Between Space and Place: Exploring Scenes of Pre-Hospital Emergency Medical Care

by

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in the
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Abstract

Background: Current scholarship regarding space and place has largely neglected emergency medicine in pre-hospital contexts. The process through which paramedics operate within between spaces is an unexplored concept, and one that has the potential to impact applied pre-hospital practice. Question: How do paramedics practice across unpredictable spaces? Theoretical Orientation: This study will be conducted as a clinical ethnography, applying Foucauldian and Spatial Practice theory towards the analysis of space. Methods: This study will be conducted through (1) participant observation of paramedic practice, (2) semi-formal interviews with paramedics while on shift, in specific and limited contexts, and (3) in depth debriefing interviews following initial observation and preliminary analysis. Significance: The proposed research will be the first to explore the concept of space in paramedic contexts, and represents a unique investigation of the use of space in emergency contexts.
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Table of Contents

Approval.................................................................................................................................................. ii
Partial Copyright License ....................................................................................................................... iii
Ethics Statement..................................................................................................................................... iv
Abstract................................................................................................................................................ v
Acknowledgements............................................................................................................................. vi
Table of Contents.................................................................................................................................. vii
List of Acronyms...................................................................................................................................... viii

Chapter 1. Introduction and Methods........................................................................................................ 1

Chapter 2. Literature Review.................................................................................................................... 10

Chapter 3. The Observation of Spatial Practice......................................................................................... 19

Chapter 4. Imagined Geographies and the Performance of Work............................................................ 32

Chapter 5. Conclusion............................................................................................................................... 56

Appendix: Case Studies............................................................................................................................ 61

References.................................................................................................................................................. 74
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCAS</td>
<td>British Columbia Ambulance Service</td>
</tr>
<tr>
<td>CAD</td>
<td>Computer Automated Display</td>
</tr>
<tr>
<td>JIBC</td>
<td>Justice Institute of British Columbia</td>
</tr>
<tr>
<td>PCP</td>
<td>Primary Care Paramedic</td>
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<tr>
<td>SFU REB</td>
<td>Simon Fraser University Research and Ethics Board</td>
</tr>
<tr>
<td>EHCS</td>
<td>Emergency Health Services Commission</td>
</tr>
</tbody>
</table>
Chapter 1. Introduction and Methods

When you are experiencing a life threatening medical emergency, the sound of sirens in the distance may be the best sound you have ever heard. You hand yourself over to professionals, who arrive with their equipment and their confidence. Those around you are relieved, too: They are now freed from any further obligation to help. In British Columbia, this basic scenario is played out nearly every minute, of every hour, every single day, with nearly half a million emergency medical responses occurring in the 2013/2014 fiscal year (BCAS 2014).

Performing their medical practice without on-scene supervision from the doctors under whose standing orders they work, paramedics deliver medical care in unpredictable and complex environments. Most of the time, their calls are routine and they serve as the link between homes or streets and emergency rooms. Frequently, the care paramedics provide dramatically improves the prognosis for those who have experienced a traumatic injury or true medical emergency, on some of these occasions, what they do is the difference between life and death. Despite the critical role that paramedics play within the contemporary western medical system, we know very little about how they carry out their tasks. (Campeau 2009:296) Most research on paramedics and pre-hospital care focuses on the relationship between enactment of set protocols and clinical outcomes. It is as if paramedics are simply another machine enacting a series of steps, in an abstract location somewhere outside the hospital.

As the son of a paramedic, and having conducted a previous study of paramedic practice, I knew there was more to paramedic practice than serving as a kind of high-end, medically equipped taxi. In an earlier study, which formed the basis of my undergraduate honors thesis, I explored the concept of Cultural Competency among paramedics in the BC Ambulance System (BCAS). Both paramedics and civilians perceived paramedics to be racially biased, and I wanted to understand whether this was true for individuals in general, and whether such individual beliefs affected how care
was delivered. I narrowed this broad topic to focus specifically on how paramedics in the BCAS system perceived the cultural systems of their patients, how they negotiated those culture systems if they conflicted with their own, and ultimately how cultural diversity impacted patient care. My findings in this small study suggested that ethnicity had a significant impact on a paramedic’s conduct while providing emergency medical care, but at the same time, that inter-related factors, like characteristics of the homes and outdoor environments in which paramedics found themselves were equally important.

My previous research lead me to consider the cultural interactions of paramedics not only in terms of ethnicities, but also in terms of professional cultures, for example, when paramedics interact with police and fire, who are also usually on scene of the emergency. I began to consider the clash of cultures – ethnic and professional – as a question of the management of space, and in particular, the management of clinical space. To date, while there is some research on nurses working in the community, there is no academic research that explores the role of paramedics in the creation and management of pre-hospital spaces that approaches those spaces as a form of clinical space. This initial focus on clinical space suggested that my best theoretical grounding would be in Michel Foucault’s *The Birth of the Clinic*, in which he defines the clinic as the intersection between physician and patient, and its capacity to generate knowledge. As I will detail later, I reviewed Foucauldian-derived work, as well as other work specifically in anthropology that dealt with space more generally, and with highly defined and constrained spaces in particular. Initially, I drew heavily on these works, and in particular, on the work of Stoller, whose study of prison life seemed to me to most closely match the setting I wanted to study. Stoller’s examination of spatial practice within an all-female correctional facility appeared to offer the ideal framework for the investigation of clinical space and was adopted for this project.

I soon found that pre-hospital clinical space is less tangible and less dependent on particular physical supports than argued by researchers studying what I initially believed would be similar situations. I found that the clinical space paramedics enacted is constructed through their imaginative projections of what might happen, a projection originally learned in paramedic school as a series of protocols and variations, and later modified and refined through “seeing” actual cases unfold. After several weeks of observation it became clear that the initial framework was not applicable to the
deconstruction of clinical space. Where Stoller observed beds and chairs as significant aspects of spatial practice, objects in my study appeared to have little influence on medical care. What I observed in my fieldwork proved to be quite different. Instead of creating clinical spaces at scenes of medical care, paramedics were seen to create complex mental pre-constructions based on education and personal experience. These pre-imagined scenes of emergency care were then carried into medical emergencies where the paramedics did not define spaces, but rather enacted a complex theatrical performance of clinical space.

I worked closely with the British Columbian Ambulance Service research office and the National Emergency Health Services Commission as the initial proposal was developed. This presented quite a few difficulties, including their unfamiliarity with qualitative research and what it might offer them. I had to simultaneously explain qualitative research and grapple with the ethical issues that clinic-based ethnography poses. In the end, I balanced the requirements of an MA thesis with the interests of the BCAS research office in finding out something useful to the service. It took more than a year to fit my research design to the realities of what I would and would not be able to observe.

*Emergency Medicine in British Columbia*

The history of the British Columbia Ambulance Service is rooted in the pre-industrial era. During this period there was little in the way of emergency medical care, with the majority of all medical assistance being the responsibility of a patient’s family. When professional medical assistance was required there was a range of potential medical professionals available, such as shamans, spiritualists, and classically trained medical doctors. Despite the complex and non-cohesive arrangement of medical systems during this period, several significant developments arose that have had a notable influence on modern medical technologies. The most significant development of the pre-industrial era was the concept of resuscitation after sudden death. This idea influenced William Tassach’s 1732 development of mouth to mouth resuscitation, and inspired the founding of European Rescue Societies focused on the use of ventilation to revive victims of drowning (Walz et al 2011:20). On the battlefield, the preindustrial era marked the first use of rapid transport as part of pre-hospital medicine. Deployed in
1792, the French army developed a system in which battlefield patients were assessed, triaged, and then transported by cart to specific aid stations where they received medical care (Walz et al 2011:20). The most important development of this period was the creation of a new medical paradigm where planning, education and emergency response were a focus for the first time in history.

During the Industrial Era, advances in technology and medical care formed the foundations of modern EMS. In North America, workplace hazards resulted in emergency medical response planning. In the eastern United States First Responder teams banded together to create rescue societies that serviced dangerous industries (Walz et al 2011:22). As more First Responder organizations developed, so did a need for a central body to standardize and promote emergency medical delivery. This task was taken up by the American Red Cross, who developed the first pieces of basic and advanced Emergency First Aid literature (Walz et al 2011:22). From this, standardized first aid was born.

As the population in Canadian cities surged, the reliance on medical services became more pronounced. In the early 1900’s, there was a lack of central organization in the delivery of emergency medical care in British Columbia. During this period emergency medical care was provided by an array of services, ranging from fire departments, private contractors, and municipal organizations (BCAS 2014). In urban settings the majority of emergency care and transportation was provided by private fire departments and rural services were provided by various volunteer organizations. By 1966, over half of all ambulances were owned by funeral homes which emphasized speed and efficiency over medical training (Walz et al 2011:25). Prior to 1974 all emergency medical care in British Columbia was unregulated. This resulted in a wide range of training, services and qualifications (BCAS 2014), which negatively impacted patient care.

1973 saw the release of the Foulkes Royal Commission report on provincial health issues. This document addressed several significant health issues within the province, specifically the extant structure of emergency medical response. The Foulkes Report recommended that “…the fractionated ambulance services provided by private companies, volunteer agencies and municipal fire departments be amalgamated under
one jurisdiction” (Foulkes 1973). As a result of this report, the Province of British Columbia sanctioned the consolidation of all corporations and volunteer agencies and the standardization of all emergency medical services (BCAS 2014).

The Foulkes report set in motion the establishment of two significant agencies, forever changing emergency medicine in British Columbia. The first agency established was the Emergency Health Services Commission (EHSC). This body was created to ensure the delivery of the highest quality of medical care across all pre-hospital emergency services in British Columbia. This resulted in the development of emergency health centers, response stations, and the assistance of health institutions and agencies in the provision of emergency health services. The second and most significant result of the Foulkes report was the creation of the British Columbia Ambulance Service, an organization mandated to recruit, train and make available high quality emergency medical responders for the entire province. This established a standard of training and medical care, eliminated the differences between boundary and entity disputes, and ultimately resulted in today’s provincial Ambulance Service.

Methodologies

Given my dual interests in clinical spaces and in workplace dynamics, I reviewed a range of potential methods to discover what might best fit. After review and consideration I chose to balance two complimentary qualitative methodologies that, working together, would provide the best possible perspectives on paramedic work as a form of clinical space.

Clinical Ethnography. In general, ethnography is a form of qualitative inquiry that places the researcher inside the very environment that they are interested in learning about, allowing them to see the world from the perspective of their subjects. Selecting Clinical Ethnography as a methodological approach allows the observation of paramedic practice from the same vantage point as the paramedics themselves. Clinical Ethnography, a sub-type of Ethnography, provides a more specific approach that takes into account the ethical and practical demands of observing medical care within a clinical
environment. Here, the clinic is as the natural habitat of those observed, positioning the researcher to observe the expected and unexpected variations that occur in clinical environments. Although much of the observation of pre-hospital care is in the ambulance station, I conceptualize the larger space in which the paramedics work one are transformed from neutral space into clinical spaces through paramedic practice.

Extended Case Method. This methodology is ideal for several key reasons. First, Small's (2009) Extended Case Method is an ideal research method for fields that are dominated by of quantitative research. In these academic scenarios, qualitative researchers are expected to be experts on their topic and at the same time, be able to write for an audience critical of their methodological approach. The Extended Case Method responds to this issue by contending that truly quantitative work cannot be done conducted at the ethnographic scale, and because of this, qualitative researchers should not attempt to represent themselves as quantitative experts (Small 2009:28). Rather than struggling to find a representative sample, or focusing on creating a statistically generalizable sample, quantitative research should focus on a small section set of actors and seek to uncover specific processes inherent to their daily life. In case of this study, the Extended Case study allows for a focus on relatively small sample size and to devote research hours to understanding processes specific to a particular set of participants.

The second reason the Extended Case Method is ideal is the incorporation of Case Study Logic (Small 2009:24). Case Study Logic is a perspective within the methodology that governs the way a researcher views particular sets of data. When applied to observations, rather than a study being treated as a totality of observations, case study logic treats each observation as a unique case. Once a case has been observed and analyzed, the results of that case are used to modify the next observations (Small 2009:24). This perspective allows the researcher to modify their perspectives on unique phenomenon as they emerge, and is an ideal counterpart to Clinical Ethnography's ability to account for unforeseen variables.
Data Collection

A total of five individuals participated in the study, all working from a single station in the greater Vancouver area. The participants’ professional experience ranged from five to over twenty years, and most had worked in several areas of the province before settling in the Lower Mainland. During the 2010/2011 operational year, the British Columbian Ambulance service responded to 262,873 events in the Lower Mainland, with 214,720 of those requiring pre-hospital medical care provision (BCAS 2012:12). Because of the extremely sensitive nature of this work, and the small number of paramedics, I agreed not to record any information related to sex, gender, or personal attributes that might enable readers to link specific paramedics to specific scenarios. Historically, the relationship between the BCAS Union members and the BCAS organization itself is uneasy. There are issues of trust between the two groups and in order to conduct this study I agreed to take every possible measure to protect the identities of the participants, and they were informed of this when they enrolled in the study. The second reason for limiting reference to participant identifiers is that this study has the potential of exposing opinions or behaviors that may, once exposed, jeopardize a participant’s career. Given that this study had a relatively small sample pool, the concern about linking findings to specific individuals was increased. As a result, this thesis does not include any information that could possibly be linked to a participant. Names were replaced with X1 or X2, and any reference to a participant’s sex is arbitrarily assigned.

I spent a total of 130 hours in observation. Roughly 100 of these hours were spent with two primary participants. Observations occurred across all aspects of the paramedic’s duties, including time spent at the station, ambulatory preparation, activity at medical emergencies, and time spent in hospitals. During calls, I stayed as removed from the scene as possible without sacrificing my ability to observe what was happening. Between calls, I had discussions with the paramedics that could be considered informal interviews. I used these times to explore issues in their work and to validate my understanding of what they were doing. It was through these semi-formal interviews that I discovered some of the most interesting aspects of the research project, in particular, the issues about pre-visualizing the scene, which will become crucial in my later discussion of their work. Material that I include in quotations comes primarily from these
informal interviews which represent the source of almost all of the conversation. When the observations for this project started, I had the intention of conducting informal interviews during breaks at the station where I would be free to interact with the paramedics in a relaxed environment. I quickly learned that it was unlikely I would have any interview time in this context and I was forced to move my interviews into the field.

This had the effect of adding two significant complications. First, not being able to conduct interviews in the station meant I would be unable to use my voice recorder. As per my ethics agreement, I was not permitted to record any aspects of an emergency response where anyone other than the participants may be recorded. My only remaining option, recording in the ambulance, was not possible due to ambient noise. Secondly, not being able to record meant that I would be required to transcribe, to the best of my ability, conversations as they occurred. As it happens, the privilege of holding an uninterrupted conversation with paramedics is a rare luxury and I had a considerable amount of “down time” during which I could write out my immediate recollections of my conversations. In most cases, conversations would start, be interrupted, and then picked up during downtime at a hospital triage ward. The majority of all interviews were conducted during long periods of lull while waiting to offload stabilized patients to the emergency room. Once the observations were complete, the hand written record was transcribed into electronic form on my workstation and archived for later review.

I also recorded field notes in the form of a journal. I recorded entries into this journal as soon as possible following a period of observation. Given that the standard shift for a paramedic is 12 hours, I was unable to record field notes immediately upon finishing my observations but made an effort to complete them while the observations were fresh in my memory. I recorded my general sentiment of the evening, noting any particularly interesting observations and thoughts. This journal acts as an analytical tool which was used to explore lines of inquiry and created a record of debate with myself over the possible meaning of the observations.

The last primary form of data collection was the use of complex scratch notes recorded during emergency responses. These notes were collected for every response and sought to account for a wide array of information. Once the ambulance was assigned to an emergency, the cars Computer Automated Display (CAD) would provide
basic information related to the call. This data, which was a general overview of the call type, would be recorded onto a sheet of paper along with the date and time. Memory triggers such as mood, weather, and anything of note would be included as well. Data collection started upon arrival at an emergency response. I recorded paramedic interactions with patients by transcribing key comments and phrases, as well as the diagnostic or medical care provided to patients. Included in these notes were sketches of the physical environment, including furniture or the placement of people and objects. I also use these scratch notes as a place to record ideas and queries made after the call was over. While very loosely organized, these scratch notes served as the primary source for data analysis as they represented an effective summary of key emergency responses. The use of these fragmentary but consistent notes is common in clinical ethnographies, where observations are constantly interrupted, and yet the basic flow of a medical encounter is repetitive in structure.

Ethical Considerations

Research herein is conducted in accordance with the requirements of the Tri-Council Policy Statement, the Simon Fraser University Research Ethics board, the British Columbia Ambulance Service, and the British Columbia Emergency Health Services Commission. All efforts were made to minimize risk to both research participants and their patients. At no time is personal information regarding participant’s names, specific years of service or any identifiable aspects presented. Participants in this study are referred to by either X1 or X2 identifiers as a further attempt to maintain anonymity.
Chapter 2. Literature Review

My central concern in this study is the mechanism through which paramedics construct the emergency scene as a clinical space. There are several approaches to the relationship of space, place, and performance in anthropological literature. In fact, these ideas might be viewed as foundational to the discipline of anthropology since they appear in the works of Durkheim and Mauss, and are developed in the mid-twentieth century by Pierre Bourdieu. (Durkheim et al 1967, Bourdieu 1977). More recently, anthropologists like Escobar (2001) have argued that despite the fact that space and place appear to be similar concepts, these topics have been intellectually separated since the dawn of western science (Escobar 2001), with space generally viewed as an absolute, universal, and ambiguous entity and place considered fixed and inherently located within a single geographical location. From at least the 1990s anthropologist shifted their interest toward the spatial dimensions of culture, rather than considering fixed places simply as the backdrop for cultural interactions (Low and Lawrence-Zuniga 2003:1). Since the 1990s, anthropology moved away from the concept of culture as a localized aspect of landscape to a more refined theoretical orientation of space. This has resulted in the systematic study of space across several key categories (Low and Lawrence- Zuniga 2003:1).

**Anthropology of Space**

The best use of the concepts of space and place continue to be heavily debated within anthropological scholarship. Escobar usefully reviews these debates and argues that anthropological space is considered to be universal and all-encompassing, existing across landscapes, transcending nations, and considered the host for human culture. This is partially due to the various uses of the term space across disciplines within social science. Focusing on the concept of place, Escobar contends that place refers to the
experience of a boundary defined location with links to every day practices (Escobar 2001: 152). With space disassociated from bodies (Escobar 2001:143), and bodies being the very vessels through which culture is carried (Escobar 2001: 143), place then becomes the point at which culture and memories are produced. Working from this premise, Escobar cites place as co-productive with bodies and individual identities as they conduct their social practices. Escobar identifies several uses of place, including self-conscious action by people through the active process of work (Wade 1999), places as related to narratives (Raffles 1999; Berger 1979) and place as a function of movement (Harvey 1996).

Edward Casey's work is similar to Escobar's in that it builds upon a phenomenological perspective of space, presenting space as empty and a priori (Casey 1996) to culture. Space is nothing, but at the same time contains everything. In this model, place is seen as specific divisions of space, or compartmentalization's (Casey 1996: 19) of lived reality, with space merely the medium in which the particularities of culture and history become inscribed (Casey 1996:19). Place is the result of these human inscriptions.

Where space is general and absolute, current anthropology considers place as both generative and regenerative as a source of collection and recollection, gathering lived experiences into arenas of common engagement (Casey 1996:26) and serving as a medium for the development of cultural products. Despite the general academic agreement with the aforementioned representations of space and place, there are many scholars (Gupta and Ferguson: 1992) who disagree with the established paradigm.

**Embodied Space**

Of more interest to my own project are the specifications of space through embodiment. This aspect of anthropological thought explores biological bodies as the center of lived experience, as the location for speaking, acting, and interacting with the world (Low and Lawrence-Zuniga 2003:2). An individual's interaction with the world then becomes a part of their lived experience, and is in turn reapplied into their physical
actions and language, creating new forms of space and place. (Low and Lawrence-Zuniga 2003:2). This concept can be seen in early anthropological works (Mauss 1967, Bourdieu 1977, Lefebvre 1991) focusing on spatial movements as both representative and generative of cultural elements. From this point much of contemporary anthropology explores the individual as spatial entity capable of generating space and place through their spatial interaction.

The concept of embodied spaces is also explored in the work of multiple authors (Barber 2005, Ingold and Vergunst 2009). In her 2005 *Chaining Spaces*, Barber explores the habitual use of gesture and speech in order to transform public spaces into areas of chained activity where interactions can be conducted within a specific context across multiple spaces (2005: 196). Similarly, Richardson’s 1982 work on the transformation of experience into embodied action represents space as the physical reality of interacting with the material world. The exploration of language in conjunction with action is also explored in Alessandro Duranti’s review of ceremonial greetings in Samoan communities, where language and action are synthesized into the concept of embodied space (Duranti: 1997).

Moving beyond gesture and speech, other authors examine the role of bodies as central to the concept of place and non-place (Casey 1993). In Perrson’s 2007 work, Satyanada yoga practitioners are investigated in an attempt to examine the multimodality of embodied spaces, exploring how embodied practices are used to produce meaningful space (Perrson 2007:45) wherein internal space is manifest in physical realities (Perrson 2007:54). Munn examines space as a nexus of relations produced by various interactions between bodies and spaces creating individual mobilized spatial fields (Muun 1996: 449. Ultimately Munn asserts that social space is both a field of, and a basis for, individual action.

*I Inscribed Spaces*

Branching from the concept of embodied spaces, a significant amount of anthropological research has been dedicated to examining inscribed spaces.
Scholarship on this topic focuses on the fundamental relationship formed between human beings and their influence on their environmental surroundings (Low and Lawrence-Zuniga 2003: 13).

In Rodman’s *Empowering Place* the concept of unique realities is introduced, where each individual develops and elicits a unique understanding of the world, stressing a non-western approach to multiple place-making (1992). More recent works (Patel’s 2012) explore how physical spaces become both meaningful and therapeutic places. Drawing on Lefebvre’s concept of rhythm analysis, Patel presents familiar spaces as regenerative or therapeutic places, capable of combating the stresses of daily life (Patel 2012: 74).

Scholarship concerning inscribed space also considers physical space as interactive with cultural systems. Bubinas (2005) discusses the development of the physical environment toward the production of cultural space. Here, Indian immigrants are seen as altering the physical and economic spaces to suit their perceptions of success, community and politics (Bunibas 2005).

*Contested Space*

In an era of reflexive anthropology and academic activism, the concept of contested space has gained much attention. In this category of research, scholars examine space and place as the site of social conflict. Specific locations and spaces become the staging area for conflicts of opposition, subversion and resistance, often granting or limiting access to resources or power (Low and Lawrence-Zuniga 2003:18). These sites are then likened to the creation of place and identity (Low and Lawrence-Zuniga 2003:18) through the actions of development and resistance. The formation of place through resistance is explored in several ways, often occurring at the site of colonial resistance (Low 2009, Pandolfo 1989, Biolosi 2005), economic and social oppression (Goldstein 2005), and the investigation of class hierarchies (Dickey 2000).

Exploring the use of engaged anthropology, Low (2009) discusses how systems of exclusion are hidden and revealed through anthropological research. Citing her work
on Spanish American plazas, Low asserts that the strength of engaged anthropology is in its ability to uncover systems of exclusion (1996). Focusing on marginal communities, Goldstein (1989) discusses a small Bolivian village’s use of dance in an attempt to gain legitimacy for their communal space. By participating in the Bolivian carnival Goldstein shows how participation in a national festival can act against social stigma and the implications of primitivization. Resistance against social hierarchies is also explored in Dickey’s (2000) examination of space in the homes of India’s elite. Here Dickey explores how wealthy homeowners arrange their household and control their servant’s movements through space and access to resources in order to maintain “insideness” and “outsideness”, thus preserving social status (2000: 482). Also investigating social oppression, Biolosi’s (2005) work on Native Americans explores four spatial arenas, ranging from tribal to national spaces, as the site of multi-located political struggle.

*Clinical Geography*

Recent work that combines geography and the sociology of medicine explores medical spaces as a kind of geographical formation. Focusing on clinical and health oriented perspectives of cultural geography, this discipline investigates the manner in which cultural beliefs and practices form a structure at the sites of clinical consumption and provision (Gesler and Kearns 2002:1). At its core, clinical geography is a discipline that attempts to translate spatial aspects of medical practice, position in space as opposed to action, and track the movement of care and care practitioners within space, where space itself produces and translates the development of clinical activity (Andrews and Shaw: 472). Like the work in anthropology, there are debates within clinical geography about the reality of spaces, the concept of landscapes and the social relationships defining places (Gesler and Kearns 2002:2).

*Therapeutic Spaces*

A second theme within Clinical Geography is the exploration of therapeutic spaces; spaces within institutions of care that provide basic therapeutic and healing
functions. This aspect of clinical geography expanded from an interest in therapeutic space into one focused on exploring the link between physical and mental health in artificial environments such as clinics or hospitals. Therapeutic spaces are seen in the work of Gillespie (2002) wherein architecture is exposed as a method of ordering spaces, influencing cultural practices within specific spaces. Gillespie uses this approach in the examination of a Family Planning Clinic, exposing the gender inequalities manifested through the structures of architectural space, revealing how architecture can be used to perpetuate dominant cultural discourses (2002:211). In another line of research, Andrews' ethnographic study of a fitness facility provides insight into how patrons conduct themselves within a space of health and wellness, investigating practices that contribute to both fitness culture and health space. Andrews et al represents the fitness facility as a container of specific social norms and attitudes that patrons use to "make the gym" (Andrews et al 2005:888) resulting in a unique therapeutic space. In a second study by Andrews and Shaw (2008) provides an analysis of the spatial features of nursing practice. In this examination of nursing practice and agency, Andrews states that nurses manipulate, normalize and create clinical space through the management of social composition (Andrews and Shaw 2008:463). In doing so, nurses modify existing structural elements of clinical environments as part of everyday practice, resulting in the social development of therapeutic spaces (Andrews and Shaw 2008:466). Similarly, Liu and Manias (2012) examine the social aspects of professional medical communication within the confines of hospital wards. Liu and Manias; research offers insight into the specific location based practices where power relations are enacted and contested, resulting in location-based communication influencing professional discourse.

**Therapeutic Networks**

Clinical geography also examines the avenues of connection that exist between spaces and secondary networks of health and healing. The research into therapeutic networks explores the less formalized support and care systems that exist outside the field of standard biomedicine (Smith 2005: 492), addressing new forms of healthcare delivery. The examination of alternative care networks is present the work of Johnsen...
and Clokeb (2005) who examines the impact of a mobile food service on homeless populations in the UK. Exploring the process of food delivery as a form of transitory care, Johnsen and Clokeb discuss complex spaces of care, exploring how the mobilized delivery of sustenance can be used to create new and dynamic spaces of health. The examination of non-traditional therapeutic networks is also seen in the work of Condradson (2003) who explores how drop-in centers function as spaces of care within urban environments. Focusing on the development of social relationships within surrounding spaces, Condradson reveals that therapeutic spaces are points of consumption, resulting in the interaction of space and social practice (Condradson 2003:520), which in turn move out into the community, impacting marginalized populations. The process of marginalization and the development of therapeutic networks is also examined in the work of Robertson (2007), who explores home and place making in Vancouver, British Columbia. Here Robertson explores how stigmatized clients of public health services negotiate with public services, resulting in a discussion of the dynamics of space and identity within the broader structural contexts of public health and poverty (2007:527).

Bodies and Spaces

With a focus on the presentation of bodies in space, Clinical Geography discusses physical position with space and place as a variable impacting patient care. Here place is considered to be constituted by two related experiences, the first being the actual physical location, with the second as a more self-ascribed concept of ‘place of belonging’ within the world. Though not mutually exclusive, these concepts are addressed in tandem when investigating space in a geographic context. An example of this is seen in the work of Milligan (2003) who explores the multiple dimensions of care provision within the homes of elderly dementia sufferers. Focusing on the spatial manifestations of care, Milligan opens up the concept of space and non-spaces. Milligan draws attention to the way that health care provision trespass on personal spaces and reorders spatial divisions within private spaces.
Regarding Current Scholarship

The longstanding work in anthropology and the new field of Clinical Geography provide several avenues for exploring paramedics and their construction of clinical spaces. However, there are several limitations of these two general approaches as applied to the paramedic setting. Anthropological explorations of space and place are focused on very specific themes. Scholarship regarding embodied space is focused on the internalization of specific places. These internalizations are the result of interacting with the physical world, with the embodied practices producing spaces meaningful to a particular group. Research on inscribed spaces focuses on how individuals interact with an influence the environment around them and how actions make places meaningful. Contested space is concerned with space as the location of political resistance and is used to explore how groups use cultural practices in order to combat systems of exclusion or power.

The topic explored in my research does not fall within the scope of the anthropological scholarship reviewed due to the nature of the clinical spaces being considered. Rather than being embodied, clinical space in this study is created through practice. Instead of being a space being inscribed with a permanent cultural significance this clinical space is dynamic and unpredictable. Lastly, clinical space in this context is not a site of political resistance or exclusion but is rather a location of inclusion into the Western Medical system. Clinical Geography, while more focused on western medical practice, does not offer a cohesive link between what is perceived within a space and what actually occurs at a scene. Therapeutic space research focuses on the manipulation of physical and social constructs in existing medical environments, while therapeutic networks address a wide range of concepts outside more formal medical settings and cannot be applied to this studies interpretation of clinical space. Research on bodies and spaces is similarly not applicable due to its focus on the physical location of an individual within a medical environment.
To correct the shortcomings of these research perspectives, I applied the work of Stoller (2003), who combines anthropology and concepts similar to clinical ethnography to my own research. Stoller’s work is discussed in detail in chapter three.
Chapter 3. The Observation of Spatial Practice

The following case occurred on my second rotation with the paramedics in Surrey, and remains one of the most uncomfortable calls that I witnessed during my observation process. The call came in on a Sunday morning around 10 am, with a description that indicated an elderly woman was complaining about back pain. Assisting the elderly was a very routine operation for these paramedics, and it was almost expected that at least half of the days’ work would be spent either transporting or assessing elderly members of the community. Leaving the hospital from the previous call, we immediately headed toward the address of the distressed woman, arriving at her location in under five minutes. The crew exited the vehicle in a practiced manner, slamming doors in unison. The passenger side paramedic casually opening the box doors as he strolled by. Grabbing the stretcher and the kit, we headed into the large apartment building overlooking the busy morning street. After a quick trip through the elevator we reached a hallway and counted down the numbers looking for the particular door. Rounding the corner I saw a man hunched over, leaning against the wall, staring distantly at the ground. As we got closer it was clear this man was in front of the door we were looking for. Believing him to be the patient the paramedics moved to his side, eager to assist the elderly man with his medical needs. “No, I called you for my mother” he said, turning slowly and walking towards the open apartment door. We followed the man who seemed barely able to stand. Hunched over with his head barely above his hips, the man fumbled for the light switch and closed the door behind the stretcher. “My mother is quite old, and her health is not good. She is having some problems with her back and hasn’t been able to get out of bed” The man went on to explain that his mother lived independently, but he had been staying over for a few days because she had been experiencing some major issues with her back. In the previous week she had been taken to the doctor who prescribed some painkillers but they had recently stopped having any effect. As the X2 paramedic engaged the patient’s son in discussion, I wandered into the living room, still listening to the conversation but attempting to give the paramedic space to conduct his work. “She has had osteoporosis for many years… and now her back isn’t
so good”. “Where is your mother now?” Asked the X1 paramedic, pointing suggestively down the dark hallway. “This way… in her bedroom” The man walked toward the hall with both paramedics close behind. I followed and noticed the man shutting doors in the hallway as we moved through, eventually arriving at the end of the hall. He opened the door into the master bedroom that was largely empty except for a single bed in the middle of the room. Atop the bed lay a very frail woman covered in light blankets, her eyes closed, quietly moaning in pain. The room was darkened by a blanket over the window, and the air was stale. “Hello there… how are you feeling today? Your son tells me you’re having some back trouble?” The X1 moved to the side of the patient, placing the kit on the far side of the bed. The stretcher was pushed toward the foot of the bed, and the X2 paramedic stood beside it assessing the scene. After some introductions, the patient explained that she was experiencing some severe pain in her back due to osteoporosis and her pain medication was failing to provide any comfort. As the patient explained the situation the X1 paramedic began to palpate the patient’s body, attempting to determine the location of the pain and the accuracy of the patient’s complaint. The paramedic didn’t have to search long before finding the source of the pain, and with a cry from the patient he ceased his search. “Ok dear… let’s take a look at your blood pressure ok? I’ll need your arm” The patient slowly moved her arm from the blanket, producing an incredibly thin limb.

With the goal of observing paramedic practice in action I required a theoretical framework that would allow me to analyze my findings. Being familiar with the work of Patton (2010) I was interested in the development of a clinical space. In her 2010 work, Patton describes the construction of a clinical space within a private setting. In this study home care nurses were forced to navigate patient’s private spaces and establish a form of clinical practice in an unfamiliar context. To accomplish the exploration of clinical spaces in paramedic work, I adopted the perspective of Spatial Practice as described by Nancy Stoller (2003), who conducted her benchmark study drawing from the works of Henri Lefebvre (1972).

Spatial practices are the modes of creation of everyday spaces (Lefebvre 1972). Through everyday actions and communications individuals create and recreate spaces in which they live out their lives. In order to examine the concept of clinical spaces as products of spatial practice, this project utilized the categorical analysis put forward by
Nancy Stoller in her 2003 examination of women’s correctional facilities. Using the four categories of spatial practice I examine the conduct of paramedic practices as they exist at scenes of emergency, highlighting strengths and weaknesses of this approach toward the examination of clinical space.

This section of the chapter will discuss the process through which I arrived at my final hypothesis concerning the development of clinical spaces in pre-hospital practice. First, I discuss the spatial practices as they are observed, highlighting any significant observations and their impact on patient care. Moving through an analysis of movement, object, policy and language, I discover that the use of Stoller’s Spatial Practice framework is limited in application to my research. However, it exposes the way in which paramedics perceive and operate within the space of a medical emergency.

**Bodies & Movement**

In my observation of paramedic practice I expected that the movement of bodies would be the easiest of the four spatial practice categories to observe. Paramedics move through spaces, encounter obstacles, assume postures and positions, and contend with unpredictable variables at every scene.

When entering a scene of emergency, paramedics bring with them only the most basic pieces of equipment as required for the type of call they were attending. In most cases this equipment is limited to a kit bag, which includes basic first aid items, a stretcher, and a basic blood pressure machine. Lacking any significant equipment at the scene itself, the paramedics’ bodies become the primary means of establishing a physical presence at the scene. During observations, most calls proceeded in a very linear fashion and in almost every case, the movements and physical conduct of the paramedics seemed to function without thought. The X1 paramedic acts as the primary care provider and takes a leadership role, whereas the X2 paramedic assists with the care provision and is responsible for paperwork and driving the ambulance. I explore this differentiation in detail in chapter 4.
When navigating spaces outside the scenes of emergency, paramedics seem to pay little attention to the manner in which they moved. Their actions were practiced, rehearsed and mastered, requiring little thought. Their years of experience with their partner meant they needed not even speak to conduct their work and are able to complete most tasks with a choreographed expertise.

Once in sight of the patient, the X1 paramedic moved to the patient’s side in order to conduct the primary and secondary surveys. In almost every case the patient was seated or in a supine position, either on a chair, floor or bed. Each position required a slightly different bodily configuration on the part of the paramedic, yet they all shared a single trait: the paramedic always went to the patient. In some cases the X1 paramedic would assume a position on his hands and knees beside the patient, in other cases he would sit on the patient’s bed, turning sideways to engage the patient in conversation. When confronted about the ideal position in which to treat a patient, the answer was, in short, that it didn’t matter.

The X2 paramedic would often leave the immediate scene and assume a position away from the patient and gather important medical history and related information. The posture was casual, and the paramedic conducted his work as if he was preparing a grocery list. It was as if I was witnessing a task from the everyday lived experience of the average person. Here too, there was little in the way of pattern. The official documentation was filled out on any surface available. When there was no suitable surface, the paramedics used the hard shell of the kit bag to perform their work.

Despite the lack of quantifiable intentional actions that would contribute toward the development of space through spatial practice, the paramedics did exhibit certain bodily behaviors that indicated their immersion in private spaces. In several instances, the conduct of the paramedics suggested that, while they were practicing within non-medical spaces, their role as emergency response personnel allowed them to act in novel ways. One such example can be seen in the decision to move through patients’
homes without regard for what could be termed common courtesies. In many cases paramedics would enter a patient’s home or business without regard for the condition of their footwear. In most other social situations this would not occur.

I asked the paramedics about concerns regarding their feet, the question was disregarded as policy requires paramedics to keep their footwear on for health and safety concerns. Another example of paramedics taking ownership of spaces is demonstrated in the manner in which the X2 paramedic collects information regarding the patient’s medical history. In almost every case, the X2 paramedic conducts a survey of the patient’s home looking for any potential medical information or prescription bottles. This includes opening cupboards, drawers, exploring bedrooms and bathrooms, and even searching through paperwork in offices. Finding any information, the paramedic catalogues it into the documentation. By participating in the scene as a care provider, the paramedic is granted rights not normally given to individuals in everyday situations. This act of information procurement suggests that the paramedics are permitted to function above the social norms of everyday private spaces.

I had considerable difficulty in visualizing clinical space during my observations. There was no discernable difference between a clinical space and a private space. Despite the fact that the paramedics act in contrast to expected social norms, it is also clear that the patients’ homes remained private spaces. In one example, despite entering a patient’s home, the actions of the patient assert that all parties existed in a private space. This is accomplished through the act of a formal invitation into the home, and the offering of refreshments.

By offering the paramedics hospitality, the patient makes it clear that the scene is a private space, and paramedics are expected to conduct themselves accordingly. In other less direct cases, patients use their bodies and actions to delineate private spaces from spaces of care. The following example begins with the Paramedic addressing a patient being treated for back pain.

“So I think that we should take you to the hospital to get looked at, what do you think?” The patient nodded, and then announced that she would like to use the bathroom before she left. “There is a bathroom at the hospital, can you make it there?” The
patient’s son interjected that the woman had not been able to move from her bed since the previous night, and hadn’t used the facilities since then. He also informed the paramedics that the patient’s mobility was so poor that she was forced to use a bucket with his assistance. The patient was adamant that she needed to go before leaving the house, which prompted the son to move towards her. Realizing what I was about to witness, I suddenly felt that my presence was in no way required and that I should leave the scene immediately. As I turned to walk out of the room, I hear the woman cry out in pain as the X1 paramedic and the son assisted the patient off the bed, preparing her to defecate into the bucket held by her aged son.

In one example the division of space is indicated through the act of urination and defecation. The decision to defecate in front of the paramedics, who were mere strangers, is perhaps the most poignant example of how a private space can remain a private space while at the same time, exist as a space of care.

**Objects**

The role of objects and equipment in the creation of space is significant for several reasons. Specific objects can convey information, prestige, value, or in pre-hospital medicine, that help has arrived. In Stoller’s examination of a women’s prison, objects play a critical role in the development of a patients healing narrative (Stoller 2003:2270). In this study, I focus my observations on the methods through which paramedics interact with and utilize their equipment in the provision of pre-hospital medical care.

One of the first and most poignant examples of objects in action is the use of emergency vehicles. The use of the ambulance as a tool beyond transport was mentioned by every paramedic during interviews, with each person citing the car as useful for demarcating space.

This was observed in action during an emergency response near the American border. When we arrived at the scene, the patient was seated on the ground and suffering from severe facial lacerations. It was explained that the border lineup was
experiencing significant delays and the elderly man had opted to walk while his family idled in the vehicle. When he observed his vehicle moving away, he panicked and attempted to run, ultimately tripping and scraping his face and head. When the fire truck and ambulance finally made their way to the patient, both vehicles were placed alongside the road obstructing the line of sight between the patient and the passing cars. Paramedics justified the use of vehicular barriers as a means to create a comfortable space for patients.

In contrast, I observed emergency vehicles being used in opposition of one another for dominance at scenes of medical emergency. Citing a long history of animosity between the fire departments and the BCAS, the paramedics explained how the interaction between the two organizations binds the provision of medical care. During fieldwork, the presence of fire trucks at scenes of emergency limited the paramedic’s access to patients which results in increased response time. In one example, a single fire truck was already on scene. As we arrived a second truck rounded the opposite corner, and deployed its units in full sight of the ambulance. As a result, the ambulance was forced to park well away from a scene which eventually required advanced life support.

Inside the ambulance, a wide variety of equipment is stored that can be used for a multitude of medical potentialities. Lung draining tubes, oxygen, and even a robotic chair capable of carrying a patient up and down a set of stairs can be found in the back of the ambulance, yet very little was is brought into the scene of emergency. Only the most basic equipment was brought into the scene during observations, with additional equipment retrieved as required. I explored the importance of where specific pieces of equipment was placed, ultimately revealing that paramedics dropped equipment arbitrarily at a scene. The location of equipment prior or after use is of little significance.

Regulatory Analysis

In Stoller’s paper, the rules and policies governing a patient’s life, and the modification of behavior through these restrictions, represents an important aspect of the
analysis of spatial practice. Much of my fieldwork involves observing regulation and ritual in practice, with a focus on investigating policy from the perspective of the paramedics.

The first example of policy in action is observed as paramedics prepare for their shift. Prior to the first call, each crew is required to perform an inspection of the ambulance and conduct an inventory of all medical equipment. This involves a visual inspection of the ambulance, as well as a thorough cataloguing of all items within the ambulance itself. I inquired as to how the paramedics prepared for the evening, which revealed that paramedics often stock items that fall outside the required inventory. This is a response to previous experience, with particular items stocked due to an abnormal frequency of a specific call type. Hip slings were not required, yet were frequently included in the observed medical practice.

In addition to guiding the function of restocking inventory, routines and protocols serve as the basic framework for on-scene action. Paramedics arrive at the scenes, perform primary and secondary surveys, and upon arriving at a preliminary diagnosis, perform the required treatment and transportation of the patient.

In one observation the adherence to policy and protocol was particularly evident. Having been called to attend to a visibly deceased patient, I paid special attention to the difference in paramedic conduct. When attending to a deceased patient, paramedics performed their practice according to the required two step process. The X1 paramedic is required to perform circulatory systems assessment and checks for a pulse on the patient’s wrist, and a second check on the heart with a stethoscope.

This procedure is then repeated by the X2 paramedic, who follows the same pattern of assessment. I inquired as to the reason for this practice, and why it is conducted in the field. When prompted, the X2 paramedic explained that policy required two paramedics to confirm if someone is deceased.
Language and Semiotics

The use of language is a valuable aspect of social practice which can be utilized to analyze relationships and structures and explore how language is used to identify power dynamics between patient and care providers. While several studies exist that highlight the role of language between physicians and patients, there is very little research available that discusses this topic in a pre-hospital context. In the fieldwork conducted for this thesis, the majority of all interactions between patient and paramedic followed a similar pattern. Following introductions the paramedic would ask probing questions during surveys, communicating any required information to the paramedic. In doing so, I observed that in the paramedics used language to influence patients, reifying patient provider social dynamics.

During one example, the observed paramedics encountered an elderly male with mental health concerns. His condition was worthy of a physician’s assessment, yet the patient had no interest in being taken to the emergency room. After 30 minutes of debate, the paramedics were able to convince the patient to accept medical care and transportation to the hospital.

The process of convincing the patient that ambulatory transport was required was not completed in a timely process. The significance of this exchange lay in the fact that the paramedics were able to use their professional discourse as a tool to convince a “real stubborn old guy” to visit the nearest emergency room.

Paramedics also utilize language in the performance of stage theory, as described by Campeau and Goffman. According to his 2008 analysis of paramedic space management, Campeau describes how paramedics conduct themselves according to a system of public and private spaces, with distinct forms of communication for each.

I observed several cases of language operating as stage theory without a visible separation of spaces. In one example, the paramedic conducted their secondary survey of an elderly patient while questioning the nursing attendants at a retirement facility. The
paramedics changed the mode of language between lay English and medical terminology, which limited the patient’s ability to participate in the medical process.

Stage theory was also present in examples where the paramedics used their bodily position to indicate that private conversation were underway. This was conducted by either turning away from patients or retreating to a private space for conversation. In one example the paramedics reacted to a patient’s constipation by turning their backs to the patient to create a physical and social barrier.

Turning their backs to the patient, the paramedics modified the volume and content of their discourse, demarcating a space for private conversation. The use of medical terminology and professional jargon was reserved for discussion between paramedics, and communication with primary care providers within hospital settings.

The most significant aspect of the language used by paramedics is seen in how communication is shaped by policy and protocol. During fieldwork, paramedics were seen to act and speak in a manner directly conducive to the successful treatment of the patient. Once on scene, paramedics first focus on obtaining the cooperation of the patient. Paramedics then move into their primary and secondary surveys which become their primary focus. Tone and mannerisms during this process are focused with an emphasis on treatment. Paramedics were also seen to rely on language to distract a patient and remove their attention from their injuries while at the same time facilitating treatment.

When combined with the primary and secondary surveys, language is used to facilitate a proper diagnosis and enable the provision of treatment at several emergency scenes. This reliance on language with respect to protocol indicates an inherent value that paramedics placed on routine.
Revisiting Clinical Space

The original intention of this study was to explore the way in which clinical space, in the Foucauldian sense, was established at scenes of medical emergency. Foucault’s definition of the clinic is focused on the complex interplay between physician and patients, and has been unexplored in aspects of the social sciences. I set about developing a project that would examine the spatial practices (Lefebvre 1992, Stoller 2003) of emergency medical personnel at scenes of medical emergency, analyzing how the paramedic’s spatial conduct serves to manifest a clinical environment in a previously non-medical space.

I started to notice a weakness in my original hypothesis that challenged the project: the paramedics didn’t seem to exhibit any significant spatial practice that were explicitly constructive of clinical space. Observed Paramedics would arrive at a scene, perform their work in relative silence, gather all of the required information for a differential diagnosis and move the patient for transport. Regardless of the type of call this pattern was followed time and time again regardless of context.

I spent several days focused on the role of objects (Stoller 2003) and equipment as an aspect of spatial practice. Despite the fact that many of the calls were similar in execution I couldn’t determine why or how paramedics decided to perform their practice in specific ways. In two similar calls, the same paramedic would deploy his or her kitbag in different ways. In one example, where a patient’s blood pressure was being taken, the paramedic had opened the kit and laid several pieces of equipment on the bedside. In another example, the same paramedic removed and replaced each piece of equipment before moving onto the next. While there were certainly extra variables that contribute to case by case medical practices, the fact remained I could not determine any specific causation for differences between otherwise identical cases.

Similarly, paramedics seems exceptionally consistent in their use of language, which was rather basic in character. When consulting with a patient, the paramedics tended to use relatively basic lay language in order to communicate. When discussing the patient with their partners, the paramedics tended to use more advanced language, citing medical terminology, specific medications and jargon associated with their
practice. While this suggested some level of front and back stage separation (Campeau 2009, Goffman 1959) there was little significance to this difference in term of power relations or symbolic interactions, and this made it difficult to identify any set of linguistic markers of a spatial practice resulting in clinical space. If anything, these were more or less two sides of a coin, one more technical and one less technical.

The study of bodies and movement was used to enhance my analysis of paramedic spatial practices. Observing the paramedics in action I paid special attention to the manner in which they moved through space, held their bodies in a specific position, and the manner in which they interacted with patients. Additionally, I observed the ways in which family members conducted themselves in response to the presence of paramedics. Attempting to discern a pattern of paramedic bodily conduct, I noted the postures, positions and body language during emergency responses. Despite my attempts at an in-depth analysis I found a wide variation in each paramedics’ spatial conduct. But like the straight forward linguistic dimension, the differences in body movement were not definitive. When asked about particular choices, the usual reply was that all decisions were based on efficiency or random chance, and I saw nothing to make me wonder if there was something more. In one example I inquired as to why a paramedic opted to conduct an exam on the patients couch. "Why here? I don’t know…that’s where the patient went. It doesn’t matter too much."

I then turned to the practice of ritual and regulatory conduct as a result of my limited success with the previous categories of spatial practice. Here the focus of observation was the way in which paramedics followed step based protocols for the provision of medical practice. How did they decide which equipment was required for a specific call? In what order was the patient assessed and treated? How did policy compare to what was observed in the field? After several weeks of observation it became apparent that the paramedics did indeed rely on a complex series of protocols, both policy and experientially based, and used these protocols to perform their role as emergency medical care providers. Through the enactment of protocol, the paramedics were able to deploy their spatial practice and create space of caring in which patients were treated and assessed. However, in the cases where protocols could not be followed, and patients refused to cooperate within the scope of paramedic practice,
clinical spaces of care failed to materialize. The performance of paramedic practice required the cooperation of all parties; without it, there could be no clinical space.

Despite a plethora of research focused on the concept of spaces of care, almost all of these studies take place within the confines of a structure, facility or are bound by some physical barriers that influence human behavior. With little research conducted on the use and development of space in pre-hospital contexts, this paper sought to apply the analysis of spatial practice toward an understanding of paramedic clinical space. After weeks of observation it became clear that despite all of the necessary elements of spatial practice, the development of a clinical space was contingent on more than simply the enactment and provision of pre-hospital medicine, and somehow relied on policy and protocol.

Spatial Practice appeared to be an ideal process for the study of paramedics and clinical space. One could easily observe movement, objects and language in the day to day operations. Protocol and ritual could likewise be observed, and all facets of spatial practice could be discussed during interview. Despite the seemingly ideal analytical framework, the use of spatial practice toward the analysis of pre-hospital space was limited, yet at the same time, was extremely useful in exposing an alternative hypothesis for the development of clinical space. The application and limitation of Stoller’s Spatial Practice framework was critical in exposing a new perspective, one that moves the creation of clinical space from the scene of emergency into the minds of medical professionals.
Chapter 4. Imagined Geographies and the Performance of Work

In Chapter 3, I discuss the limited applicability of Stoller’s spatial practice on the analysis of paramedic clinical space. Rather than finding a specific pattern of behavior, the analysis of spatial practice revealed that paramedics rely on a foundation of protocols that were used as behavioral scripts that form the bedrock of paramedic practice. This chapter explores the important notion that professional experience results in the constant deconstruction and reconstruction of knowledge, which is then carried into new scenes of emergency care.

In the following section of the paper I assert that spaces of care are preconceived concepts that, based on experiential practice, are carried with paramedics as they conduct their professional duties. Through an analysis of imagined geographies and ethnographic evidence, I contend that clinical spaces exist in the mind of paramedics, and are transported and deployed as performances requiring the cooperation of both paramedic and patient.

*Imagined Geographies*

In her 1997 *Calvinism and Chromosomes*, Taussig contends that anthropologists rarely pay attention to geographically specific practices and that a care provider’s preconceptions about places, real or imagined, have a measurable influence on the delivery of care (Taussig 1997:496).

Taussig states that the perception of a patient’s home town has an influence on the quality of care they receive. Taussig offers an example where a Clinician offered significant resistance to treating a young couple based on the fact they hailed from a small religious community. She explains that Clinicians come to conflate clinical,
scientific and medical knowledge in a way that result in lived consequences for patients (Taussig 1997:496). This concept of a Geographic Imaginary, acknowledged within academic scholarship, also influences the provision of medical care in pre-hospital medical practice.

In my observations the practice of applying expectations and stereotypes to geographic locations was common. Participants broke up their area of practice into regions based on call frequency and type, using routine scenarios as templates which were used to mentally prepare for calls. Participants openly discussed the fact that their home stations area known for high rates of drug overdose. Paramedics grow accustomed to routine call types and overtime common situations fail to arouse interest or emotional response.

Observed paramedics also spoke of an infamous section of a neighboring city, well known for being a center for drug trafficking, prostitution and gang violence. This region over-utilized BCAS resources to the point where ambulances from neighboring cities were forced to come in and relieve crews. Crews sent as relief were rarely able to return to their home region which resulted in overall distaste for attending emergency responses in that municipality.

In addition to applying preconceived notions to municipal regions, the participants in this study also applied preconceptions to more specific aspects of the cityscape. During one call, the CAD information instructed the crew to attend an emergency on the city’s north side. The paramedics commented on this part of the city, stating it was common to students and drug users.

Similar to Taussig’s study (1997), residents of these devalued or marginal places became connected to geographic imaginaries (Kelly 2003:2280) carried by paramedics as they conducted their practice. I questioned the paramedics on the topic with the understanding that such preconceptions had the potential to influence patient care. The paramedics commented that the location of an emergency response held meaning based on said location. Paramedics attending an emergency in an ethnic community stated an expectation of culturally specific behaviors.
The fact that these preconceptions played such a prominent role in the mental development and delivery of medical care is critically important. These cases reify the fact that preconceptions of geography and regions become implicated with clinical knowledge, resulting in the modification of care (Taussig 1997: 522). Perhaps more important for this study is the fact that such preconceptions are intrinsically related to the production of knowledge (Taussig 1997: 522) which in turn becomes the foundation of paramedic practice.

The Importance of Imagination

I spent considerable time in reflective analysis considering the failed application of the original frameworks in explaining clinical space. I realized that the study participants had been using a key word that I had thus far ignored. They imagined. All but one of the paramedics in this study spoke of imagining scenes of emergency, and how this imagination was used as a tool for mental preparation. The act of preparation could be seen once the call was received with paramedics entering a state of analysis comparing the situation at hand against their own experience. I observed paramedics maintaining periods of prolonged silence when driving to complex medical situations for which they had no previous experience.

The act of preparing for an emergency could be seen as the analysis of experiential knowledge contrasted against expectations of an emergency. Have they handled this type of call before? Is it routine, or will it challenge their ability? Is their partner confident? I inquired as to how paramedics go about preparing for a call and was informed that paramedics consider the all potentialities of the scene they will attend, and attempt to account for all possible outcomes.

The act of preconception played a significant role in the development and preparation for the delivery of pre-hospital emergency care. Calling upon an experiential database, paramedics construct hypothetical scenarios which are then mentally enacted. This allows each paramedic to develop a system of expectations and responses to be quickly utilized at a scene of medical emergency.
The Performance of Emergency Medicine

I have explained that clinical space, rather than being a product of spatial practice, is experientially created through an adherence to protocol and policy. Shaped and reshaped by a paramedic’s working history, the paramedic’s experiential database becomes a mental tool with which they manifest hypothetical clinical scenarios, assigning roles to all parties.

The importance of assuming role identity can be observed in how paramedics interact with their partners at a functional level. During all field observations, participants worked in units of two paramedics per car. Paramedic practice is then conducted through the development and execution of two distinct performances.

The first performance, entitled Active Attending, is the most common and relies heavily on the X1 paramedic to perform the primary and secondary survey. The X2 paramedic works in the background to conduct aspects of the Subjective Assessment of the secondary survey. In this performance, both paramedics arrive at the emergency, with one paramedic designated as the X1 paramedic. Generally, this is the paramedic who rides in the passenger seat and provides medical care at the scene and during transportation. The X1 paramedic examines the scene for safety concerns and quickly focuses on the patient performing a rapid primary survey. The X2 paramedic performs a supportive role, standing well away from the X1 paramedic and deploying equipment if required. If the patient passes the primary survey and no life threatening injuries are found, the X1 paramedic moves into the secondary survey. While the X1 paramedic focuses on performing a series of diagnostic examinations, the X2 paramedic then retreats from the immediate scene and collects the patients’ medical history from family members, visible prescriptions, and assesses the sociophysical context of the emergency. The X2 paramedic also records any data provided by the X1 paramedic during their exam, such as the patient’s vital signs, and visible symptoms, or any medical history provided by the patient. Once the X1 paramedic has completed their assessment and the X2 paramedic has collected all relevant information, the patient is placed into the
ambulance for transport. The X1 paramedic stays with the patient in the rear of the car, and the X2 paramedic pilots the vehicle to the nearest medical facility.

The second performance, termed Active Secondary, is common at scenes of acute medical injury that require the concentrated effort of both paramedics working on the patient. The X1 paramedic examines the scene for safety concerns and moves into conducting a primary survey. Should the X1 paramedic determine an acute injury is present, both paramedics will consult and determine a plan of action. If immediate transportation is required, paramedics work in conjunction to stabilize and mobilize the patient. Should the X1 paramedic progress into the secondary exam a switch occurs between the assigned tasks of the X1 and X2 paramedic. The X1 paramedic focuses on gathering information related to the Subjective Assessment, inquiring to the patient’s past, medical history, recurring injuries, and any other factors that may be influencing the patient’s primary complaint. The X2 paramedic conducts the Objective Assessment, performing diagnostic exams and checking the patient’s respiratory, cardiovascular systems. Once both paramedics conduct their respective assessments they work together on arriving at a differential diagnosis and treatment plan. The patient is mobilized and transported to the hospital for further medical treatment.

This system was observed, described and validated by several of the research participants in this study. During every call that resulted in the establishment of a space of care, the paramedics practice conformed to one of the two performances. Success of these performances resulted in the treatment of the patient, and more critically for this project, the establishment of a clinical space.

Paramedic Practice as a Theatrical Production

I have shown that paramedic practice relies on the successful application of experiential knowledge, which is used to shape imagined performances. These performances are then acted out at scenes of medical emergency, and require the full participation of all parties. The concept of reality as performance is a topic well discussed in anthropology, and figures prominently in the work of Erving Goffman.
In his seminal work *The Presentation of Self in Everyday Life*, Goffman describes a system of dramaturgical analysis that can be used to describe how human beings interact with each other in daily life (1959). Goffman states that lived reality can be interpreted as a constantly evolving theatrical performance. Within this performance, each space or place in which an individual exists becomes a stage. All parties within this theatrical performance are assigned roles and are expected to follow them toward a successful completion of the scene.

**Successful Performances of Paramedic Practice**

In the previous examples of paramedic practice, theatrical performances were described in which all paramedics were assigned roles. Successful completion of a given performance required that each paramedic assume a role and execute it. One such example of this in action can be seen below.

*We had just spent two slow hours standing in the emergency room and our patient had finally been admitted, releasing my crew to return to active duty. Once the ambulance was sanitized, we slowly rolled out of the parking lot with the intention of returning to the station. The car bumped along on and as I listened to a single speaker belting out a static filled country music, I completed my notes from the previous call. When we had almost reached the station, the CAD sounded off and the dreaded words “Cross-Cover” were shouted out for all to hear. A cross-cover meant that all ambulances in both our home and neighboring regions were busy, and being the only car, we had earned the position of being available for both municipalities. The worst part of this task however, was that the cross-cover car had to sit at a middle location between the two cities, usually the side of dark road, for what could be hours. Over the next 20 minutes we made our way to the cross-cover location, finally arriving and settling in for an unknown period of time. I sat in the dark cab of the ambulance, watching approaching headlights through the dusty rear windows. An hour of silence.*

*Finally the CAD beeped, and we were off to the next scene. The chief complaint for the call was chest pain and shortness of breath, two symptoms of heart attack that*
established an emergency as Code 3, full lights and sirens. The sirens went on, and the ambulance turned out onto the road in the direction of the call. Then oddly, the sirens went off. “No lights and sirens?” “We’re supposed to use them…but there isn’t really anyone on the road and it just causes problems”. The lights and sirens stayed off, save for brief moments when we had entered an intersection with a red light. This continued until we had arrived at the scene of emergency, the patient’s home in a middle class neighborhood. As we pulled up it was clear that the fire department had beat us to the punch and several firemen stood around the truck, with a few more inside. “They are supposed to help us, but you wouldn’t believe how much they get in our way” murmured one of the paramedics. We walked into the house with no regard for our wet feet and made our way over to the 4 firefighters and 2 family members. Their bodies turned and seemed to highlight an individual sitting in a recliner, alert, but clearly in pain. The X1 medic, kit in hand, casually walked over to the patient and laid his kit down and opened it with a practiced touch. “How are you doing tonight sir? You are experiencing chest pain?” “Well yes, but it is from lung cancer” “Ok sir, we’re just going to take your blood pressure now”. At this point the X1 medic reached into the kit, extracted the blood pressure cuff and read off the details to his partner. The X2 medic, who was off collecting the patient’s background and medical history from the family, repeated the numbers as he wrote them down. After several minutes of conversation with the patient, the X1 medic sat back and pondered the situation. “Well sir, I recommend we take you to the hospital. Your readings look ok to me, but I’m not qualified to say if you are ok to be at home or not”. The patient, whose chronic pain had driven him to require additional medical attention, agreed. With a nod the patient turned to his wife who walked toward the hall closet to prepare his things. The X1 packed up his kit, and motioned the patient over to the stretcher. With a practiced choreography, both paramedics positioned the patient and buckled him in.

In this example all parties present at the scene assumed their roles in the performance of pre-hospital medicine. The fire department, first on scene, met the expectations of the paramedics by parking in front of the patient’s home. The paramedics assumed their own roles according to the Active Attending protocol. The patient, unprepared for his own role, was still able to facilitate the successful execution of the theatrical performance.
Failed Performances of Clinical Space

The majority of all calls observed during the months of fieldwork were met with the successful provision of pre-hospital emergency care. In most cases, patients were treated and transported to medical facilities without issue. In some rare instances, patients were found to be in good health and declined the paramedics offer to be transported to a hospital for further assessment. The common thread linking every successful performance of emergency care was the effective cooperation of all members of the cast. In the rare cases where participants of the performance failed to assume their role, the theatrical performance failed to materialize.

In the following I analyze the emergency response as presented in Case 5 of the appendix. Using excerpts of the case study I will break down the performance of each member of cast, highlighting their role performance and its impact on the development of clinical space.

We had just finished picking up a coffee at the local Tim Horton’s when the CAD chirped into action. Ever curious, I leaned over to listen into the conversation I knew would be coming. “Looks like...an elderly male...head injury. Code 2. Looks like one of the homes”. As it would turn out, this was a fairly standard type of call, and on average the crew would respond to at least 2 or 3 of this type per shift. After only 8 shifts with the paramedics, I had been to countless seniors facilities, and had been to the address listed on the CAD twice before. Preparing for what was expected to be just another call, we secured our coffees, stowed our garbage and prepared to head out. “Ok. Let’s go save some lives!” The group laughed as the ambulance turned out onto the street and headed south.

The paramedics review the information provided on the CAD and formulated a preliminary assessment. The information provided identified a routine head injury, at a well-known location. With this information the paramedics call upon their experiences and develop the pre-imagined scenario.
Once the nursing staff unlocked the front doors we made our way to the desk. “We’re looking for…” “Third floor, take a right out of the elevator. I’ll buzz you up”…. An assisted living nurse stood beside him outside of the apartment, and his wife was kneeling at his side with a towel holding his head in place. In consultation with the nursing staff, it was revealed that the man had a history of seizures and had experienced at least a few of them during his time in the facility. He always seemed to know when they were coming on, but this time it had surprised him and he fell during the onset and hit his head and face causing injury.

The nursing attendants assume their role as the paramedics supporting cast, offering guidance and background information that facilitated the patient’s assessment. The patient was introduced into the scene once the interaction between nurses and paramedics was complete.

The man was still unconscious but was breathing normally as he lay on the floor bridging the gap between the public space and his private apartment. As the paramedics received the patient’s medical history, the X1 paramedic put on his vinyl gloves in preparation for assessment. Kneeling beside the patient, he scanned his body for any secondary injuries before moving to assess the laceration on the patient’s head. “Sir, can you hear me?” After a brief second the patient opened his eyes and took in his surroundings. The vacant and distressed look was soon exchanged for one of frustration and panic as the patient realized he was surrounded by strangers as he lay on the floor. With a startled flurry the patient stood up much to the concern of the paramedics and staff “No, Sir! Please stay down. Sir, we are paramedics, we are here to help” The patient was having no part of the situation and forced himself into a standing position, leering at the paramedics in an incredibly dazed manner. It was clear that the patient was not coherent and was experiencing a common post-seizure recovery period.

The patient was still performing his role despite his refusal to cooperate with paramedics. The patient’s mental state following a seizure fell in accordance with the paramedic’s expectations and they were able to adapt their performance to the developing scene.
The paramedics continued to attempt to communicate with the patient. “Ok, we just want you to come over here and sit down so we can take a look at your head ok? It looks like you have a nasty bump there”. The paramedics gestured to the man still standing in the doorway, who offered nothing but an empty glare in response. With the lack of reaction, the X2 paramedic moved into assist the first in physically assisting the patient to the stretcher. Upon placing their hands on his arms, the patient recoiled with a violent jerk and pushed his back against the wall. “No you can’t do that, he will get very angry” stated one of the Nurses. Clearly agitated, the patient pushed his way through the paramedics and nurses and walked into the large central room leaving the paramedics perplexed. “Is this normal for him?” the X1 medic asked, addressing no one in particular. The nurses explained that the patient was very easily agitated following a seizure, and in general it was easier to let him wander the halls until he had returned to his normal self.

The paramedic’s mood of the scene began to change after repeated failures to treat the patient. Still within the scope of the paramedic’s experiential practice, the performance continued.

It was becoming clear that the patient was not going to cooperate any time soon, so the X2 paramedic began the process of gathering the patients’ medical history and discussing the state of the patient with his daughter. After 15 minutes of the patient wandering in between the tables of the common area, he had returned to hallway where the paramedics and stretcher were located. The patient’s daughter was summoned and asked to assist the paramedics who had yet to perform their assessment or collect any of the patient’s vital signs. “Come on Dad, sit down, these people just want to help you. Can they take your blood pressure? Yes?” The patient had been largely unresponsive to his daughter, but she waved over the paramedics and seemed to indicate that it was a good time to proceed. As the paramedics approached the patient, he glanced at them, then back to his daughter with a growing concern. “Ok, we are just going to put this cuff around your arm very gently and that is going to let us get a reading on your blood pressure. Is that ok?” No response from the patient.

The patient’s daughter was requested to take a more active role in the delivery of medical care when the paramedics were unable to perform their duties. The act of including a new member of the theatrical cast failed to expedite the delivery of care.
Confused, the paramedics retreated in silent contemplations. How could they address the situation at hand? Although it was a minor laceration, the patient was still bleeding, and he still required an assessment. He could have health issues that required immediate attention but without his cooperation the paramedics had no route of action. For another 5 minutes the patient wandered in between the tables with his daughter occasionally coming to his side and requesting that he come and cooperate with the paramedics. As I leaned against the wall observing the process unfold, one of the paramedic wandered over and joined me in silence. The paperwork had long been complete, and there was nothing left to do until the patient was willing to have his vitals taken. Perplexed and out of ideas, the paramedic turned to me and stated “What should we do?”

The patient had refused his role, and continued to act in a manner which now fell outside the scope of the paramedic’s experience. It was now clear that the successful theatrical performance of clinical space was waning.

“I have no idea… has this happened before?” Without a response, the paramedic stood up and walked over to his partner for a private discussion. By this time we had been at the scene for roughly 45 minutes to an hour, and there was no resolution in sight. Unable to assess and transport the patient to hospital, the only way the paramedics could leave the scene was if the patient completed the medical release form…. Seeing no other resolution, the daughter was approached and presented with the option. After a quiet deliberation, the daughter agreed with the paramedics and the paperwork was signed. Almost immediately the paramedics began collecting their equipment and preparing the stretcher to leave the scene.

The performance had failed.

The act of providing medical treatment could not proceed with the patient unwilling to cooperate with the paramedics. Without the ability to perform their duties, the construction of clinical space never occurred.

I have shown that the professional medical practice conducted by paramedics is best explained as theatrical production in which every individual present at an
emergency is assigned a particular role. Each paramedic is designated a particular duty prior to arrival, with the injured party clearly assigned the role of patient. Any additional actors present at the scene are likewise assigned a role, and all parties are expected to conduct themselves properly. With this perspective in place, it is then necessary to explore the source of the paramedics imagined scenes.

One of the results of applying Stoller’s perspective on paramedic practice was that it highlights the importance of policy and protocol. Paramedics rely on repetitive action, which forms the basis for routine, but allows for adaptation to the specifics of what they found on scene. This emphasis on protocol enables all paramedics to work from the same foundation and generate action, as long as everyone stayed in their role. This prompted me to further explore the paramedic educational practices that established these protocols as a kind of cognitive script.

**Paramedic Education and Protocols**

The role of education in the world of paramedic practice is a complex and tangled combination of classic ontology and real world experience. Once paramedics move through the system of formal education they are placed into a world of fast paced life and death decisions where they find their formal education has them ill-prepared for the tasks at hand. Facing a career of endless possibilities, new paramedics are forced to cut their teeth on the streets, relying only on their experiences and their partners to develop a sense of confidence and ability.

One of the first steps toward becoming a paramedic is to obtain a career-relevant education. This tedious process starts with the development of basic medical knowledge. Students of emergency medicine undergo home study, class-based curriculums and exams. Following their course-based education and practicums, paramedics participate in a demanding mentorship program where they are assessed, graded, and educated by their peers in real world emergency situations. Once these students have passed their requirements and obtain a license, they are finally ready to forget everything they know and learn what it’s really like to work in the chaotic world of
emergency medicine. Forget everything, this is what works. This is how you save lives on the street.

**Getting Started**

Today the majority of all BCAS Paramedics are trained at the Justice Institute of British Columbia (JIBC). While some paramedics are educated out of province, all BCAS Paramedics must meet or exceed the training contained in the JIBC Primary Care Paramedic program. The JI’s Primary Care Paramedic (PCP) program is an intense 8 month curriculum geared at providing graduates with the primary skills required for Basic Lift Support. The first month of education is conducted through independent study with the student required to master basic human anatomy and physiology in preparation for more advanced in class instruction. Once complete, the student enters into traditional classroom study and is required to complete a series of courses which include the basics of clinical science, fundamental paramedic training, and several classes dedicated to the introduction of specific case scenarios.

The emphasis on protocol, expectation and assessment is an important aspect of the paramedic ontological process. This concept is seen in action in the PCP education platform, which dedicates over half of all classroom instruction toward building familiarity with specific cases. Following the completion of an introduction to clinical sciences and fundamental paramedical care, students enroll in a course entitled Trauma Cases. Trauma cases represent the bulk of all non-routine medical emergencies and are almost always attended to by PCP level paramedics. The Trauma course work is focused on educating students on how to diagnose and treat individuals with “classic” injuries, such as head/neck/spine injuries, chest and abdominal trauma, and injuries to limbs (JIBC 2014). The Trauma coursework also introduces students to emergency scene management. Students are instructed on the process of employing clinical assessment strategies, generating provisional diagnoses, and developing and executing appropriate treatment plans.
PCP students then move into two courses focused on Classic medical cases. Classic medical cases include typical cardiac and respiratory conditions (JIBC 2014B), abdominal conditions and altered states of consciousness (JIBC 2014C). In both courses, the students are instructed on the use of clinical decision making and assessment and are taught how to rely on their skills and judgment to administer medical protocols.

Finally, PCP students enroll in Complex Cases. This course is designed to call upon the skills, knowledge and judgment developed in the previous classes. Students are exposed to complex medical, environment and trauma cases and are required to focus and adapt as required. This course calls upon all aspects of the student’s professionalism, scene management skills and clinical ability.

*Rules to take on the Road: Protocol and Procedure*

All of this preparation would be for nothing if students do not learn to apply their knowledge in actual emergencies. Given the often chaotic scenes attended, paramedics need to be able to rely on a foundation system of steps they can use toward providing care, but they must also perceive the difference between the expected and unexpected. The following is a rough guideline of what I observed on scene, and has been verified through conversations with the research participants.

Upon arriving at a scene of medical emergency, paramedics are instructed to rely on a set of protocols that are designed to provide the best possible care for patients in a wide variety of contexts. These procedures fall into two categories: operational practices and role performance.

The operational practices and expectations are clearly dictated to paramedics through education and official best practice guidelines. These best practices are the result of ongoing research and development and are intended to allow a paramedic to quickly diagnose, assess and treat a patient by looking for key indicators of specific injuries or ailments. Given that many life-threatening injuries may only be experienced by paramedics once or twice in their career, it is critical that emergency care providers are
able to rely on a system of care and assessment (Wardrope 2008: 15). In modern emergency medicine, the system of assessment is broken up into a primary and secondary surveys.

The rapid primary survey is an aspect of standard first aid that is applicable to all acute medical emergencies (Wardrope 2008: 17) and serves as the template for the rapid examination of patients at scenes of medical emergency. The focus of the primary survey is to seek out and determine any issues that are considered immediately life threatening (Wardrop 2008: 167). Following an ABDCE template (see Wardrop 2008: 17-18), more commonly known as the ABCs in first aid, emergency care providers rapidly assess their patients. First, the paramedic conducts an Airway assessment to determine the existence of an airway blockage. If the patient is speaking, or no airway blockage is found, the paramedic moves to the Breathing Assessment. The patient is screened for increased respiratory effort, inadequate ventilation, or partial airway obstructions. Next, a Circulation Assessment is conducted. Paramedics screen the patient looking for signs of shock or infection. The patient’s skin is checked for color, temperature, and rates of capillary refill. Within BCAS protocol, the patient’s blood saturation levels are assessed. Lastly, patients are screened with a Disability Assessment, which is intended to check for levels of consciousness through the examination of a patient’s pupils, speech, posture and limb function. Once the rapid primary survey is complete, the patient is slotted into three potential categories (See fig 2.1, Wardrope 2008: 17). If the primary survey shows positive for acute medical emergency, or indicates the patient requires care, they will be immediately transported to the nearest hospital. Should the primary survey result in a negative for acute medical emergency, the paramedics will move into a secondary survey.

The secondary survey, or the SOAPC system, is a more in depth and traditional model of medical examination (Wardrope 2008: 21) that is intended to seek out medical issues that are not immediately apparent. Following the SOAPC protocol, paramedics assume the role of investigator and utilize a variety of avenues with which they arrive at a differential diagnosis (Wardrop 2008: 21). First the paramedics conduct a subjective assessment where the patients’ medical history and current condition is investigated (Wardope 2008: 21). Has this occurred before? What are the related symptoms? What does the patient take for medication? This information is explored through interview and
a review of any medical documentation. It is important to note that this aspect of the secondary survey also examines the social context of the scene, such as drug use and hygiene (Wardrope 2008:21). The second step is the Objective Assessment, where the paramedic conducts a series of medical tests in an attempt to arrive at a diagnosis. To do so, the paramedic will use a look-feel-listen system to examine the patient’s respiratory and cardiovascular systems in detail (Wardrope 2008: 22-32). Paramedics then move into an Analysis phase where all available information is reviewed and a preliminary diagnosis is made. The paramedic then develops a treatment plan for the patient which will result in treatment, either immediate treatment or transportation. According to BCAS policy, paramedics must provide transportation to any patient who requests it. Should a patient decline transportation, they are required to sign a document releasing the paramedics and BCAS from legal issues resulting from the treatment or lack of transportation.

Beyond the use of Primary and Secondary surveys, paramedics are also trained to rely on a system of injury specific protocol. Examples of such protocols can be reviewed in the Saskatchewan Emergency Treatment Protocol Manual (2012) document. This document dictates a series of actions to be followed by paramedics across a range of certifications. See Abdominal Trauma Scenarios (SASK 2012: 89) for a detailed example. Basic Life Support protocol dictates paramedics are instructed to conduct patient surveys, perform suctioning, cardiac monitoring, and administer oxygen (SASK 2012: 110). In addition, the document outlines specific instances where more advanced medical care should be obtained through an interception with an Advanced Life Support ambulance.

Procedure in Action

During the course of the fieldwork portion of this study, a reliance on systems of policy and protocol was observed. These protocols ranged from the correct way to prepare medical supplies to the procedure for treating cardiac arrest. The purpose of this section is to outline the process through which paramedics internalize protocols, how
said protocols are utilized in conjunction with experience, and ultimately show how this combination is used to prepare paramedics for future situations.

Graduating from a medical training program, new paramedics are forced to enter a workplace with a foundation of knowledge that, for the most part, will be replaced through education in the “genuine site of...knowledge” (Wyatt et al 2003:3). During observations, several participants indicated that new paramedics had a difficult time adjusting to field practices. It was stated that rookie paramedics held an almost comical regard for policy and regulation, following it without question.

“New paramedics will come in and do everything on the chart. Hell they will even take a glucose reading on a broken ankle, just in case the sheet has a place for it.”

Without the ability to confidently make judgment calls, and lacking tacit knowledge gained through experience (Wyatt et al 2003:3), novice paramedics were viewed as being rigid and uncompromising in their practice (Wyatt et al 2003:3). During my observations we encountered a patient suffering from severe head trauma sustained during an epileptic seizure. Given the volatile nature of the patient’s state an advanced life support unit was dispatched to the scene, which intercepted the paramedics, taking the patient into their care. One of the paramedics on the ALS unit appeared to be young and lacking confidence which suggested that a recent graduation from the JIBC. The first interaction occurred as the ALS car arrived on scene. At this point the ALS paramedics assume control of the situation, and request information from the trauma team. The X1 ALS paramedic interrupted the debriefing process to inquire about basic protocols and their fulfillment. When informed that the patient had not been screened for vital signs or been given an IV line, the ALS team showed open disapproval.

As the ALS crew retreated to the Trauma car, the paramedics showed their frustration with the line of questioning from the new, yet senior, ALS paramedic. This example is an example of paramedic practice conducted without the benefit of experiential knowledge. When faced with the patient in a seizing state, ALS protocol required a series of tasks be performed in the delivery of care, one of these being the use of an IV line for the potential delivery of medication. This inherent reliance on official policy and protocol molds the nature of a new paramedics practice and influences the
way they interact with patients and perform in spaces of care. Without field experience, new paramedics are forced to rely on the only form of preparation they have: formal education and routine. Only after exposure to various types of calls and emergencies are new paramedics able to form their own systems of knowledge and expand on the core reliance on official policy.

Creation of Knowledge

Paramedics in this study went through their shifts relatively unchallenged. Conversation with their peers usually involved a discussion on the types of trauma attended, or if the paramedics had attended anything exciting, such as a motor vehicle accident or a shooting. These types of calls were idealized for two reasons. First, they meant a break from the daily routine of public assistance and abdominal pain emergencies. Secondly, these types of calls often represented a new a challenging environment which would force the paramedics outside of their comfort zone and into a chaotic state for which they may not be prepared.

One such example occurred during a call at a border crossing. The call started off strangely, with the information stating that the Ambulance was destined for the American side of the border.

“Looks like a code 3… at the border. American side?” The driver looked over with a curious glance, double checking the cad and looking back at his partner. “Yeah… that’s what it says…”

Arriving at the scene, we moved into the building where the patient was said to be experiencing symptoms of a cardiac arrest. Mentally prepared to deal with a life and death situation, the paramedics instead found a man surrounded by armed guards impeding what would have otherwise been a relatively routine call. Unsure how to proceed, the paramedics sought information from the CBSA (Canadian Border Services Agents) agents who explained the situation. Moving in to perform their assessments, their attempts were rebuked by the patient.
Attempts at communication were made several times with no success, nor was there any progress with the paramedics presenting the blood pressure machine and motioning toward the patient's arm. The patient largely ignored the paramedics, choosing to sit in relative silence, occasionally releasing a barrage of angry mandarin at the CBSA guards still watching him closely. The paramedics sat back and reassessed the situation.

When exposed to new and unique situations that require paramedics to operate outside their daily routine, paramedics have the unique opportunity to apply clinical judgments, learn from them, and internalize them in a process that requires professional introspection and the reconstruction of lived experience (Wyatt 2003:7). It was clear that the production of clinical judgment was a process of envisioning what one might see, making modifications, and then incorporating this new knowledge into imagining the next scene.

Experience: The good and the bad

The knowledge accrued over the course of a paramedic's career grants them the ability to perform their practice in a calm and collected manner. In my observations, as well as other studies concerning pre-hospital practice (Wyatt 2003:3) paramedics conduct routine calls in near silence, often managing multiple tasks simultaneously.

Experienced paramedics are more capable of making clinical judgment calls and reacting to unforeseen circumstances yet, as my observations indicate, still rely on a foundation of policy. While scholars such as Wyatt contend that veteran paramedics tend not to reply upon protocol, I contend that several aspects of paramedic practice are reactionary in nature and are used to establish a new protocol modified through experiential practice. One example of this can be seen in how participants prepare for their shift.

(Explaining why certain pieces of equipment were being packed into the field kit) …the paramedic went into depth about how experience and intuition comes into play when planning a shift. “Some people’s kits are different, and I find it has a lot to do with experience. For example, someone will go on a call and realize that they need extra
compression pads, but they don't have any more in their kit. From then on they will start packing extra compression pads every night”. The paramedic told amusing tales of his peers packing all manners of objects into the kit, citing the majority of it as excessive”.

When prompted about policy the participant replied “You're supposed to do it (follow policy)... but everyone stocks their kit the way they want”. Later, the same paramedic cited his own practice of carrying additional equipment based on his own choices “…despite what the government says”.

By relying on their personal experiences in the field, paramedics were able to utilize experience-based knowledge in the modification of their practice. All paramedics in this study agreed with the notion that on scene experience becomes a source of stored knowledge that influences future actions (Wyatt 2003:3).

In addition to informing practice in a positive and preparatory manner, career experience was also capable of influencing the provision of pre-hospital medicine in a negative manner. The veteran paramedics observed in this study carried with them a combined total of 30 years of experience. In most cases observed, the paramedics conducted their work without hesitation, moving through each step of the patient’s treatment as if they had done it a hundred times before.

The majority of all calls observed were deemed to be routine calls, ones that didn't deviate from the day-to-day encounters that paramedics come to expect. Their reactions to these calls range from apathy to anger, but every participant in this study discussed the inherent overuse of emergency services for non-emergency issues.

Repeated exposure to these types of calls tended to illicit a negative response from the paramedics. One example was seen while responding to a routine call for abdominal pain, which involved a female patient suffering from menstrual cramps requesting a ride to obtain painkillers. Visibly frustrated, one paramedic revealed her position on the topic once we had left the scene citing the fact that all women experienced the issue, and the patient had no case for complaint.

The negative perception of specific types of emergency responses have been shown to influence the provision of medical care. Discussing the topic, one participant
admitted their own bias had developed over several years of service which influenced
the way that they imagined scenarios and anticipated outcomes.

Case Study

The emphasis on the construction of a professional working experience should
not take away from the fact that protocol plays a critical role in the delivery of medical
care. Procedure forms the foundation of paramedic practice. Reliance on a system of
protocols and the inherent structure of emergency medicine is made evident and
validated by the following observations.

I had just spent almost two hours sitting on an uncomfortable chair in Surrey
Memorial hospital, reading the copy of the Metro news for the 3rd time. Standing beside
me was the X2 paramedic of my car, resting against the wall in silence, his eyes closed.
We had run out of conversation as it was the 2nd time we had visited that hallway in as
many hours. I kicked my legs against the legs of the chair, staring at the flickering lights
overhead. It was a slow night.

I must have drifted off into a deep relaxation because when I came to the X1
paramedic was back and calling for my attention. “Ok we’re ready. Is this clean? Good.
Let’s get out of here and try to get home”. Somehow that evening we had been sucked
into what the paramedics called the black hole of central Surrey. “Once you get in…
there’s no getting out. You’ll be there until end of shift”. With the hope of getting back to
the station an entire city away, the crew packed up the stretcher and prepped the car for
deporture. With a few door slams and a headcount, the ambulance ambled out of the
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his stethoscope and brought the instrument to the patient’s chest, holding position for several seconds before reattempting on the other side. With no results the paramedic retraced her steps between the piles of clothing and left the bedroom. Following the paramedic, we rejoined the group in the living room where the sobbing woman was recounting the events leading her to calling the police. The woman explained how her partner, who worked the night shift, and come home earlier in the day complaining of weakness after a long day’s work. Now on days off he had gone to bed around noon that day, and slept the majority of the afternoon. Around 5 pm he woke up complaining of nausea and a pain in his ear, but ultimately decided to return to bed. This was the last time the woman had any contact with the man. She called 911 when she went to check on him around 1:30 am, at which point he had been deceased for several hours. Listening intently, everyone in the room seemed to be unsure of what to do next. There was clearly a policy in place as the Police Officers were doing their paperwork and the paramedics making their checks, but it all had to be handled in a way that was respectful of the family who was clearly in mourning. After the woman had finished her story, the paramedics briefly met in the hallway, with the X2 paramedic moving into the bedroom to conduct her own verification of the deceased. “Policy required two paramedics to confirm if someone is deceased. Just to double check”. Finding no signs of life, the room was vacated and the light was turned off. We walked down the hallway, and stood in the kitchen waiting while the X1 paramedic discussed the situation with the family. “There is a series of steps that must be performed when someone dies. When a loved one passes away, you have to call the police, as you did… then paramedics must confirm someone has deceased.” Sobbing the woman nodded on the couch, staring into the ground. “The police will arrange for someone to come and retrieve the deceased and take the body away… I am so sorry for your loss. I know how hard this can be, and no words can make you feel better. Having a loved one die is... incredibly hard” I moved toward the hallway and leaned against the wall in silence. The two RCMP constables stood quietly in the living room. Everyone listened. Finishing her conversation with the family, the X1 paramedic stood up and walked toward the officers. Explaining that there was nothing to be done, the officers nodded in silence. The paramedics handed over the required paperwork, with the officers acting in kind. “Ok, you are good to go. Thank you for coming” The paramedics nodded and turned toward the empty stretcher, pushing it towards the door. “The officers will assist you if you have any questions… again I am so
sorry for the loss of your loved one”. We left the house and walked down the stairs into the rainy night, the ambulance lights still flashing against the neighbor’s house. Impressed by the level of compassion showed by the paramedic, I decided to ask if consoling grieving widow was a common task. The paramedic replied “Studies show that it takes someone saying dead, death, deceased or passing away five times before someone starts to process it. So that’s what we do”

The significance of the previous observation is that it exposes the paramedic’s absolute and total reliance on policy and procedure. Despite being witness to incredibly raw emotional scene, the paramedics in this observation conducted their work with a calculated and scripted touch. When confronted with an openly sobbing widow, the paramedic sat beside her, offering condolences and advice, her arm wrapped around the grieving woman. She held the woman in her arms and offered the family words of comfort. Yet behind it all, at the very core of this exchange, was the adherence to best practices suited to the situation at hand. Even in the most emotional and vulnerable conditions, the paramedics relied on a system of procedures and expectations to guide their conduct and interactions with patients. Novice paramedics enter their professional field and hesitate to deviate from official policy. Experienced paramedics, having gained experiential knowledge, made conscious choices to deviate from official policy to better inform their practice. Only when confronted with challenging situations, are paramedics forced to deconstruct and reconstruct their professional practice. Once reconstructed, this modified practice is then carried into the field in preparation for the next emergency response.
Chapter 5. Conclusion

Over the course of this study it became clear that paramedics rely on a complex system of rules and protocols that act as the core of their medical practice. From the outset of their education to their field training and professional experiences, these paramedics are inundated with best practices and regulations that are intended to guide the care they provide their patients.

During their formative education paramedics are taught the specific order of action they are to take for a given scenario. Systematic instruction instills a strict order of protocol to be followed in any emergency. In the trauma education paramedics are instructed on the proper application of clinical assessment strategies, performing diagnoses on complex cases and are offered guidelines for developing proper treatment plans well before the patient arrives in the hospital. As the paramedics progress through their training the emphasis on protocol is only strengthened. Once enrolled in more advances classes, paramedic students are instructed on the types of emergencies they may encounter in the field. From cardiac arrests to respiratory failures, students are instructed on what to expect, how to react, and most importantly, the ideal treatment plan to execute. Near the completion of their studies paramedic students are exposed to training that demands the very best of their ability, highlighting their ability to adapt and focus in high stress and complex environments. The focus of this training is always on the proper execution of the applicable task for the delivery of the best possible care.

Once paramedics are out of school and in the field, they are faced with a fast paced and challenging environment that no amount of classroom education could prepare them for. In many cases, this is where real education begins, and everything that they have been taught is put to the test. While the notion that the truest form of education is derived primarily from experience, the research conducted for this study indicates that the classroom education is so strongly imbued into the students that it becomes they very foundational core of their practice. In my observations it was
revealed that new paramedics were seen as being reliant on protocol to a fault. More experienced members of the Ambulance Service lamented at how new paramedics performed every possible step of a diagnostic process, even if it was clear that these steps were illogical and not required. In one example, a paramedic discussed the prevalence of new paramedics insisting on performing blood glucose readings on a patient with minor trauma simply to fill a box on a chart. Without the field experience, new paramedics are forced to rely on the only preparation they have and fall back on lists, steps, and protocols.

Once paramedics have established themselves in their practice and have gained some much needed field experience, they begin to develop their own best practices built upon their formal education. This development of subjective and personal experientially based knowledge has two significant impacts on quality of medical care they are able to provide their patients.

First, paramedics are able to develop the experientially based knowledge that serves to improve the quality of their professional practice. When a paramedic encounters a novel scenario they are able to learn from their experiences and better prepare for future emergencies. In this study, paramedics who commonly attended to emergencies with the elderly carried with them additional equipment they felt pertinent to a specific type of emergency. This results in a more streamlined delivery of medical care, ultimately reducing the overall call time.

As paramedics conduct their practice and encounter new situations and new people, their experiences begin to have an influence on the way they perceive particular aspects of society. Overtime paramedics are exposed to the particulars of their environment and must contend with the various regions, cultures and individuals that make up a community. Paramedics are then exposed to those communities that oversubscribe to the use of emergency services. The majority of this studies participants expressed negative sentiments toward people and places. Areas with large ethnic populations were described with distain and any emergencies in these areas were considered to be a potential abuse of the medical system. Specific parts of cities were considered to be filled with prostitutes and addicts, where others regions were agreed to be more family friendly. The most important thing to consider in this instance is that the
Paramedics develop their own subjective interpretation of particular areas or culture groups, derived from personal experience. This experience then becomes a permanent aspect of their own personal experiential database and influences all future medical care provision.

In addition to the development of experientially based knowledge, the approach that paramedic education takes results in the development of pre-imagined scenarios. These scenarios are created by paramedics as they conduct their practice and form the new core of their medical knowledge.

Paramedics conduct their work in unpredictable locations and must contend with a variety of unknown variables at every scene. In my observations it was clear that participants prepared for emergencies by imagining what they might encounter and what may be expected of them. This mentally constructed version of the scene calls upon the training and experience of each paramedic as they attempt to navigate the countless unknowns they face upon arrival at the scene. In some cases, information offered to the paramedics would inform them that they were attending a routine call resulting in a near instantaneous mental construction of the scenario. In the case of complex emergencies, or calls in new environments, the paramedics operate in near silence as they process all available experiential data while imagining the potential scene of emergency.

There is no doubt that paramedics operate in a highly charged environment and are often faced with making life or death decisions in an instant. In addition, paramedics are constantly faced with responding to unpredictable scenarios in unpredictable locations. Forming mental constructions of emergency response scenarios and performing these scenes is a method that paramedics have developed for coping with the unknown. In almost every case, enacting the pre-imagined course of events results in the provision of medical care. However, as this study indicates, this is not always the case.

This study offers one example of what can occur when a mentally constructed scenario fails to prepare paramedics for the emergency they attend. Despite having considerable field experiences and countless years of formal education and
recertification, the paramedics in this study were unable to properly provide medical care for a patient that desperately needed attention. The fact that this does not occur on a regular basis is a testament the ability of these medical professionals to prepare for and adapt to the unknown. However, this study suggests that there is yet room to improve the way paramedics are educated and informed about how to deal with the unknown.

The educational process developed by the JIBC is no doubt rooted in the desire to provide the best possible care to all patients, regardless of region, race or religion. This commitment to medical excellence has resulted in the operation of a world class emergency response system and provides some of the highest quality of care available. However, the steadfast reliance on specific training, rigid requirements and best practices has resulted in a dehumanized form of medical care which forces paramedics to rely on their own faculties for improvement. I believe the results of this study can be used to better inform the education and practices of all emergency response personal in British Columbia in two primary areas.

First, I believe the education of new paramedics can be improved by incorporating training that addresses the development of negative subjective perceptions of people and place. In countless examples, paramedics addressed issues surrounding specific locations as being prone to drug addiction, which in turn changed the way they prepared for scenes. When faced with emergencies in an ethnic neighborhood paramedics called upon their previous experiences and developed responses rooted in their own experience. In both situations, these reactions are the direct result of personal experience which was categorized as negative. I believe that the introduction of cultural competency training at the foundational level of paramedic education would be instrumental in the reduction of negative sentiment. By educating new paramedics on addiction and culture relativisms it is possible to mitigate negative perceptions experienced in the field.

Secondly, I believe that paramedic education could be improved to address the concept of the pre-imagined scenarios, and more specifically, how the failure of this system can result in the lack of medical care being provided. It may indeed be possible to develop an educational platform that better informs paramedics on an ideal process for imagining and preparing for scenes of complex situations. In addition, this study
suggests that paramedics lack training for navigating and processing complex scenarios that exist outside their own ability to pre-conceive. By developing a psychological toolkit for such scenarios, paramedics may be better equipped for dealing with scenes of emergency that exist outside the scope of their own mental constructs.
Appendix: Case Studies

Case 1

The following case occurred on my second rotation with the paramedics in Surrey, and remains one of the most uncomfortable calls that I witnessed during my observation process. The call came in on a Sunday morning around 10 am, with a description that indicated an elderly woman was complaining about back pain. Assisting the elderly was a very routine operation for these paramedics, and it was almost expected that at least half of the days’ work would be spent either transporting or assessing the elderly members of the community. Leaving the hospital from the previous call, we immediately headed toward the address of the distressed woman, arriving at her location in under five minutes. The crew exited the vehicle in a practiced manner, slamming doors in unison. The passenger side paramedic casually opening the box doors as he strolled by. Grabbing the stretcher and the kit, we headed into the large apartment building overlooking the busy morning street. After a quick trip through the elevator we reached a hallway and counted down the numbers looking for the particular door. Rounding the corner I saw a man hunched over, leaning against the wall, staring distantly at the ground. As we got closer it was clear this man was in front of the door we were looking for. Believing him to be the patient the paramedics moved to his side, eager to assist the elderly man with his medical needs. “No, I called you for my mother” he said, turning slowly and walking towards the open apartment door. We followed the man who seemed barely able to stand. Hunched over with his head barely above his hips, the man fumbled for the light switch and closed the door behind the stretcher. “My mother is quite old, and her health is not good. She is having some problems with her back and hasn’t been able to get out of bed” The man went on to explain that his mother lived independently, but he had been staying over for a few days because she had been experiencing some major issues with her back. In the previous week she had been taken to the doctor who prescribed some painkillers but they had recently stopped having any effect. As the X2 paramedic engaged the patient’s son in discussion, I wandered into the
living room, still listening to the conversation but attempting to give the paramedic space to conduct his work. “She has had osteoporosis for many years… and now her back isn’t so good”. “Where is your mother now?” Asked the X1 paramedic, pointing suggestively down the dark hallway. “This way…in her bedroom” The man walked toward the hall with both paramedics close behind. I followed and noticed the man shutting doors in the hallway as we moved through, eventually arriving at the end of the hall. He opened the door into the master bedroom that was largely empty except for a single bed in the middle of the room. Atop the bed lay a very frail woman covered in light blankets, her eyes closed, quietly moaning in pain. The room was darkened by a blanket over the window, and the air was stale. “Hello there… how are you feeling today? Your son tells me you’re having some back trouble?” The X1 moved to the side of the patient, placing the kit on the far side of the bed. The stretcher was pushed toward the foot of the bed, and the X2 paramedic stood beside it assessing the scene. After some introductions, the patient explained that she was experiencing some severe pain in her back due to osteoporosis and her pain medication was failing to provide any comfort. As the patient explained the situation the X1 paramedic began to palpate the patient’s body, attempting to determine the location of the pain and the accuracy of the patient’s complaint. The paramedic didn’t have to search long before finding the source of the pain, and with a cry from the patient he ceased his search. “Ok dear… let’s take a look at your blood pressure ok? I’ll need your arm” The patient slowly moved her arm from the blanket, producing an incredibly thin limb, with paper thin skin covered in slight abrasions. Delicately the blood pressure cuff was applied and the readings were announced to the X2 paramedic, who was busy transcribing basic information into the call summary documentation. “So I think that we should take you to the hospital to get looked at, what do you think?” The patient nodded, and then announced that she would like to use the bathroom before she left. “There is a bathroom at the hospital, can you make it there?” The patient’s son interjected that the woman had not been able to move from her bed since the previous night, and hadn’t used the facilities since then. He also informed the paramedics that the patient’s mobility was so poor that she was forced to use a bucket with his assistance. The patient was adamant that she needed to go before leaving the house, which prompted the son to move towards her. As I turned to walk out of the room, I hear the woman cry out in pain as the X1 paramedic and the son assisted the patient off the bed, preparing her to defecate into the bucket held by her aged son. I
waited in the living room for some 10 minutes before the X2 paramedic and the patient’s son made their exit from the room. Walking over to the kitchen counter I noticed that the X2 paramedic was collecting the patients’ medical history and prescription information. I observed the process for several moments before returning to the bedroom where the patient had returned to her bed. In preparation for transport, the paramedics had provided the patient with laughing gas, a treatment used to mitigate chronic pain prior to arrival in the hospital. After receiving her instruction on controlling the gas inhalation, the X2 paramedic returned to the bedroom and prepared to move the patient onto the stretcher. After several large breathes of the gas, the woman was lifted by the blankets beneath her and placed onto the stretcher. She was then covered in blankets secured and was prepared for transportation to the emergency room.

Case 2

It was roughly 7:20 pm on February 18th, and the paramedics had just finished restocking the car for the upcoming night shift. Mondays were reported to be oddly busy, so I was anticipating an eventful night. Hopefully we would be busy for the full 12 hours, it was hard to stay awake in the back of the warm ambulance at 3:00 am. The station phone rang at 7:30, and the crew stirred to a disheartened form of quasi life. Jokes were made as the two paramedics raised their eyebrows in “Here we go” manner, and we ambled out to the car, and as the garage door opened the CAD beeped. The X2 paramedic, the passenger in the car, read the call out loud “Just a routine hip, nothing exciting”. Casually the ambulance drove through the city, there was no panic, no sirens, and no cause for concern. After all it was just a routine hip issue. We arrived at the scene, a retirement home that was known to both paramedics as a regular stop. “We come to these places all the time, we’re actually one of the only stations who carries hip slings…” The car was parked in front of the doors, just far enough away from the awning that it warranted flipping up my hood and guarding my notepad against the water. The paramedics meandered to the back of the car, and without thinking they pulled out the stretcher and clamshell, and with kit in hand they walked towards the door. Once inside the paramedics headed toward the cafeteria. Having been there countless times before they needed no direction from the nursing staff. The room was filled with tables, chairs,
and televisions quietly humming on the wall. Dazed residents casually watched us approach, paying very little attention to the woman moaning on the ground. The X1 paramedic approached the patient, placing his kit to the patient’s right side, and started to assess the injury. The X2 placed the clamshell on the ground and turned to the resident attendants in order to gather information. Items such as lists of current medications, insurance information, and the patient health history were noted down on the required forms. While the X2 medic collected the relevant information, the X1 paramedic consulted the patient and the resident nurse. “Did you fall?” No response. “How did she fall?” “We didn’t see her fall”. “How long has she been here?” “20 minutes. We called you”. At the same time the questions were asked, the X1 medic reached into the kit bag to retrieve the blood pressure machine. The arm sleeve is applied to the moaning patient, and the readings are taken along with pulse and blood saturation. “130/90. 90 Reg 97 Sat” was mentioned out to X2, who transcribed without acknowledgment. The equipment was then placed back into the kit, and once X2 had completed the transcription, both paramedics placed the patient into the clamshell and positioned her onto the stretcher and escorted her back to the hospital.

Case 3

We had just spent two slow hours standing in the emergency room and our patient had finally been admitted, releasing my crew to return to active duty. Once the ambulance was sanitized, we slowly rolled out of the parking lot with the intention of returning to the station. The car bumped along on and as I listened to a single speaker belting out a static filled country music, I completed my notes from the previous call. When we had almost reached the station, the CAD sounded off and the dreaded words “Cross-Cover” were shouted out for all to hear. A cross-cover meant that all ambulances in both our home and neighboring regions were busy, and being the only car, we had earned the position of being available for both municipalities. The worst part of this task however, was that the cross-cover car had to sit at a middle location between the two cities, usually the side of dark road, for what could be hours. Over the next 20 minutes we made our way to the cross-cover location, finally arriving and settling in for an
unknown period of time. I sat in the dark cab of the ambulance, watching approaching headlights through the dusty rear windows. An hour of silence.

Finally the CAD beeped, and we were off to the next scene. The chief complaint for the call was chest pain and shortness of breath, two symptoms of heart attack that established an emergency as Code 3, full lights and sirens. The sirens went on, and the ambulance turned out onto the road in the direction of the call. Then oddly, the sirens went off. “No lights and sirens?” “We’re supposed to use them…but there isn’t really anyone on the road and it just causes problems”. The lights and sirens stayed off, save for brief moments when we had entered an intersection with a red light. This continued until we had arrived at the scene of emergency, the patient’s home in a middle class neighborhood. As we pulled up it was clear that the fire department had beat us to the punch and several firemen stood around the truck, with a few more inside. “They are supposed to help us, but you wouldn’t believe how much they get in our way” murmured one of the paramedics. We walked into the house with no regard for our wet feet and made our way over to the 4 firefighters and 2 family members. Their bodies turned and seemed to highlight an individual sitting in a recliner, alert, but clearly in pain. The X1 medic, kit in hand, casually walked over to the patient and laid his kit down and opened it with a practiced touch. “How are you doing tonight sir? You are experiencing chest pain?” “Well yes, but it is from lung cancer” “Ok sir, we’re just going to take your blood pressure now”. At this point the X1 medic reached into the kit, extracted the blood pressure cuff and read off the details to his partner. The X2 medic, who was off collecting the patient’s background and medical history from the family, repeated the numbers as he wrote them down. After several minutes of conversation with the patient, the X1 medic sat back and pondered the situation. “Well sir, I recommend we take you to the hospital. Your readings look ok to me, but I’m not qualified to say if you are ok to be at home or not”. The patient, whose chronic pain had driven him to require additional medical attention, agreed. With a nod the patient turned to his wife who walked toward the hall closet to prepare his things. The X1 packed up his kit, and motioned the patient over to the stretcher. With a practiced choreography, both paramedics positioned the patient and buckled him in
Case 4

I had just spent almost two hours sitting on an uncomfortable chair in Surrey Memorial hospital, reading the copy of the Metro news for the 3rd time. Standing beside me was the X2 paramedic of my car, resting against the wall in silence, his eyes closed. We had run out of conversation as it was the 2nd time we had visited that hallway in as many hours. I kicked my legs against the legs of the chair, staring at the flickering lights overhead. It was a slow night.

I must have drifted off into a deep relaxation because when I came to the X1 paramedic was back and calling for my attention. “Ok we’re ready. Is this clean? Good. Let’s get out of here and try to get home”. Somehow that evening we had been sucked into what the paramedics called the black hole of central Surrey. “Once you get in… there’s no getting out. You’ll be there until end of shift”. With the hope of getting back to the station an entire city away, the crew packed up the stretcher and prepped the car for departure. With a few door slams and a headcount, the ambulance ambled out of the parking lot and headed onto the road. “Let’s hope we get a break tonight”. It didn’t look like we were going to get one as only seconds after clearing, we had a call. “Looks like we’ve got a… Code 3 Cardiac arrest. Patient is visibly deceased”. A code three call warranted the use of lights and sirens, and was the only time that paramedics could drive at speeds exceeding the speed limit. In general the paramedics considered driving under such conditions dangerous and would often not use their lights and sirens even when policy dictated they should. “There aren’t really any cars out right now… its 2am… why put ourselves in danger?” I then asked the paramedics to explain why we were headed to a cardiac arrest at a code 3, if the patient was already deceased. The reply was that on off chance that the patient is still alive, the paramedics had to do everything in their power to reach the patient in a timely manner. After 10 minutes of silent driving we arrived at the intersection 3 blocks from the scene. Turning off the main strip, the driver finally activated the lights and sirens, which flashed up and down the quiet residential neighborhood until we arrived at the address. “Why use the sirens in the last few minutes?” “Well… for the family. So it looks like we hurried”. We got out of the ambulance, its lights still flashing in unison with two RCMP patrol cars parked in front of the house. I flipped up my hood and stood in the rain waiting for the paramedics. Like a
strobe, the police lights lit up the falling rain. Turning, I saw the paramedics pushing the stretcher toward the house, kit bag in tow. I hurried up behind just in time to see the RCMP officer open the door and usher the paramedics inside. “He’s in the bedroom.”

We walked into the home, which opened up into a large living room on the right and a hallway door to the kitchen straight ahead. The smell of cigarettes and cats dominated the air, and I saw two large couches sitting against the walls of the living room. Empty whiskey bottles were piled high on the coffee table and side stands. A cat walked along the headrest of the couch, trying to reach out and rub against the nearest body. Across the dimly lit living room three people were sitting on one of the couches. Sobbing into the shoulder of a younger woman, a middle aged woman grieved openly. A young man sat staring at the wall, slowly smoking his cigarette occasionally looking at the sobbing woman. The X1 paramedic announced herself to the group on the couch, and then moved toward the hallway were the RCMP officers were standing. I followed as the officers led us into the hallway, motioning toward the bedroom. As we rounded the corner the scene opened up before us. A large bed lay in the middle of a dark room, surrounded by piles of clothes. A single light on the bedside table illuminated the deceased male, who lay on his side in the bed, his blankets still pulled close to his chest. His face was grey and his eyes were distant. A trickle of blood left the corner of his mouth. Surveying the scene, the X1 paramedic made his way over to the man. He first reached for his wrist to examine for a pulse. For several seconds he stood in silence. Readjusting his grip, the paramedic attempted a second reading for the patients pulse. Not finding one, the arm was placed back onto the bed. The paramedic then reached for his stethoscope and brought the instrument to the patient’s chest, holding position for several seconds before reattempting on the other side. With no results the paramedic retraced her steps between the piles of clothing and left the bedroom. Following the paramedic, we rejoined the group in the living room where the sobbing woman was recounting the events leading her to calling the police. The woman explained how her partner, who worked the night shift, and come home earlier in the day complaining of weakness after a long day’s work. Now on days off he had gone to bed around noon that day, and slept the majority of the afternoon. Around 5 pm he woke up complaining of nausea and a pain in his ear, but ultimately decided to return to bed. This was the last time the woman had any contact with the man. She called 911 when she went to check on him around 1:30 am, at which point he had been deceased for several hours.
Listening intently, everyone in the room seemed to be unsure of what to do next. There was clearly a policy in place as the Police Officers were doing their paperwork and the paramedics making their checks, but it all had to be handled in a way that was respectful of the family who was clearly in mourning. After the woman had finished her story, the paramedics briefly met in the hallway, with the X2 paramedic moving into the bedroom to conduct her own verification of the deceased. “Policy required two paramedics to confirm if someone is deceased. Just to double check”. Finding no signs of life, the room was vacated and the light was turned off. We walked down the hallway, and stood in the kitchen waiting while the X1 paramedic discussed the situation with the family. “There is a series of steps that must be performed when someone dies. When a loved one passes away, you have to call the police, as you did… then paramedics must confirm someone has deceased.” Sobbing the woman nodded on the couch, staring into the ground. “The police will arrange for someone to come and retrieve the deceased and take the body away… I am so sorry for your loss. I know how hard this can be, and no words can make you feel better. Having a loved one die is... incredibly hard” I moved toward the hallway and leaned against the wall in silence. The two RCMP constables stood quietly in the living room. Everyone listened. Finishing her conversation with the family, the X1 paramedic stood up and walked toward the officers. Explaining that there was nothing to be done, the officers nodded in silence. The paramedics handed over the required paperwork, with the officers acting in kind. “Ok, you are good to go. Thank you for coming” The paramedics nodded and turned toward the empty stretcher, pushing it towards the door. “The officers will assist you if you have any questions… again I am so sorry for the loss of your loved one”. We left the house and walked down the stairs into the rainy night, the ambulance lights still flashing against the neighbor’s house. Impressed by the level of compassion showed by the paramedic, I decided to ask if consoling grieving widow was a common task. The paramedic replied “Studies show that it takes someone saying dead, death, deceased or passing away five times before someone starts to process it. So that’s what we do”
The day had been going like any other, I had started conducting my observations early Saturday morning and the day had been steady. There was not enough time to return to the station, but the crew was able to stop for a coffee and enjoy the day at a moderate pace, a nice change from the block that had been non-stop. We had just finished picking up a coffee at the local Tim Horton’s when the CAD chirped into action. Ever curious, I leaned over to listen into the conversation I knew would be coming. “Looks like... an elderly male... head injury. Code 2. Looks like one of the homes”. As it would turn out, this was a fairly standard type of call, and on average the crew would respond to at least 2 or 3 of this type per shift. After only 8 shifts with the paramedics, I had been to countless seniors facilities, and had been to the address listed on the CAD twice before. Preparing for what was expected to be just another call, we secured our coffees, stowed our garbage and prepared to head out. “Ok. Let’s go save some lives!”

The group laughed as the ambulance turned out onto the street and headed south. Some 10 minutes later we arrived at the address and the ambulance was parked in front the building’s front entrance, made of up a collection of green hedges and a cement pathway leading up towards 2 large glass doors. As I stepped out of the ambulance I scanned the area and noticed a series of large red warnings on the columns and doors of the front entrance that read Warning: Influenza Contamination. Concerned, I asked the paramedics if this was something to worry about, but they appeared to be casual. “You can stay if you want... but really you just get that many old and sick people together, and someone brings in the flu. Just don’t touch anything, you should be fine”. Not wanting to miss any action, I decided I would observe the call and prepared myself for whatever could lay ahead. Once the nursing staff unlocked the front doors we made our way to the desk. “We’re looking for...” “Third floor, take a right out of the elevator. I’ll buzz you up”. We made our way through the oddly clean lobby, taking note of the relatively nice furniture and pleasant smell of the building. One paramedic commented “You know... this place isn’t so bad”. Nodding, I stepped into the elevator and we proceeded to the third floor. We then walked down a narrow yet well-lit corridor which opened up into a much larger area. In the center of the large room, a collection of dining tables and chairs were arranged in a cafeteria style. To the sides of this area, several couches and side tables were arranged to create a separate space in which to view the silent television or watch the fireplace. A single open hallway surrounded each of these
spaces, and on the outside wall, what appeared to be apartment doors could be seen. “Janice Smith” here, next door to her was “The Adams”, and just around the corner was the Garrett residence. Each door represented a self-contained residence for those requiring assisted living. In some cases I could peer into the homes, which appeared to be complex hospital rooms adorned with family pictures, and personal possessions. It was clear that these were homes, but at the same time, were highly medicalized spaces. Moving through the large central hall, the reason for our visit became evident. In one of the doorways a man could be seen laying down with his body halfway out of the apartment. An assisted living nurse stood beside him outside of the apartment, and his wife was kneeling at his side with a towel holding his head in place. In consultation with the nursing staff, it was revealed that the man had a history of seizures and had experienced at least a few of them during his time in the facility. He always seemed to know when they were coming on, but this time it had surprised him and he fell during the onset and hit his head and face causing injury. The man was still unconscious but was breathing normally as he lay on the floor bridging the gap between the public space and his private apartment. As the paramedics received the patient’s medical history, the X1 paramedic put on his vinyl gloves in preparation for assessment. Kneeling beside the patient, he scanned his body for any secondary injuries before moving to assess the laceration on the patient’s head. “Sir, can you hear me?” After a brief second the patient opened his eyes and took in his surroundings. The vacant and distressed look was soon exchanged for one of frustration and panic as the patient realized he was surrounded by strangers as he lay on the floor. With a startled flurry the patient stood up much to the concern of the paramedics and staff “No, Sir! Please stay down. Sir we are paramedics, we are here to help” The patient was having no part of the situation and forced himself into a standing position, leering at the paramedics in an incredibly dazed manner. It was clear that the patient was not coherent and was experiencing a common post-seizure recovery period. Still standing in the doorway the paramedics attempted to communicate with the patient several times with no success. “Sir, we are paramedics. I am here you help you, you had a seizure”. The paramedics continued to attempt to communicate with the patient. “Ok, we just want you to come over here and sit down so we can take a look at your head ok? It looks like you have a nasty bump there”. The paramedics gestured to the man still standing in the doorway, who offered nothing but an empty glare in response. With the lack of reaction, the second paramedic moved in to assist the first in
physically assisting the patient to the stretcher. Upon placing their hands on his arms, the patient recoiled with a violent jerk and pushed his back against the wall. “No you can’t do that, he will get very angry” stated one of the Nurses. Clearly agitated, the patient pushed his way through the paramedics and nurses and walked into the large central room leaving the paramedics perplexed. “Is this normal for him?” the X1 medic asked, addressing no one in particular. The nurses explained that the patient was very easily agitated following a seizure, and in general it was easier to let him wander the halls until he had returned to his normal self. This option wasn’t ideal as the paramedics had yet to address the patient’s injuries. With the possibility that the patient may require critical care, the paramedics had no choice but to follow the patient into the hall and attempt to direct him back to the stretcher. Heeding the nurse’s advice they opted to give the man some time to himself, letting him slowly wander up and down the walkway, occasionally leaning against the wall. After roughly five minutes the paramedics started to take a more proactive approach in returning the patient to the stretcher. Initially they tried to communicate with him verbally, explaining they had been called due to his fall and wanted to help him with his injuries. When this line of explanation failed to yield any results, the paramedics produced the blood pressure cuff as tool for non-verbal explanation. This too had no result, and the patient was once again feeling the pressure having so many bodies in his personal space. With little warning, the patient’s agitation flared up once again and he quickly walked past the paramedics into the eating area within the communal space. Around this time the patient’s daughter had arrived after being called by the Nurses as an emergency contact. It was becoming clear that the patient was not going to cooperate any time soon, so the X2 paramedic began the process of gathering the patients’ medical history and discussing the state of the patient with his daughter. After 15 minutes of the patient wandering in between the tables of the common area, he had returned to the hallway where the paramedics and stretcher were located. The patient’s daughter was summoned and asked to assist the paramedics who had yet to perform their assessment or collect any of the patient’s vital signs. “Come on Dad, sit down, these people just want to help you. Can they take your blood pressure? Yes?” The patient had been largely unresponsive to his daughter, but she waved over the paramedics and seemed to indicate that it was a good time to proceed. As the paramedics approached the patient, he glanced at them, then back to his daughter with a growing concern. “Ok, we are just going to put this cuff around your arm very gently
and that is going to let us get a reading on your blood pressure. Is that ok?” No response from the patient. With a deliberate calmness, the X1 paramedic moved the blood pressure cuff closer to the patient’s arm, tearing open the Velcro seal in preparation. Immediately the patient pulled his arm away and took a step back, angered by the persistence of the paramedic’s attempts to touch him. With an angry sound the patient turned and walked toward the open area. Confused, the paramedics retreated into their own heads in silence. How could they address the situation at hand? Although it was a minor laceration, the patient was still bleeding, and he still required an assessment. He could have health issues that required immediate attention but without his cooperation the paramedics had no route of action. For another 5 minutes the patient wandered in between the tables with his daughter occasionally coming to his side and requesting that he come and cooperate with the paramedics. As I leaned against the wall observing the process unfold, one of the paramedics wandered over and joined me in silence. The paper work had long been complete, and there was nothing left to do until the patient was willing to have his vitals taken. Perplexed and out of ideas, the paramedic turned to me and stated “What should we do?”

It was at this that I realized that two important facts. First, that I had achieved a level of comfort with the paramedics that allowed for my immersion into the scene. I was now part of the process and was having a minimal impact on the performance and delivery of emergency medicine. The second and most important point was that the paramedics appeared to be unprepared to handle the situation in which they were currently found, to the point where they were requesting guidance and assistance from an official observer. “I have no idea… has this happened before?” We stood in silence, then paramedic stood up and walked over to his partner for a private discussion. By this time we had been at the scene for roughly an hour, and there was no resolution in sight. Unable to assess and transport the patient to hospital, the only way the paramedics could leave the scene was if the patient completed the medical release form. This form was designed to release the paramedics and BCAS from any legal action resulting from a lack of medical assistance. Usually this is only filled out by a conscious and alert patient capable of making a clear choice in their own best interest. This was certainly not the case, as the patient was still wandering the hall in a daze and refused to be touched by the paramedics. After some deliberation with the nursing staff it was revealed that the patient’s daughter had been given power of attorney over her father’s health matters.
Seeing no other resolution, the daughter was approached and presented with the option. After a quite deliberation, the daughter agreed with the paramedics and the paperwork was signed. Almost immediately the paramedics began collecting their equipment and preparing the stretcher to leave the scene. With our work done, the crew collected the final signatures on the legal paperwork and we headed down the hall back to the elevator. Clearly frustrated and taxed, the elevator ride and walk to the car were relatively silent with only a single comment “Guess we don’t need to sanitize the equipment....”
References

Andrews, Gavin G, and David Shaw  
2008  Clinical geography: nursing practice and the (re)making of institutional space.  
Journal of Nursing Management 16:463–473  

Andrews, Gavin J, Mark Sudwellb, and Andrew Sparkes  
2005  Towards a geography of fitness: an Ethnographic Case Study of the Gym in  
British Bodybuilding Culture. Social Science & Medicine, 60:877–891  

Barber, Annice  

BCAS – British Columbia Ambulance Service  
http://www.bcas.ca/?media_dl=986  

BCAS – British Columbia Ambulance Service  

Biolosi, Thomas  
2005  Imagined Geographies: Sovereignty, Indigenous Space and American Indian  

Buraway, Michael, Alice Burton, Ann Ferguson and Kathryn Fox  
Berkeley: University of California Press.  

Bubinas, Kathleen  
2005  Gandhi Marg: the Social Construction and Production of an Ethnic Economy in  

Bourdieu, Pierre.  

Casey, Edward  
1993  Getting back into place: Toward a Renewed Understanding of the Place-world.  
Bloomington: Indiana University Press.  

Casey, Edward  
1997  How to get from Space to place in a fairly short stretch of time. In Senses of  
Campeau, Anthony,  
2009  Introduction to the “space-control theory of paramedic scene management”.  
Emergency Medicine Journal 26:213–216

Campeau, Anthony,  

Conradson, David  
2003  Spaces of Care in the City: the Place of a Community Drop-in Centre. Social & Cultural Geography 4(4):507-525

Dalakoglou, Dimitris  

Dickey, Sara  

Duranti, Alessandro  

Durkheim, Emile, and Marcel Mauss.  

Escobar, Arturo  

Foucault, Michel  

Foulkes, Richard.  

Frohlick, Susan  

Goldmacher, Amy  
Goldstein, Daniel

Goldstein, Daniel

Gordon, Richard

Gesler, Wilbert, and Robin Kearns.
2002 Culture/Place/Health. New York: Routledge

Gillespie, Rosemary
2002 Architecture and power: a family planning clinic as a case study. Health & Place 8:211–220

Goffman, Erving

Gupta, Akhil, and James Ferguson.

Ingold, Tim, and Jo Lee Vergunst

JIBC - Justice Institute of British Columbia

JIBC - Justice Institute of British Columbia

JIBC - Justice Institute of British Columbia

Kelly, Susan
2003 Bioethics and Rural Health: Theorizing Place, Space and Subjects. Social Science & Medicine 56:2277-2288

Lazarsfeld - Jensen, Ann, Donna Bridges, Steven Loftus
Lee, Jo and Tim Ingold

Lefebvre, Henri
1992 The production of space. Cambridge: Blackwell

Liu, Wei, and Elizabeth Manias

Low, Setha, and Denise Lawrence- Zuniga

Low, Setha

Masquelier, Adeline

Munn, Nancy

Nigel, Rapport

Patel, Neal

Patton, Cindy

Pandolfo, Stefania

Person, Asha.
Richardson, Miles.  

Rodman, Margaret  

SASK - Saskatchewan Health  

Schmoll, Beverly.  

Small, Mario.  

Smith, Fiona  

Stanfield, Peggy, Nana Cross and Y Hiu  

Stoller, Nancy  

Taussig, Karen-Sue  

Johnsen, Sarah, and Paul Clokeb  

Walz, Bruce J, Kurt Krumperman, and Jason Zigmon  

Wardrope, Jim, Peter Driscoll, J Laird and Malcome Wollward  
Wyatt, Andrea