present-moment-action rather than contemplation about action. As Doel (2010: 120) explains:

“By refusing to yield to the onto-theological dogma of re-presentational second comings (i.e. the dutiful copying inwards, concepts, and pictures of revered originals, such as being, identity, intention, reality, sense, truth, and value), non-representational styles of thought foreground the eventfulness of ‘a momentary world ... which must be acted into’, and ‘not a contemplative world’ that should be held at a reverential or critical distance” (Thrift, 2000: 217).

A key difference between representational approaches discussed above and Non-Representational Theory is in their respective pre-requisites. The former requires contemplation about interactive events (including embodiment) to apprehend reality, while the latter relies on interactive events themselves to experience our world. This is not to say that thought is absent from Non-Representational Theory.

Non-Representational Theory attempts to construct knowledge that is acquired through extra-cognitive means. There is knowledge born of contemplation (internal strategizing, brainstorming, reflection etc.) and then there is knowledge that is acquired through interaction with the world around us. Dewsbury (2010: 152) ponders contemplative knowledge this way: “When you think, don’t you think in words?” This question is helpful in delineating contemplative knowledge from interactive (or non-representational) knowledge. As Dewsbury noted above, if we pause to consider our thoughts, they are usually linguistic. That is, our thoughts typically manifest themselves in words (i.e. inner dialogue). This relegates our capacities to think within the confines of the words we know. Surely, this is not the limit of humankind’s cognitive potential. There is more to thinking than words in our minds.
Non-Representational Theory addresses this extra-cognitive way of knowing. If we come to know things through environmental interaction, the question arises, so what? What does this mean for geographers? Anderson and Harrison (2010: 8, 9) take this very question up:

If thinking is not quite what we thought it was, if much of everyday life is unreflexive and not necessarily amenable to introspection, if [...] the meaning of things comes less from their place in a structuring symbolic order and more from their enactment in contingent practical contexts, then quite what we mean by terms such as ‘place’, ‘the subject’, ‘the social’, and ‘the cultural’ and quite how ‘space’, ‘power’, and ‘resistance’ actually operate and take-place, are all in question.

Thinking may not be what we thought it was. For geographers, this may mean (re)constituting fundamental concepts in the discipline and developing new ways to engage people/place relations.

Perhaps physical interaction is responsible for much of what is or can be known. If Non-Representational Theory is correct, then it is the practices, performances and interactions between people and places that create patterns and relations that perpetually and continually weave together (Anderson and Harrison, 2010: 8). This means that personal interaction is required for reality to occur. Think of the metaphorical tree falling in the forest. According to non-representational theorists, human intervention is required not only to hear the tree fall, but for the event to have any meaning at all. Reality is brought into being by people (Doel, 2010: 153). Reality, as we know it, only exists in the moment it is experienced.

Adopting this line of thinking has representational implications. It is no longer possible just to contemplate the world around us in order to know it. We do not conceive of a world in our minds and then live in that conception. Instead, we conceive of and know about our world
through interacting and living in it (Anderson and Harrison, 2010: 9). This condition of interaction makes representation elusive. If reality is created through interactive events, then representing reality would require a separate presentation for each event. Anything less would be an oversimplification or generic statement that would bear little resemblance to the event in question. Indeed, the goal for non-representational theorists is to “open up the moment through effectivity rather than representation” (Thrift, 2000: 216). This means that audiences do better to experience researchers’ ideas than contemplate them, because reality occurs in moment to moment interaction and not in “presentations of thought in the wake of the event” (Dewsbury, 2010: 152). If knowing about reality is the object of representation, then experiencing reality is the object of non-representation.

Geographers who subscribe to Non-Representational Theory (e.g. Macpherson, 2010) still publish articles and make attempts to communicate their ideas. It becomes a question of how. How might non-representational theorists in Geography communicate their ideas in a fruitful way? If we consider key concepts in Non-Representational Theory such as interaction-based ontologies and event-oriented realities, it may be that sound walks have potential to be useful to geographers working within a non-representational framework.

Growing up in worlds ‘furnished’ by previous generations will take on different ‘decors’ from place to place (Anderson and Harrison, 2010). The unreflective, unthought aspects of everyday life will differ across geographies. Sound walk producers can make use of this, by directing audiences to interact with environments in ways that require little reflexivity. For example, a sound walk route might involve entering a room and sitting at a table. Sound walk users might comply with these instructions without thinking about how to operate a door knob, or remember what a chair looks like or how to use one (Anderson and Harrison, 2010: 9). These
types of effectivities require little introspection. Sound walks could be designed to call attention to this. Certainly, textual accounts could attend to this matter too, but in the case of sound walks, there is physicality at work. The focus, after all, is on the pre-personal lives of our bodies. It is apt to demonstrate this point by involving corporal interaction. This is not the only appeal sound walks have for non-representational theorists.

Interaction-based ontologies maintain that reality can be experienced through active exchanges. In other words, when an actor intervenes with environments or other actors, opportunities to know about our world occur. Harkening back to the physical requirements of demonstrating pre-personal lives of our bodies in sound walks, demonstrating interaction-based ontology requires physical intervention too. According to non-representational theory, if we are to discover our world, it is done physically, interactively. Since sound walks are physically engaging and interactive, they make for appropriate methodological tools for this particular ontological perspective.

Similarly, apprehending event-oriented realities requires personal interaction. If we understand events as singular, interactive moments in the appearing of the world (Dewsbury, 2010: 153), then it follows that events need to be created in order to experience reality. This condition requires particular approaches for geographers to communicate something about reality. Initiating occurrences of events allows for different realities to appear. This means that geographers would have to incorporate some type of interactive element (beyond the reading of a text for example) in their work in order to facilitate the apprehension of particular realities. This requires different consideration than conventional academic work; it would require geographers to be open-minded about how to communicate ideas, and perhaps a more artistic approach to how we do geography. This raises the question, are geographers as social scientists capable of
being artistic enough? (Dewsbury, 2010: 155). It is seemingly unconventional to produce academic work that is interactive, embodied and open to interpretation. This is what makes sound walks so useful for non-representational theorists. Events happen out in the world rather than in one’s mind. As for non-representational applications, it is the sound walk user and not the sound walk producer who experiences non-representational effects. In other words, the producer is producing a representation, but the user is not receiving only a representation. The user may also experience embodied, affective sensations that occur in spontaneous moments of interaction.

Conclusion

Compared to conventional approaches to representation, sound walks may help to provide geographers with alternative representational options. Sound walks can do this through engaging multiple senses, walking en route, and by embracing contingency. Sound walks can also be utilized by non-representational theorists.

When engaging multiple senses, sound walks offer new and dynamic ways to get at representational and non-representational aspects of knowledge by making use of sensorial combinations as they occur in reality. For example, we experience tactile, aural, visual and olfactory realities. It may be helpful to engage these types of realities directly in our representations of them. However, it is important to choose content carefully and make sure that sensual combinations work to help achieve the purpose of the sound walk.

At a most fundamental level, walking, being physically immersed and in-situ literally connects people with places. Audiences discover for themselves through interaction what is
being represented rather than having it overtly delivered to them. Walking contributes to representational efficacy because the act of walking, or moving about a place, involves potential for discovery and embodiment. This circumstance may provide for compelling representational or evocative effects, because when interactive audiences discover representations of reality for themselves, the focus turns to what is being represented as opposed to how something is being represented.

The lesson is one of coherence - coherence in the sense that sound walk elements and contingency are utilized carefully, pursuant to the goal of the sound walk. Much like the care required to incorporate multi-sensual elements into sound walks effectively, the ways that walking en route may be helpful for sound walk producers requires the same degree of mindfulness. That is, walking in-situ bears the potential for discovery and connects people to place in a meaningful way, yet it is most effective when aligned with other sensual content and cognition. It is not sufficient to assume that having audiences walk a particular route will generate the intended representational effects. Still, being mindful when incorporating multiple senses and walking in-situ are only part of sound walks’ potential to represent reality. These strategies have more to do with presentations of reality than they do with reality itself. Reality is considered differently across theoretical frameworks. Some ontologies imagine reality to be ‘out there’ and apprehendable from ‘in here’. Other perspectives take up more complex and contingent positions. Since sound walk experiences are contingent, and sound walks operate in an evocative register, sound walks may not be a useful representational resource for positivistic methodologies. The more complicated messy understandings of reality may be especially well-suited for representation through sound walks.
Geographers who wish to represent realities while addressing contingency may find that sound walks are an apt option. The ways sound walk producers present ideas, the ways audiences embrace and interpret those ideas, and the route itself, all introduce contingency into representational effects. Sound walk producers deal with contingency by first, identifying the purpose of their sound walk and second, by limiting or encouraging contingency according to that purpose.

Unlike the former discussion, Non-Representational Theory claims that some knowledge is acquired through pre-personal lives of our bodies and that reality occurs through physical interaction and not contemplation. Sound walks are useful still because they may be designed to foster either contemplative representational approaches, or event oriented realities. The advantage that non-representational theorists have in using sound walks in their work is that audiences are necessarily required to interact physically with environments, to initiate events. It is within these events that non-representational theorists can communicate their ideas. Audience interpretation will be unpredictable, but the yield will be fruitful if we are to understand reality through physical interaction, through our bodies.

This chapter discusses the utility of sound walks as representational tools. Whether sound walk producers theorize reality to be apprehendable, perpetually elusive or non-representable, sound walks have potential to help. This is because of the versatile and flexible constitution of sound walks. Beyond the potential for sound walks as representational tools, sound walks are an appealing choice for geographers because of their novelty. Sound walk production requires a degree of artistry, of creativity; something that may signify a need for new skill sets for future geographers. In the next chapter that follows, I aim to show how sound walks are well-suited for, not only (re)presenting, but also teaching specific ideas about places.
Chapter 4: Sound Walks as Teaching Tools

The main argument of the thesis is that sound walks have three overlapping applications for Geography: thinking through geographical ideas, representing geographical ideas and teaching geographical ideas. This chapter explores the potential for sound walks to teach specific ideas about a place or spatial relations. The two previous chapters demonstrated that sound walks have potential to generate productive geographical thinking and to be effective representational resources. Once sound walk producers have thought through what is needed to produce a sound walk and have satisfied representational aspirations, the next task is to convey these thoughts and representations to audiences. In order to do this, sound walk audiences need to be shown or taught how to understand and engage places and geographical relations through the sound walk. Efforts to achieve this require pedagogical approaches.

Some key theories in pedagogical literature call for teaching strategies to engage student minds in dynamic, multi-sensoral ways. I will argue that the aural elements of sound walks (environmental sounds, music, and narration) in conjunction with other sensoral elements (sight, touch, embodiment, and movement) recommend sound walks as apt tools for teaching geographical ideas.

This chapter will unfold in three sections. The purpose of the first section is to establish that sound walks have potential to be productive teaching tools in general terms, and that they are applicable to teaching a variety of subject matter. In order to do that, I will evaluate how sound walks relate to four key schools of thought in pedagogical literature: Active Learning, Student Differences, Multimedia Learning Theory, and the M.A.I.N. Model. Each theory argues
for dynamic approaches in delivering lessons to students. I think that sound walks satisfy these
dynamic needs in a variety of ways.

The second section examines sound walks’ potential to be used as teaching tools
specifically for geography. The section argues that the elements within sound walks themselves
(environmental sounds, music, narration, sights, touch, embodiment and motion) are conducive
to teaching specific ideas about a place. The chapter draws on secondary sources, as well as
interview and course material from a small sample of participating 4th year advanced geography
of music (4P51) students. This material includes student-made sound walks, reflection papers
and one-on-one in-depth interview material. These sources of data are outlined in more detail
below. Finally, the third section of this chapter concludes with an executive summary of the
chapter’s main points, followed by a summary of the thesis so far, which will then develop into a
set-up for the final chapter.

**Student Sound Walks**

I listened to nine student-made sound walks in total. Each sound walk was designed with
the intention to produce some kind of effect on the listener. My task in listening to student sound
walks was to try to understand each student’s approach while paying attention to how the sound
walk affected me emotionally, intellectually and corporeally. I was both researcher and
participant when listening to these sound walks. Scholarly literature helped me to make sense of
my own experience with each sound walk. I also had access to nine papers corresponding to each
sound walk to help me understand why the students made the choices they did and how they
assessed them.
There are steps used to ‘do’ student sound walks. I started by reading the instructions for where to walk and when to walk. Then, I put on the headphones and did the sound walk. When I was finished, I was careful to make notes about how I felt and what I was thinking. After that, I played the audio back and made a list of all the sounds used and how they are used. For instance, some students cross-faded between sounds, panned a sound from left to right or played more than one sample at once. After I made notes on my experience of the sound walks and the audio content of the sound walk, I returned to the route to make notes exclusively of the visual environment. In analyzing the sound walks this way I gained a sense of each sound walk as a whole as well as a deep understanding for its component parts.

**Student Essays**

One of the 4P51 requirements was to write a paper about the sound walk one produced, explaining decisions made in terms of subject matter, site, the use of each sound and why these choices ought to be successful. Additionally, each student reflected on limitations and ways to improve their sound walk. Since I already listened to each sound walk, I understood how each student designed their respective sound walk. This was the case for every sound walk as I was granted access to nine papers corresponding with nine sound walks. Ideally, I would have liked an interview to accompany each essay and sound walk. Unfortunately, I only was able to interview four students.

I read each paper for the ideas and rationales put forth by the students. I was interested in why students thought the sounds they used would accomplish the effect(s) they intended. The essays were read in relation to the interviews and sound walks. Together, each source combined
to generate data that each source on its own could not. Therefore, the value of the sources existed in their combination. On their own they were not as comprehensive. It is worth noting that student-made sound walks and papers were course assignments. Like all qualitative data, it is uncertain exactly what participant intentions are. In this case a problem with this data source was that students may not have been overly thoughtful about their sound walk projects. That is, students have produced sound walks and written their accompanying papers simply to meet course requirements. I therefore cannot be confident that what students have produced is anything more than a poorly-considered completion of course requirements.

**Student Interviews**

The script for my interviews contains six sections (see Appendix 3). Each section focuses on certain issues in a particular order. The goal was to first establish what each participant thought about space and place in general, then discuss soundscapes and their sound walk projects and then revisit conceptions of space and place. In structuring the interview in this way, I hoped to gain a sense of how each student imagined relationships between sound and space before I potentially steered the conversation into a more blatant discussion about sound and spatiality. Each interview lasted between one and two hours. Participants Lyla and Mookie were interviewed in person while Clementine and Robert participated by phone. The three 4P51 data sources help to demonstrate how sound walks have potential to teach students and geography students in particular. The following sections reviews schools of pedagogical thought as a way to evaluate pedagogical potentials of sound walks.
Pedagogical Literature

This section reviews four key pedagogical schools of thought. The first two (Active Learning and Student Differences) relate to the ways students learn. Examining pedagogical theories about how students learn is important in demonstrating how sound walks have potential as teaching tools in general. The last two pedagogical schools of thought (Multi-Media Learning Theory and the M.A.I.N. Model) examine the value of multi-media technology in delivering teachable content. The value here is similar to the first two schools, except instead of theorizing the ways students learn, this is a theorization of how technology aids in teaching (Multi-Media Learning Theory), and PLDs in particular (the M.A.I.N. Model). After reviewing these four pedagogical schools of thought, I will then evaluate how sound walks relate to each of them.

Active Learning

Active learning is a widely adopted construct among educators, yet its meaning remains unclear and contested within pedagogical communities (Drew and Mackie, 2011). One understanding of active learning pertains to knowledge construction. Students learn through interaction and generate knowledge actively rather than receiving knowledge passively from more knowledgeable others (Scott, 2011: 192). The learner is central in learning processes; learning has more to do with students than with more knowledgeable others. This is an important notion because it shifts the focus from pedagogical practitioners (i.e., teachers) to the student as the subject of pedagogies and teaching strategies. Teachers are undoubtedly important to deploying pedagogical strategies yet students must receive, retain and apply lessons. Active
learning strategies employ ‘student-centric’ perspectives to allow student agency, because students learn more productively when they discover things for themselves (Scott, 2011: 191).

Active learning may also involve physical action. Physical activity combined with a high level of student agency makes education more enjoyable for students (Drew and Mackie, 2011: 456, see also Watkins, Carnell and Lodge 2007). In this way, the active in active learning pertains to activity, or hands-on, or kinaesthetic, ways to encourage learning and the generation of knowledge. However, this understanding of active learning might be better understood as a learning style rather than active learning per se.

**Student Differences**

An acknowledgement of student differences comes out of a critique of Learning Styles Theory. Learning Styles Theory claims that different students have different modes of learning, and their learning could be improved by matching teaching with preferred or effective learning modes (Barbe, Swassing, and Milone, 1979). Visual, aural and hands-on learning are learning styles. Visual learners connect with visual aids such as pictures, demonstrations, diagrams, etc. According to learning styles theory, pedagogical strategies ought to include opportunities for visual learners to engage the lesson visually. Aural learners respond best to verbal instruction. Hands-on learners relate best to pedagogies that include practical participation (Reiner and Willingham, 2010).

---

4 For example, a recent study in Hamilton Ontario found that children’s fitness had an impact on their academic performance (www.chch.com).
Learning styles theory has been critiqued for misrepresenting student’s reactions to
certain pedagogical deliveries. There are scholars who attribute students’ levels of engagement
to other criteria. Riener and Willingham (2010: 35) reject learning styles theory, suggesting that
it seems persuasive only because people are unwilling to challenge their own beliefs or
expectations:

When evaluating our own beliefs, we tend to seek out information that confirms
our beliefs and ignore contrary information, even when we encounter it
repeatedly. When we see someone who professes to be a visual learner excel at
geography and an auditory learner excel at music, we do not seek out the
information which would disprove our interpretation of these events (can the
auditory learner learn geography through hearing it? Can the visual learner
become better at music by seeing it?).

Even if we accept that multimedia pedagogies have value, these authors think modifying them to
incorporate learning styles theory is a simplistic application and “we shouldn’t congratulate
ourselves for showing a video to engage the visual learners or offering podcasts to the auditory
learners” (Riener and Willingham, 2010: 35). This line of thinking challenges learning styles
theory as effective pedagogy. Instead of responding to visual, aural or hands-on training, Riener
and Willingham (2010) advocate for acknowledging differences among students by arguing that
students engage lessons based on individual learning capacities, interests and background
knowledge.

In terms of individual learning capacity, Riener and Willingham (2010: 33) argue that
“people vary in their capacity to learn different areas of content”. This could mean that students
learn at different rates and have different capacities for knowledge. Indeed, some students
absorb information with more intensity and extensity than others.
Additionally, students who have an interest in a particular subject are more likely to engage the lesson with more attentiveness and enthusiasm than students who are not as keen on that same subject matter (Riener and Willingham, 2010). While there may be motivations for teachers to generate interest with pedagogical strategies, students will initially have different levels of interest and this has an impact on student performance.

Finally, background knowledge is cited as a contributor to pedagogical efficacy. Students differ in their background knowledge, and that difference influences their learning (Riener and Willingham, 2010: 33). Students bring different and individual bodies of knowledge to the classroom. These differing backgrounds position students within a variety of skill sets and learning capacities. Background knowledge influences learning experiences and provides foundations for continuing education.

In sum, some scholars suggest that students learn best actively rather than passively. According to Active Learning Theory, students benefit from learning experiences that they discover for themselves as opposed to having more knowledgeable others present discoveries to them. Lesson plans may resonate better across different styles of learning; matching one’s teaching with that preferred learning mode could improve learning (Riener and Willingham, 2010). What if students are different from one another in the ways they respond to active learning or, if all visual learners do not respond the same ways to visually presented ideas? This line of questioning gives rise to theorizations of difference among learners. It is held that students engage lessons based on individual learning capacities, interests and background knowledge. What each of the above theories has in common is that they all pertain to the ways students learn. The next two pedagogical schools of thought pertain to the ways multi-media and technology impact learning experiences.
Multi-Media Learning Theory

Effective pedagogical strategies require consideration of how the human brain interacts with information it receives. According to multi-media learning theory, each sense interprets information differently, so presenting information simultaneously across multiple sensorial modalities opens up opportunities for multiple interpretations. According to Downs et al. (2011, 187) “the multimedia principle states that students learn better from a combination of words and images than from words alone.” Similarly, “the modality principle proposes that the use of specific combinations of presented information improves performance”. These theories focus mostly on visual and aural modalities.

John Nesbit and Olusola O. Adesope (2001) study a sample of students learning from animated concept maps with concurrent audio narration. Nesbit and Olusola study the use of moving images (animated concept maps) with accompanying audio narration to examine the pedagogical efficacy of multi-modal information presentation, and discover that verbal redundancy makes for more efficient and easier learning experiences. Nesbit and Adesope (2001: 214-15) elaborate on their findings:

Verbal redundancy is a type of bisensory stimuli in which the same information is presented simultaneously in two sensory modes. Summarizing research in cognitive psychology, Mayer and Moreno (2002, p. 157) concluded that ‘under specific conditions, verbal and visuospatial information can be more efficiently integrated in working memory when the verbal information is presented as audio narration rather than text. Shifting verbal information from text to audio is theorized to produce a modality effect in which students learn more or learn with less effort because processing of the multimedia presentation is more equally balanced across visual and auditory cognitive resources. When audio narration is used the learner does not need to split visual attention between image and text’.
Multiple senses interact with one another to pick up information in dynamic ways (see Schuler et al., 2012). Sometimes, what we see influences what we hear. For example, in certain instances speech is perceived differently according to what we see the mouth doing; a visual *fa* combined with an audio *ba* is always heard as *fa*. This is known as the McGurk effect (Nicholls et al., 2004). In this case, we hear what we see.

This example illustrates how senses interact to create a multi-modal interpretation. The modality principle states that particular modalities may combine to make learning more efficient. Combining multiple senses to present information is often an effective way to communicate ideas. The human brain is capable of simultaneously accepting information across multiple senses (even if we typically focus on only one at a time).

Moreover, engaging multiple senses heightens sensorial apprehension. This phenomenon is known as multisensory integration, which means “input from one sensory modality enhances the perception of stimuli in another modality” (Eramudugolla et al., 2011: 60). Multisensory integration occurs both in the ways our senses coalesce, and also in the ways that different parts of the brain process information. Much of the human brain is devoted to visual processing. It has been traditionally upheld that multisensory integration occurs outside of visual processing portions of the brain, yet “several studies have found that sounds may directly alter processing in visual brain areas” (Baston et al., 2011: 579). These findings suggest that when information is strategically deployed in ways that engage multiple senses, processing in the brain may be enhanced.

Technology and teaching represent another school of thought in pedagogical literature. This category of scholarship deals less with students’ apprehension of information and more with
technologies themselves – in this case, PLDs. Downs et al. (2011) provide a model for identifying technological affordances in MP3 players, known as the M.A.I.N. Model.

The M.A.I.N. Model

This acronym stands for Modality, Agency, Interactivity and Navigability. These four terms represent the possibilities or technological affordances (Downs et al., 2011), that PLDs (among other personal devices such as tablets or smart phones) offer in the context of teaching ideas to students. Modality, agency, interactivity and navigability are technological affordances that help make sound walks into what they are. Sound walks are multi-sensorial, personal, interactive and mobile. Sound walks are these things because of what PLDs are capable of doing. The following discussion outlines how each technological affordance applies to sound walks.

The first affordance is modality. Personal listening devices provide students with a means to mediate soundscapes as they walk through them. Modality applies to different modes of information, including textual, aural and so on. Media that appeal to different modalities engage the users’ senses in different ways (Downs et al., 2011: 186). PLDs utilize different modalities because they play audio files for listening, include visual modalities as PLD users see their surroundings, and employ tactile modalities moving along the route as well as in the ways that PLD users operate these devices. Typically, users navigate through a menu of files, select the desired track and then play it. Additionally, PLDs require an apparatus (head phones, ear buds) to connect to our ears. This is a physical, embodied experience that PLD users must engage. These modalities are expanded and combined as users move themselves across space.

I cannot use a PLD with ear buds. They never stay in my ears properly and as a result, I either have to hold them in with my hands or push them in so forcefully that it hurts my ear. Alternatively, I wear noise-cancelling
This brings up the second affordance, agency. In keeping with principles of active learning, students who are left alone to move about particular geographies exercise a degree of agency in their learning experiences. While students inevitably receive instructions at school, lessons involving PLDs leave parts of those lessons entirely up to students. For example pace of movement, duration of visual gazing, and how to react to contingencies are determined by students. These types of factors have a significant impact on learning experiences where PLDs are used (Kervin and Vardy, 2007). These specific examples of agency are facilitated, in large part by the remaining technological affordances, interactivity and navigability.

The mobility afforded by PLDs allows sound walk participants to interact more immersively with an environment than classroom-based modalities do. In fact, it is the mobility of the PLD that makes sound walks possible at all. Moreover, PLD use unites user and environment in personal and solipsistic ways. The user becomes sonically isolated when soundscapes are mediated by recorded compositions on PLDs. The PLD user is the only one hearing and experiencing the environment in a particular way, and so a sense of solitude is created. PLD users become ‘cut-off’ from experiencing the shared or non-exclusive sonic environment that is occurring around them (Hosokawa, 1984: 167). Interaction is between one’s self and others and/or one’s self and environment. These interactive relationships are mediated by PLDs because of the effects that these devices have on one’s self. Michael Bull (2000: 77), who has done extensive work with PLD users, notes this sort of mediation. He quotes one of his research participants as saying “it’s like looking through a one-way mirror. I’m looking at them but they can’t see me (Julie: Interview number 12)”. Bull’s (2000) participant expresses a feeling of separation from her surroundings so intensely that she feels invisible to those around

headphones, but these are so obtrusive that I become self-conscious about how they appear on my head. These are examples of how PLD use is an embodied experience, and can be a distraction because of the hardware required to use them.
her. This provides a unique element to PLD-interactivity which offers students alternative ways to interact with people and surrounding environments.

Because PLDs are portable, and may be used continuously across space, sound walks can take place virtually any place people are permitted to walk. Navigability benefits students because the ability to listen and learn on the go is appealing to students (Downs et al., 2011: 198). Learning on the go requires having a form of media with a high degree of navigability. Navigability also provides students with opportunities for discovery through continuously changing vantage points. This results in an experience of changing perspectives which may lead to changing ideas or attitudes (e.g. Daniels, 1992). Navigability facilitates comprehensive learning experiences of the place that is being navigated.

In sum, Active Learning Theory, Learning Styles Theory and theorizing student difference are all attempts to understand how students learn. Multi-Media Learning Theory and the M.A.I.N. Model pertain to ways that multi-media and technology (PLDs in particular) can benefit students. In the following section I evaluate how sound walks relate to these key schools of thought in pedagogical literature.

**Sound Walks and Pedagogy**

While there is much about the above pedagogical schools of thought that dovetails nicely with what sound walks have to offer (I will get into more detail about this later), there are limitations to consider. One consideration is how sound walks are to be used by students. There are two main uses. The first one is to have students ‘do’ a sound walk. This involves teachers either selecting or making a sound walk for the students. In either case, teachers are responsible
for making sure that the sound walk achieves its pedagogical purpose. Using sound walks to teach with has limitations for teachers because if they choose a pre-existing sound walk to use, they need to ensure its relevance to the course and tailor some kind of assignment to accompany it. This may prove especially challenging if the pre-existing sound walk is not precisely suited to the course. The alternative then, is to produce a sound walks specifically for the course. This would solve the issues of using a pre-existing sound walk (in that it would be tailored to exactly what teachers would require), yet sound walk production can present challenges in terms of execution and time constraints. After teachers have their sound walk ready to use (pre-existing or otherwise), they must provide adequate instructions and disclose intended takeaways for the class. At this point students are ready to ‘do’ the sound walk. Sound walk participants are required to commence a sound walk with a willingness to surrender to the effects of the sound walk, which may be easier said than done.

The second use is for students to engage in making a sound walk. In the case of the 4P51 students, course requirements involved making a sound walk, peer-reviewing another student’s sound walk and then editing their own sound walks in light of the peer-reviewed suggestions. These components seemed fruitful as students pointed out ways to improve sound walk efficacy, and then went back to their own work to make improvements. The potential to learn from this was limited by a lack of skill and experience. Sometimes peer feedback indicated that the audio mix could use improvement, but students were not well enough versed in sound engineering to make the recommended mastering and editing. Similarly, this was likely the first time any of these students had attempted to make a sound walk and they were therefore not equipped to decide what content would best achieve the purpose of their sound walks. With more time and practice, the students would have acquired the skills and experience required to take the most
from this kind of lesson. Time constraints also limited potential for optimal results as students effectively had to learn what sound walks are, and then make and listen to them, and then write a paper on their experiences, all within a semester of school.

Still, in spite of their limitations sound walks remain commensurate with pedagogical strategies and for that reason have potential to be productive teaching resources. Sound walks may help execute active learning strategies because of the ways that some students are able to physically engage sound walk experiences. As Drew and Mackie (2011: 456) note, “some pupils link engagement to being physically active [...] for them engagement in learning stems from active, physical involvement, possibly accompanied by a perceived degree of freedom or ‘space’.” Sound walks achieve this active, physical involvement as well as a perceived degree of freedom or space. Students are not confined to classrooms and desks but rather are out walking and moving about; they actively drive the learning process. Interviews with 4P51 students indicated that actively working with sound walks yields learning about a place that may not have occurred otherwise. For instance, Lyla learned that places are partly constituted by temporalities, if you were dropped off in the downtown at night your understanding of it would be altered, as opposed to being dropped off during the daytime - I think you would be a little more comfortable knowing that you can see everything, whatever, where at night you can’t see as much – you can still hear – your awareness of space based on sound would be the same, but when you are in the dark, those sounds would be heightened because that’s your sense that’s heightened if you’ve lost your vision, so it would make it all the more scary because you don’t know what you are seeing, and that’s what I mean, sight and sound are so intertwined – than like on a farm in the daytime seems so pleasant and nice, but at night those sounds become all the more dangerous and you are more vulnerable because you don’t know what’s around you, as much as you were experiencing in the daylight.

Lyla equates a lack of visual information with fear. In Lyla’s mind, places become fearful under the cover of night, despite being ‘pleasant and nice’ during the day. Lyla’s statement suggests that diurnal rhythms play a role in the ways that geographical information is interpreted
Lyla’s work with sound walks involved choosing a time of day to ‘do’ the sound walk. She developed an understanding of geographic temporality by going beyond theory to imagine what it would be like to actively immerse one’s self into particular geographies. This is a point worth noting when adopting a ‘student-centric’ pedagogical position: teachers can use sound walks as active learning practices that engage students multi-sensorially.

Sound walks may be a useful tool for designing pedagogies that incorporate multiple learning styles, especially as different learning styles are complimented by one another in sound walks because of their simultaneous presence. Thus sound walks provide opportunities for students who connect with a blend of more than one learning style. Sound walks may therefore be valuable to teachers who wish to tailor lesson plans with learning styles theory in mind.

If students are considered to differ in terms of learning capacities, interests and background knowledge, sound walks may even out any disparities. As the brain engages information more effectively across a combination of sensorial modes, individual learning capacities are demonstrated on new, different terms. In other words, students’ capacities to learn from sound walks are very different from students’ capacities to learn from conventional ‘uni-modal’ pedagogies. Therefore, students are provided with more opportunities to exercise different learning capacities when teaching strategies include multi-modal media such as sound walks.

Individual interests also influence how a given student engages learning:

Often intertwined with ability, students differ in their interests. If a student loves the piano, or basketball, or chess, or the biology of frogs, that student will no doubt learn material related to that subject faster than another one who does not share that fascination. We all agree that interest and attention are preconditions of learning and vary from student to student, depending on the subject (Riener and Willingham, 2010: 33).
The challenge then, is to generate interest or fascination. Sound walks may be an effective tool in overcoming such challenges. It may be difficult to determine if a given student lacks interest in particular subject matter, or whether a lack of interest is cultivated by an uninteresting delivery of a given subject. The information presented in sound walks engages multiple senses as the user moves about space. These elements alone position ideas presented in sound walks as at least somewhat more interesting than, for example, sitting in a lecture hall taking notes while being dictated to for an hour or two. Still, it is hard to say whether a student’s interest level is most affected by content, delivery or some combination of the two. At the very least, well-conceived sound walks may do much in terms of eliminating uninteresting delivery from the equation. Much like student interest levels, sound walks may play a generative role where background knowledge is concerned.

According to Multi-Media Learning Theory, the brain learns more efficiently with multiple senses engaged at once, when there is an element of verbal redundancy present. Sound walks inevitably exhibit verbal redundancy in their combinations of landscapes and soundscapes. That is, particular sights along a given sound walk route may interact with particular sonic information to deliver teachable content in an intelligible and meaningful manner. For instance, a sound walk teaching ideas about shopping malls could maximize potential pedagogical value by having a student walking inside a mall, bearing visual witness to its stores and patrons, while hearing narrative that contains corresponding words and place names that are seen in the visual landscape.

Sound walks may be effective pedagogical tools because lesson plans can be designed to present information across multiple senses at once. Sound walks offer educators options to teach more effectively and multiply the amount of content delivered to students. Moreover, sound
walks offer an effective way to achieve multisensory integration in lesson planning. Depending on the characteristics of the route, sound walks may engage a variety of sensorial modalities in addition to seeing and hearing. Relationships between seeing and hearing are significant in sound walk experiences, yet count for only one of a number of sensorial relationships. Sound walk experiences might reveal different possibilities for embracing multi-media learning. For instance, 4P51 student Lyla associates certain sounds with certain tactile expectations:

I like to sit in my backyard in the summer [...] like in the summer there’s the sounds of birds and planes passing overhead, and I don’t know if those sounds are associated with the heat and I enjoy being outside in the warmth, which is a factor that has to be considered. I don’t know if because they are associated I just seem to like them because I know I like the heat I think the activity is associated with the sounds is why I choose to like those sounds.

Lyla connects hearing sounds to feeling heat or warmth. This may be another way that sound walks operate across multiple sensorial modalities. Particular sounds might have an ability to evoke tactile responses. It may be that Lyla remembers feelings of warmth when she is sonically cued to do so, and therefore sound has a haptic quality (see Paterson, 2007 and Rodaway, 2002). If this is the case it is analogous to the McGurk Effect, but this time the senses involved are hearing and feeling.

Music may also be used in sound walks as a supplemental sensoral media, in part as a way to affect students’ moods. In addition to being part of the information interpreted during a sound walk, music may simultaneously make students susceptible to certain moods and engender receptiveness. 4P51 participant Mookie for example notes that in his life, music is “an energizer, a distracter and a stimulant”; Mookie’s comment suggests that music may have potential to combat lethargy, divert students’ attention away from the fact that their sound walk participation is compulsory, and may stimulate engagement (see O'Loughlin, 1986). Of course, this depends largely on what the music is and how listeners respond to it. On its own, music may aid in
student engagement (see Boal-Palheiros, and Hargreaves, 2001). When deployed in the context of a sound walk, music combines with information collected by other sensorial modalities in ways that may help to improve student performance.

Sound walks require PLDs and this type of technology can benefit learning experiences. Sound walks allow for dynamic pedagogical strategies through technological affordances of PLDs in the ways that they engage multiple modalities and allow students to physically move around and enjoy a level of perceived freedom or agency.

The personal experience of sound walk participation leads to a degree of student agency. Since learning from sound walks does not necessarily involve a teacher pontificating to a classroom, students experience sound walk lessons personally. That is, each student has a personal sound walk experience. Students make their own sense of their sound walk experiences. Additionally, sound walks take students outside of the classroom. The classroom is sometimes a place of order, discipline and power relations. The ways some classrooms are spatially and socially organized positions students as subordinate to the teacher (see Harden 2012 and Toprak and Savas, 2013). Sound walks reduce this by subtracting the presence of the teacher and senses of place associated with classrooms. This in itself may be empowering to sound-walking students because they are isolated in a world mediated by their PLD (see Bull, 2000). PLD mediated isolation replaces overt power relations characteristic of conventional classroom geographies. Because of this, students may experience a level of liberation or control that is not usually experienced in the classroom.

Sound walk users interact with environments and people in ways made possible by a PLD. It is important to remember that engaging multiple modalities necessarily blends them. In

---

6 While students are subject to other sorts of ordering in public places (such as sidewalks or shopping malls for example), they are free from the sometimes oppressive character of classrooms.
other words, seeing, hearing, touching, tasting and feeling are not mutually exclusive (see Downs et al., 2011). Our senses interact with one another to produce contingent sensorial interactions. This sensorial contingency may yield a variety of impressions on sound walk users because senses vary from person to person (some people wear glasses for example). We also process information gathered by our senses differently (one person’s delightful aroma is another person’s potent olfactory nightmare). In terms of navigability being an asset to productive learning experiences, this applies directly to sound walks. Sound walks of all types involve some degree of navigation. PLDs are what make sound walks possible. Indeed, PLDs provide technological affordances for sound walks and, the sound walk experience turns these affordances into pedagogical fruit.

The above ideas found in pedagogical literature situate sound walks as useful tools to teach students in general, across a variety of disciplines. Through the main elements of sound walks themselves (environmental sounds, music, narration, sights, touch, embodiment and motion) sound walks are positioned as useful for teaching ideas about geography. The next section aims to show how sound walks are productive pedagogical tools specifically for teaching geography.

**Teaching Geography with Sound Walks**

In this part of the chapter I argue that the multi-sensoral characteristics of sound walks make them especially well-suited to teaching ideas about geography. In particular, I hope to show that by requiring students to engage actively with their environment using a combination of senses, sound walks have the potential to generate nuanced insights into the constitution of space
and place. I shall dedicate a subsection to each experiential sound walk element (environmental sounds, music, narration, sights, touch, embodiment and motion) in order to demonstrate how experiencing a sound walk is particularly useful for teaching geography. The elements appear in this particular order because sound is the resource that sound walk producers control the most. Underneath an overarching category of sound, I identify three sub-categories. Environmental sounds include any noises or sound effects that may occur naturally in a soundscape. I distinguish music from this category of sound because music contains unique aesthetic and cultural values that require slightly different attention than do dogs barking or car horns honking. Narration also gets special treatment because language and voice convey explicit information directly, in ways that music and environmental sounds cannot. The remaining categories (sights, touch, embodiment and motion) belong to the non-sonic category of sound walk elements beginning with overt elements (sight and touch), and finishing with more complicated elements, embodiment and motion.

**Environmental Sounds**

Environmental sounds are sound events indigenous to naturally occurring soundscapes. Examples of these types of sound events could be a babbling brook, wind, traffic, seagulls, church bells, and so on. Part of how geographers understand their surroundings is through the sounds occurring there (see Matless, 2005). By manipulating soundscapes, certain aspects of the environment may be emphasized or de-emphasized to communicate specific ideas about a place as research participant Mookie did in his sound walk about the downtown:

> The goal of my sound walk was to illustrate how downtown St. Catharines, or any downtown for example, has become not only reliant on the car, but
become isolated and desolate from human activity. So I didn’t use too many sounds. I used wind, I used car sounds, and I used cars honking – so vehicular sounds in the main pretty much – that was a main focus.

Manipulating soundscapes may include a rearrangement of the soundscape, or introducing sounds to an environment that are geographically out of context. Manipulating environmental sounds may be used in ways that call attention to particular places on a given sound walk route. Emphasizing and de-emphasizing environmental sounds call attention to aspects of places that create alternative perspectives for sound walk participants to experience. Experiencing alternative perspectives about places may facilitate effective pedagogies for teaching about those places or spatial relations.

Environmental sound manipulation also teaches about sonic geography. That is, by emphasising and manipulating naturally occurring soundscapes, students can investigate how places sound and what those sounds signify. Because soundscapes are heard all of the time (by those of us capable of hearing), it may be difficult for students to listen critically to soundscapes they have always heard. One way for students to become sensitive to soundscapes is by walking somewhere solely to listen to the surrounding sounds. This is known as an ear-cleaning exercise and it helps listeners decipher between an ordering of background and dominant sounds that comprise soundscapes and their ecologies (Schafer, 1994). So only part of this lesson may be taught and learned just by visiting a place and listening to it. The remaining lessons about sonic geographies are learned when environmental sounds are manipulated to make lessons overt and accessible. Other sounds that may feature in a sound walk (music and narration) are already overt because they do not typically occur naturally in soundscapes as environmental sounds do. If music and narration occur naturally in the soundscape, it is because of some deliberate sonic intervention for some specific purpose.
Music

Music in sound walks has potential to teach ideas about geography\(^7\). Many elements inform geographical perceptions or understandings, yet strategically deployed sounds and music may demonstrate how fluid and subject to change these perceptions can be (see Wood, Duffy, and Smith, 2007). However, there are limitations in using music to teach ideas about geography. Music is often an appealing resource for sound walk producers because music aestheticizes and provides cultural meanings that can be compelling. Yet, despite the appeal for including music in sound walks, there seems to be great difficulty in using it effectively. When I asked the 4P51 students about the music they used in making their own sound walks, there was difficulty explaining to me what the music accomplished, as indicated in Mookie’s response: “[music] was more to enhance that idea, because the music was very like — it was really distant I guess you can say - with a lack of - I don’t know what else I can say”. Furthermore, after the peer reviewing process, music seemed to be a problematic resource to include in a sound walk as 4P51 student Robert explains:

[Sound walk participants] might already have emotions attached to either the songs or the sounds and even though Lukin was a great song to listen to, [...] I’m thinking of the song – how much I like it, even the connections I have when I heard it live in Toronto – it was a great time – so I think that was kind of limiting too but I mean that’s the risk of including songs too, for anything.

Robert included a song called Lukin in his sound walk. He acknowledges that music has potential to have a ‘limiting’ effect on sound walk experiences, yet seemed to include songs in his sound walk because he likes them, and that he has emotional connections to the songs (e.g. seeing Pearl Jam play Lukin live in Toronto). While there may be shared cultural responses to

\(^7\) I am treating music here as any recorded sound that contains rhythm and melody. This is a broad treatment of music that can also include sound effects such as percussive noises or noises that sustain some tonal arrangement. For the purposes of this section though, music mostly refers to recorded songs.
certain music, the type of meanings and connections to the songs featured in Robert’s sound walk are uniquely his own. The motivation to include Lukin in his sound walk came from a personal understanding of how that song impacts listeners. It is therefore unwise to expect others to react to the song in the same ways Robert does. Rather than stirring up particular emotions in participants, music in sound walks may be better suited to emphasize something about places and spatial relations.

For instance, music cues us to certain geographical identities. For example, pipe organs help to make churches into the places they are understood to be. Loud music in night clubs and easy listening radio at the doctor’s office do the same. Music also disciplines bodies. Retail stores and aerobics classes make use of particular music and tempos in order to coerce bodies into behaving in certain ways (see DeNora, 2000). This helps to create impressions of these places and expectations we have when we go there. Music also works to identify people associated with places. This includes assumptions about social categories such as class, ethnicity, gender and sexuality. Music also constitutes material spaces.

In the context of shopping malls, amusement parks and restaurants, music acts as a type of aural architecture (Connell and Gibson, 2003). This refers to places that play music as part of a backdrop that is not necessarily listened to but rather heard. Hearing music (but not listening to it) provides spaces with a quality that is more material than conceptual (in ways that place making is conceptual and constitutions of space are material). Thinking of music in these ways acts as a reminder that music (and more generally, sound) may be a constituent of space. Sound walks can present music in ways that demonstrate it to be a place making factor and/or music as an element of material space. Narration can achieve a similar function.
Narration

Voice connects identities to geographies. The ways people speak are often linked to place identities (e.g. Johnstone, 2010). For instance accents, grammar, pitch and diction frequently inform ethnicity, class and gendered assumptions (see Kristiansen, 2001) about particular places. How voices are heard determines relationships that people have with places (Boland, 2010 see also Kanngieser, 2012). These relationships establish places in part as inclusive, exclusive, familiar and/or alien. Sound walks can make use of vocal qualities to highlight place-making processes in ways that may not be realized otherwise.

Whether it is the type of voice, vocabulary, or vocal effect, sound walks can deploy narration to teach specific ideas about a place. In the case of sound walks, 4P51 interview participants indicated that narration was particularly useful in communicating ideas. When part of the 4P51 sound walk project called for students to reflect on their peer’s assessments of their own sound walks, narration seemed to be the area in which students wanted to improve their sound walks. Their comments indicated that narration is the most accessible element of sound walks and the easiest way to communicate their ideas. Others commented on the inefficacy of song lyrics; that they were too difficult to discern and that narration could accomplish a type of communication that song lyrics could not.

Narration serves multiple purposes in sound walks. Firstly, narration is a direct way to communicate ideas explicitly. There seemed to be consensus among 4P51 participants that one way to improve upon their sound walks was to include more narration. Secondly, narration is more than just a resource for communication it is also a way to express geographical identities. For example, the voice doing the narrating can evoke places and cue students to the ways that
people are tethered to particular places (whether they are there or not). Additionally, narration helps to directly communicate ideas in sound walks, which is a strategy to limit contingency. In this way, narration helps every experiential element teach geography.

**Sights**

Visual elements of sound walks are important as visuality is central to most learning experiences (e.g. Felten 2008, Goldfarb 2002). The point here is that sound walks are necessarily visual. Geography as a discipline is responsible for a body of work on visual methodologies (Tolia-Kelly, 2012) as well as promoting visual literacy (Thornes, 2004). Visual characteristics of sound walk routes may be compelling for students. In terms of teaching ideas about geography, visual elements of sound walks give context to the other sound walk elements and vice versa. Visual elements are compelling because their impact is overt and immediate. This is not to say that sightless populations are exempt from experiencing a compelling sound walk, but rather, what is seen along a sound walk route is often important to its effect.

In an article about visual images and Geography, Elisabeth Roberts (2012: 386) discusses certain ways that surrounding visual experiences impact our lives. She notes that:

> Images can make us cry, shock us, change our mindsets, and haunt our thoughts and dreams. Yet images also surround us at all times, unnoticed, banal and clichéd. They comprise a large part of the background to our day-to-day lives, informing (knowingly or not) our actions.

This quotation helps us to understand geography through understanding visual information. For instance the things we see around us are at once compelling and banal. The persistence of our

---

8 Visual literacy refers to the creation of visual images - picturing theory - as well as interpreting visual images - theories of pictures (Thornes, 2004).
visual surroundings creates a powerful, permanent visual experience. We also get quite used to our visual experiences because they are always happening, always becoming ordinary. This applies to geography at large. Geography is always all around us and because of this, some geographical ideas may be exciting to research and work with and may simultaneously go unnoticed ‘on the ground’. Sound walks can counteract this effect by calling attention to it. Part of what makes sound walks such an exciting tool to teach geography are the visual aspects and opportunities for interaction with them.

Visual elements potentially make sound walks effective pedagogical tools because what we see on a sound walk gives context to what we hear and vice-versa (e.g. Schlottmann and Miggelbrink 2009). Still there is more to teaching with sound walks than seeing and hearing things. Touch is also an intriguing sound walk element in terms of pedagogical potential.

**Touch**

Perhaps the most fundamental relationship people have with their surrounding environments is touch (Robles-De-La-Torre, 2006). In their fascinating book *Touching Space*, *Placing Touch*, Paterson and Dodge (2012: 50) discuss what touching does in terms of our relationship to all that surrounds us:

“Touch reveals our ‘withness with things’ (Paterson, 2007: 93), our being in an excessive material world. It also reveals the singularity of things, their uniqueness and irreplaceableness (Vasseleu, 1998). Central to touch is an idea of confirmation, authenticity and presence [...] In touch, things are significant in and of themselves, thus breaking with the dematerialized visualities of the optical experience”.

88
Touch reminds us of our place in the world in terms of materiality. This may be useful for teaching ideas about geography, because touching the world around us (clutching a fistful of soil, climbing hills, etc.) establishes a direct physical link between student and geography. Moreover, people sometimes get wrapped up in their own subjectivity, so much that their ‘withness with things’ becomes lost. It might be important for students to learn what it means to be a material being in a material world through touch.

In the context of sound walks, touching may simply be the feel of the terrain underfoot, feeling the steel of a door, or picking up a piece of agricultural produce (in the case of the grocery store sound walk I produced). In each case, there is a type of tangible validation when things are touched. We can see things and have a particular understanding of them, yet when we see and touch things we get an extended sense of them. In this way, touch would help to teach ideas about geography because it provides a connection to places that is intimate and difficult to achieve through other means.

Touch is also a way to directly introduce our bodies to geography. This includes tastes and smells (see Drobnick 2006, Hoover 2009, and Henshaw 2013) that may occur during a sound walk. But, bodily interactions with geographies go beyond touch into a realm that is somewhat affective. Our bodies react to certain stimuli in ways that are not cognitive or purely tactile. The next section discusses embodiment and how sound walks can make use of this to teach specific ideas about a place.

**Embodiment**

We experience our geographical surroundings through our bodies and bodies are a type of geography themselves. This makes for an interesting dichotomy that may be fruitful in
teaching geographical ideas. Before discussing the pedagogical yield of embodied elements in sound walks, there needs to be a clear understanding of what the body means to geography.

Elizabeth Kenworthy Teather (1999: 7) offers the following:

Our bodies occupy space, but they are also spaces in their own right. The ‘space’ of our body is encoded with ‘maps of desire, disgust, pleasure, pain, loathing, love’ (Pile, 1996: 209). The body and gesture are inseparable: bodies make statements, involuntarily and/or through deliberate choice. The body is a ‘site’ for consumption and for the expression of values. Through the body’s sensory organs, we perceive the qualities of space; through our cultural baggage we assess space; through a combination of creativity and motor skills we adapt and design space.

Sound walks may emphasize bodies in a number of ways. One way is to feature the body of the sound walk user. For instance, the sound walk route could take the user (and their body) through geographies that highlight the space their body takes up to demonstrate that we are all individual geographies in motion. Bodies are also sites for political expression; sound walk producers may require users to don some type of clothing that makes a particular political statement as they move about the route. Because the body of the user is treated as its own geography in these examples, this may be an effective way to teach ideas about material space or political geographies because the student doing the sound walk is experiencing the lesson bodily and personally.

Kenworthy Teather (1999) points out that we perceive space through our bodies, and assess it through our ‘cultural baggage’. If sound walk producers could elicit these types of responses from sound walk users, it may be a useful pedagogical tool for teaching specific ideas about places. We are only beginning to understand how our bodies mediate our experiences with surrounding environments, but we do know that our bodies react to certain stimuli in ways that are separate from any cognitive reactions (see Longhurst et al., 2008). Moreover, our bodies
interact “intercorporeally” (Macpherson, 2009) with other bodies to aid in our experiences of landscapes. If these embodied reactions could be designed and employed in sound walks, this may be an effective pedagogical resource. While this seems most difficult to do, sound walks do possess the ingredients that would be required for such a task, namely bodies and geographies. One way to incorporate embodiment is through movement, which is another element of sound walks that may have pedagogical potential because moving through space is another way to experience geography.

Motion

In an article outlining the benefits of pedestrian practices for young populations, Horton et al. (2014) highlight four characteristics of walking practices that would benefit youth. Although they frame this discussion in the context of walking and how children would profit from it, the message can be applied to people moving through space through self-propelled means (other than walking) with benefits to those who wish to teach ideas about geography.

First, walking is a multi-sensorial experience (Horton et al., 2014). Beyond walking, movement through space in general, is a multi-sensorial practice. Sights, sounds, feelings, tastes and smells pass by us as we move through space. Indeed, movement adds more to experiences en route because our surroundings change as we move through space to experience an ongoing series of different vantage points. This may prove useful in pedagogical terms because it highlights how one place may be experienced very differently from different positions in the landscape.

Secondly, there is an emotional/affective element in walking. Walking can be used to reflect on relationships between memories and landscapes (Horton et al., 2014). This is
reminiscent of sense of place because feelings are sometimes triggered through memories associated with places (Knox et al. 2007: 276). Being ‘on the ground’ moving through a place can conjure up emotions or senses of place that are powerful and compelling. This would be useful for teaching how sense of place operates on people in a practical ‘hands-on’ way. Since emotional/affective geographies are concerned with feelings associated with place, it makes sense to teach these ideas by including some element of emotional experience.

The third characteristic is that “there is often a sense of the social nature and socio-technical process of walking; highlighting the importance of social interactions, materialities and non-human agencies with/in walking practices” (Horton et al., 2014: 97). Moving through places necessarily means being exposed. This type of activity opens up opportunities for social interaction, and interaction with non-human agents, which demonstrates a polyvocal world of many other voices (see Clifford, 1997). Moving through space may be helpful for teaching specific ideas about a place because it positions sound walk users to engage people, non-people and materialities along the route. Moreover, moving through environments fosters particular interactions that highlight certain characteristics of places that may only be discovered by moving through them.

Finally, there exists a “political potential, and politicised context, of many walking practices” (Horton et al., 2014: 98). Indeed, moving through places may be interpreted as a political action (see De Certeau, 1984). In terms of teaching ideas about geography, moving through some places makes those places and actions political. Also, politicized geographies may become politicized by the presence of the public. Moving through spaces may work to challenge dominant ideology or question who should be where. Sound walk users may experience these terms directly just by walking through places, which may be useful for teaching students about
political selves as well as politicized geographies. Walking is also useful for teaching substantive material to students because walking establishes familiarity (see Matos Wunderlich, 2008). When students walk a route, they connect to it in a physical and visceral way. This connection provides an apt scenario for students to engage with sound walk content across a variety of geographical subject matter.

In sum, sound walk elements (environmental sounds, music, narration, sights, touch, embodiment and motion) have individual and cooperative potential to effectively teach geography.

Conclusion

Key schools of pedagogical thought (Active Learning, Student Difference, Multi-Media Learning and the M.A.I.N. Model) theorize optimum ways to engage students. Sound walks pertain very closely to these recommendations. Sound walks are a way for students to engage actively with subject matter. If students prefer different senses to learn with, sound walks are accommodating because they make use of them all. This also satisfies pedagogical theories recommending lesson presentation across multiple senses. Finally, technological affordances of PLDs position sound walks as appealing teaching resources. While there are limitations for both teachers and students who use sound walks, according to pedagogical schools of thought, sound walks qualify as productive pedagogical resources, which apply to a range of subject matter.

In terms of teaching the subject of geography, sound walks are equally well-suited because of their constitutive experiential elements (environmental sounds, music, narration, sights, touch, embodiment and motion). When students engage actively with their environment using a combination of senses, sound walks have the potential to generate nuanced insights into
specific ideas about a place. Sound walks teach ideas about soundscapes, acoustic ecology, the constitution of places, reciprocity between people and places, landscapes, exclusion/inclusion and politics. And because sound walks physically take place on the ground (or some accessible floor) all of these takeaways are spatially embedded, making sound walks especially useful for teaching geography.

This thesis aims to demonstrate that making a sound walk helps geographers to think alternatively about their work, regardless of the purpose (aesthetic, didactic, evocative or representational) of the sound walk. It also tries to show that sound walk participation opens up different representational experiences and evokes places, and representational applications depend on what the purpose of the sound walk is. Finally, listening to and working with sound walks helps teachers to teach students and helps students to learn from teachers – geography teachers and students in particular. Again, the purpose of the sound walk is important in how lessons are delivered. For instance, it would not make much sense to try and teach students about migrant labour with a purely musical sound walk that has an aesthetic purpose.

Sound walks operate in an evocative register which means they can evoke lessons about places and nurture geographical imaginations. Evocation, in the context of sound walks, involves embodied or affective elements that generate visceral connections or responses to a place. Evocation is a compelling representational option for geographers because it is multi-sensorial, emotional, corporeal and intellectual. These elements of evocation provide sound walk participants with opportunities to connect to places in ways that are difficult to accomplish without sound walks. This is a similar condition to representational applications and benefits of making one’s own sound walk. As stated in Chapter One, now that I have dealt with each analytical category (sound walks as thinking tools, representational tools, teaching tools) the
final chapter will investigate how these relate to and constitute each other and then discuss future directions for research with sound walks in geography.
Chapter 5: Conclusion

The previous substantive chapters highlight ways that sound walks can be used in geographic scholarship. I have used relevant literature, material from 4P51 students, professionally made sound walks, and personal experience from my own sound walks to outline how and why sound walks can be productive tools for geographers.

This concluding chapter serves three purposes. First I revisit the potential for sound walks to be used as pedagogical, theoretical and (re)presentational tools. Secondly, I reflect on the overlap between these three applications to tie them together. Sonic geographies and sonic-oriented geographical methodologies do not yet receive much attention, so I end the chapter by suggesting how to continue this line of enquiry.

Summary

Each sound walk production stage is beneficial for developing geographic thinking. The experiences of making my own sound walks combined with reflections from 4P51 students and professional sound walk producers, present opportunities to compare empirical practices and develop insights into the yields of sound walk production.

The order of production steps laid out in this thesis is one productive sequence. The sequence itself is less about directions for making a sound walk and more about including each component involved in the process. Each step may be worked on repeatedly throughout the process. Each production stage requires action that forces sound walk producers to think through
specific ideas about a place or spatial relations. These thought processes are driven by particular objectives. These types of objectives are concerned with (re)presenting ideas about a given sound walk route.

Sound walks are effective representational tools if the goal is for a co-operatively produced evocation or (re)presentation. In this way, both participant and producer are present for representations. Because of this, sound walks may be a novel way to explore mobile methodologies, where research participant and researcher are in motion in the field (Hein, Evans, and Jones, 2008). Geographers interpret and evoke place through sound walks by engaging multiple senses, having audiences walk en route, embracing contingency, and by co-creating (with sound walk users) moments in time where and when reality comes into being. Portraying interpretations and evocations of place via sound walks is made effective by incorporating multiple senses, walking en route, and engaging contingency. Similarly, non-representational theorists may use sound walks productively because sound walks are filled with potential moments for interaction and reality-creating instances that appear and then vanish.

Pedagogical literature qualifies sound walks as good teaching tools. Several current pedagogical schools of thought recommend approaches to teaching that sound walks capably accommodate. The elements within sound walks position them as good teaching tools for geography in particular. While this thesis deals with each application for sound walks in geography separately, there are no clear delineations between them. This thesis distinguishes three applications separately, but this is purely for analytical purposes. The applications are actually inseparable.
Applications as a Whole

An important analytical issue concerning the potential for sound walks in Geography is how these three applications – theorization, representation and pedagogy – relate to, overlap with, and constitute each other. This includes both producing as well as ‘doing’ a sound walk. Whether geographers produce, or ‘do’ a sound walk, the experience has potential to generate productive thinking, representational effects and pedagogical yields.

Sound walk production incorporates all three applications. It is helpful as a thinking tool in the ways that sound walk producers must come up with strategies to present ideas using the resources of sound walks. Strategizing and theorizing in these ways raises challenges. One challenge is how to present an argument sonically. Thinking through this challenge is simultaneously a representational approach for the same reasons that presenting an argument textually is. One main difference is that sound walks operate in an evocative register and that may be helpful, or not, depending on the goal of the sound walk. Similarly, once sound walk producers think through how to use sound walks to represent or evoke ideas, other questions emerge such as: how will this representation be received by sound walk audiences?

Thinking about the effects a sound walk will have on audiences is not only a metacognitive exercise, it is also a pedagogical one. This is because the goal is to communicate ideas to audiences. In order to achieve that goal, sound walk producers must ensure that participants understand what is being communicated to them. This is a pedagogical aspiration because presenting ideas is an act of communication and if the intent is to have audiences understand the communication in a particular way, then it is also an act of teaching.
Sound walk production has potential as a representational tool. However, sound walk producers comprise only part of the representational outcome of sound walks. The remainder is constituted by participants. Representational strategies for producers require considerations of self, participant, and route contingencies. Where participant contingency is concerned, producers are required to strategize how to engage audience contingency in ways that achieve their goals. This is also a pedagogical pursuit because audiences need to be shown or taught how to participate in representations that are contingent on audience involvement.

Similarly, using sound walks to teach subject matter requires planning or thinking about how to present content. This necessarily involves representational strategizing and theorization because how subject matter is presented will shape pedagogical efficacy. Sound walk production initiates thought exercises as well as representational and pedagogical activity. All three projects are linked and mutually constitutive. To think about making a sound walk is also to approach representation and to teach. This mutually-constitutive circumstance also applies to ‘doing’ a sound walk.

When participants ‘do’ sound walks, there are opportunities to learn. For example, students receive a lesson via sound walks and in so doing also engage in thinking exercises. Sound walk participants experience sound walks as pedagogy as well as theory because they might learn something during the sound walk, they might also learn afterwards when reflecting on their experience. Thus, when ‘doing’ a sound walk, the experience is simultaneously about learning and thinking. This type of experience that sound walk participants come away with is also constitutive of sound walks as representations.
Using sound walks as representational tools applies as much to participants as it does to producers. If we understand representations to be cooperatively constituted (see Butz and Besio, 2009), then sound walk participants are necessarily required to constitute sound walks as representations.

In sum, the effort to produce sound walks that teach others, or that represent something to others, is also an act of teaching ourselves (theorizing/conceptualizing). In this way producing, theorizing, representing and teaching are all part of the same process but described differently when they are related to different objects. We produce a sound walk in order to teach ourselves (theorize), represent our insights (teach others), and help others learn for themselves (pedagogy). Indeed, for both sound walk producer and participant, all three applications occur simultaneously and cannot be separated from each other. This raises the question, what does it mean that all three applications engage both producer and participant? The next section suggests what directions are needed in order to answer such questions.

Future Directions

Applying sound walks to geography in these three overlapping, mutually-constitutive ways is fraught with unknowns. This thesis, as a contribution to Geography, is only a beginning. Sound walks have potential to be effective pedagogical tools, yet there is insufficient data for comprehensive practical and empirical evaluations and analysis. The fact of the matter is sound walks are not widely used to teach students. Moreover, the only course that does this at the university I attended is 4P51 – a fourth year Geography course. Introducing sound walks so late into an academic career means that students have to learn what a sound walk is at the same time they are supposed to make some kind of effective use of them. If sound walks were introduced
to students in secondary school or even the primary level, then working with them at the university level would be a much different pedagogical undertaking. Moreover, analyzing a significant sample size is not an option as fourth year courses tend to have small enrollment.

Similarly, there are a limited number of people who have made sound walks. There are few people to study, and few people who have expressed what it is to produce a sound walk. This is a reason why I decided to make my own sound walks – to have an empirical data source pertaining to sound walk production experiences. If students across multiple grade levels were required to make sound walks, and if course instructors made sound walks for the courses they teach, there would be more data available regarding sound walk production processes and corresponding experiences. Furthermore, with a limited number of well-documented sound walk producers to choose from, there are few opportunities to investigate the ways sound walks are used to (re)present or evoke a place or spatial relations. These circumstances do not necessarily limit this thesis: rather they situate it as a beginning. This thesis demonstrated the potential for sound walks in Geography; the next step is to put them into practice.

Since this thesis is a starting point for considering sound walks as a multifunctional, productive resource for geographers, the opportunities for further development are many. One opportune place to start would be for geographers to incorporate them into their work. Sound walks are available as a tool for courses that may not necessarily have anything to do with music or sound studies. Transportation geography, gender in geography, and even first year courses introducing students to geography stand to benefit from integrating sound walks into their respective syllabi.

As teaching, thinking and (re)presenting geography overlap, then including sound walks in a syllabus would include all three applications. Geographers who use sound walks to teach
would also engage the production process. This means that professional geographers would have to think about place and space in terms of seeing, hearing, touching, tasting and smelling.

Finally, deploying sound walks into curricula necessarily means that geography teachers would need to think about how to communicate their lesson plans, or how to (re)present their ideas to students, using sound walks.

It is for these reasons that future research needs to investigate sound walks in *practice*. This thesis is meant to demonstrate *potential* for sound walks and not to empirically examine large samples of sound walks in practice. This leaves some unanswered questions after this study. For example, how does making a sound walk help geographers think through subject matter? How do sound walks work as representational resources? Finally, how do students learn from sound walks? In order to answer questions like these, there needs to be *empirical* research conducted with geographers who publish work, who teach, and with students who are assigned to ‘do’ sound walks as required reading (or required sound walking).

One place to start is with an empirical study involving a sample of geographers (who are at the onset of a research project) to see how producing a sound walk affects their thinking about the subject matter of their work. This would require a number of geographers willing to add sound walk production to already time constraining research projects, but this is necessary in empirically researching potentials for sound walks as thinking tools. Similarly, there needs to be empirical research involving a sample of geographers who represent their work through sound walks. Again, it may prove challenging to find such a sample, yet to address the ways that sound walks may be used as effective representational resources requires rigorous and empirical research with a sample of geographers who are using sound walks for representational purposes. If we are to understand potentials for sound walks as pedagogical tools, there needs to be
classroom-based research undertaken to address the ways that students respond to, comprehend and receive lessons through sound walks. This does not necessarily have to take place in post-secondary classrooms, yet it will require teachers who are willing to include sound walks in their lesson-plans.

Future research needs to be empirically-based, and to accomplish this, geographers need to use sound walks to teach, to think and to (re)present geography. Only then will future researchers have opportunities to pick up where I have left off. This thesis demonstrates that sound walks are worthwhile and potentially productive resources for geographers. The next step is to put sound walks into practice and find out how they live up to their potential.
Bibliography


Appendix 1a – University Campus Mental Map
Appendix 1b – Route Map (Drawn to Scale)
Appendix 2 – Page from Grocery Store Sound Walk Script

Make your way past the last island display - take note of the asparagus from Peru, and the garlic from China. In Peru, local water supplies are in jeopardy because of the amount of water required to produce asparagus. Local populations need water to live but the export of asparagus is so crucial to the economy that it gets priority. Imagine going to work and seeing how water is used to grow asparagus and knowing that the well in your village is running dry.

Now consider the garlic from China. According to a garlic farmer in California, Chinese garlic can be sold cheaper than domestically grown garlic because of different labour laws. Chinese workers work for more hours a day and for much less money than their American counterparts. Locate the Chinese garlic and hold it in your hand. Imagine the working conditions in the place where that product came from. Imagine the workers who touched that same garlic some 11,000 km away, for a company whose labour policies differ greatly from the one's we may be accustomed to. Hold that garlic, look at it, smell it. Close your eyes and imagine the place it came from...

FLUTE

STINGS
Appendix 3 – Interview Protocol

The interviews were structured as follows:

- **Section One** included basic questions about space and place. These consist of questions about knowledge and experiences with space, place and sonic environments.

- **Section Two** dealt with student made sound walks. This section featured questions about aural and visual content and why decisions were made to include that content. Questions also focused on peer-reviewed sound walks. Students were asked to listen to another student’s sound walk and critique it. This process offers students a chance to think about sound and spatiality and also reflect on their own work and how to improve.

- **Section Three** revisited ideas discussed in Section One. The difference was Section Two dealt with sound walks and may have started a line of thinking that has more to do with sonic environments than the discussion in Section One. I compared responses and investigated how students responded differently to the same types of questions after discussing sound walks in section two. The strategy was to hear what students had to say about space and place before and after discussing sound and spatiality. I was interested to find out if participants responded differently in each section. Section Three also introduced some new questions. Students were asked to comment on the content of their essays as well as class discussions and course readings. Students were asked to identify specifically what they learned from making sound walks.

- **Section Four** focused on students’ background experiences with sound. First I asked about music listening practices and histories. I think it is important to know students’ relationships with music when analyzing their sound walk choices and rationales, especially as many students prominently incorporated music in their sound walks. Music is a type of sound and getting at this information gave me clues as to how each sound walk producer values music. Second, I asked about soundscape listening practices and histories. This grouping of interview materials covered every sound in the sonic environment except music. It did the same as the previous grouping about music, only this time concentrated on sounds in general. This helped me to better understand relationships between students and their sonic environments. Third, I asked about PLD use. This tied in the entire section because if students use PLD’s with regularity then I know decisions have been made to personalize soundscapes. If not, students explain why they are not interested in personalizing soundscapes. In either case, students’ relationships with their surrounding sonic environments were elaborated upon, providing me with insight regarding ways that GEOG 4P51 students treat soundscapes in their everyday lives.

- **Section Five** tied in personal background material with ways that GEOG 4P51 may have impacted understandings of space and sound. This section is a direct interrogation of whether or not students have changed the way they consider sound in the constitution of
space, and if so, what precisely has brought about that change. In this section I asked about all course material and even other courses that may contribute. This section offered a chance for participants to reflect on the discussion in section four by revisiting their statements with GEOG 4P51 course content in mind. It was my hope that this section will flesh out exactly what sound walk production accomplishes as a pedagogical tool.

- Section Six was a summary of the interview and an opportunity for clarification.
Certificate of Ethics Clearance for Human Participant Research

DATE: 1/12/2011

PRINCIPAL INVESTIGATOR: BUTZ, David - Geography

FILE: 10-154 - BUTZ

TYPE: Masters Thesis/Project

STUDENT: Warren Jenkinson

SUPERVISOR: David Butz

TITLE: Using Soundwalks to Understand the Sonic Environment

ETHICS CLEARANCE GRANTED

Type of Clearance: NEW

Expiry Date: 1/31/2012

The Brock University Research Ethics Board has reviewed the above named research proposal and considers the procedures, as described by the applicant, to conform to the University’s ethical standards and the Tri-Council Policy Statement. Clearance granted from 1/12/2011 to 1/31/2012.

The Tri-Council Policy Statement requires that ongoing research be monitored by, at a minimum, an annual report. Should your project extend beyond the expiry date, you are required to submit a Renewal form before 1/31/2012. Continued clearance is contingent on timely submission of reports.

To comply with the Tri-Council Policy Statement, you must also submit a final report upon completion of your project. All report forms can be found on the Research Ethics web page.

In addition, throughout your research, you must report promptly to the REB:

a) Changes increasing the risk to the participant(s) and/or affecting significantly the conduct of the study;
b) All adverse and/or unanticipated experiences or events that may have real or potential unfavourable implications for participants;
c) New information that may adversely affect the safety of the participants or the conduct of the study;
d) Any changes in your source of funding or new funding to a previously unfunded project.

We wish you success with your research.

Approved:

Michelle McGinn, Chair
Research Ethics Board (REB)

Note: Brock University is accountable for the research carried out in its own jurisdiction or under its auspices and may refuse certain research even though the REB has found it ethically acceptable.

If research participants are in the care of a health facility, at a school, or other institution or community organization, it is the responsibility of the Principal Investigator to ensure that the ethical guidelines and clearance of those facilities or institutions are obtained and filed with the REB prior to the initiation of research at that site.