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A thesis submitted in partial fulfillment of the requirements for the Doctor of Philosophy degree in Women's Studies and Feminist Research

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For Keeps-Sake: Women's Experiences with Elective Prenatal Ultrasound Imaging
in Canada

(Monograph)

by

Jennifer Chisholm

Graduate Program in Women's Studies and Feminist Research

A thesis submitted in partial fulfillment
of the requirements for the degree of
Doctorate of Philosophy

The School of Graduate and Postdoctoral Studies
The University of Western Ontario
London, Ontario, Canada

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Abstract

This thesis explores women's experiences with the practice of elective prenatal ultrasound imaging in Canada. Ultrasound technology was first introduced into obstetric practice in the late 1950s and has, since then, become a routine part of antenatal healthcare. More recently, ultrasound technology has expanded into private industry, with many businesses now offering keepsake or entertainment ultrasound to pregnant women and their families. I begin by offering a brief historical account of the development and diffusion of obstetric ultrasound, and situating the elective ultrasound industry within current debates about non-medical applications of ultrasound technology. Through in-depth interviews with women who had received (or were planning to receive) an elective ultrasound during a current or recent pregnancy, and a discourse analysis of the promotional websites of a selection of elective ultrasound clinics, I sought to understand how ultrasound is taken up in non-medical settings; how women experience ultrasound in a non-medical setting, and how the image is taken up both inside and outside the screening room. Using a feminist standpoint approach, deeply influenced by institutional ethnographic methodology, I analyze the practice, beginning from women's lived experiences. Elective ultrasound was positioned, and in most cases experienced, as a welcome alternative to medical ultrasound. Participants described their consumer choices as inspired by a desire to bond with their fetus in a comfortable and inviting atmosphere, to counteract their feelings of anxiety around their pregnancies. The findings expose a gap in feminist theorizing around prenatal ultrasound, in that most participants discussed their experiences in positive terms. A discussion of neoliberal subjectivity addresses the ways in which participants were able to articulate their maternal identities through their consumer choices. I contend that the maternal identities to which participants aspired reflect broad social and cultural narratives of motherhood, specifically the institution of motherhood as first described by Adrienne Rich (1977). Notions of risk and responsibility are foregrounded in both medical and elective settings in ways that emphasize pregnant women's responsibility to mitigate potential risks, without ascription of the corresponding social, political and economic power to do so.

Keywords

Elective Prenatal Ultrasound, Technology, Consumption, Neoliberal Subjectivity, Institutional Ethnography, Feminism

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1 Introduction

“It’s such a business - the business of babies and pregnancy and everything”

- Rachelle

The “business of babies” identified by Rachelle, a participant in this study, is lucrative and growing. In neoliberal societies, the purchasing of goods and services functions as a means of expressing identity. Within the context of pregnancy, consumption is understood to signal excitement, anticipation and preparedness for a new addition to one’s family. Women, in particular are called upon to assert their maternal, consumer identity in ways that reflect the kind of mother they are or wish to be. A growing array of consumer options is now available to facilitate this expression of maternal identity, one of which is the practice of elective ultrasound imaging. Elective ultrasound clinics operate outside of the healthcare system, and offer non-diagnostic prenatal ultrasound imaging on a fee-for-service basis. Elective ultrasound imaging, also referred to as “entertainment” or “keepsake” ultrasound, is advertised to pregnant women and their families as a fun and joyful means of bonding with their fetus. The elective ultrasound industry in Canada has grown rapidly, though relatively quietly, since the first clinic opened in 2003. Only recently has the practice gained media attention, and popular opinions are polarized. For some, elective ultrasound presents a welcome alternative to medical ultrasound, while for others its non-medical use is controversial, perhaps even dangerous. Currently there is very little research that looks at ultrasound performed in elective settings from the standpoint of women who purchase or use the service. I offer this thesis as starting point for exploring women’s motivations for, and experiences of, elective prenatal ultrasound imaging.

Using a feminist standpoint approach, coupled with ethnographic methods, this project examines women’s experiences with the practice of elective prenatal ultrasound imaging in Canada. The study involved in-depth, semi-structured interviews with ten women who had received or were planning to receive elective ultrasound during a current or recent pregnancy (within the last five years). Particularly I was interested in: how the technology of ultrasound is employed within the non-medical context of elective prenatal ultrasound clinics, how women experience ultrasound in

a non-medical setting, and how the image is understood and taken up both inside and outside the screening room. Elective ultrasound businesses are clear to position themselves outside of the healthcare system through advertising and promotional materials. The advertising which elective clinics engage in is important, because in many ways, it facilitates women's expectations of the type of experience they can have with ultrasound in a non-medical setting. For this reason I conducted a discourse analysis of a selection of promotional websites for elective ultrasound clinics in Canada. The results of this analysis are put in conversation with participant's experiences and expectations to illuminate the ways in which consumer culture creates and responds to desires. The introduction of elective ultrasound clinics and the products and services they provide, links pregnancy, technology and consumption in ways which exemplify the increase in the commodification of reproduction.

To understand the particular ways prenatal ultrasound functions in elective settings, it is important to look at both the similarities and differences between elective and medical ultrasound. In the sections that follow I describe these similarities and differences, while situating the practice within larger debates about safety, regulation, and the questionable uses of elective ultrasound that have recently come to light.

The deployment of ultrasound in obstetrics has long been a concern for feminist scholars, and much attention has been paid to the ways ultrasound technology reifies and reproduces the patriarchal medical gaze (Oakley, 1984; Petchesky, 1987). Feminist critiques of ultrasound focus on the ways ultrasound images position the pregnant woman and her fetus as two separate, autonomous entities (Petchesky, 1987; Rothman, 1984, 1989; Haraway, 1997; Stabile, 1999). The technology of ultrasound is thus tasked with placing women in visual contact with their fetus. The pregnant woman is then in a position to respond to her fetus in a way that the fetus cannot respond to her (Davies, 2009). In other words, the bond or relationship created is one of caregiver and cared-for, as the fetus has no similar capacity to respond (or any awareness at all that she is being looked at). The literal effect of the application of ultrasound technology renders the fetus, as Petchesky suggests, "more visible [and] renders the woman invisible" (1987: 277). So while the fetal body is illuminated in the ultrasound image, the pregnant woman's body is effectively erased (Stabile, 1999). By visually separating fetus from pregnant woman, a new category of patient is created (Casper, 1996). Within the medical management of pregnancy,

physicians are then called upon to treat the needs of two patients within one body. Petchesky, (1987) Rothman (1986) and others (Haraway, 1999; Rapp, 1998; Franklin, 1991; Stabile, 1999; Oakley, 1984; Casper, 1996) contend that this often leads to the privileging of the fetal patient, and have connected this ideology to drastic increases in the use of reproductive technologies and medical interventions in pregnancy, such as fetal monitoring, amniocentesis, and caesarean sections. The increasing prevalence of medical interventions in pregnancy underscores and normalizes their use and necessity. Visual and technological information is presented, and often accepted, as objective fact, or evidence, in a way that feminist critics suggest discredits women's embodied knowledge of pregnancy such that feeling fetal movements is no longer accepted as a "definitive diagnosis" of pregnancy (Petchesky, 1987).

While the feminist criticisms of ultrasound technology are certainly warranted, it is striking that most theorizing around the impact and effects of prenatal ultrasound on the experience of pregnancy, are not based on women's experiences with the technology. Much of the criticism takes up feminist interpretations of science, technology and medicine, in ways that highlight the patriarchal root of these discourses and seek to expose the ways they undermine, erase or ignore women as knowledgeable subjects. Such a feminist reading of ultrasound technology does not account for the rapid diffusion of prenatal ultrasound in non-medical settings, or the excitement generated around the ultrasound session as a specific event within the context of pregnancy. I contend that in order to produce a feminist account of prenatal ultrasound, women's experiences with the technology must foreground theorizing of its impact. As such, in this thesis I place women's experiences of elective ultrasound at the centre of the research project, and seek to explore the gaps in knowledge around how prenatal ultrasound functions in women's lived experiences of pregnancy.

The proliferation of visual images of the fetus has also been suggested by feminist scholars to have produced the "public fetus" (Petchesky, 1987; Duden, 1993; Taylor, 1992, 2002, 2008). The public fetus is a social and cultural entity which has come to signify life, and by extension, personhood. The public fetus differs from the fetus as an object of the medical gaze, in that it functions as an "icon" in the public imagination, or, a signifier of a particular kind of identity (Chisholm, 2011). Ultrasound images are used in advertisements, (Taylor, 1992) to serve as plot lines in television shows and movies, (Thoma, 2009) as well as appearing online, particularly on

social media websites such as Facebook (Anderson, 2010). The public fetus has been an especially effective communication tool for anti-abortion groups as the fetal image is used to solidify the personhood of the fetus, and to concretize their belief that life begins at conception. Interestingly, the issue of abortion in relation to ultrasound comes up again and again in the literature, as well as in public conversations about elective ultrasound in particular. In the following section I describe how the elective ultrasound industry in Canada has been aligned with the on-going abortion debate.

1.1 Debates and Controversy

The elective ultrasound industry in Canada grew steadily and relatively quietly until 2012 when a CBC investigative report found that numerous elective ultrasound clinics in three different Canadian cities were providing fetal sex information prior to 20 weeks gestation. It is a common medical practice not to reveal this information prior to 20 weeks gestation. Elective abortions can be performed up until 20 weeks gestation, while abortions that take place after 20 weeks gestation are considered “late term” and only performed if there is a grave risk to either the fetus or the pregnant woman (Abortion Rights Coalition of Canada, 2014). Despite common medical practices, there are currently no laws or regulations specifying when fetal sex information can be given to parents. Although the Harper government did go on record to condemn the practice of sex selective abortion during a Conservative party convention in 2013, it is not illegal in Canada to abort a fetus based on sex. Both the investigative report and the subsequent statement from the Harper government linked the issue of sex selective abortion, early sex determination and the elective ultrasound industry in the minds of many Canadians. Specifically, CBC’s report cites concerns over certain immigrant communities and ethnic or religious beliefs which position male children as more valuable or desirable than female children. It is impossible at this point to determine the reasons why women obtain abortions, as this information is not required or requested in order to electively terminate a pregnancy prior to 20 weeks gestation. However, a study conducted by researchers at St. Michael’s Hospital in Toronto, Ontario suggests that the ratios of male and female live births are found to be skewed, specifically among women of Indian, Korean and Pakistani decent (Ray et al., 2012). The study reveals that after an analysis of 766, 688 live births in Ontario between 2002 and 2007, South Korean and Indian born women had as many as 136 males for every 100 females (Ray et al., 2012). Such a statistical anomaly

has led many to suspect that sex selective abortions are being sought in Canada (Sawa and Burns-Pieper, 2012). This uncomfortable finding, combined with the direct link to the elective ultrasound industry confirmed in the CBC investigative report, has reignited controversy over the ethical implications of the elective practice of ultrasound imaging.

Links between ultrasound technology, sex determination and abortion have been the subject of much media attention and academic scholarship. The CBC report expanded conversations in Canada, while in the United States, ultrasound technology received a great deal of attention between 2011 and 2014 in relation to many states' proposed laws to require that ultrasound be performed on pregnant women considering abortion. The major catalyst for such laws is the supposed connection that is facilitated by viewing an ultrasound image of one's fetus. In other words, it is assumed that upon viewing an ultrasound image of their fetus, women will better understand the value of the life they are gestating and opt to continue the pregnancy. Similarly, much of the academic literature around the emotional effects and impacts of viewing ultrasound images concerns both pro-life and pro-choice politics, particularly by feminist scholars (see Petchesky, 1987; Taylor, 2008; Davies, 2009 for examples). The connection that is presumed to be facilitated by ultrasound imaging is referred to as "bonding" in the advertising and promotional materials for elective ultrasound clinics. Women are encouraged to use the ultrasound session as a means of developing closer bonds with their fetus, family and friends. In the American context, laws that require a woman to view an ultrasound image of her fetus prior to receiving an abortion, rely on the bonding potential as a means of dissuading women from their decisions to terminate. Interestingly, in the Canadian context, particularly in regards to elective ultrasound imaging, both the CBC report and the findings by Ray et al (2012) suggest that pregnant women may not be so dissuaded by seeing an image of the fetus, in fact, it is this image (and the fetal sex information presented alongside it) that may persuade her towards seeking an abortion. Thus, the elective ultrasound industry in Canada operates in particular ways that can be distinguished from other uses of ultrasound imagery and technology. This distinction is especially evident when considering medical versus non-medical uses of prenatal ultrasound.

1.2 Elective Ultrasound in Context

Elective ultrasound is distinct from medical ultrasound in a number of ways. First, and perhaps most importantly, elective ultrasound does not provide any diagnostic information about the

fetus. Although there is evidence that some elective ultrasound clinics are run by individuals with medical training (such as UCBaby which was founded by Dr. Tina Uteren, a former physician) most clinics clearly state that their services are not physician supervised and should not be used as an alternative to medical imaging. Medical and elective ultrasounds therefore serve different functions. Women in Canada typically receive two ultrasounds as a standard part of their medical prenatal care. The first is performed typically between 10 and 12 weeks gestation, with the primary purpose of these scans as being to confirm the pregnancy, provide a more accurate due date and to check for the presence of multiple fetuses (i.e. twins or triplets). The second routine medical ultrasound women receive is typically referred to as a morphology scan, performed at about 20 weeks gestation for the purpose checking organ development, measuring the spine and skull circumference, and checking for certain fetal abnormalities such as spina bifida. Many elective ultrasound clinics require (or recommend) that clients have received at least one medical ultrasound prior to purchasing. While the reasons for this are not made explicit, I suspect it relates to the possibility of ultrasound to reveal fetal defects (or pregnancy loss) that are better interpreted and communicated by qualified physicians. Some participants in this study indicated that they were asked for information about their attending physician, such as a name and contact number, presumably in case an abnormality was detected during the elective scan (though they could not recall if they were given a reason by the clinic for this request).

A second key difference between medical and elective ultrasound in Canada, is the cost. Medically indicated prenatal ultrasounds are recognized as a standard part of prenatal care in Canada and are thus covered under publicly funded healthcare. Elective ultrasound in contrast is offered on a fee for service basis, with customers paying out of pocket for the different products available. In addition to selling a particular ultrasound experience, which I qualify as a service, elective ultrasound clinics also offer a number of products that take up the ultrasound image. These products include glossy 3D images of varying sizes, that one participant in this study described as akin to a Sears Portrait Studio and the different packages of pictures available. These images are available with different backgrounds and effects, such as a blue or pink tinge of colour to signify the fetus as a boy or a girl. Elective ultrasound clinics also offer DVD's of the ultrasound session for purchase, or clients can opt to have their session stream online for friends and family living overseas, or available "On Demand" from their cable television provider. Another product available from some elective ultrasound clinics, and one that was

particularly enticing for one participant in this study, is a stuffed animal (typically a teddy bear or bunny) with a recording of the fetal heartbeat embedded inside, so that when you squeeze the stuffed animal, it plays the fetal heartbeat. One elective clinic franchise, *UCBaby*, calls this the “Heartbeat Bear”. The cost of the service can thus vary greatly depending on how many of these additional products a woman, or her family, wishes to purchase.

Lastly, the third significant difference between medical and elective ultrasound practices, which was highlighted by participants in this study, is the setting and atmosphere of the clinics.

Because medical ultrasound takes place in hospitals or medical clinics, the atmosphere is in keeping with its function, such that medical ultrasounds were described as clean, sterile, and in some instances, cold. Conversely, elective ultrasound clinics promise a warm and friendly atmosphere for customers, often involving comfortable furniture, soft lighting and friendly, engaging staff. The screening rooms are large, with room to comfortably accommodate many spectators. The ultrasound is projected onto a large, flat screen television positioned for the pregnant woman’s ease of viewing. Though these comforts may have been initially enticing, the experiences articulated by participants in this study suggest that a welcoming environment was not the only, or even the major factor that drew them to the practice of elective ultrasound imaging.

While there are several obvious differences between medical and elective ultrasound imaging, there are also obvious similarities which complicate an understanding of the relationship between the applications. The most significant similarity, at least on the surface, is the technology.

Prenatal ultrasound is recognizable as a common and accepted reproductive technology. The routine use of ultrasound in medical settings, especially in the last thirty years, is often referenced in advertising and promotional materials for elective ultrasound clinics as a means of addressing possible safety concerns. In other words, the use of ultrasound in medical settings is called upon to give legitimacy to the use of prenatal ultrasound technology in general. So while elective ultrasound clinics are clear to state that their services are non-diagnostic, the history and frequency of the medical use of prenatal ultrasound is often referenced as a means of calming any safety concerns for prospective customers. The three-dimensional (3D) and four-dimensional (4D) images offered by elective ultrasound clinics represent a difference from the standard two-dimensional (2D) images obtained during diagnostic ultrasound sessions. However the difference

lies in the quality of the imaging software, as opposed to the technology used to obtain the scan. Sound waves are employed by 2D, 3D and 4D ultrasound imaging at the same intensity, with 3D and 4D images being constructed using software that pieces together 2D images taken at varying angles. The clarity and quality of these images, relative to the grainy black and white 2D images, is offered as a major selling point for elective ultrasound businesses.

Another important distinction between medical and elective ultrasound imaging in Canada involves industry regulation. In the next section, I describe the current status of the elective ultrasound industry as unregulated, and identify some of the debates and controversies surrounding the practice.

1.3 Guidelines and Regulations

The regulation of prenatal ultrasound in Canada presents an interesting paradox. Diagnostic ultrasound use is regulated by the Canadian government, while non-medical or elective ultrasound remains unregulated at the time of writing. Diagnostic ultrasound regulation falls under the purview of Health Canada, in particular under the Food and Drug Act, the Radiation Emitting Devices Act, and the Medical Devices Regulations (Health Canada, 2003). In 2008 Health Canada issued its most recent *Guidelines for the Safe Use of Diagnostic Ultrasound* which state expressly that “ultrasound should not be used for any of the following: (i) to have a picture of the fetus, solely for non-medical reasons, (ii) to learn the sex of the fetus solely for non-medical reasons; and (iii) for commercial purposes such as trade shows, or producing pictures or videos of the fetus” (Guidelines for Safe Use of Ultrasound, Section 2.1, 2008). While the reasoning behind these recommendations is not explicit, the guidelines highlight the need for ultrasound operators to determine a justification for exposure relative to the “likelihood of an adverse health effect” (Guidelines for Safe Use of Diagnostic Ultrasound, Section 4.2.3., 2008). In other words, the diagnostic benefits must outweigh the potential risks. Numerous professional organizations have followed Health Canada in issuing statements against non-medical uses of prenatal ultrasound, including the Society of Obstetricians and Gynaecologists of Canada, the Canadian Association of Radiologists, the Canadian Society of Diagnostic Medical Sonographers and the College of Physicians and Surgeons of Ontario. While each statement differs slightly in language, the message is the same; providing ultrasound solely for the purposes of producing a keepsake image or for determining the sex of a fetus (for reasons

unrelated to health) is “inappropriate and contrary to good medical practice” (College of Physicians and Surgeons of Ontario, 2010). Each of the above mentioned professional organizations and Health Canada cite the potential for adverse effects of ultrasound on fetal development in their reasoning for cautioning against non-diagnostic use, though each organization also acknowledges a lack of evidence confirming any negative effects.

While there remains no conclusive evidence of harmful effects of ultrasound exposure on either the fetus or pregnant woman, some studies suggest that there is a potential for “ultrasonic heating” to occur, which effects the temperature in utero (Health Canada, 2008). The potential increase in temperature is attributed to both the energy output of the ultrasound scanner, and what is referred to as “dwell time”, meaning “the length of time that the transducer is actively transmitting ultrasound while staying in one place during part of an examination” (Health Canada, 2008). Recommendations for the energy output of ultrasound scanners are issued by Health Canada and are based in large part on the recommendations issued by the American Institute of Ultrasound in Medicine/National Electrical Manufacturers Association (Health Canada, 2008). It is worth noting that in both the Canadian and American context these guidelines appear to be only recommendations and thus ultrasound manufacturers are asked to comply voluntarily. Dwell time would be determined in large part by the ultrasound technician, based on what kind of diagnostic information is being sought, and the time it takes to obtain that information. For this reason Health Canada also recommends that ultrasound be performed only by qualified, licensed technicians (Health Canada, 2008). Again, it is worth noting that because elective ultrasound remains an unregulated industry, there are no enforceable standards for the training and qualifications of ultrasound technicians employed by private industry, or for the duration of individual ultrasound sessions.

Despite the directness of Health Canada’s statement on the use of fetal ultrasound for keepsake images and video, no conclusive evidence of harmful effects has been provided. In fact, the statement, which is directed towards pregnant women considering elective ultrasound, is premised on the notion of “minimizing your risk” (Health Canada, 2008). In addition to cautioning women to “do everything you can to give your baby a healthy start in life” and to “seek appropriate prenatal care”, the statement also recommends that “you have fetal ultrasound only on referral from a licensed health care provider” (Health Canada, 2008). While the potential

risks are not named or quantified, their existence is assumed and the responsibility for minimizing risk is placed on individual women. Within the clinical guidelines, risk is assessed under the ALARA principle, which means “As Low As Reasonably Achievable” and aimed at “reducing unnecessary, potentially hazardous exposure to individuals” (Health Canada, 2008). In this instance, both ultrasound operators and manufacturers would be implicated in determining and managing risks, whereas, Health Canada’s statement appears to suggest that in the context of elective ultrasound, it is pregnant women themselves who must reduce “unnecessary, potentially hazardous exposure”. So, while it is governmental and medical regulatory boards that determine the necessity of ultrasound use, and have the resources to determine potential hazards, it is pregnant women themselves who are positioned as responsible for negotiating risk in non-medical settings. Risk and responsibility emerged as major themes in participants’ descriptions of their experiences with both medical and elective ultrasound, and are taken up in detail in the chapters that follow.

Implicit in both Health Canada’s statement on fetal ultrasound for keepsake videos, and the *Guidelines for Safe Use of Diagnostic Ultrasound*, is a fundamental distinction between medical and elective ultrasound practices. Diagnostic justifications are given primacy over personal justifications, and risk is positioned differently in either setting. In short, diagnostic ultrasound is framed as presenting minimal risk in exchange for necessary information, while elective ultrasound is framed as presenting a greater risk for reasons that lack medical justification. In the chapters that follow, I discuss the ways that the experiences of, and justifications for elective ultrasound articulated by research participants complicate medical definitions of necessity. For example, the value of the reassurance provided by seeing an image of their fetus was articulated by many participants as a necessary means of calming their anxieties around fetal health and well-being. I detail the ways that participants understood risk and reassurance in relation to pregnancy, and the specific ways they saw elective ultrasound as contributing to these feelings, in the chapters that follow.

Despite the controversy surrounding the use of prenatal ultrasound in elective settings, in the years since Health Canada’s statement was issued, the elective ultrasound industry in Canada has grown considerably. A lack of industry regulation also means it is difficult to ascertain exactly how many of these businesses exist in Canada. However, current internet search results confirm

the presence of elective ultrasound businesses in every major city in every province of Canada. The location of participants in this research, also suggest that elective ultrasound businesses are set up in smaller or mid-sized cities, such as Ajax and Pickering, Ontario. Additionally, in the five years I have been engaged in this research, one elective ultrasound clinic franchise alone, *UCBaby*, grew from 18 clinics across Canada in 2009, to 27 clinics in 2014 (web, 2014). As the industry continues to grow in popularity, it becomes even more important to examine what the practice of elective ultrasound looks like in Canada, how and why pregnant women and their families access ultrasound in elective settings, and what, if any, differences there are in the meaning and significance assigned to elective and medical ultrasound experiences. Participants in my study articulated clear differences between their experiences with ultrasound in medical and elective settings, as well as identifying the issue of safety as a particular concern.

Interestingly, debates around the safety and use of ultrasound for prenatal diagnostics have existed since the technology was first adopted for obstetric use. Throughout its development concerns about the safety of the apparatus for both fetus and pregnant woman have been raised and refuted. Hospital administrators questioned the value of the expense, while health ministries and officials questioned the routine use of ultrasound and the level of exposure and risks it posed to women. Feminist scholars questioned its function in undermining women's embodied knowledge of pregnancy. However, throughout decades of conversations about the safe and appropriate use of prenatal ultrasound, one set of voices has been remarkably absent: the experiential knowledge of women who have received ultrasounds over the course of their pregnancies. How is prenatal ultrasound experienced by women? How is it valued? How is it understood within the social, cultural and personal embodied experience of pregnancy? Although my research questions focused specifically on the practice of ultrasound in elective (i.e. non-medical) settings, participants referenced their experiences with ultrasound in medical settings in ways that suggested the two were mutually reinforced. As such, it is useful to begin with a consideration of the history and development of medical ultrasound, as it informs the ways it is currently employed in both medical and elective settings.

Thanks in large part to the Historical Collection of the British Medical Ultrasound Society (BMUS), there exists a detailed and comprehensive historical record of the development and diffusion of obstetric ultrasound. Dr. Ian Donald of the Queen Mother's Hospital in Glasgow,

Scotland is widely credited with the first successful application of ultrasound for obstetric diagnostics in the late 1950s. Subsequent improvements in the technology and its rapid diffusion are also credited largely to Donald and his team, who formed early partnerships with the engineering firms that would go on to manufacture ultrasound machines, and personally trained physicians from all over the world on how to use the technology in their own hospitals. Included in the BMUS Historical Collection are Donald's personal correspondences dating throughout his career, media clippings, articles and studies about the development and diffusion of obstetric ultrasound. What follows is a brief historical description of ultrasound as a medical innovation, with particular attention paid to the ways early controversies and understandings have come to bear on how the technology is being used today. I suggest that the historical rise of ultrasound technology is reflected in its current uses and thus provides an important background to my study, and the chapters that follow.

1.4 History of Prenatal Ultrasound

Trained as an obstetrician, Ian Donald's interest in the early development of ultrasound for diagnostic use came from a desire to locate and diagnose abdominal tumors. He was quoted as saying "the most common abdominal tumor in women, is pregnancy" (Oakley, 1984). In fact, Donald acknowledged that discovering ultrasound could be so useful for pregnancy diagnosis came as a "happy accident" (Donald, 1974). Interestingly, he also acknowledged that it was in fact his staff nurse, Marjorie Marr who first used the ultrasound apparatus to detect the position of a patient's fetus (Donald, 1974). At the time of his discovery, the firms working to produce ultrasonic machinery were squarely located in weapons development and industrial metals. Locating wartime submarines or detecting flaws in structural supporting metals were, at the time, the primary markets for ultrasonic technology. In 1955 Donald convinced friends at the Glasgow engineering firm of Kelvin Hughes Ltd. to give him access to one of their machines to test his hypothesis that ultrasound waves could be used to detect masses or tumors in the human body. After an initial breakthrough using slabs of meat and already excised benign and malignant tumors, a partnership was born between Donald and Kelvin Hughes Ltd. and the manufacturing of medical ultrasound equipment began.

By the late 1950s, the first and only ultrasound machine was located at the Queen Mother's Hospital in Glasgow, and operated by Donald, his staff nurse Marjorie Marr and a small cohort

of Donald's colleagues whom he personally trained on the apparatus. Early successes in confirming difficult to diagnose pregnancies meant that both Donald and ultrasound imaging received a great deal of attention. It was not long before word of the diagnostic potential of ultrasound imaging spread throughout the medical community and physicians from other Scottish hospitals were seeking his instruction and looking to purchase ultrasound machines for use in their obstetrics departments. Donald's personal correspondences also include letters from physicians in England, Ireland, Denmark, Saudi Arabia, Canada, and the United States, indicating the burgeoning global interest in the diagnostic potential of ultrasound. Each letter requested the chance to take up residence at the Queen Mother's Hospital, to learn to use ultrasound equipment under Donald's instruction. The exact number of physicians Donald is responsible for teaching is unknown, but it is safe to say that he was instrumental in the development and diffusion of ultrasound, both of which contribute greatly to the ways it is employed today (Nicolson and Fleming, 2013).

1.5 Ultrasound as Medical Modality

The vast majority of Donald's patients at the Queen Mother's Hospital were women who experienced difficulties conceiving and carrying pregnancies to term. Thus, the basis of his efforts to develop ultrasound technology as a diagnostic tool was to intervene in such a way that it might increase the chances of a healthy, live birth. Ultrasound technology proved useful at determining the size of the fetus, the presence of vital organs, as well as the location of the placenta. Information about the size of the fetus allows physicians to predict more accurate due dates based on gestational age. Confirming the presence of vital organs meant that physicians could rule out certain genetic conditions such as spina bifida, and locating the position of placenta allowed for the diagnosis of placenta previa (when the placenta sits on or near the opening of the cervix, increasing the chances of spontaneous miscarriage). A diagnosis of placenta previa was often followed by a prescription for bed rest, which, depending on a woman's work and family situation could prove to be incredibly disruptive.

In its early days, a high risk diagnosis precipitated the deployment of ultrasound, as it had not been intended for routine use in prenatal healthcare. Interestingly, in the five decades following the development of ultrasound technology for use in prenatal diagnostics, routine use has expanded to include all pregnancies (especially in North America and Europe). In Canada,

pregnant women typically receive two diagnostic ultrasounds throughout a pregnancy. The first at or before 12 weeks gestation is employed primarily for the purpose of predicting a more accurate due date (more accurate than relying on a woman's knowledge of the date of her last period). The second ultrasound is typically performed around 20 weeks gestation and is known as a morphology scan. During this ultrasound, physicians are taking measurements and checking to make sure there are no significant deformities or abnormalities in fetal development. These two ultrasounds are considered part of routine prenatal care and are provided to women in Canada at no cost. Ultrasound is further deployed during pregnancies that present as high risk, or if the safety of the fetus is called into question, for example, if a woman experiences vaginal bleeding or spotting.

The increasing technologization of the medical management of pregnancy during the latter half of the twentieth century, of which prenatal ultrasound is a part, contributed to its acceptance and rapid uptake. Rothman (1989) has argued that through techniques of fetal monitoring developed throughout the nineteenth and twentieth century's, the management and control of pregnancy and childbirth shifted from midwives and birthing women, to physicians. Early developments in fetal heart rate monitoring in the 1820s (Wulf, 1985) followed by the more advanced fetal electrocardiogram in the early 1900s (Neilson, 2006) and more recently the performance of fetal surgery, beginning in the 1980s, (Han & Hwang, 2001) facilitated a significant shift in the control and management of pregnancy. This shift was so significant that medical intervention in pregnancy is now normalized, particularly in Western industrialized nations. Though, as my research shows, the issue of the safety of ultrasound technology for both fetuses and pregnant women has been a concern from the beginning, and an inability to definitively prove negative effects has meant that ultrasound is widely considered to be safe. Throughout the early development of ultrasound, Donald maintained an interest in actively monitoring patients who had been exposed to ultrasound during pregnancy and in utero, as he was aware of the potential of harmful effects. At the time, it was suspected that exposure to ultrasound in utero could present risks to the fetus at the level of chromosomes, however this was later disproved (Stolzenberg et al., 1980). Donald was often in the position of needing to defend the diagnostic potential of ultrasound against accusations of potential harm. At some point throughout the diffusion and routinization of ultrasound technology, however, it appears the onus to confirm the safety of the technology shifted from doctors and medical researchers, to pregnant women

themselves, as my research will show. Bypassing medical and governmental regulatory bodies, the responsibility for ensuring the safety of exposure rests with pregnant women, lest they be viewed as unconcerned with the safety and well-being of their fetus. I take up this point in the results and discussion chapters of this thesis.

As ultrasound technology gained popularity, so too did research on its potential negative effects on fetal growth. Soon after ultrasound was first adapted for use in pregnancy, medical researchers began to study its effects, replicating exposure with mice (Stolzenberg et al. 1980), hamsters (Barnett, et al. 1988) and blood cultures (Macintosh and Davey, 1970). Research focused on whether or not exposure to ultrasound in utero had a chromosomal impact on the fetus. Donald criticized these studies for simulating ultrasound exposure at much higher energy intensities than would be performed on humans, and thus dismissed their findings as misleading. He was skeptical of any suggestion that ultrasound had been found to produce negative effects, in part because he kept a close eye on the individual outcomes for his patients. Donald was quoted in many articles and interviews advocating for continued diligence when performing ultrasound on pregnant women. He wrote,

Hitherto all attempts to measure the physical effects of sonar at the power levels employed in diagnostic work have failed, and so far it has not been found that this technique has caused any harm. Experiments are now continuing with chromosome analysis of tissue cultures after exposure to ultrasonics. Our extensive experience in clinical practice encourages the view that the method is entirely harmless. Nevertheless the matter must be kept under constant review (1968: 75).

While Donald remained realistic about the possibility of harm that could be caused by increased exposure or advances in the technology, he was dismissive of the suggestion that when used appropriately, diagnostic ultrasound could cause damage to a fetus. Despite a lack of reliable evidence, the opinions of various medical researchers were published alongside the diffusion of ultrasound across Britain and United States, which questioned the safety of prolonged exposure to ultrasound waves. Highly respected medical journals such as the *British Medical Journal* and high traffic newspapers such as the *London Times*, ran articles suggesting the dangers of adopting ultrasound technology for routine use during pregnancy, including abnormal limb

growth and chromosomal damage. Immediately, Donald and his team began publishing work that countered these assertions and reminded the public of the relative safety of ultrasound as compared to x-rays. Of those who questioned ultrasound safety, Donald wrote,

There are plenty of soothsayers, both within our profession and out of it, whose ignorance and prejudice keep them eager for any chance to hint at hypothetical hazards and whose motive I would trust as I would of 'adders fanged'. It is all too easy to say that absence of evidence is not to be taken as evidence of absence. This implies guilt without proof, a state of affairs which could continue for a couple of generations to come. Conjecture without experiment does not merit further notice (1980: 2).

Donald seemed annoyed that some detractors would cite an absence of proof of safety as evidence that ultrasound was or could be harmful to a fetus. He argued that this was not the same as proving a negative outcome from ultrasound exposure in utero. In fact, on a small piece of scrap paper, tucked among his personal letters, Donald wrote "A doubt is not the same thing as a risk. Benefits are very real. Risks are hypothetical" (personal document, BMUS Historical Collection, year unknown).

In many ways, the controversy regarding ultrasound safety began during its early development and has continued to present. Still today, no definitive, evidence based research exists to prove the absence or presence of negative effects from ultrasound use during pregnancy. Nicholson and Fleming suggest that it is "impossible to prove a negative" pointing to the fact that "millions of fetuses have now been insonated in utero" with no pattern of demonstrable negative effects (2013: 260). This statement epitomizes the approach to research regarding ultrasound in that, unlike other medical technologies, its use is considered safe until proven unsafe.

Although it was not developed for this purpose, Donald was aware of the potential for the general use of ultrasound during pregnancy and acknowledged the possibility that there was a limit to safe exposure. Again, medical ultrasound was developed for the diagnosis of high risk pregnancies and fetal abnormalities, not routine use on all pregnant women (and certainly not for the purpose of entertainment). It was the potential broader, more routine uses of ultrasound technology which led Donald to acknowledge the possibility of negative side effects. Nicholson and Fleming write, "the safety concern surrounding obstetric ultrasound was never quite laid to

rest” though it had never been proven (2013: 225). As a strong proponent of the diagnostic use of ultrasound, Donald was not unaware of the potential for overexposure, acknowledging that once ultrasound technology was widely available in hospitals, the potential for misuse or overuse was ever present. Although he always maintained the diagnostic benefits of the technology, Nicolson and Fleming suggest that,

Donald voiced a particular concern that improvements in the quality of ultrasound imaging, while desirable in themselves, generally entailed an increase in the energy output of the apparatus. Thus the threshold of fetal tissue damage, wherever it might lie, was gradually becoming less remote (2013: 226).

Donald’s opinions came to light in response to technological advances in the field of obstetric ultrasound, which became more frequent very soon after he first began touting the benefits of its use. Beginning in the early 1960s, technical manufacturing firms began developing “real time” ultrasound technology, which laid the ground work for the 3D and 4D scans available today. Although he was impressed by the quality of images, and acknowledged its potential to help pregnant women bond with their fetuses, Donald was unconvinced that real time scans would necessarily provide better diagnostic accuracy than his grey scale scans could provide. Instead, the benefit of real time scans was in the quality of the images produced. And while he acknowledged the value of the reassurance ultrasound imaging could provide for expectant parents, for which clear, high quality images would be useful, Donald maintained that the diagnostic benefits of scanning must outweigh any potential for risk posed to fetus or pregnant woman. This attitude continues to be reflected in the position statements of medical and regulatory bodies such as the Society of Obstetricians and Gynaecologists, and Health Canada, cautioning against the non-medical use of ultrasound.

1.6 Critiques and Criticisms

At the time of its development, criticisms regarding the safety of ultrasound were understood to be coming from two groups; the first was other physicians and medical innovators attempting to perfect the kind of advancements Donald was offering. Criticisms offered by the first group were relatively easy for Donald and his colleagues to dismiss as it amounted, they argued, to professional jealousy and frustration by those offering the critiques that they had not yet

accomplished what Donald and his team had. The second group was feminists, whose critiques seem to have been more difficult to disprove. Nicolson and Fleming (2013) cite Ann Oakley and Barbara Duden respectively as two of the most vocal opponents of the diffusion of ultrasound. Both Oakley and Duden argued that ultrasound technology further objectified women under the medical gaze and undermined women's authoritative knowledge of their own pregnancies. Indeed, Donald openly questioned the reliability of women's embodied knowledge and pointed to ultrasound as useful in large part because it removes any necessity of such knowledge for diagnosis. This attitude invited criticism at the time, and can also be seen in many of the published critiques of ultrasound as a reproductive technology that have followed in the years since. I return to these discussions in the following chapter.

Women's embodied knowledge was understood, by Donald and others, to amount to "traditional guesswork" and led to the conclusion that, "obstetricians are not going to take the mother's word for something they can now determine for themselves" (Nicolson and Fleming, 2013: 262). Here the primacy given to visual, so called objective knowledge is clear, as is its dismissal of women's ability to provide useful accurate information about their pregnancies. However, Nicolson and Fleming suggest that rather than being a direct undermining of women, the development and diffusion of ultrasound was part of a larger trend in medicine throughout the twentieth century, during which time many specialties became "intensely visual" (2013: 263). The authors connect this trend in medical modalities to more far reaching social and cultural changes, suggesting that society "accords special epistemological status to the visual sense. The visual is the real - and the moving image conveys reality to us in a particularly convincing manner" (2013:264). In referring to the early development of real time ultrasound scanners, which began in the late 1960s, the authors suggest that the visual reality of the moving image implies a level of "realness" that was not perceivable with traditional grey-scale still images. This attitude is certainly reflected in the accounts given by many women in the years since, that ultrasound often acts as the point at which they begin to recognize the reality of their pregnancy. This point was echoed by participants in this research and is discussed in greater detail in the chapters that follow.

1.7 Ultrasound and Personhood

Rather than a direct dismissal of women's embodied knowledge, Ian Donald understood his actions to be in service of women; perhaps because in the early days prenatal ultrasound was

used almost exclusively to diagnose high risk and difficult pregnancies. Having worked with these patients for many years, and knowing intimately their sense of loss and frustration, the alternative to which Donald was comparing ultrasound seemed far less desirable. Within his role as an obstetrician, Nicolson and Fleming (2013) suggest that Donald saw the innovation of prenatal ultrasound, from the beginning, as enabling women to bond with their fetus; though perhaps it was not a direct bond between woman and fetus, but a sense of reassurance that allowed women to bond more closely with the idea of their pregnancy. For many of Donald's patients, ultrasound imaging was the sole confirmation of pregnancy and thus, understandably a gateway to bonding and relationship building. Although his reasons were unexplained, Donald understood the capacity of even the earliest grey scale ultrasound imaging to provide pregnant women with a sense of reassurance regarding their pregnancies. Thus, he viewed unsubstantiated claims about the dangers of ultrasound exposure as cruel, given women's desires for such reassurance. Of these claims, he suggested,

One is thus left with the sobering conclusion that these speculations are mischievous and cruel to expectant mothers whose natural anxieties for their babies' well-being need reassurance rather than alarm and distress (1985: 13).

Given its application as an early pregnancy diagnostic tool, the sense of reassurance to which Donald referred could come from the confirmation that one is, indeed, pregnant. It is also the case that Donald's earliest patients were typically women who had difficulty conceiving or who had experienced multiple miscarriages. Personal correspondences indicate that Dr. Donald's patients were extremely grateful for the successful pregnancies resulting, at least in part, from his use of ultrasound technology. In a touching letter, a patient of Dr. Donald's for whom he had helped deliver six children after a devastating series of miscarriages, wrote,

Thank you again for everything from the bottom of our hearts; it has been perhaps the greatest privilege of my life to have been looked after by you (personal correspondence, dated September 2, 1968).

It is clear from the above quote that, despite feminist criticisms of ultrasound and the man behind the technology, Donald's patients felt cared for by him. In fact, Nicholson and Fleming (2013) suggest that it was Dr. Donald who first began to give his patients a copy of one of the images he

obtained during their ultrasound scan. His reasons were not made explicit, although it is widely speculated that this practice was in service of building a stronger bond between a pregnant woman and her fetus.

Undoubtedly, Ian Donald's personal feelings about the value of prenatal ultrasound were reproduced and reinforced through the diffusion of the technology. As its greatest champion, Donald often presented his thoughts on the interpersonal connections facilitated by ultrasound imaging, alongside medical and scientific data regarding its diagnostic capabilities. Later in his career Donald became a vocal anti-abortion advocate and expressed disgust that the technology he had developed, rather than convincing women to continue unwanted or difficult pregnancies, in many cases was used to detect fetal abnormalities that once diagnosed, would lead to termination of the pregnancy. At this point, he put aside safety concerns of the misuse of ultrasound technology and became a champion of the development of real time scanners, which Nicolson and Fleming suggest came from "a conviction that [moving images] conveyed the life of the fetus more vividly than a static image could" (2013: 242). Upon retiring from obstetrics, Donald devoted a great deal of time to championing the efforts of anti-abortion groups. He even produced a film entitled, *Human Development Before Birth*, depicting the ultrasound scan of a healthy, normal pregnancy, while adding his voice in describing the image, and what the "baby" could be seen doing in utero (Nicolson and Fleming, 2013: 242). His film was broadcast numerous times on British, Irish and Italian television throughout the late 1970s. Donald's contribution to that film resulted in an invitation to meet privately with the Pope to commend him for his work in preserving fetal life. It is no coincidence that this association between ultrasound images and anti-abortion groups remains today.

It is clear that, alongside the general public, Ian Donald's ideas about the purpose, use and value of ultrasound imaging shifted throughout his life. As such, evidence was gathered, interpreted and presented in ways that adhered to dominant ideologies of the time. At present, questions regarding the safety and potential risks involved with prenatal ultrasound imaging remain unanswered. Unlike most other medical technologies, ultrasound is understood to be safe until proven unsafe, even while, to my knowledge, there are no continued efforts to study or track the long term effects of ultrasound on women and fetuses. It is also worth noting that Donald's belief

in the personhood of the fetus revealed through ultrasound is reflected in the myriad ways these images are and have been employed, particularly by anti-abortion groups.

The history of the development of ultrasound gives important insight to the ways in which ultrasound technology is used today. Many of the beliefs and attitudes of ultrasound's earliest champions have been reinforced and reproduced throughout its diffusion. The foundation of ultrasound as a technology that removes the necessity of women's embodied knowledge is reflected in the medical experiences articulated by participants in this study. The ability of ultrasound images to convey a sense of reassurance and promote bonding between pregnant woman and fetus is reflected in the advertising for elective clinics, and in the ways participants discussed their motivations for purchasing the service. In the chapters that follow I offer a discussion of women's experiences with elective prenatal ultrasound, and analyze how women negotiated their decisions to purchase the service in light of historical, cultural and social understandings of pregnancy, technology, consumption and motherhood.

Chapter 2 of this thesis provides a comprehensive review of literature relating to numerous applicable fields of study. First I discuss the concept of the medical gaze and the ways in which ultrasound technology facilitates and functions within the medicalization of pregnancy. While there is very little research that takes up women's experiences with ultrasound, the studies that have been conducted specifically reference its applications in medical settings. This research is reviewed and discussed in relation to feminist criticisms of the medicalization of women's bodies, which also do not take up empirical evidence of women's experiences with ultrasound. I then turn to existing literature which details the shift from medicalization to the commodification of reproduction and the ways in which the elective ultrasound industry relies on the association between consumption and good motherhood. Lastly, I position ideologies of motherhood as the overarching belief system that communicates to women what is expected of them as mothers. As the results chapters will show, women's experiences with elective ultrasound were discussed in direct relation to their maternal identities.

In chapter 3 I detail the methodological framework for this research and discuss the methods I employed to pursue the research questions. Included in this chapter is a description of the theoretical assumptions which formed the basis of my inquiry. I position this project as a

feminist standpoint investigation informed by institutional ethnographic principles, and discuss the ways in which it is distinct from traditional ethnographic studies. Lastly I offer a description of the participants in this study, derived from information obtained during the interviews, or provided in the demographic survey given to each participant.

Chapter 4 is the first of four results chapters in which I take up the first of four themes identified from the data. I detail the sense of worry and risk articulated by participants in relation to their pregnancies, and the ways in which their experiences with medical ultrasound served to increase their anxiety, rather than appease it. Foundational to these experiences was a sense of isolation and alienation from their embodied experiences of pregnancy, and an understanding that physicians and medical professionals acted as gatekeepers of authoritative knowledge regarding pregnancy.

In chapter 5 I discuss the results of the discourse analysis conducted of advertising and promotional materials for a selection of elective ultrasound clinics. In this chapter I detail the ways elective ultrasound is positioned as a “fun” and “exciting” experience and the particular ways it is distanced from medical ultrasound practices. I conclude the chapter by highlighting the ways participants positioned themselves as consumers and the particular ways the practice of elective ultrasound relies on and reinforces specific gendered assumptions.

Chapter 6 concerns the specific interplay of risk and reassurance as they were experienced by participants in relation to their elective ultrasounds. As a response to the anxieties they were feeling in relation to their pregnancies, as detailed in chapter 4, elective ultrasound is presented as a consumer choice. The positioning of elective ultrasound as in service of reassurance and bonding, as discussed in chapter 5, is problematized by participants’ fears relating to the safety of exposure. I conclude this chapter with a discussion of ways an emphasis on relationships - both the relationship of pregnant woman to fetus, and between extended family members - both serves to allay fears about fetal well-being, and reinforce an ideology of motherhood that positions women as responsible for nurturing relationships within the family.

In chapter 7, the last of the results chapters, I detail the ways participants discussed elective ultrasound in particular as helping them form a maternal identity. Most participants in this study were first time mothers and as such discussed the importance of “wrapping their minds around”

their impending roles as mothers. In the descriptions provided by participants, they placed special emphasis on the inclusion of their partners during their elective ultrasounds, which I position as beneficial in helping them articulate a particular maternal identity.

Chapter 8 includes a discussion of the results of this research in relation to the literature detailed in chapter 2. Particularly I discuss elective ultrasound as working to facilitate prenatal maternity (Davies, 2009) in ways that rely on and reproduce a specific ideology of motherhood that necessitates complete self-sacrifice, and what Adrienne Rich has termed “powerless responsibility” (1977). I argue that this ideology of motherhood is constitutive of what Dorothy Smith (1987, 1989) calls “the ruling relations” which serves to organize women’s lived experience of pregnancy.

Lastly I offer a conclusion which returns to the historical positioning of ultrasound detailed in this chapter, and suggest points for further examination of the practice of elective prenatal ultrasound imaging.

Chapter 1

2 Literature Review

The practice of elective ultrasound exists on the boundaries between many established fields of study. The medicalization and technologization of women's bodies has long been a concern for feminist theorists who are critical of the ways the medical gaze undermines women's authoritative knowledge. The medical gaze is often referred to in relation to patriarchy, and is discussed by many feminist scholars as particularly devaluing of women's embodied knowledge. The basis of prenatal ultrasound as a medical technology necessitates a discussion of both its medical uses, as well as its diffusion into consumer culture. As a consumer practice, elective ultrasound relies on particular definitions and ideologies of motherhood that reflect a need to consume as evidence of maternal ability. In what follows I detail existing literature, with particular focus on feminist scholarship, in an attempt to position elective ultrasound in relation to medicine, technology, patriarchy, capitalism, ideologies of motherhood and consumption.

2.1 Pregnancy and the Medical Gaze

In one of his most famous works, *The Birth of the Clinic*, Michel Foucault (1963) endeavors to explain the impact of the modern medical system on the ways we understand identity and power in relation to the human body. As a history of medicine, Foucault charts the making of the patient as a particular identity, in direct relation to the making of the medical professional as expert. Such an understanding necessitated the separation between body and soul, in that medical practitioners were charged with treating the body, not necessarily the soul (or mind). As such, the medical gaze was suggested to penetrate the borders of the patient's body, as an effort to "see inside", detect and treat illnesses that remained invisible on the body's surface. For this reason, the medical gaze encourages a disembodied relationship between body and mind, and promotes the belief that bodily processes can be identified and controlled via prescriptive medical treatment. Through defining, detecting and treating illness, the medical gaze positions individuals as patients. The concept of the medical gaze has been of particular concern to feminist scholars of medicine (Young, 1983; Lupton, 2012; Kristeva, Grosz, 1994; Shildrick, 1997; Shaw, 2012) as they suggest that women's bodies are particularly targeted by the medical gaze, while simultaneously remaining misunderstood by the largely male medical profession.

The pregnant woman's status as patient has also been called into question as has the association between pregnancy and illness that precipitates the medical management of pregnancy.

Deborah Lupton argues that, in western societies, women's bodies in particular are seen as "symbolically leaky, open, fluid, [their] boundaries permeable and blurred" (2012:333). This state of being intensifies during pregnancy (as well as menstruation and menopause) and has the effect of rendering women, and their bodily functions, as "chaotic". Lupton contends that because western ideals dictate that the ideal body, or state of being, is "dry, contained, controlled by the mind, closed off from other bodies and autonomous, the female body is therefore considered inferior, lacking, uncontrollable and disturbing" (2012:333). This is especially true for pregnant bodies as they signify a blurring of lines between self and other. Julie Kristeva (1982) asserts that the pregnant body disturbs the ordered and systematic way in which we understand bodies to function, and rather than accept this difference in functioning, we seek to control it. Following Kristeva (as well as Grosz, 1994; Shildrick, 1997), Lupton suggests that "liminality of body boundaries creates cultural imperatives to control and contain such ambiguity" (2012:333). In western societies the desire to control the ambiguity of women's bodies, particularly during pregnancy, manifests in numerous ways, including as an intense and intensifying medical gaze.

Many feminist theorists (Oakley, 1984; Petchesky, 1987; Rapp, 1998; Duden, 1993; Haraway, 1997; Rothman, 1989; Shaw, 2012) contend that this medical gaze seeks to understand the particular functioning of pregnant bodies, in order to control them. Jennifer Shaw offers a reading of pregnant bodies through Foucault's *Birth of the Clinic*. She distinguishes between male and female bodies by virtue of their capacity for reproduction, and argues that women's bodies are subject to the medical gaze in relation to their reproductive capacities in ways that men's bodies are not. Shaw asserts that "this has the dual effect of giving women more perceived control over reproduction (as an internal system that can be potentially monitored and controlled....) while at the same time rendering that system external, in that the interior of the body becomes a thing to be known, an object of discourse..." (2012:127). In other words, Shaw describes the ways in which the medical gaze as applied to pregnancy, has the effect of representing women as capable of both more, and less control over their pregnancies and pregnancy outcomes. The idea that pregnant bodies need to be contained, dissected and

controlled has meant concentrating medical research, technology and innovations, in an effort to understand and ultimately control the reproductive process.

Shaw and others (Haraway, 1997; Duden, 1993) suggest that medical discourses of pregnancy seek to undermine women's embodied and authoritative knowledge as necessary to the production of knowledge about the fetus. Following Haraway (1997) and Duden, (1993) Shaw (2012) argues that ultrasound is a particularly apt example of medical technology designed to take the "guess work" or subjective knowledge, out of the diagnostic equation. She explains, "the advancement that ultrasound represents is the ability to interpret the signs of the fetus without having to read them through the surface of the mother's body, or relying on her testimony as an 'unreliable source'. This is the radical implication of ultrasound: the ability to register the signs emitted by the embryo, independently of the mother" (2012:126). While this independent reading may be the radical implication of ultrasound, it is also a motivation at the heart of its development. As discussed in the previous chapter, Ian Donald was clear in his descriptions of the development of ultrasound as useful in part, because it meant that physicians did not need to rely on women's embodied knowledge. Embodied knowledge is framed as subjective, and positioned against the technical knowledge provided by ultrasound, which is framed as objective. Thus the medical gaze renders women as "unreliable source[s]" in regards to their bodily experiences and instead situates, in this case ultrasound technology and its operators, as authoritative knowers.

The rendering of women's embodied experiences as non-authoritative, has the effect of alienating women from their own bodies. Philosopher Iris Marion Young (1983) draws attention to what she calls the medical alienation of pregnant women from their bodies. She argues that the pregnant woman experiences a particular kind of distancing from her bodily experiences that is both similar to, and distinct from, other kinds of patients. That is to say, Young suggests that all patients are alienated in some way from their embodied experience by way of the authority assigned to medical/technical knowledge. Where the pregnant woman differs from other kinds of patients is in her status as a patient at all. Young contends that "a woman's experience in pregnancy and birthing is often alienated because her condition tends to be defined as a disorder, because medical instruments objectify internal processes in such a way that they devalue a woman's experience of those processes, and because the social relations and instrumentation of

the medical setting reduce her control over her experience” (2005: 55-56). The fact that pregnancy is treated, and managed alongside illness, disease and disorder, leads to a logical conclusion that pregnancy is indeed an illness, disease or disorder. With this designation comes the implicit assumption that there is a cure or a fix for the condition of pregnancy.

Young (1983) and others (Rothman, 1989; Oakley, 1984; Petchesky, 1987; Rapp, 1998) insist that medical and technological interventions into pregnancy, such as induction, fetal monitoring and ultrasound, reinforce the notion of a cure by giving the impression of control. Through a separation of woman and fetus, techniques of fetal monitoring position the fetus as a patient in ways that allow for diagnoses and potentially even medical interventions for the fetus, such as fetal surgery (Casper, 2009). Such interventions not only imply that pregnancy can be controlled, but suggest that it is not the woman herself who is able to assert control; it is instead the medical personnel. Young explains that through this assertion of control, women’s embodied knowledge is devalued and replaced with a means of observation that gives the illusion of objectivity. What is able to be observed takes on the status of authoritative knowledge, replacing or at least devaluing women’s “privileged insider knowledge” (2005: 61). The privileging of “insider knowledge” is not strictly relegated to medical settings, but is rather taken up and internalized by pregnant women as patients.

In a postscript to her essay *Pregnant Embodiment: Subjectivity and Alienation*, written 20 years after the original text, Young points to ultrasound specifically as a technology that has seen a massive proliferation in use from the time the essay was first published. She suggests that ultrasound has accelerated the objectification process, and made it possible for anyone to experience the fetal image. The democratization of identification has meant that “the pregnant woman’s experience of that image is just the same as anyone else’s who views it” (2005: 61). I will return to this point later in the chapter.

Ultrasound may have accelerated the objectification process, as Young suggests, but it did not initiate it. While ultrasound technology provides the most recent and arguably highest quality fetal image, it is part of a long history of visual representations of the fetus. Karen Newman suggests that anatomical illustrations of the fetus date back to the 9th century, and “illustrate a core schema...: a uterus separated from the female body and a seemingly autonomous fetal

figure” (1996:27). In many of the obstetrical illustrations Newman describes, the uterus was represented as a jar-like container, completely independent of any body. The fetus was often sketched as a tiny, but fully formed man, complete with muscle-definition, facial expressions and a full head of hair. The free floating fetus was pictured in various positions which often resembled somersaults or swimming through a pool of water towards the cervical opening. Newman contends that until the 17th century, obstetrical illustrations were consistent with the “medical belief in ‘preformation,’ [meaning] the fetus was conceived of as preformed, a fully fashioned though tiny adult that simply grew in size” (1996:33). At the time there was also a pervasive medical belief that women’s bodies were simply “passive receptacle[s]...with birth taking place thanks to the autonomous efforts of the fetus” (1996:33). Newman’s work highlights the long history of visual representations of the fetus, in which she argues that “the human body as object of scientific study is...always already a cultural object invested with meaning” (1996: 4).

The advent of ultrasound technology to produce images of the fetus meant that fetal images were drawn out of obstetrical textbooks and into broad public view. The meaning invested in images of the fetus has been taken up by numerous feminist theorists in the years since ultrasound images first appeared in the social landscape. Barbara Duden (1993) points to a 1965 issue of *Life* magazine which purported to show the first images of a live fetus inside its mother’s womb. These images also followed the “core schema” Newman described, in that the fetus was pictured completely independent of the maternal body. The high quality and romanticized images were accompanied with captions explaining fetal growth as if the fetus were a kind of explorer of the womb, while it consciously waited for the moment of birth. The images, taken by photographer Lennart Nilsson, were later discredited as not, in fact, images of the life of the fetus in utero, but rather a composite of posed images taken with aborted fetuses. Still, Duden, Petchesky, (1987) Haraway, (1997) Taylor, (2002, 2008) and others, point to these images as an important cultural turning point in how we understand fetal life. Petchesky suggests that the power of fetal images “derives from the peculiar capacity of photographic images to assume two distinct meanings, often simultaneously: an empirical (informational) and a mythical (or magical) meaning” (1987: 269). Ultrasound images appear as empirical due to a privileging of the visual sense, or in other words, the notion that seeing is believing. The mythical or magical meaning Petchesky points to, can be understood as the cultural beliefs we have about fetal life and the value of that life relative

to society. Following this understanding, Petchesky coined the term “public fetus” to refer to the ways that “fetal personhood [becomes] a self-fulfilling prophecy by making the fetus a public presence [that] addresses a visually oriented culture” (1987: 264). Not long after Nilsson’s images were first circulated, ultrasound images began to appear in social spaces. While the clarity and quality of the first ultrasound images barely compare to the highly stylized, 3D images now available, the meaning invested in the images was the same: proof of life in utero. Understandably, these images became popular amongst pro-life and anti-abortion groups in furthering their cause. It was this popularity and political purpose that led to broad feminist critiques of ultrasound and the images created (Petchesky, 1987; Duden, 1993; Newman, 1996; Haraway, 1997; Taylor, 2002; Davies, 2009). Pro-life groups employ ultrasound images in their campaigns and protests, precisely because of the broad associations drawn between fetal images and proof of life. For their purposes, these groups are hoping that women will see these images, understand their representation of life, and change their minds about terminating their pregnancies. In other words, anti-abortion groups are banking on a particular kind of experience of the fetal image. The association between fetal images and a particular affective response is not relegated to anti-abortion propaganda; it can also be seen in the medical deployment of ultrasound. In the following section I take up the ways that ultrasound has been employed in medical settings and the sparse research that exists on women’s experiences with medical ultrasound.

2.2 Medical Prenatal Ultrasound

There exists little research concerned with women’s experiences of prenatal ultrasound. While medical discourses underscore the diagnostic value and accuracy of ultrasound, feminist theorizing has exposed the ways the technology forces a visual separation between woman and fetus. In other words, prenatal ultrasound is framed as either producing valuable medical knowledge, or undermining women’s autonomy. While there is validity to both viewpoints, the question remains, how do women experience prenatal ultrasound? Certainly there are many different answers to this question within the medical context. There exists some research on women’s experiences with medical prenatal ultrasound, which I discuss in more detail below. Addressing the gap in research concerned with women’s experiences with ultrasound in elective settings is the primary focus of this project.

Providing one of the few published accounts of women's experiences with medical ultrasound imaging, Clement, Wilson and Sikorski (1998) write about medical ultrasound scanning in the context of the detection of fetal abnormalities. Their findings were based on a questionnaire distributed in concert with The Antenatal Care Project, which involved 2794 women receiving maternity care at three London-area hospitals in England in the mid 1990s (1998:9). Although The Antenatal Care Project was concerned mainly with women whose fetuses had been diagnosed with fetal abnormalities, they were able to generalize some of their findings about women's experiences of prenatal ultrasound scanning. The collected responses came from 700 women participating in the study and found that most described the reassurance provided by the scan (213), the ultrasound scan itself (193), positive experience with caregiver (168) and the opportunity to listen to the baby's heartbeat (111) as the best things about their prenatal care (1998:10). The authors affirm that the ability to have "the emotional reality of pregnancy confirmed by the scan and to obtain general reassurance about fetal well-being" had positive psychological effects on the women participating in the study (1998:10). Interestingly they identified a paradox in women's experiences with ultrasound scanning; in that, although women described their ultrasound scans as reassuring, their other responses indicated that indeed they were not truly reassured by their ultrasounds. The reassurance they described was temporal, in that it only pointed to the fetus's well-being at a particular moment in time. Many of the participants in The Antenatal Care Project were disappointed by the number of ultrasound scans they received, and suggested that had they been able to have more scans, they would have been further reassured (1998:11). Because women's embodied knowledge as it relates to pregnancy is undermined, ultrasound technology is viewed as one of the only means by which to obtain the kind of reassurance women are seeking. There has always been a degree of uncertainty regarding pregnancy, however, under the medical gaze, pregnancy is positioned as a condition which can be defined and controlled; therefore forwarding the illusion that reassurance is possible with the right technology.

Recognizing the privileged insider status of medical personnel in the exchanges that take place around diagnostic ultrasound imaging, Clement, Wilson and Sikorski suggest a number of ways in which medical care givers can empower women to reassure themselves as to the healthy development of their pregnancies, without the aid of technology or medical personnel. These suggestions include; teaching women to palpate their own abdomens and pointing out fetal body

parts that are recognizable through touch; helping women become more attuned to the movements of their fetus, as well as providing a common stethoscope so women may listen themselves to the fetal heartbeat (1998:13). By shifting the control over this information and reassurance, from medical personnel to the women themselves, their emotional reliance on technology may decrease. The authors affirm the psychological value of prenatal ultrasound scanning for women and their families, but suggest that the most positive outcomes can be assured through focused support. They suggest that this “support should involve listening to women, acknowledging their feelings and responding to their wishes and needs as individuals” (1998:21). Here they are arguing for a woman-centered approach to healthcare which focuses first and foremost on the needs of women.

A lack of recognition and affirmation of embodied knowledge about pregnancy not only shifts the site of reassurance from women to technology and/or medical personnel, it also underscores the need for reassurance in the first place. Such thinking relies on both deference to technical knowledge, and an understanding that pregnancy is a tenuous physical state, subject to change at any moment. A change in the status of a pregnancy may or may not be attributed to the woman’s own actions and behaviour. In other words, recognition that women themselves pose a risk to their fetus’ well-being (an understanding that runs counter to the social and cultural positioning of mother as protector) is implicit in discussions about the reassuring potential of ultrasound. In her description of the medical and non-medical uses of obstetric ultrasound, Janelle Taylor (2008) argues that the justification for ultrasound as promoting reassurance and bonding is a complicated, and in many cases, contradictory argument. Taylor contends that the terms “reassurance” and “bonding,” although they sound similar, actually point to contradictory or opposing views of pregnancy. Within the context of pregnancy, reassurance is framed as confirmation that there is nothing wrong with the fetus, that it is healthy and developing normally. However, Taylor suggests that since not all fetal abnormalities or problems can be ascertained with ultrasound, and given the changing nature of pregnancy in which problems can arise at any point throughout the duration of gestation, whatever reassurance that is offered by ultrasound is limited. The primary reason reassurance is sought in this context is to inform subsequent decision making for the pregnant woman and her physician. So, if the results of a diagnostic ultrasound were to reveal any abnormalities, a decision could be made as to whether the pregnancy should continue or be terminated. While the politics of abortion are highly

controversial, termination for reasons of disease or defect are more broadly accepted by the public. Taylor suggests that this notion of reassurance differs drastically from the notion of bonding, which seeks to promote a closer, more protective relationship between woman and fetus. In fact, it might be assumed that were bonding to take place, reassurance may become much more difficult to obtain, as it would complicate the decision to terminate a fetus with which one has already bonded.

Bonding, as it is promoted by ultrasound, should not be understood as arising from an altruistic concern for the relationship between woman and fetus. Rather, Taylor argues that there is an expectation of behavioural changes that result from the kind of bonding ultrasound imaging promotes. She states “the sight of the ultrasound image is expected to work an emotional transformation upon the viewer, which will in turn inspire the desired behaviour” (2008:60). In medical terms, this “desired behaviour” would include things like the cessation of smoking, adoption of a healthier diet, more focus on exercise and taking care of oneself for the sake of the growing fetus (Campbell et al. 1982:60). Taylor is also critical of the motivations behind the promotion of bonding via ultrasound, since it relies on particular understandings of women’s emotional disposition and prior behaviour. She identifies two major issues with this mode of thinking about bonding. The first is that it “equates pregnancy with the relationship between a woman and her newborn child - in this regard it presumes a view of pregnancy as absolute” (2008:64). In other words, the tentative condition of pregnancy is reframed as a process with a guaranteed outcome. The second issue Taylor identifies is one that echoes concerns raised by other feminist theorists (Oakley, 1984; Petchesky, 1987; Haraway, 1997) which is that technological bonding negates or ignores the embodied attachment between a woman and her fetus. In other words, “the theory that ultrasound promotes bonding suggests that this relationship forms through technologically and professionally mediated spectatorship” (2008:64). This type of spectatorship relies on the assumption that bonding has not, and cannot occur, without the opportunity to see inside the womb.

The role of spectator of ultrasound images is not confined to pregnant women. In fact, numerous feminist theorists (Petchesky, 1987; Duden, 1993; Haraway, 1997; Taylor, 2002, 2008) have discussed the role of ultrasound technology in creating a “public fetus”. An ability to image the fetus has prompted the dissemination of fetal images in the social and cultural landscape. The

ubiquity of ultrasound images in popular culture, alongside their routinization in prenatal healthcare, has meant that the reading and deciphering of these images is much more common. In addition, ultrasound scans have been increasingly opened up for viewing by individuals other than the pregnant woman. Within medical settings, partners are often invited in to the screening room at some point during the ultrasound session. Alternatively, elective ultrasound businesses take this a step further and encourage women to bring their family and friends along for the session. In fact, elective ultrasound businesses are designed for this purpose and often take place in large rooms, with plenty of furniture to accommodate the increase in spectators.

In one of the only published accounts of men's responses to ultrasound imagery, Margarete Sandelowski (1994) contends that expectant fathers receive a greater degree of benefit from being present in the ultrasound screening room than do expectant mothers. Derived from a study which included 62 child bearing couples interviewed about their experiences with medical ultrasound, Sandelowski found that while for women there was a potential to experience ultrasound as a "disabling mechanism", men exclusively experienced ultrasound as an "enabling mechanism" (1994:230). She suggests that for expectant fathers, "ultrasonography is always enabling, permitting them access to a female world from which they have been excluded by virtue of their limited biological role in reproduction" while for expectant mothers, ultrasound may disrupt "the privileged access to the fetus that only being 'with child' confers" (1994: 232). Sandelowski refers to the fact that, in her study, men reported feeling an increase in attachment and connection to the fetus by way of the visual image itself, as well as how the experience was organized around them. For example, some participants in the study indicated that the obstetrician (who accompanies the ultrasound technician during medical scans) spoke mainly to the expectant father, pointing out things in the image and directing him in how to interpret what he was seeing. The women in these couples described feeling that they were simply a means through which to view the fetus. This reduction in subject status meant that women felt disconnected from their embodied experience by way of the ultrasound. Such accounts stand counter to the notion that ultrasound technology is collaborative, in the sense that it requires all parties present in the scanning room to actively interpret the image.

Sandelowski suggests that without ultrasound technology, a pregnant woman experiences a privileged relationship with her fetus because it resides within her (1994:233). It is implied that a

pregnant woman possesses embodied knowledge of her fetus that is “corporeal and concrete, she ha[s] tactile and kinesthetic awareness and an overall sense of knowing the fetus that her male partner cannot have” (1994:234). While the fundamental connectedness of woman and fetus cannot be denied, I suggest that the embodied knowledge Sandelowski (1994) describes is not a given. As with other forms of knowledge, embodied knowledge must be recognized, understood and valued for its authoritative status. Since the medicalization and technologization of pregnancy has undermined the status of embodied knowledge, we must re-learn to see tactile and emotional knowledge as authoritative.

In keeping with the notion of the “public fetus” discussed by Petchesky, (1987) Duden, (1993) and others, (Haraway, 1997; Taylor, 2002, 2008) Sandelowski (1994) asserts that ultrasound technology has functioned to expand the fetal experience, such that professionals (ultrasound technicians, radiologists, obstetricians) and expectant parents are all cast as spectators of the fetal image. She suggests that ultrasound “has altered the epistemology of expectant parenthood by emphasizing seeing as the principal mode of fetal inquiry and by extending the sensory capabilities of nonpregnant inquirers” (1994:234). Such a description suggests a more sinister or negative outcome than the “collaborative coding” discussed by Taylor (2008) and Palmer (2009). The most significant difference in the two descriptions is the status of each individual as authoritative knower. While collaborative coding suggests that each are equal participants in the interpretation of the image, Sandelowski’s description implies that women are de-centered from the process, while other observers (expectant fathers, physicians and ultrasound technicians) are drawn further into the centre. Sandelowski contends that this process serves to fulfill women’s desire to include their partners, which can be understood as the gendered expectation of women to nurture all familial relationships. Referencing Lorber (1989, 1993) and Raymond (1990), she claims that “the fetal sonogram helped men *see* the fetus, and it helped women to help their partners see, thereby reinforcing women’s roles as gatekeepers to the fetus and the experience of pregnancy, and as altruistic gift-givers” (1994:237). Women are the physical gatekeepers of the fetus in such a way that it distinguishes pregnancy from other experiences to which men have access, in equal or greater ways than women. By facilitating this shift in roles, women are engaging in the kind of nurturing and self-sacrificial behaviour that is expected of them, particularly as they become mothers. Conversely, in the effort to focus the ultrasound experience on men’s needs and desires, women can be left out, alienated or isolated from the process.

Particularly in the interactions Sandelowski described where descriptions were directed first and foremost to expectant fathers, the effect is that women are seen as secondary or as mere incubators for their fetus. Thus, she describes ultrasound technology as potentially isolating women from their embodied experience, while simultaneously devaluing or undermining their embodied sensations.

Conversely, some have argued that elective ultrasound sessions may enable women and their families to engage in a process of “collaborative coding” (Taylor, 1998; Roberts, 2012) whereby they make personal and social meaning of the fetal image through an iterative process in which all can participate. Some feminist critics of ultrasound technology (Sandelowski, 1994; Haraway, 1997; Stabile, 1999) contend that ultrasound technicians are positioned as authoritative knowers in possession of the appropriate level of technical skill and know-how to interpret and explain the image. However, Julie Roberts (2012) suggests that women, partners and families, alongside ultrasound technicians, actively interpret, narrate, and thus give meaning to ultrasound images, collaboratively. Much of the existing scholarship deals specifically with diagnostic prenatal ultrasound in clinical settings, which arguably relies more heavily on technical and medical knowledge than elective ultrasound scans. While the ability to accurately interpret the technological image is necessary, alone it does not give meaning to the ultrasound image. Indeed, Sandelowski, (1994) Mitchell, (2001) and Roberts (2012) each assert that “translation is not a one-way process, with patients as passive recipients of expert knowledge, rather meaning emerges from the social interactions in the scan room” (Roberts, 2012: 301). As my study will show, this is especially true of elective ultrasound scans due to their primarily social, non-diagnostic function. Pregnant women, partners, parents, siblings and others are required to give personal, specific meaning to the images in the context of their growing families and changing roles. In this way, elective ultrasound in particular, can be understood as primarily social in that it facilitates and encourages the collective building of an identity for the soon-to-be baby. Perhaps more importantly, participants in this study indicated that their elective ultrasound experiences helped them to build a maternal identity while connecting the visual image with their embodied knowledge. Additionally, participants described situating the image, and the meaning they took from it, (within the broader context of their pregnancies) which, for many, provided reassurance and confirmation in both anticipated and unanticipated ways. Again, interpreting the

image was not a solitary process, but a collaborative one that involved the pregnant woman, her partner and family, as well as the ultrasound technician.

The expansion of prenatal ultrasound technology from strictly medical settings, to commercial businesses requires a broadening of the discussion from the ways the medical gaze undermines women's authoritative knowledge, to the role of capitalism and commodification as it concerns ultrasound imaging. In the sections that follow, I discuss the commodification of reproduction as a social and cultural phenomenon, and position the elective ultrasound industry within capitalist modes of thinking about production and consumption.

2.3 Commodification of Reproduction

Barabra Katz Rothman (1989, 2004) and others (Layne, 2004; Clarke, 2004; Fletcher, 2006; Overall, 1986; Voigt and Laing, 2010) have observed that pregnancy, as experienced under capitalism, is characterized by increasing commercialization and commodification. This social phenomenon is identified as the commodification of reproduction. The term commodification of reproduction "refers to the processes by which economic relationships of various sorts are introduced into the social patterns of human reproduction" (Overall, 1986:6). Reproduction is commodified by assigning market value to reproductive experiences and processes.

The notion of the commodification of reproduction was first applied to reproductive processes, and arose out of advances in new reproductive technologies, such as in vitro fertilization and surrogacy. These advances have allowed sperm, eggs, embryos and wombs to be bought and sold in an increasingly global marketplace (Voigt and Laing, 2010, Banerjee, 2010). Feminist and bioethics theorists such as Rothman, (1989) Banerjee, (2010) and Overall (1986) have indicated the numerous ethical dilemmas that can arise when body parts or functions are assigned a market value. This market value will depend on many social and cultural factors, such as the age and race of a gestational surrogate, or the height and educational attainment of an egg donor (Rothman, 1989). In each case, young, white, middle class bodies, and thus body parts, are given the highest value. The commodification of reproductive processes assigns market value not only to the body parts or functions that are bought and sold, but also to the fetus (and eventual child) that results from this exchange. The sum of money spent on conception or gestation services can be said to transfer to the fetus - making the fetus more or less valuable, depending on the amount

of money spent. Rothman asserts that “one thing that the market is good for is forcing us to confront our values” (1989; 177). Implicit in the commodification of reproduction is the social, cultural and financial value of having a child of one’s own. Based on the cost of services such as in vitro fertilization, egg donation or surrogacy (laws in Canada prevent a surrogate from being paid for her gestational work, however money and items are often given to the surrogate as gifts) we are able to pinpoint an exact market value for reproduction, and clearly identify those who are unable to participate in this market.

In the above examples, it is the process of reproduction, or conception that has been commodified. However, given the abundance of goods and services specific to reproduction that are available for purchase, the experience of pregnancy itself can be understood as commodified (Armstrong, 2002; Voigt and Laing, 2010). It is particularly interesting to frame pregnancy in this way because commodification “refers to the transformation of something that would not by its nature be considered to be a saleable good into a (mere) commodity” (Voigt and Laing, 2010). Arguably, pregnancy and childbirth are not, by their nature, saleable goods, despite the historical legacy of the exploitation of women’s bodies and reproductive processes (Rich, 1977; Davis, 1993). The massive growth in availability and popularity of new reproductive technologies proves that reproduction is now understood to be “for sale”.

The proliferation and routinization of medical and technological advances have facilitated their use for commercial purposes. Prenatal ultrasound imaging is a prime example of a medical technology that has come to gain a market value outside of its medical or scientific context. The existence of for-profit, elective ultrasound clinics and the increasing demand for their services highlights an emerging trend in the commodification of reproduction. Voigt and Laing, (2010) among others (Layne, 2004; Clarke, 2004; Fletcher, 2006) observe that pregnant women comprise a valuable niche market to buy products, both for their unborn child(ren) and for themselves (in the form of maternity clothes, pregnancy and parenting advice books, prenatal vitamins, and so on). The increasing availability and diversity of products and services marketed specifically to pregnant women, have had the effect of normalizing pregnancy-related consumption to such a degree, that the line between ‘wants’ and ‘needs’ becomes blurred. In western countries, pregnant women as a group have a particular consumer identity, meaning the

experience of pregnancy is now “intrinsically connected with consumerism” (Voigt and Laing, 2010:254).

2.4 Capitalism and Commodities

In the context of private prenatal ultrasound clinics, it is important to consider the services provided as a product to be consumed, and consider the fetal image a cultural artifact that can be, and is, consumed. To explore consumption in this way it will be useful to engage with a Marxist theory of capitalism and commodities, namely the relationship between labour, the commodity produced, and the social value it comes to signify. Specific to this project is an understanding of commodity fetishism, referring to the ways in which commodities come to take on certain characteristics and values through social relations. Commodities are fetishized into things that bring us pleasure or take on certain meanings within a cultural and social context. As a fetishized commodity, the fetal image may bring us pleasure, or come to signify new understandings of maternity or parenthood, for example. Marx suggests that “the products of labour become commodities, sensuous things which are at the same time suprasensible or social” (1976: 11). The social value of the commodity of prenatal ultrasound is evidenced by the interactions that take place during and after the ultrasound session, involving ultrasound technicians, friends, family members, co-workers, and pregnant women themselves. In elective settings, the ultrasound scan is presented as a social activity to include friends and family. The value of this interaction, and thus the commodity of prenatal ultrasounds, is shown to be the connections made, and bonds formed, between the people in the room and the fetus. The value of the commodity also extends beyond the walls of the clinic, in that women are given the opportunity to purchase photos and videos of their ultrasound session, which will enable further social interactions when the video is viewed, and the photos are shown to others.

As with any commercial endeavor, the prenatal ultrasound industry has a specific consumer in mind. While pregnancy is no doubt the primary characteristic of this preferred consumer identity, many other characteristics are implicit in the advertising and marketing strategies of private ultrasound clinics. For example, emphasis on the advantages of elective prenatal ultrasound imaging for fathers, seems to suggest that the preferred reproductive consumer is heterosexual and either married to, or dating, the father of the fetus. The intended inclusion of fathers and

other family members is an explicit purpose of elective ultrasound services, as they aim to facilitate the building of relationships with the fetus.

The value of ultrasound is framed as a social relation in the marketing strategies of many elective ultrasound clinics (as will be established in the chapters that follow). The ultrasound session is presented as a social activity, as clients are encouraged to fill the room with family members and friends. Social connections are emphasized, in part because medical or diagnostic ultrasounds performed in hospital do not allow for such interactions (Palmer, 2009). Fletcher states, “consumption is sometimes organized to provide for needs in ways which are not geared towards profit-making but which are about building social relationships between people” (2006:30). As mentioned, the social value of consuming prenatal ultrasounds is evidenced by the connections made between those present in the room. However, a unique point of prenatal ultrasound is that it facilitates the development of a social relationship between the woman, her family and friends, and the fetus. This social value is transmitted through the fetal image itself, and exemplified by the interactions that take place with and around the image.

2.5 Elective Prenatal Ultrasound

While research on ultrasound is plentiful, very few studies have been conducted that specifically take up ultrasound in an elective or commercial setting. Janelle Taylor (2008) provides a comprehensive anthropological account of the practice of “keepsake ultrasound imaging” in the United States, while Julie Palmer (2009) offers insight into the elective ultrasound industry in the United Kingdom. Charlotte Krolokke’s (2010) work employs an analysis of marketing materials for elective ultrasound clinics in the United States and Denmark. She provides a cultural comparison of elective prenatal ultrasound as they relate to, and remain on the boundaries of, each country’s healthcare system. Taylor’s (2000, 2008) work is focused primarily on the role of ultrasound technicians (or ultrasonographers) and the descriptive and iterative ways in which they bring the fetus into being. Taylor’s work also engages with the concept of the “public fetus” particularly as it is employed by anti-abortion and pro-life groups. She argues that using ultrasound images for the purpose of promoting a pro-life agenda, affects the way we, as a society, understand these images and what they purport to show us. Julie Palmer’s (2009) work involved observing elective ultrasound sessions at three different clinics in the United Kingdom.

She chronicled the kinds of social exchanges taking place between ultrasound technicians, pregnant women and their partners. Each of these three studies offers important and similar insights into the particularities of prenatal ultrasound as an elective practice. While they often refer to the experiences of pregnant women as elective ultrasound consumers, none of these studies takes this experience as the basis of inquiry.

Most closely related to this project is the work of Charlotte Krolokke, (2010) and her examination of promotional websites for a selection of elective ultrasound clinics in the United States and Denmark. Krolokke contends that elective ultrasound represents the convergence of technocratic, holistic and consumer models of pregnancy. She suggests that holistic models of pregnancy, which involve procedures like home births, and labour attendance by midwives and doulas, present a sharp contrast to the technocratic or medical models of pregnancy which tend to involve much higher degrees of intervention, such as assisted reproductive methods or cesarean sections. Pointing to the work of Franklin, (1991) Duden (1993) and Rothman, (1989) Krolokke asserts that technocratic models of pregnancy, specifically those that take up visualization technologies such as ultrasound imaging, displace women's embodied experiences. An authoritative shift takes place here, which grants credence to technological and medical forms of knowledge over those felt and communicated by women themselves. Conversely, Krolokke suggests that holistic models of pregnancy "deliberately grant women agency in the decision making [process. As such] the maternal-fetal relationship is cast as mutual and interdependent of each other" (2010:141). Holistic models of pregnancy are understood to result, at least in part, from feminist critiques of technocratic models that suggest women are undermined (Franklin, 1991) or erased all together (Stabile, 1999; Haraway, 1997) by the imposition of highly technical forms of knowledge gathering during pregnancy.

Krolokke argued that a consumer model of pregnancy, as exemplified by elective ultrasound clinics, presents a confluence of both the technocratic and holistic models, to provide women with a trustworthy and consumable experience. She contends that a consumer model "privileg[es] issues of women's agency, as they unfold in consumer culture" (2010:142). In other words, pregnant women assert their agency through the consumer choices they make regarding their pregnancy. This attitude was certainly reflected by participants in my study who were very clear to position themselves as active agents in the purchase of elective ultrasound. Krolokke

continues, “at the crux of the consumer culture model is the notion that pregnancy is intricately tied to consumption choices that mark the onset of motherhood” (2010:142). Here she draws on the work of Clarke (2004) in explaining that within our broader consumer culture, we have come to define motherhood - and specifically “good motherhood” - based on consumption. One’s ability to consume is important, as is what is consumed. Class becomes an important indicator of “good motherhood” as it facilitates or forecloses the purchasing of consumer items (Clarke, 2004). Thus, instead of aligning authoritative knowledge with technology, or with narratives of embodied experience, a consumer model of pregnancy takes consumption choices as evidence of a proper understanding of legitimate expressions of motherhood.

Elective ultrasound clinics are an apt example of the consumer model of pregnancy discussed by Krolokke (2010). Such clinics provide not only a service to be bought and consumed, but they also facilitate the consumption of the fetus as a “product or commodity” (Krolokke, 2010:142). The fetus becomes a visual product to be consumed by expectant parents and families. The image is appropriated into “take home” products such as glossy pictures, DVDs and various other consumer items. Citing Joseph Pine and James Gilmore (1999) Krolokke contends that beyond simply products and services, elective ultrasound clinics are offering “profound[d] experiences and potentials for transformations” (2010:142). Indeed, the promotional websites reviewed for this project, reveal the ways in which elective ultrasound is framed as a transformatory experience which increases the bonds between pregnant woman, fetus and extended family members. The elective ultrasound experience is prescriptive in that clinics advertise a particular and similar (to each other) setting and atmosphere in which to view images of the fetus. Seeing or “meeting” the baby via ultrasound imaging is framed as a profound experience, while the potential for transformation is found in the building or reinforcing of new relationships, or roles based on the impending arrival of the baby. For example, many women suggest that it is through viewing an ultrasound image of their fetus that they begin to recognize themselves as mothers. As previously discussed, a similar relationship shift is reported by fathers (Sandelowski, 1994). Krolokke further contends that through the consumer experience of elective ultrasound imaging, pregnancy “becomes a performance in which the woman’s consumption - from her choice of baby carriage to food consumption - signals the type of mother she wants to be” (2010:142). This understanding implies that there are proper ways to perform pregnancy related consumption that would suggest a woman wishes to become a “good mother”.

Seeking out and purchasing elective ultrasound communicates a strong desire to “meet” and connect with one’s fetus, that draws on dominant ideologies of good mothering. Therefore one’s status as a mother is displayed via consumer choices.

Chevernak and McCullough (2004) endeavour to understand the ethical significance of the practice of elective ultrasound, or what they term “boutique imaging” (2004:31). The authors reference the psychosocial risks involved in elective ultrasound imaging by way of an increased attachment with the fetus, that may develop abnormalities and influence decisions regarding pregnancy termination. Chevernak and McCullough (2004) also take issue with the economic incentive to performing elective scans for physicians or entrepreneurs and, subsequently, the economic burden placed on women and families in order to purchase the service. Here they are specifically referencing trained and licensed physicians, who open up their practices of obstetric ultrasound to women seeking the service for non-medical reasons. Interestingly, the authors draw a comparison between elective prenatal ultrasound imaging and cosmetic surgery. The similarities between these two procedures lie in patients’ (or clients’) ability to elect such procedures. However, Chevernak and McCullough contend that elective ultrasound should not be understood along these lines because “cosmetic clinical intervention usually requires for justification that the patient does not like some aspect of his or her appearance. The patient is experiencing some psychosocial deficit, no matter how idiosyncratic it might be. A pregnant woman experiences no such psychosocial deficit, only curiosity” (2004:32). The justification for cosmetic procedures lies in their ability to fix something that was broken or undesirable. Chevernak and McCullough suggest that ultrasound imaging has no such capacity. The authors assert that in terms of justification, the psychosocial effects of disliking a certain aspect of one’s appearance are sufficient cause for surgical intervention, while experiencing curiosity in regards to one’s fetus, is not. Based on the level of anxiety some participants in my study described, prior to having their curiosity about the fetus satiated, I would argue there are indeed psychosocial effects and justifications that have not been properly identified or analyzed. Consequently, Chevernak and McCullough (2004) argue for the relegation of ultrasound imaging to medical, clinical practice.

What the literature detailed above confirms, is a distinct link between practices taken up during pregnancy, and a particular ideology of motherhood. Actions taken during pregnancy occur in

relationship to a desired maternal identity. Rather than being an individual assertion of maternal ability according to one's own set of standards, the ideology of motherhood to which women are encouraged to ascribe, is rigidly defined and prescriptive. In the section that follows, I detail ideologies of motherhood, with particular focus on what Adrienne Rich (1977) defined as the "institution of motherhood". What Rich and other scholars of ideologies of motherhood (Rothman, 1989; Lazarre, 1997; O'Reilly, 2004) have in common is the association they detail between the ways we conceive of and understand motherhood as in direct relation to patriarchy.

2.6 Ideologies of Motherhood

In her groundbreaking autobiographical work, *Of Woman Born*, Adrienne Rich (1977) described her own feelings of shame and guilt about her maternal abilities, and attributed these feelings to what she termed "the institution of motherhood". Rich suggests that under patriarchy, the qualities which define motherhood - instinct, self-sacrifice, unconditional love - are understood to come naturally, or without effort, for women. Instead she argues that the ways we have come to understand motherhood, and by extension, pregnancy, result from a system of patriarchy that seeks to control women's bodies and undermine their social power. She explains that the so-called natural qualities associated with motherhood, are instead socially imposed upon women, and thus must be understood as separate from women's embodied experiences of pregnancy. Rather than an attempt to demonize or deny motherhood as an important and noble vocation, Rich's work was rooted in her own desire to reconcile her experiences with, and feelings towards, mothering her own three children, as described in years of journal entries. In these journals Rich articulated her feelings of guilt and inadequacy as she continued to experience a range of emotions in relation to her children, including frustration, anger and a desire for solitude. Because such emotions run counter to the socially validated institution of motherhood and its promotion of constant selfless relation to one's children, Rich described feeling that, in many ways, she had failed in her duties as a mother.

Despite the argument that these selfless qualities are natural to women, Rich draws a clear conclusion that they are, in fact, cultural ideals supported and maintained by patriarchy. Patriarchy is a system of domination in which men hold social, political and economic power, and in which women's only meaningful vocation is as the bearers and nurturers of children (Oakley, 1984; Brownmiller, 1984). Within the vocation of motherhood, women are afforded

little recognition besides an assumption that they are fulfilling their duties as reproducers. Rich suggests that our social and cultural institutions, including the nuclear family, are patriarchal constructs designed to control and dominate women. Rich explains that the notion of the nuclear family - male breadwinner, female caregiver, and children - upon which contemporary Western society is built, is a violent illusion in which women bear an extraordinary amount of responsibility yet hold very little power. The violence comes from the imposition of the responsibility to bear and nurture children, and the active denial (or removal) of choice for women to control their own reproductive processes. Within the nuclear family, women's responsibility is to care for, and nurture her husband and children; however these are not recognized as special skills. Instead, they are understood as natural inclinations for women and as such, are socially and culturally undervalued.

Central to the institution of motherhood is a predicament Rich has labelled "powerless responsibility". It means that women are responsible for performing (and for desiring to perform) a particular kind of motherhood, yet they are afforded no power to dictate the terms of their mothering, including but not limited to: when and how many children to have, prenatal care and attendants, methods of birth and breastfeeding. She explains that powerless responsibility results in isolation, shame and guilt for individual women, in relation to their mothering capacities, as they are separated from the experiences of other women and taught to assume that their desire to mother should be constant, and their ability to do so, innate. Rich's contention may be summed up as follows:

My individual, seemingly private pains as a mother, the individual, seemingly private pains of the mothers around me and before me, whatever our class or colour, the regulation of women's reproductive power by men in every totalitarian system and every socialist revolution, the legal and technical control by men of contraception, fertility, abortion, obstetrics, gynecology, and extrauterine reproductive experiments - all are essential to the patriarchal system, as is the negative or suspect status of women who are not mothers (1977:34).

Rich's description highlights a plausible justification for the diminished status of motherhood in contemporary society. If the full power and possibility of reproduction were recognized,

women's status as mothers would be lauded, revered and held sacred in its unparalleled production of human life. Instead, women are positioned as passive vessels through which new life passes. Their physical capacity for this work is unquestioned by biology, yet undermined by its biological connection. In other words, because reproduction is a biological process, the skills associated with the successful execution of motherhood (unconditional love, attentiveness, nurturing touch) are thought to be biologically inherent, and thus afforded little corresponding social status. For Rich, this devaluation is a method of patriarchal control, which imposes binary ways of thinking about motherhood, presupposed on an impossible ideal. The selfless, loving, nurturing, and perfectly content mother is the ideal against which all women's mothering capabilities are judged (and found wanting). Any hint of resentment, anger, frustration, or longing for solitude is taken as an affront against the institution of motherhood, and brands those women who admit such feelings as "bad" mothers. The separation of good and bad mothers has a history as long as the institution of motherhood and, as Rich contends, is displayed very clearly in societal responses to infanticide. The idea that a woman could or would kill her own child is in direct opposition to every tenant of the institution of motherhood. The frustration and anger one would need to feel in order to take the life of a child (and, I would argue, shame, fear and desperation) is in direct contradiction to women's assumed innate, biological capacity for selfless, unconditional love.

Following Rich, Betsey Wearing (1984) endeavored to deconstruct the notion of ideology as it relates to motherhood. Wearing's concept of ideology, derived from Marxist theory, is defined as, "a legitimating mechanism which distorts the true relationships of material production" (1984: 15). At issue here is the concept of the nuclear family, and the ways in which it is rooted in, and supportive of, the capitalist means of production. Under this definition, women are positioned as responsible for the care of private life, while men are responsible for representing the family in the public sphere. Wearing argues that gender biases are implicit in this system, as men's work in the public sphere is seen as productive and valuable, while women's work in the private sphere is invisible and undervalued. She suggests that the reason for this distinction lies in gender biases that are reinforced through the organization of social life. Rather than being the basis for this organization, Wearing contends that biological arguments regarding women's natural and innate mothering capacities, serve to prop up this ideology in ways that benefit the

“ruling class” (1984: 16). In this case the ruling class has a distinct class and gender identity. In short, ideologies of motherhood serve to maintain a patriarchal and class based social system.

Barbara Katz Rothman (1989) also positions motherhood under patriarchy and suggests that the “central social relationship” of kinship under patriarchy is that of the father. In other words, “women, in this system, bear the children of men” (1989:15). Focusing on the analogy of “the seed”, Rothman describes our understanding of pregnancy as growing that which has been “planted”. The fetus would not exist without the implantation of sperm, just as the plant would not exist without the seed. Placing sperm, and thus men’s contribution to the reproductive process, as the central and integral step, devalues the work of gestation, labour and ultimately mothering. This argument supports the claim that reproductive technologies are a means through which men assert control over reproductive processes. Again, from a Marxist standpoint, men own the means of production, while women, literally, provide the necessary labour. Rothman recognizes the impacts of this way of thinking, particularly in relation to its “reification of] the patriarchal concept of woman as vessel” (2004: 285). Rothman therefore contends that capitalism and consumer culture, work to reinforce patriarchal ideologies of motherhood that displace women’s embodied labour, and devalue their contributions to the reproductive process.

Further, Rothman suggests that, as an extension of patriarchy, technology - particularly reproductive technologies - should be understood as ideology. She argues that as a function of patriarchy, pregnancy, or the production of human life, is reduced to a capitalist relationship between labourer and product. While women are the labourers responsible for producing the child, Rothman argues men are positioned as the supervisors or foremen of women’s labour through the medicalization and technologization of pregnancy and birth. This way of thinking leads to the conclusion that women’s bodies and reproductive capacities, are resources that can then be exploited for capitalist gains. Rothman contends “the ideology of technology has as its consistent theme a connotation of order, productivity, rationality and control” (1989: 29-30). The ideology of technology is reflected in medical practices which aim to manage pregnancy and childbirth to make it more “efficient, predictable [and] rational” (1989: 31). Understanding pregnancy in this way leads to the analogy of the “mother machine”. Women’s bodies and functions are mechanized, manipulated and controlled, which Rothman insists produces an understanding of the maternal-fetal relationship as one which is “divided, systematized, reduced”

(1989: 31). Rothman's contention reflects many of the feminist concerns previously detailed in this chapter regarding medicalization and reproductive technologies, as reorienting authoritative knowledge from pregnant woman to physician.

In contemporary Western culture, one of the most accessible ways to display one's adherence to the institution of motherhood is through consumption. The purchasing of pregnancy related goods and services, has the immediate effect of displaying publicly a woman's desire for, and connection to, her fetus. The relationship between consumption and maternal identity are discussed in the following section.

2.7 Consumption and Maternal Identity

The relationship between pregnancy, motherhood and capitalism is a complicated one. Within a capitalist system women are variously positioned as producers and/or consumers of (sometimes human) commodities. From a Marxist standpoint, women's bodies are the literal means of producing citizens (Rothman, 1989). Among the first to position motherhood under capitalism Rothman argued that new reproductive technologies signal the "commodification of life" (1989:5). Reproduction is commodified directly in terms of the monetary value assigned to services such as in vitro fertilization, and egg and sperm donation. Further, Rothman suggests that life is commodified in more subtle ways. For example, the terms we use to reference parenting a child with disabilities, as related to the "costs and burdens" (1989:5). Such commodification can be understood to assign a real, monetary value to the lives of children.

Rothman is careful to assert that the commodification of life reinforces and reproduces racial and class hierarchies, in that the value assigned to life varies, depending upon the social location of both parent and child. Angela Davis (1993) echoed this sentiment in her discussion of the racial biases implicit in new reproductive technologies. Specifically, the cost and availability of reproductive technologies makes white, middle class motherhood possible within a society that simultaneously devalues impoverished African American motherhood. As previously stated, the value assigned to the child as commodity, reflects the literal investments made in its production. A further and perhaps far more damaging effect of this understanding is that white, middle class mothers are positioned as "good mothers" while racialized, and impoverished women are seen as "bad mothers". This distinction reflects broader racial and class prejudices, but is described in relation to the ability to consume. Women who mother their children while experiencing poverty,

are positioned as bad mothers because of their assumed inability to provide for their children. As such, we can understand the economic imperative of good motherhood as directly related to one's ability to consume. The racial and class divisions supported by patriarchy and capitalism were reflected in the participant pool for my study. While it is certainly true that all kinds of people engage with the practice of elective prenatal ultrasound imaging, it is not insignificant that the majority of my participants were white, middle class, educated and employed.

In thinking about motherhood under capitalism, consumption can be viewed as both the problem, and a potential solution. While the consumption of new reproductive technologies may work to reinforce patriarchal ideologies of motherhood that devalue women's work, consumption also represents a means through which women can display their maternal identity in socially sanctioned and recognizable ways. For instance, Alison Clarke (2004) suggests that it is through the buying and receiving of baby items, that both mother and child are socially constructed. The ascription of personhood to both mother and child is a relational and iterative process that, Clarke argues, begins during pregnancy (sometimes even before) and extends well into the child's infancy. In other words, both mother and child come into being through consumption. Clarke's (2004) ethnographic study of English mothers living on a particular street in North London, details the ways in which particular purchases - a stroller, crib or toys for the baby - signals the type of mother one wishes to be, and to be viewed as. For instance, purchasing a high end stroller (or receiving one as a gift) is taken as a sign of both maternal love and devotion, as well as indicative of a particular class status that, if we follow Rothman's (1989, 2004) assertions, serves to further position the woman as a good mother. Such a purchase explicitly indicates that no amount of money is too much to ensure the comfort and safety of the child, while implicitly it attributes a very specific monetary value to the comfort and safety of the child. These consumption decisions take place within a broader social and cultural system that values and rewards consumerism as a tangible reflection of emotional and relational commitment.

Linda Layne (2004) also addressed the role of consumption as it relates to mothers who have experienced pregnancy loss. In this instance, consumer items may be bought and displayed in an effort to materialize the memory of a lost child and to, symbolically, keep the child alive. In her ethnographic study of pregnancy loss support groups, Layne observed that the items many parents buy and use as a means of memory making, reflect a particular understanding of both the

maternal role and the experience of childhood. Layne suggests that “mothers must constantly self monitor to be sure that their children not only have all they need but also are enjoying each moment of their childhood” (2004: 126). As such, Layne found that teddy bears, baby booties, and not surprisingly, ultrasound images, are items favoured by parents in an effort to keep alive the memory of the children they lost. For those who experienced miscarriage or stillbirth, ultrasound images often represent the only proof of life for the child. The images are then memorialized through framing and mounting in the home, or displayed alongside other consumer items in a shrine to the child. Far from demonizing such purchasing decisions, Layne is careful to point out the meaning embedded in these actions and items as a reflection of grief, and an act of remembrance. Further, she suggests that consumer items are also employed by women who have experienced pregnancy loss in ways that display and reify their maternal identity. Because the most tangible indicator of maternal identity was lost, women in Layne’s study turned to consumer items as a means of asserting their role as mothers. Despite having lost their children, many of her participants were still clear to position themselves as mothers.

In their comprehensive study of women’s experiences of first time motherhood, Thomson, Kehily, Hadfield and Sharpe (2011) identified consumption as one of the most significant ways new mothers negotiated their maternal identity. They acknowledged the ubiquity of consumer culture, and suggested that “part of the work of pregnancy involves making sense of the commercial culture of motherhood” in ways that reflect a readiness for birth and motherhood (2011: 205). The authors drew from an economically and racially diverse, cross-cultural sample of 62 pregnant women living in London, England. Based on the ways participants described their consumption practices in relation to their pregnancies and themselves, Thomson et al suggest that commodities are “preparatory, expressive and identity producing” (2011: 198). Women engaged in consumption practices as a means of preparing themselves, their homes and their families for the arrival of the baby. This study was particularly concerned with new or first time mothers, and as such, the role of consumption in expressing a maternal identity was emphasized, since prior to the baby’s arrival, their ability to position themselves as mothers was limited. Thomson et al contend that the purchasing of baby related items helps women to “make sense of the maternal project” (2011: 198). Most significant among their findings was the differences in purchasing motivations among women depending on their age and class status. The authors found that young mothers (25 and under) tended to value high end, designer brands and reject the

notion of second-hand purchases or hand me downs. In their analyses, Thomson et al point to the necessity for younger women to project a confident maternal identity, in order to counteract the potential for negative judgements of their maternal abilities. They suggested that young mothers consumption habits were also more concerned with self-reflection and understanding themselves as good and capable mothers, than was evidenced by the older age group (26-39, or 40+). The authors found that mothers in each age group engaged with consumer culture in ways that were directly related to the formation of their maternal identity, and therefore concluded that “the materiality of motherhood matters” (2011:198).

Janelle Taylor (2000, 2002,2004) addresses consumption, specifically as it relates to elective prenatal ultrasound imaging. Taylor provides one of only three studies available that directly engage with ultrasound imaging as a consumer practice. She positions the decision to purchase (thus consume) elective prenatal ultrasound as in relation to the myriad other consumption choices pregnant women must make: what to eat and what not to eat; which vitamins to take; how to limit exposure to toxins; and the type of prenatal healthcare to engage with. Taylor’s study was conducted in the United States and thus the lines between healthcare and consumerism are perhaps more blurry than those in Canada. Since healthcare in the United States is privatized, decisions relating to prenatal care involve purchasing decisions in a way that they do not in the Canadian context. Though the business practice of elective ultrasound imaging is similar, whether located in the United States or Canada, the difference lies in Canadian women’s ability to access medical ultrasound services without payment. Taylor argues that elective ultrasound be understood alongside other consumption decisions, in ways that facilitate a particular kind of maternal identity. Taylor’s discussion is useful, in that she details two ways of thinking about consumption as it relates to pregnancy. Consumption practices can be understood as agentic acts on behalf of consumers, making use of the means at their disposal to participate in a broader social and cultural system that rewards consumption as a means of displaying identity. Alternatively, consuming in this way can be viewed as tacit acceptance of the “hegemonic power of consumer culture” (2004: 137). I suggest that distinguishing between these modes of thinking about pregnancy related consumption, especially in the context of elective ultrasound, requires an exploration of women’s motivations for purchasing the service, as well as their experiences with the technology in elective settings.

This dichotomy of consumption is taken up in the chapters that follow, specifically as it relates to purchasing decisions around elective prenatal ultrasound imaging. Participants in this study each engaged in this type of consumption for reasons that do not necessarily fit neatly into a binary understanding. Rather, participants described negotiating their purchasing decisions based on numerous factors and prior experiences, including negative interactions with medical ultrasound technicians, a desire to learn the sex of the fetus, as a means of reassurance as to the health and well-being of the fetus, or in an effort to involve partners and family members more fully in the pregnancy.

2.8 Conclusion

It is clear that elective prenatal ultrasound imaging practices rely on existing social and cultural narratives about pregnancy and motherhood. Its root as a medical technology cannot be disentangled from its current manifestation as a consumer practice. Much of the literature detailed above came to bear on the experiences of elective ultrasound as articulated by participants in this study. A lack of literature expressly referencing women's experiences with ultrasound in this setting contributed to the methodological approach of this project. In the following chapter I describe this approach, as well as the methods employed to interrogate women's experiences of elective prenatal ultrasound imaging.

Chapter 2

3 Methodology

As discussed in the preceding chapter, there is a lack of literature regarding women's experiences with elective prenatal ultrasound. My intention for this project was to help fill this gap, and begin to examine how discourses of medicalization, motherhood and consumption, come to bear on women's experiences of elective ultrasound in particular and pregnancy more broadly. I employed the methods of discourse analysis and in-depth interviewing for the purposes of this research. I follow Sandra Harding (1987) in viewing methods and methodology as distinct from one another. While the methods that a researcher uses to gather data can take on, or adapt to most theoretical frameworks, it is through her methodology that a researcher claims a particular theoretical approach. For the purposes of my research, I employed a feminist standpoint methodology. Feminist standpoint methodology takes, as its starting point, the lived realities of women's lives and seeks to build new knowledge based on the particularities of women's experiences (Brooks, 2007). This research was also heavily influenced by ethnographic methodology, particularly institutional ethnography (Smith, 1987), though for reasons explained in this chapter, I do not consider this project either an ethnography nor an institutional ethnography in the traditional sense.

The goal of this research was to discover and analyze women's experiences with elective prenatal ultrasound. As such, ethnographic methods were particularly well-suited for this purpose. A total of 10 in-depth interviews were conducted, which included a short demographic survey at the end of the interview. Additionally I conducted a discourse analysis of four promotional websites for elective ultrasound clinics in Canada. While the discourse analysis served to examine the way in which elective ultrasound is marketed to pregnant women, the interviews focused on women's decision making practices around elective ultrasound, and their experiences with the technology in an elective setting. I do not intend for the findings of this small, purposive sample to be universally applied. Indeed, each account provided by participants in the research, exposes both the deeply personal motivations behind individual women's decisions to purchase elective ultrasound, and the similarities between their experiences. In the analysis and discussion of this thesis, I situate these similarities (and dissimilarities) within the

context of dominant ideologies of medicalization, motherhood and consumerism, in an effort to understand the ways in which they informed participants' experiences. I draw on the work of Judith Stacey in an effort to remain "rigorously self-aware and therefore humble about the partiality of [this] ethnographic vision" (1991: 117). Every effort was made to understand and situate participants as authoritative knowers and active subjects within the research, however I recognize that it is ultimately I, as the researcher who "narrates [or] authors" the research (Stacey, 1991: 114).

For this reason, I feel it is important to situate myself in relation to the research and to my participants. Perhaps most importantly, I am not now, nor have I ever been pregnant, thus I rely on the authoritative voices of participants to speak about their experiences with both pregnancy and ultrasound. I am a heterosexual, Caucasian woman whom, if I were married and expecting, would be part of the target market for elective ultrasound services. My education (graduate degree) and income level (middle-class) would also indicate my place within this target market. Because I lack the kind of experiential knowledge my participants had, I am reliant on their narratives in order to explore my research questions. I strive to maintain "strong objectivity" (Harding, 1991) while acknowledging my subjectivity as a researcher. My purpose for including direct quotes from research participants alongside my own interpretation and contextualization was to situate my analysis as speaking about rather than speaking for participants (Bhavnani, 1993).

One major concern for feminist researchers is that research on women may produce or reinforce essentialized notions of womanhood that overemphasize commonalities, and homogenize women's experiences. Historically, this essentialized view of women was based on a white, middle-class, heterosexual, western notion of womanhood. With the scholarship of Patricia Hill Collins (1991) and Maria Lugones (1987) in mind, I worked to contextualize the data such that it "dismantl[es] the idea that all women are the same and positioned evenly in the social landscape" (DeVault and Gross, 2007:175). To carry out this research, I employed multiple methods. Advocates of using multiple methods, such as Shulamit Reinharz suggest that this approach "enable[s] feminist researchers to link past and present, 'data gathering' and action, and individual behaviour with social frameworks" (1992:197). In other words, employing multiple

methods exposes connections within the data that may have been lost, had the researcher made use of only one method type. For this study, I combined the methods of interviewing, discourse analysis, and a short demographic survey.

In this chapter I discuss the research questions that guided my project. Additionally, I describe the theoretical assumptions I brought with me to the research. Also included, is a detailed discussion of my methodological approach and the specific methods used for this investigation. I explain some of the challenges that arose during my research, and conclude by situating interview respondents in relation to one another.

3.1 Research Questions

This research was guided by the following questions: *How do women experience elective prenatal ultrasound? What are their reasons for purchasing the service?* Recognizing that the practice of elective ultrasound produces images, video and other consumer items, I also asked: *How is the ultrasound image explained and understood in a non-medical setting? How does the ultrasound image (video or other consumer items) get taken up both inside and outside the screening room?*

My research was originally proposed as an institutional ethnographic study of elective ultrasound imaging. In keeping with the centrality of texts in institutional ethnography, I understood the ultrasound image to be the central text around which the experience of elective ultrasound was organized. This understanding was in keeping with the emphasis on 3D imaging in the advertising and promotion of elective ultrasound. For this reason I was interested in asking *How does the ultrasound image work to organize relations between individuals?* What became clear early on in this research was that, much more than the quality of the image, participants were seeking a particular kind of experience from their ultrasound sessions, that was facilitated, for the most part, by their engagement with elective ultrasound. Thus, the research questions shifted to reflect how participants spoke about their experiences.

While my aim was to remain as open-minded and reflexive as possible during my fieldwork, I acknowledge that I approached this research with a number of theoretical assumptions, based on

feminist understandings of pregnancy, the fetus, and the socially productive role of technology. For the purpose of explanation I have separated these assumptions into three categories, though it should be noted that each assumption relies on, and builds upon the others, to form the theoretical basis for my project.

3.2 Theoretical Assumptions

3.2.1 Pregnancy

The primary research assumption I make, is that pregnancy and motherhood are social and cultural practices. More than simply a biological process, the experience of pregnancy is informed by social and cultural expectations of motherhood. In her anthropological work on motherhood, Adrienne Rich (1977) detailed the myriad ways pregnancy and motherhood have been practiced and understood in cross-cultural contexts, throughout history. In this thesis, I focus specifically on the experience of pregnancy in a Canadian context. Living in a western, industrialized nation means that Canadian women have access to a medical system that involves the routine, regulated use of ultrasound technology, as well as an economy to support a fee-for-service ultrasound industry. Therefore the experiences of pregnancy for women in Canada will undoubtedly differ from that of women in different cultural and economic positions. For this reason I am clear to situate my research within a Canadian context, and do not intend to suggest that it can be extrapolated to other cultural contexts.

Pregnancy and motherhood are seen as socially significant and important displays of women's femininity. Pregnancy and motherhood are, as Tasha Dubriwny states "practice[s], not instinct[s]" (2010:288). As discussed in the previous chapter, pregnancy is framed by social and cultural expectations that require women to alter their behaviour in ways that signal the care and protection of the fetus as their primary goal. As such, women are told they must change their diet, exercise routine and clothing choices. They must think more carefully about the type of products they use on themselves and in their homes, while being mindful of chemicals and toxins that might put their fetus at risk. Additionally, many women participate in pregnancy specific practices that hold cultural significance, such as the baby shower, the process of "nesting" (whereby women work to ready themselves and their homes for the arrival of the new baby) and, I argue, the prenatal ultrasound. Part of this work is accomplished by medical, diagnostic

ultrasound, due to its routine use in antenatal care. However, the elective ultrasounds that are the focus of this research, also involve another culturally significant practice relating to pregnancy; consumption. I suggest that the culture of pregnancy (and motherhood, more broadly) is such, that consumerism and materiality are valued as the markers of good parenting (Clarke, 2004; Layne, 2004; Thomson et al, 2011). Seeking and paying for the services of an elective ultrasound clinic can signal to outsiders that a woman is appropriately excited about her pregnancy, and will be appropriately excited about, and prepared for her role as mother. Currently, little research exists that identifies pregnancy as a cultural practice, (see Rothman, 1989, as an example) except to draw attention to the different ways pregnancy is practiced in western and non-western cultures. For instance, the heavy reliance on medical intervention into pregnancy in western countries is contrasted with the widespread practice of home birth and midwifery in non-western countries. This project contributes to the growing body of research through its examination of pregnancy as a cultural practice, one that is specifically influenced by neoliberalism and the privileging of consumption as a display of maternal identity.

Although I interviewed women about their experiences with the same practice, I heard very different accounts of how elective ultrasound was experienced by each woman. This speaks to the argument made by Amy Mullin, (2005) and others, (Ruddick, 1990; Rothman, 2000) that there is no one single experience of pregnancy. Every pregnancy is influenced by social, cultural, situational and bodily forces that are both temporal and relational. In other words, pregnancy is a common, yet highly individualized experience, with many contributing factors. As such, my research project was designed to locate individual experiences of pregnancy at particular times and places, while also creating space for common experiences to emerge, and tell us something about the broader implications of our collective understanding of pregnancy and motherhood. By focusing attention on the experience of elective ultrasound during pregnancy, I work to contextualize the social and cultural meaning given to prenatal ultrasound and the images produced.

Also central to this project is that I view pregnancy as an active, rather than a passive process. Pregnancy is something a woman does, not simply something that happens to her. By viewing pregnancy as an active process, I acknowledge that the act of gestating a fetus is work. This work

is often undermined as a natural or instinctive process for women (Rich, 1977; O'Reilly, 2004). Amy Mullin makes the argument for pregnancy as an active process, which she refers to as “embodied labour” (2005: 49). For Mullin, this embodied labour takes two forms; physical and mental. A woman’s body is at work sustaining the fetus and supporting its growth, while her mind is at work adjusting to the changes in her lifestyle, her body, the way she sees herself, and the way others see and interact with her. Through her work on pregnancy and self-identity, Lucy Bailey notes that for many women she interviewed, “pregnancy was described as a ‘full-time’ job” (1999: 343). I approached my research with an understanding of, and respect for pregnancy as work, and I acknowledge that this belief had some effect on what I asked of my research participants, regardless of whether they shared this view of their own particular pregnancy as work. This is not to say that I disregard participants’ understandings of their own pregnancy; rather it is an acknowledgement that I approached this research not as an objective researcher, but as a subject with knowledge and beliefs that cannot be neatly separated from my work.

3.2.2 The Fetus

Another theoretical assumption I made, follows Barabra Duden’s assertion that “the human fetus, as conceptualized today” and revealed through the technology of ultrasound imaging, “is not a creature of God or a natural fact, but an engineered construct of modern society” (1993:4). This is not to suggest that neither God nor science plays a role in how we understand the fetus, but rather that the popular concept of the fetus as seen via ultrasound imaging is a discursive and visual production. The fetus comes into being through the social interactions that take place around the image. Contemporary understandings of the fetus and when it constitutes a life of its own are based on prevailing forms of knowledge such as medicine and technology, religion, and popular culture. The definitions of fetal personhood forwarded by these prevailing forms of knowledge work to decenter, or even undermine women’s embodied knowledge. Barbara Duden, among others, (Petchesky, 1987; Haraway, 1997; Taylor, 2008) described the fetal images produced by ultrasound technology as the “public fetus” (1993:51). Duden suggests, “increasingly, the public image of the fetus shapes the emotional and the bodily perception of the pregnant woman” (1993:52). Both technically and figuratively, the fetus, as we know it today, is discursively produced. When the ultrasound technician describes the image on the screen, she is producing the fetus. When the pregnant woman shows and describes the image to friends and

family, she is producing the fetus. When friends and family comment on the image or issue projections about the future child, like which parent the child will take after, or the kinds of activities in which the child will be interested (for instance a fetus that moves around a lot in utero will become an active child) they too are producing the fetus. Each of these descriptions, or productions, is located in a particular temporal space and place that also influences how we understand the fetus. The fetal image that has become recognizable through its ubiquity in our social and cultural landscape, takes on particular meaning within the context of the ultrasound screening room. The image functions as a powerful indicator of fetal health and well-being: one that, as my research will show has become an important part of the experience of pregnancy for women in Canada.

3.2.3 Technology

The last set of assumptions I brought to this research was an understanding of technology as both productive and social. Particularly, the technology of ultrasound *produces* an image of the fetus, and implicates pregnant women (and their fetuses) in a specific set of *social* relations. This theoretical assumption is premised on the work of Dorothy Smith, (1987, 1989) particularly her discussion of the ways that “texts” produce meaning. I situate the ultrasound image as the central text which works to organize social relations between the pregnant women, her family, friends and the ultrasound technician performing the scan, as all of these interactions take place around the ultrasound image. The ultrasound procedure constitutes what Smith refers to as a “text-mediated social relation” (Campbell and Gregor, 2004:33) with the individuals in the room acting as participants in this text-mediated social relation. I follow Smith in understanding the text as an actor in social relations. However, I recognize that texts do not act independently; they require the mediation and explanation of a knowledgeable insider. Producing an image of the fetus is central to the advertising and promotion of elective ultrasound clinics and that, in a tangible sense, it is what brings clients in, what clients pay for, and also what clients take home to show and distribute among their family and friends. However, as my research will show, much more than the ultrasound image itself, it is a particular kind of experience that is being sold to pregnant women and their families. The warm and friendly atmosphere of elective ultrasound clinics, and the care and attention paid to pregnant women within the screening room, is

distinctly different from the medical ultrasound experience as articulated by participants in my study.

Drawing on Dorothy Smith's (1989) work on text-mediated social relations, Campbell and Gregor assert that "objects become what they are to us by virtue of what we do with them and where and when and with whom they are used" (2004:28). The ultrasound image, by virtue of how it is shown, explained and taken up, makes it possible to view the fetus as a fully constituted social being. The historical and current privileging of visual representations, as discussed by Donna Haraway, (1997) gives this understanding authority over other interpretations of the image or experience. Smith suggests that texts must be activated by individuals involved in the social relation, either in the local or extra-local setting. Campbell and Gregor explain that Smith's notion of activation "expresses the human involvement in the capacity of texts to coordinate action and get things done in specific ways" (2004:33). The text of the ultrasound image is activated by the ultrasonographer in her explanation of what (or who) the image shows. The text is activated in the local setting, and distributed extra-locally when it is given to the pregnant woman, and subsequently shown around to friends and family, displayed on fridges or work spaces, and/or posted online. In this way, the text "carr[ies] messages across sites, coordinating someone's actions here with someone else's there" (Campbell and Gregor, 2004:33). The centrality of the text in this exchange in particular, is evidence of the ways that women's embodied knowledge is undervalued or dismissed, in favor of text-mediated, visual and technological forms of knowledge. Campbell and Gregor assert that "an important shift in knowing occurs when one moves from knowing first hand to knowing in text-mediated ways" (2004:36). For the purpose of this project, pregnant women are understood as knowing subjects, and their experiences act as the starting point to examine the way in which the text of the ultrasound image, particularly the ultrasound images produced in elective settings, worked to organize their experiences of pregnancy.

3.3 Knowledge, Power and Authority

Historically, knowledge about pregnancy and the fetus were thought to be solely the domain of women. The experience of "quickening" (feeling fetal movements early in pregnancy) was taken as authoritative knowledge that a pregnancy was underway. Quickening could only be

experienced by the pregnant woman herself, and conveyed by her to others such as a husband or physician. The current state of the medicalization of pregnancy suggests that women are afforded “no comparable power to redefine [their] social status by making a statement about [their] bod[ies]. In our society we are accepted as sick, healthy or pregnant only when we are certified as such by a professional” (Duden, 1993:94). My data reveals that the technology of prenatal ultrasound imaging acted for many participants as a pseudo-professional, while the ultrasound technician was charged with relaying or mediating knowledge to the pregnant woman. Duden suggests, “through the interplay of imagination and media, these highly suggestive images take on final shape in the flesh of experience...Pregnant women today experience their bodies in a historically unprecedented way” (1993:51). In other words, currently, pregnant women experience their bodies through medical and technological interventions that displace embodied knowledge in favor of institutional authoritative knowledge.

The distinct interplay of knowledge and power at the centre of women’s experiences with elective ultrasound necessitates a feminist standpoint approach. Sandra Harding and others (Smith, 1987, 1989; Hill Collins, 1991) have argued that a feminist standpoint approach to research addresses both the historical absence of women from formal knowledge production, and the ways in which dominant ideologies are produced and reproduced through the research process. Following Foucault, Harding suggests that knowledge and power “co-constitute and co-maintain each other” (2004: 67). Scientific and social scientific disciplines produce and disseminate knowledge from a privileged social position. Traditionally, the fields of scientific and social scientific research have been populated largely or at times exclusively, by educated, upper-class, white men. Within positivist research, this privileged social position has been understood as objective, due to a strict adherence to rigorous disciplinary standards. Claims of objectivity meant that research produced by and for a particular demographic (educated, upper-class, white men) came to be understood as “culturally neutral” or universally applicable (Harding, 2004: 66). Dorothy Smith (1987, 1989) and Patricia Hill Collins (1991) have detailed at length the ways that marginalized groups, specifically women and people of colour, are disenfranchised by such claims to objectivity. Objectivity becomes aligned with truth, while at the same time failing to adequately account for the experiences of marginalized groups. Harding refers to this as the “view from nowhere” in that, claims of objectivity support the belief that

universal truths exist independently of one's social location and personal history. A feminist standpoint research methodology, therefore, seeks to destabilize the traditional hierarchies of power in an effort to produce new knowledge. With this in mind, I approached this research from a feminist standpoint that regards the voices and experiences of women as knowing and knowledgeable subjects.

Understanding the ways women engage with, and negotiate themselves through complex systems of knowledge and power, requires a rethinking of the subject/object binary. Donna Haraway contends that the way to do this is by focusing on "situated knowledges" (2004:348). Situated knowledge rejects the standard scientific "view from nowhere" and instead seeks to join "partial views and halting voices into a collective subject position" or in other words a "view from somewhere" (2004: 350). Rather than suggesting that there is one universal, objective truth to which scientific inquiry aspires, Haraway argued that in order to address the bias inherent in such thinking, feminist researchers must reject the notion that knowledge can be objective.

Haraway specifically addressed visual technologies and the ways in which science privileges the visual sense. This assertion is particularly helpful for this project as it was clear in both the literature reviewed, and in participants' responses, that the act of seeing the fetus via ultrasound was privileged in relation to their experiences of pregnancy. Haraway argued that visual technologies are assigned an objective status within scientific research and sought to address this problem by insisting on the "embodiment of all vision" (2004: 348). Embodying vision requires that the person viewing be assigned a subject position. The subject position implies ways of thinking, acting and living in the world, which are reflective of a particular identity and social location. She suggests that researchers cannot "represent while escaping representation" (2004: 348). In other words, both the researcher and her research subjects are limited by the situated knowledge of their own subject position. Haraway argues that the goal of feminist research is "not about transcendence and splitting of subject and object" but rather to allow "us to become answerable for what we learn how to see" (2004: 348). Implicit in this suggestion is an understanding of the social construction of knowledge. We learn to see from the subject position of those privileged by hierarchal systems of power.

3.4 Research Approach

Feminist standpoint approach is particularly useful for this project, given the ways that women's voices and experiences have been largely ignored by the dominant discourse. Prenatal ultrasound technology is exclusively applied to women's bodies, yet there is little research that explicitly addresses women's thoughts and experiences with the practice (see Taylor, 2008 and Palmer, 2009 for examples). A lack of representation of women in research prompted Dorothy Smith to call for a "sociology for women [that] preserves the presence of subjects as knowers and as actors (1987: 105). A sociology for women recognizes the historical legacy of women's exclusion from the public sphere, and our resulting exclusion from many of the organizational processes that structure our lives. The development of research methods and methodologies is one such organizational process from which women have historically been excluded. Smith suggests that "for actual subjects situated in the actualities of their everyday worlds, a sociology for women offers an understanding of how those worlds are organized and determined by social relations immanent in and extending beyond them" (1987: 106). She continues to suggest that approaching research from the standpoint of women "does not universalize a particular experience. It is rather a method that, at the outset of inquiry, creates the space for an absent subject, and an absent experience that is to be filled with the presence and spoken experience of actual women speaking of and in the actualities of their everyday worlds" (1987: 107). The subject to which Smith is referring is absent from the literature, rather than absent in the physical sense. In other words, the thoughts and experiences of the "absent subjects" are not reflected in research or analysis. I take this to mean that a sociology for women seeks to expose the previously unarticulated ways individuals experience institutional and organizational processes in their everyday lives. For my research purposes, the absent subjects of inquiry are pregnant women who make use of elective ultrasound clinics. To date, there has been very little written about the elective ultrasound industry, and even less written about the practice from the standpoint of women. To address this gap, I used a feminist standpoint methodology, coupled with ethnographic methods of interviewing and critical discourse analysis, to investigate the experience of elective prenatal ultrasound for women.

Despite the usefulness of a feminist standpoint theory for this project, it also presents some potential challenges that must be addressed. As mentioned earlier, a challenge for feminist

researchers is to negotiate strong objectivity (Harding, 1991) in relation to analyzing participants' narratives and experience. While every effort was made to honour the voices and experiences of research participants, data analysis necessitates a level of interpretation that calls into question my own individual standpoint and assumptions regarding pregnancy, ultrasound and motherhood. I acknowledge the limits of my interpretation and suggest that readers privilege the voices of research participants communicated via direct quotes in the chapters that follow. In claiming my research to be feminist, I draw on the work of Haraway, (1989) Harding, (1991) and Bhavnani (1993) to suggest that the knowledge produced in this thesis is both situated and partial. It is situated knowledge in so far as it reflects my own social positioning as the researcher, as well as the background and social positioning of participants. As such, I do not contend that the findings of this project be universally applied. Rather, I suggest that this project act as a starting point for further investigation of elective ultrasound practices in Canada (and elsewhere). Given the amount of research which examines women's experiences of ultrasound as it relates to the politics of abortion, the chapters that follow will add to this conversation, ten women's experiences with elective ultrasound in the context of their wanted pregnancies. The knowledge produced is partial due to the limitations of a small sample size, a lack of racial and ethnic diversity (despite best efforts to address this limitation in the recruitment of participants) and the specificity of the practice being studied. I acknowledge that the experiences of the research participants in this study will differ from others as they concern race, age, sexuality, education and income level. Both Haraway (1989) and Bhavnani (1993) call on feminist researchers to refrain from reproducing dominant narratives and representations of research participants. As such, I have worked to identify and explicate the ways in which participants' narratives contradict dominant ideologies of pregnancy, motherhood and medicalization.

3.5 Methodology

As previously mentioned, I view this research as feminist, both in terms of analysis and methodology. The notion of feminist methodology is a contested one, with some arguing that because feminist methodologies do not employ particular or original methods in a rigid way, feminist methodology offers nothing new (Clifford and Marcus, 1986). Others argue that feminist methodology is about investigating previously invisible subjects, ideologies and experiences, with attention to the ways constructions of gender and power structure these

experiences (DeVault, 1999; Smith, 1987). Marjorie DeVault (1999) suggests that feminist methodology is distinctive, without having a fixed definition. The distinctive characteristics to which DeVault is referring are: the feminist commitment to refocus much of the research done on male subjects and to “bring women in” to the discussion; commitment to minimizing potential harm and the authority or control exercised by the researcher over her research subjects; and a commitment to conducting research that has the potential to liberate women and/or lead to significant social change. Under this distinction, research that meets the above criteria can be considered feminist. It is with these commitments in mind that I claim my research to be feminist. I follow DeVault (1999) and others (Harding, 1987; Pillow and Mayo, 2007) in stating that it is the epistemological and methodological approach I brought to my research that categorizes it as feminist. So while I used methods that have been established in non-feminist social sciences (interviewing, discourse analysis, survey research) I acknowledge that “the method may be changed or altered by the lens with which the researcher approaches the methods” (Pillow and Mayo, 2007:157).

For this project I drew heavily from the practice of ethnography. While traditional ethnography refers to the study of culture via prolonged immersion in an environment foreign to the researcher, not all ethnographies must be performed in this manner. In fact, ethnography has enjoyed an expansion of meaning and application that challenges previously held notions of what counts as ethnographic research. I am explicit in the assertion that I used ethnographic methodology and methods to investigate elective prenatal ultrasound imaging, rather than suggesting that this project qualifies as an ethnography in the traditional sense. My project situates pregnancy as a cultural practice and the ultrasound image as a cultural artifact, thus ethnographic methods were particularly well suited to this endeavor. However, because the culture of pregnancy cannot be neatly separated from Canadian culture more broadly, (for instance, there is no centralized community or island where pregnant women reside for the duration of their pregnancy) a traditional, immersed ethnographic study was not practical. So, although this project was informed by ethnographic principles, in practice, I worked to destabilize traditional research paradigms in an effort to create new, or previously overlooked knowledge. As such, I categorize this project as a feminist standpoint analysis of elective prenatal ultrasound, using ethnographic methods.

Ethnography has a rich and arguably patriarchal history as a social science methodology. Though it was not always referred to as ethnography formally, the study of people and other cultures has been a common pursuit for hundreds of years. At its Greek roots ethnography means “writing about a people” (Jones, 2010). More than that, ethnography refers to the study of “others”, a term which has a particular meaning for women (hooks, 1986). Feminist researchers have written extensively about the failure of early ethnographers to account for women as research subjects, and to recognize and value the work done by women in the cultures they study. For example, Bronislaw Malinowski is widely regarded as the “father” of ethnography by virtue of his work in Papua New Guinea with the Trobriand Islanders (1922). Since his findings were published in the early 1920s, numerous scholars (Weiner, 1976; Geertz, 1984) have taken him to task for ignoring issues of gender and power, and for effectively colonizing his research subjects through his writing.

From this patriarchal tradition, and active resistance to it, has emerged the field of feminist ethnography. Pillow and Mayo suggest “feminist ethnography begins from a different place than traditional ethnography; a place that questions the power, authority, and subjectivity of the researcher as it questions the purposes of the research” (2007:158). Feminist ethnography maintains a focus on gender, and recognizes it as central to both what is being researched, and how the research is conducted. So, not only is feminist ethnography (mostly) conducted with female subjects, but it also attempts to make visible the power relations that structure the experience, practice or situation being researched. Drawing on feminist ethnographic scholarship, this study situates pregnant women as the primary research subjects, and seeks to expose the gendered ideologies that structure the experience of elective ultrasound in particular and pregnancy more broadly. Feminist ethnography as a methodology is also useful for projects which aim to “interpret women’s behaviour as shaped by social context rather than as context free or rooted in anatomy, personality, or social class” (Reinharz, 1992:53). Built into this methodology is the understanding and expectation that individuals will have differing experiences depending on their life conditions and social location. While I do not qualify this project as a feminist ethnography in the traditional sense, I seek to explore, explicate and theorize the social context of women’s experiences with elective ultrasound in my work.

3.6 Research Design and Setting

This project was originally imagined as a multi-method institutional ethnography of elective prenatal ultrasound in Canada. Throughout the design and proposal stage, the project went through numerous revisions, due in large part to road blocks in access and ethics approval. Despite repeated attempts, I was unable to gain institutional support from, and access to, the elective ultrasound clinics that I approached, as a result, I altered my methodology. The feminist standpoint investigation resulting from these changes is deeply rooted in institutional ethnographic principles. My research begins from women's lived experiences, in an attempt to understand the ways in which the organization of both medical and elective prenatal ultrasound services in Canada produce particular individual experiences. For example, many participants spoke of their negative experiences with medical prenatal ultrasound, mostly attributed to the demeanor of the ultrasound technician, the treatment of the woman's partner by medical personnel, or the hospital's refusal to obtain, or release information relating to the sex of the fetus. These experiences were often the catalyst for women to seek out elective ultrasound services in hopes of having a more positive ultrasound experience. In this way, the actions of medical staff prompted women to seek different ultrasound alternatives and can thus be understood as contributing to the coordination of their elective ultrasound experience. The influence of institutional ethnography will become more clear in the discussion chapter of this thesis.

3.7 Methods

As previously mentioned I employed multiple methods for this feminist standpoint investigation of women's experiences with elective prenatal ultrasound in Canada. Most importantly, I interviewed ten women about their experiences with elective ultrasound during a current or recent pregnancy (within the last 5 years). At the end of the interviews I distributed a short demographic survey. Additionally, in an effort to situate and understand elective ultrasound as a consumer practice, and the ways in which it appealed to pregnant women as consumers, I conducted a discourse analysis of the promotional websites of four elective ultrasound clinics: two franchises and two stand-alone clinics located in the cities in which my interview participants lived.

3.7.1 Discourse Analysis

The promotional websites reviewed for the discourse analysis were *UCBaby*, *3D Miracles*, *Babymoon* and *Dr. Lederman ND 3D Baby Ultrasound*. Both *UCBaby* and *3D Miracles* are franchises that were chosen due to their numerous locations across Canada and their prominence in the internet search results for “3D ultrasound Canada”. *Babymoon* and *Dr. Lederman ND 3D Baby Ultrasound* were representative of stand-alone clinics and were chosen due to their location in the cities in which some of my participants lived (Winnipeg and Vancouver). Each website was analyzed for its use of language, images and the type of information provided. Discourse analysis is premised on the notion that texts or cultural artifacts are constructive, rather than representative of an independent reality (Edwards, 1997). This method is useful because, as Patricia Lina Leavy suggests, “texts are central to how norms and values come to be shaped...which reflect macrosocial processes” (2007: 229). For the purpose of the discourse analysis, the “texts” to which I am referring are the language and images present on the websites reviewed. Promotional materials are an important avenue for determining the business practices and ethos of a particular company, and for creating and shaping consumer expectations. Thus, the method of discourse analysis was useful for determining the specific visual and linguistic choices that frame the experience of elective ultrasound.

3.7.2 Interviews

A total of ten semi-structured, in-depth interviews were conducted with ten participants between December 2012 and July 2013. An interview guide (see appendix) was used for each interview and included prompting questions, as well as space for follow-up inquiries. Each interview lasted from 40 minutes to an hour and 15 minutes and took place at a location of the interviewee’s choosing. Attempts were made to conduct the interviews between a woman’s elective ultrasound and the birth of her baby, though due to challenges with recruitment, the decision was made to expand the interview pool to those who had received elective ultrasound during *any* recent pregnancy. Of the ten interviewees, seven had already given birth. The purpose of the interviews was to investigate why participants chose to engage with elective ultrasound, how they experienced ultrasound in an elective setting, and how the ultrasound image was understood, and taken up after the session. I do not attempt to make any claims of universality in my findings,

and as such, I feel that this purposive sample, with an eye to diversity, was sufficient for this investigation.

In my approach to interviewing I worked to disrupt the traditional positivist paradigm of researcher as authoritative, objective knower. This research was guided by, and entirely dependent on, the knowledge and viewpoints of my interview participants. Because I have never been pregnant, I have not had an elective ultrasound and thus claim no authority to speak to the experience, or the embodied knowledge gained by interview participants. I was reliant on, and very interested in the knowledge shared by interviewees, to develop a deeper understanding of elective ultrasound as it is experienced. In this sense, I view my research as collaborative. DeVault and Gross suggest that an important consideration for feminist interviewers is “how to organize interviews so as to produce more truly collaborative encounters, whatever the identities and commitments of participants” (2007:180). As a way to facilitate the kind of collaborative encounters DeVault and Gross discuss, they suggest another approach they call “strategic disclosure” (2007:181). Sharing with interviewees my own identity, as a childless researcher, my fascination with current constructions of pregnancy and motherhood, and my commitment to contextualizing women’s experiences with this meaningful and emerging practice from a feminist perspective, I believe, helped to develop an honest rapport and encourage disclosure from interviewees. I was interested in and excited by their answers to my questions, and I allowed that to show through in the interviews. Adopting a conversational style during the interviews, allowed me to react and respond to the descriptions of participants in what felt like a natural way. I believe this made interviewees feel more at ease sharing with me. This form of interviewing relies on the notion that sharing encourages sharing, and helps the interview process to unfold more like a conversation that acts “as a collaborative moment of making knowledge” rather than a stale question and answer exchange (DeVault and Gross, 2007:181).

Also within the interview process, I recognized my work as the interviewer to be two fold. Not only was I responsible for asking thoughtful, open-ended yet probing questions, I was similarly responsible for listening actively and attentively to the responses of my interviewees. Attentive listening goes beyond simply hearing and understanding what is spoken, to include the active processing of information. DeVault and Gross advocate that researchers allow the information

provided by interviewees “to affect you, baffle you, haunt you, make you uncomfortable, and take you on unexpected detours” (2007:182). Once these allowances are made, it opens the door to whole other sets of questions and interpretations that may not have previously occurred to the researcher. Attentive listening allowed me to better understand the questions I was asking, based on the responses, and to reformulate questions and ask new ones based on the responses of participants. Attentive listening also applies to the silences inevitable in interview research. I follow Marjorie DeVault (1990) in recognizing that attention to silences can help illuminate some of the points at which women’s embodied experience deviates from how that experience is culturally understood and the language available to describe it. Attention to both speech and silence, allowed me to develop a contextualized and nuanced understanding of the responses provided by interview participants. The purpose of this research lies in “creating knowledge that is for rather than about” the women I study and therefore attentive, active listening is crucial (DeVault and Gross, 2007:184).

3.7.3 Field Notes

After each interview, detailed field notes were recorded to capture my impressions about the interview, and anything I noticed about the participant or setting that may not have made it in to the recorded transcript. Due to the conversational style of the interviews and the friendliness of each encounter, we often began and ended each interview with “small talk”. For example, I would ask a participant how she was feeling, how advanced her pregnancy was or how her children were doing. Often participants would ask me questions during this time, either about my work or personal life. As well, at points during the interviews, women would often relay anecdotes or “side stories” that did not necessarily link to their experience with ultrasound. From these interactions I was able to get a better sense of who my participants were and, as such, I wished to include these observations in the data. I compiled participant profiles (see appendix) in an effort to contextualize each woman’s narrative. Participant profiles provide a description of each interview participant, including the demographic data gleaned from the survey. During data analysis, these participant profiles became in some ways inseparable from the transcript data, in that I relied on them to interpret the full meaning of participant’s responses in the context of their lived experiences.

3.8 Data Collection and Analysis

After each interview, detailed field notes were recorded to capture my impressions about the interview, and anything I noticed about the participant or setting that may not have made it in to the recorded transcript. Due to the conversational style of the interviews and the friendliness of each encounter, we often began and ended each interview with “small talk”. For example, I would ask a participant how she was feeling, how advanced her pregnancy was or how her children were doing. Often participants would ask me questions during this time, either about my work or personal life. As well, at points during the interviews, women would often relay anecdotes or “side stories” that did not necessarily link to their experience with ultrasound. From these interactions I was able to get a better sense of who my participants were and, as such, I wished to include these observations in the data. I compiled participant profiles (see appendix) in an effort to contextualize each woman’s narrative. Participant profiles provide a description of each interview participant, including the demographic data gleaned from the survey. During data analysis, these participant profiles became in some ways inseparable from the transcript data, in that I relied on them to interpret the full meaning of participant’s responses in the context of their lived experiences.

3.8.1 Recruitment

Due to the original methodological approach of the study, I decided that the sample population would be located in London, Ontario, or surrounding Southwestern Ontario. Once the observational component, central to institutional ethnography, was dropped from the study, recruitment remained difficult. While I had many informative, informal conversations with pregnant women who had either received elective ultrasound during their pregnancy or were considering it for a current pregnancy, I was unable to secure enough formal interviews in London. I decided to expand the call for participants to other parts of Canada. As a result, the research was informed by participants in London, Ajax, Ottawa, Winnipeg and Vancouver. The geographic location of interview participants was not a significant factor in their experience of elective ultrasound. In fact, each of the narratives showed many similarities, particularly in the layout and atmosphere of the clinics, and the approach and demeanor of the ultrasound technicians performing the ultrasound scans. This suggests that the business model of the elective ultrasound industry is fairly standard throughout all of Canada. A number of the

participants visited different locations of the same franchise of elective ultrasound clinics, *UC Baby*. *UC Baby* is the largest commercial prenatal ultrasound franchise in Canada with 18 clinics located throughout ten provinces. Those participants, who did not visit a *UC Baby* franchise, opted for stand-alone clinics which are owned and operated by individuals.

Participant recruitment presented a number of challenges. Without permission to advertise my research in elective ultrasound clinics themselves, a more widespread recruitment approach was employed. I attended the London Baby and Toddler Expo in May 2013 and handed out information cards about the research. Brightly coloured posters (see appendix) with contact information were placed in spaces identified as being potentially frequented by pregnant women and new mothers, such as community centres, libraries, fitness facilities, farmer's markets, maternity clothing stores and shopping malls, throughout London, Ontario. Posters were also placed at Western University and Fanshawe Community College. Additionally, online spaces have become increasingly popular as sites for pregnant women and new mothers to share information and remain connected to one another (Anderson, 2010). As such, I placed calls for participants on online forums such as Kijiji.com, Babycentre.ca and LondonMoms.ca (see appendix). Typically in online forums such as these, varieties of new posts are made each day and are presented in the form of a list, or a "feed". To ensure that my call for participants remained at the top of the feed, I posted revised calls for participants in December 2012, January, March, May, June and July of 2013. Given that pregnancy is a temporal experience, multiple calls for participants ensured that women who had only recently become pregnant were made aware of the research. Information was also placed on the online classified section of the *London Free Press*, and the *London Metro Newspaper*. Both sites operate using similar "feeds" and as such calls of participants were posted to both sites in January, February, March and April of 2013. In addition to the calls placed on online forums and newspaper sites, I reached out to communities of pregnant women and new moms via email lists. Various listserv administrators were approached to forward information about the research, including "Babies Naturally", a midwifery and natural birth collective in London, Ontario, "London Moms" and the London Women's Listserv. I found that the most fruitful recruitment strategies were the online forums and email listserv. Seventy percent of research participants were recruited using online resources. At the end of each interview, participants were asked if they knew of anyone else who might be

eligible and interested in participating in this study. Though I received the names of a few eligible women through this snowball technique, none of these referrals resulted in an interview.

Women who responded to one of the calls for participants, were given an information letter (see appendix) describing the research and what was being asked of them. Those who agreed to take part in an in-person interview were given another copy of the information letter upon meeting, and were asked to sign a consent form (see appendix). Those who were interviewed via Skype were emailed a copy of the information letter and asked for verbal consent to be interviewed and to have that interview audio-recorded. Interviewees were also asked to fill out a short demographic survey (see appendix) which helped inform the participant profiles created for each participant. Of those who responded to the calls for participants, less than half resulted in interviews. While the reason for this is unknown, I suspect that the women targeted for this research project are often incredibly busy with the duties of motherhood and/or pregnancy, in addition to work and family obligations, and could not find the time to sit for a formal interview. In the instances where interest was expressed but no formal interview was conducted, potential participants simply stopped responding to email communications. In these cases, two follow-up emails were sent, one immediately following the expressed interest, and another between one and two weeks after the initial email. If neither email was responded to, I discontinued the correspondence. No one directly refused to be interviewed.

3.8.2 Coding

All interviews were audio-recorded and transcribed verbatim. I employed line by line coding in order to identify initial themes. Influenced by the interpretive techniques of grounded theory, (Glaser & Strauss, 1967; Corbin & Strauss, 2008) the first set of codes developed were grounded in the language used by research participants. Grounded theory is an especially useful analytic strategy for this project because, like feminist standpoint theory and institutional ethnography, it begins from the narrative experience of research participants. In other words, “grounded theory is a way of arriving at theory suited to its supposed uses” (Glaser & Strauss, 1967: 3). The first sets of codes identified from the transcripts were: information, gender, risk, choice, control, and bonding. Following the initial coding, I engaged in multiple readings of the interview transcripts, in an effort to immerse myself in the data. Glaser and Strauss (1967) identified data immersion

as central to a grounded theory approach. What emerged from the original coding were; the ways participants' decisions were informed by feelings of fear and anxiety in relation to their pregnancies, but also in relation to the safety of elective ultrasound; their desires for choice and control, as well as how their elective ultrasound experiences influenced relationships, particularly with their spouses or partners. After further immersion in the data, many of the original codes were altered to reflect a deeper understanding of participant responses, and the kinds of beliefs and understandings implicit in their responses. What emerged from this subsequent coding were: the ways participants' experiences were influenced by their interactions with ultrasound in medical settings; notions of risk and reassurance regarding pregnancy; choice and control over their ultrasound experiences; and the particular ways women engaged with elective ultrasound as a means of developing and displaying a maternal identity. These themes are taken up in the four results chapters, as well as the discussion that follow this chapter.

3.9 Research Participants

For this study, the pool of participants was restricted to women who had received elective prenatal ultrasound during a current or recent pregnancy. Of the ten women interviewed, three were pregnant at the time of the interview, while the remaining seven had given birth. All of the women I spoke to were either pregnant or had given birth within the last five years (2008-2013). While the sample was not intended to be exhaustive, every attempt was made to ensure the diversity of research participants. It became clear from the promotional materials of elective ultrasound clinics that they have a particular target customer in mind when promoting this service. This target customer was, for the most part, reflected in the participant pool. Much of the advertising and promotional information for elective prenatal ultrasound clinics revolves around the notion of family - particularly a heterosexual nuclear family. Women are encouraged to bring their husbands and other children with them to the ultrasound appointment. This approach assumes a particular family structure that may exclude those in non-traditional partnerships, single women and homosexual couples, for example. The cost of the service (\$75-\$400) also assumes a particular income level. However, the data in my study suggests that this expense was subject to personal justification. For instance, women described forgoing other amenities, taking advantage of sales and promotions, or receiving the service as a gift, for a baby shower or from parents or in-laws, as ways to justify the cost of the service.

Of the ten women interviewed, all identified as being in heterosexual relationships. Seven women were married (Monique, Sarah, Ainsley, Heather, Jamie, Rachelle and Shelly), one woman was engaged (Catherine), and the remaining two women were in committed partnerships with the fathers of their children (Kelsey and Chelsea). The women ranged in age from 18 to early 40s, though most were in their early to mid-thirties. Seven of the interview participants were first time mothers (Kelsey, Sarah, Ainsley, Heather, Chelsea, Rachelle and Catherine). Monique and Jamie each had two children, while Shelly is a mother of four. Every participant with the exception of Monique, had only received elective ultrasound for one of their pregnancies, regardless of the number of children they had. All interviewees except Shelly indicated that they had elective ultrasound for their first pregnancy. Shelly had an elective ultrasound with her fourth child.

Eight of the women interviewed indicated that they were employed. Four interviewees were employed in health or health-related fields as nurses, (Monique and Sarah) a physio therapist, (Heather) a birth doula, (Ainsley) and registered massage therapists (Ainsley and Rachelle). Jamie is employed as a social worker. Two women indicated that they work in human resources (Kelsey and Catherine). Two of the ten women interviewed were not employed in the formal work sector. Chelsea was the youngest of the participants, having had her son at the age of 17, and spoke about recently completing high school and working towards entry into an Early Childhood Education program. Shelly is a stay-at-home mother to her four children.

The level of education of each participant varied. Due in part to their ages, two participants, Kelsey and Chelsea, had only completed high school. Additionally, Shelly indicated that she had completed high school shortly before having her first child. Two of the women interviewed (Jamie and Heather) had obtained advanced degrees at the Master's level, while three others (Monique, Sarah and Catherine) had university degrees. Ainsley and Rachelle have professional designations as registered massage therapists and thus completed specific training programs related to this work.

At the time of the interview, nine of the ten participants had already received their elective ultrasound. Most had had them within the last two years, although for some it had been longer, up to five years. Only one interview participant, Kelsey, had not yet had her elective ultrasound. At the time of our interview, she was 22 weeks pregnant and had scheduled her ultrasound for 30 weeks. Attempts were made to interview her again after her elective ultrasound, however she gave birth prematurely and thus had limited time and resources to sit for a second interview.

A more thorough explanation of the field notes, demographic survey, and interview data are available in the participant profiles included as an appendix to this thesis. Before continuing to the results and analysis provided in the remaining chapters, I offer a brief discussion of some of the terminology I use to describe women's experiences with elective ultrasound.

3.10 Language

In the chapters that follow I have made a number of specific linguistic choices that necessitate explanation. The most significant of which is that I employ a shifting use of the terms “fetus” and “baby” in relation to participants' descriptions of their experiences with elective ultrasound. For philosophical reasons related to my feminist politics I adhere to the “birth threshold” as the point at which a fetus becomes a baby (Weir, 2006). However, most participants, particularly those who discussed their pregnancies as both planned and very much wanted, used the term “baby” when talking about their fetus. Additionally, as I will detail in the discussion chapter, elective ultrasound works to accelerate women's identification as mothers, which had an impact on the language participants used when speaking of their experiences. In many instances participants were speaking about their fetuses in the future tense (as babies) and as such I worked to retain their voices as much as possible. In the discussion and analysis of participants' responses I use the term “baby” in alignment with participant descriptions. In all other instances I use the term “fetus”.

One of the themes to emerge from the research involves the distinctions made between medical and technological ways of knowing, and women's embodied relationship to their fetus. Thus, I often use the term “embodied knowledge”. In this case embodied knowledge refers to the non-visual sensory experiences of pregnancy such as quickening, and the fetal movements occurring

later in pregnancy like the “kicks and jabs” discussed by interviewee Jamie. Other corporeal experiences can be included in this definition such as hormonal changes, morning sickness, weight gain, swelling and other bodily changes. I contend that these sensory experiences constitute a form of knowledge that is invalidated by dominant discourses which privilege the visual sense, as discussed by Donna Haraway (2004). Understanding these sensory experiences as authoritative may have offered participants a sense of reassurance about their pregnancies, similar to the kind of reassurance they sought from elective ultrasound.

Embodied knowledge was often positioned in opposition to authoritative knowledge, and thus I make use of the phrase frequently in the chapters that follow. For the purpose of this project, authoritative knowledge refers to knowledge that is both trusted and respected by society at large. In the context of pregnancy, medical knowledge and the visual knowledge produced by ultrasound technology is recognized as authoritative. It is understood that physicians and medical professionals have formal, institutional knowledge that is regarded as fact-based and objective. Similarly, as Donna Haraway (1997) suggested, the technologically produced fetal image is also understood as authoritative in relation to knowledge about pregnancy, in large part due to the scientific privileging of the visual.

3.11 Conclusion

In this chapter, I have described the methodological approach used to explore women’s experiences with elective prenatal ultrasound. I have qualified this project as a feminist standpoint analysis drawing on principles of institutional ethnography, using ethnographic methods. I discussed some of the challenges present in the research design and data gathering phase of the project, and began to situate interview participants in relation to one another. The following chapters will detail the findings which resulted from the methodological and analytic approaches described above.

Chapter 3

4 Experiencing Medical Ultrasound

Elective ultrasound constitutes an interesting consumer practice, in part because it appears to be offering a service that in many ways is already provided to women, free of charge. The vast majority of Canadian women will receive diagnostic prenatal ultrasound during their pregnancies as a standard part of their antenatal care. In this way, the service offered by elective ultrasound clinics is not unique. It is, however, distinct from the kinds of ultrasounds that take place in hospitals or medical clinics. Participants were very clear on the distinctions between the practices, and in large part suggested that their experiences with medical ultrasound influenced their decision to purchase elective ultrasound. Diagnostic or medical ultrasounds were understood as functional and sterile, while elective ultrasound was positioned as a fun and exciting experience. The framing of both medical and elective ultrasound depends on broader cultural understandings about the role of the formal healthcare system and consumerism, in determining women's experiences with pregnancy. However, underlying both of these understandings is the way in which pregnancy is understood as a state of being. Participant responses indicated a high level of worry and anxiety in relation to their pregnancies, both of which factored heavily in their choice to purchase elective ultrasound, and how they experienced the practice.

In large part due to the medical discourse surrounding it, pregnancy itself is seen as risky. (Weir, 2006). The medical management of pregnancy has arguably introduced, and certainly reinforced, a cultural understanding that pregnancy is tenuous, risky, and potentially dangerous.

Interviewees expressed an awareness that pregnancy meant they were required to alter their behaviour in order to ensure they were providing the safest and most nurturing maternal environment for their growing fetus. Attention has been increasingly focused on the dangers presented by pregnant women themselves. The responses from participants in this research indicate that this sense of risk has been internalized, prompting women to worry that unless they have evidence of the continued life of their fetus, in the form of a heartbeat or an ultrasound image, there is no way to know whether the fetus is okay. The embodiment of this sense of risk

can be understood as worry - worry that something will go wrong at any moment and result in the loss of a pregnancy.

Participants' descriptions of their experiences with medical ultrasound reflect much of the feminist literature regarding the medicalization of women's bodies and of pregnancy in general. Their responses indicated a lack of control over decision making around pregnancy, particularly the kind of information that would result from the ultrasound, like fetal sex diagnosis.

Participants' descriptions also suggested that they experienced pregnancy as a state of omnipresent risk which they were always negotiating. As will be outlined below, participants' responses reflect a pattern where they were constantly negotiating their embodied experience of pregnancy with the recognition that this embodied knowledge lacked the authority afforded to medical expertise or to a technologically produced image. The connection between this way of thinking and what Adrienne Rich (1977) termed the "institution of motherhood" will be taken up in the discussion chapter.

The aim of this chapter is to describe some of the worry and anxiety participants expressed, and to discuss how they experienced routine or diagnostic ultrasound during their pregnancies. I will highlight some of the ways participants' negative experiences led them to want to purchase elective ultrasound. The following chapter will discuss the positioning of elective ultrasound as a consumer alternative which aims to give pregnant women and their families a fun and celebratory experience. The frequency with which participants suggested that their encounters with diagnostic ultrasound led them to desire an alternative experience indicates the significance of the medical practice, and suggests that the decision was heavily influenced by medical encounters.

4.1 Anxiety and Worry

Many women approach pregnancy with an assumption that they lack necessary knowledge about pregnancy (Mullin, 2005; Weir, 2006). Necessary knowledge might include; what they should or should not be feeling; stages of fetal development, or signs to watch for which would indicate a fetus is in distress. Interviewees described being unsure about what was going on with their bodies, and whether or not the changes they were experiencing were "normal" or a cause for concern. There was a common belief that anything could go wrong at any time, and that one of

the only ways to assuage fears about abnormal fetal development, was to engage in surveillance - through appointments with doctors and midwives, through monitoring and hearing the heartbeat, and through observing the fetal image via ultrasound. While some women were exposed to ultrasound numerous times (8-12) over the course of their pregnancies, others assumed they would have greater access than they had. Most often this discrepancy was due to a medical designation of “high risk”. A high risk diagnosis during pregnancy is far from ideal, in that fears about fetal health and well-being are heightened by the medical legitimacy of these fears and prompted by the diagnosis from a trusted doctor or midwife. However, some participants viewed the increased access to ultrasound as a positive outcome of an otherwise negative diagnosis. Rather, greater access to ultrasound was seen as a means of monitoring the healthy development of one’s fetus. For the women interviewed, anxiety about how a fetus was developing ranged from “what if my baby is ugly?” (Chelsea) to “[what if] your baby has three heads?” (Monique). For Chelsea, Monique and others, the opportunity provided by ultrasound to see that her baby was “cute” or to see that her baby did not, in fact, “have three heads” provided reassurance of the continued “normal” progression of their pregnancies.

Every interviewee, with the exception of Shelley who was the mother of four children, described experiencing varying levels of fear around their pregnancies. Women described pregnancy as “scary” and suggested that they were “terrified” that something did or could go wrong with their pregnancy. Each participant experienced fear in her own way, though many parallels can be drawn between their accounts. Certain fears were expressed by numerous women, including, for first time mothers, the strangeness of the many bodily feelings associated with pregnancy, particularly fetal movements. Not knowing what these feelings meant, or not experiencing them to the degree expected, induced worry in some participants, particularly those who had been diagnosed as having high risk pregnancies. Others disclosed previous negative experiences associated with pregnancy, including miscarriages and fertility issues, which increased their anxiety that something could go wrong and terminate the pregnancy. Some women indicated that learning the sex of their fetus gave them a sense of preparedness for the mothering process ahead, and served to calm anxieties. The myriad worries women expressed are discussed below. The ways their experiences with elective ultrasound provided a sense of visual, emotional and relational reassurance, or, in the case of at least one participant, the lack of this reassurance, will be discussed in a later chapter.

4.2 First Time Mothers

4.2.1 Movement

The impact of the feelings of risk and worry were felt very strongly by first time mothers. Typically their anxiety was related to whether or not their fetus was healthy and developing properly, with an understanding that pregnancy is tenuous, and that at any time something could go wrong and jeopardize the health of the fetus. It was this worry that prompted many women to seek out elective ultrasound, for the reassurance it provided. The opportunity to see the fetus via ultrasound acted as confirmation that, as Rachelle expressed “everything was okay”. All of the women I spoke to, with the exception of Kelsey, had received at least one medical or diagnostic ultrasound, where the health of her fetus was confirmed. However, again due to the constant state of perceived risk, women sought out that reassurance over and over again. There was an implicit understanding that even though the fetus was healthy two weeks, or a month prior, that any number of issues could have arisen in the meantime which would have jeopardized the success of the pregnancy. For example, Ainsley suggested that “at any time things could go wrong...you’re always in a bit of a panic”.

Varying levels of anxiety were experienced by all the first time mothers in my study; however it appeared to be felt most strongly by those whose pregnancies were unplanned. For example, Catherine and Kelsey described being unsure as to what they should or should not be feeling, needing to get used to the idea of pregnancy and motherhood and having to re-situate themselves within their newly pregnant bodies. Catherine suggested that,

pregnancy can be scary! You know, I mean especially if you’re not expecting it, I mean, it kind of turns your life upside down if it’s not the plan, so it was very scary at first.

Catherine’s description suggests that prior to seeing her fetus, she was confused and anxious about her experience of pregnancy. Her description also suggests a desire for information as a means of calming her fears. Catherine continued,

when I had my first [medical] ultrasound done the technician told me I had an anterior placenta so I wouldn’t be able to feel kicks right away, and you know a lot of people feel flutters and movements even at like 16 weeks, but I wasn’t feeling anything and I kept

thinking you know, is everything okay? And as a first time mom, you know, you worry, but seeing the baby on the screen, moving around made me feel so much better.

Knowing that she may not feel the movements she understood to be typical of pregnancy, Catherine looked to the visual technology of ultrasound to help foster a sense of reassurance, the kind of reassurance she imagined would come from feeling her baby move. In this way Catherine connected having an active baby to having a healthy baby. She described the ultrasound pictures as acting as an alternative to that feeling which sent the message that everything was fine and her baby was healthy. Catherine also connected a lot of her uncertainty to the fact that her pregnancy was unplanned. For Catherine, as well as other first time mothers in my study, there was an assumption that had the pregnancy been planned, she would have had the chance to work out some of her feelings and anxieties prior to getting pregnant. The need to get used to the changes occurring in and with her body, is connected to the risks she associated with pregnancy in general.

Similarly, Kelsey felt very unsure about her pregnancy at the time of our interview. Though rather than being rooted in an awareness of risk, her uncertainty was related to her general lack of knowledge about pregnancy. Kelsey explained that her pregnancy was unplanned and that the sensations she was experiencing seemed foreign and confusing. Kelsey offered,

the only time I really feel like there's a baby in there is when he's moving around, or when I'm sick, or when I go and hear the heartbeat, so for me to be able to actually go and see it...it's just so exciting...I think it's just going to make - like reassure me that I'm pregnant still and that my baby's healthy and it's just going to be so cool to see! 'Cause I'm so curious, like, how is there a baby in there? Like, I don't get it! How does this work?

In her explanation, Kelsey states clearly that she can feel her fetus moving, yet affords that movement no authoritative status to signal the successful progression of her pregnancy.

Having never experienced pregnancy before, Kelsey was very confused as to what she was supposed to be feeling and doing in relation to her pregnancy. She understood very clearly that there were a different set of expectations for her now that she was pregnant, though she was

unsure as to what they were. While she was not certain exactly what kinds of lifestyle modifications were required, her response pointed to an understanding that her choices could negatively impact the well-being of her fetus. Kelsey alluded to the fact that she was aware she would need to change her behaviour and alter the activities she engaged in due to her pregnancy, but described having not acted on these expectations prior to her ultrasound. She suggested,

I think it will make me more cautious too, like right now I kind of still do the same things that I would normally do, like, I play hockey so I'll go out to the rinks and play hockey at midnight and stuff like that, but I think, like, once I know he's getting bigger, I'm just going to be much more cautious

Kelsey anticipated that seeing an image of her fetus would help her better recognize it as a baby, as *her* baby, and as such, she would naturally begin to change her behaviour based on this recognition. Kelsey's descriptions indicate that she is aware that pregnancy means she must take better care of herself, refrain from engaging in certain activities, and shift her motivations towards acting in the best interests of her baby.

Kelsey also expressed a high level of stress and anxiety relating to her feelings of uncertainty, and her lack of general knowledge about pregnancy, particularly that her lack of knowledge made her feel "stupid". In response to a question about her experience with ultrasound in a medical setting, Kelsey explains,

I don't know what I'm supposed to be getting, I don't know if I'm supposed to be doing this or that, it's only what people tell me or what I read about or what I ask...it makes me feel even stupider, you know, it's like, you haven't even had an ultrasound yet?! And I mean, [my doctor] is not telling me anything, I get in and out of there so fast, I don't really have a chance to ask.

Clearly Kelsey felt unprepared for the experience of pregnancy and described getting very little assistance or support from her doctor. Without reassurance from her doctor, Kelsey turned elsewhere for an experience that would calm her anxiety and provide her with more information about her fetus.

Kelsey felt that her doctor should be responsible for explaining what she should be feeling, but because of the lack of information and attention she received from her doctor, her inability to identify or make sense of what these feelings meant, made her feel stupid. For both Kelsey and Catherine, seeing an image of their fetus put into perspective what they were, or were not feeling, in terms that they could make sense of. In other words, both women understood an image of a moving fetus to mean that it was active and healthy, and that their pregnancies were progressing normally.

4.3 High Risk Pregnancy

While a sense of worry and anxiety was felt to some degree by all participants, it was experienced in different ways for those who had been designated to have high risk pregnancies. Two interviewees, Ainsley and Monique described being diagnosed as high risk early on in their pregnancies. This diagnosis meant that both women received more than the usual number of medical ultrasounds, between 8 and 12. While both women were aware of the medical necessity of their numerous ultrasounds, they were critical of the ways in which these procedures were performed, and the fact that they did not feel any sense of reassurance after leaving their medical ultrasounds. The health of their fetuses was only confirmed later, after the radiologist had interpreted the results and issued a report. The delay in receiving a positive diagnosis meant that neither Monique nor Ainsley felt particularly reassured by their medical ultrasound experiences. In fact, they described feeling an increase in anxiety immediately following their medical ultrasounds as they were left waiting for test results to be delivered by the doctor. Monique noted,

Ultrasound providers are not allowed to, umm, interpret the results, right? It's not within their scope of practice, so while they know the answer...you have wait for the radiologist to get the report, then they read the report, they get the report, someone else types the report, then they send it to your healthcare provider, then you make an appointment and you go, like two weeks later...I just fe[lt] such anxiety about leaving that room, I [was] so glad to get out of there.

The lack of immediate results was concerning for Monique, in that she felt she was left to worry for two weeks before she would be able to know if her fetus was healthy.

Interestingly both Ainsley and Monique were also more involved in the medical management of their pregnancies due to their occupations: Monique as a nurse and Ainsley as a birth doula and prenatal massage therapist. By virtue of their occupational training, Monique and Ainsley both claimed to have a familiarity with the medical system with which pregnant women are involved. This familiarity manifested as a level of understanding that medical and technological interventions into pregnancy (such as ultrasound) were in fact necessary, in the context of their pregnancies. This is not to suggest, however, that Ainsley and Monique were unaffected by the uncertainty and fear experienced by other interviewees. In fact, Ainsley suggested that,

at any point in time, things could go wrong...you're always in a bit of a panic until you hear the heartbeat.

Ainsley's assertion is indicative of the different ways anxiety and uncertainty manifests for women with differing social, occupational and class backgrounds. For instance, Ainsley has the benefit of formal training in anatomy and physiology, as is required by her profession, as well as a job which positions her as an intermediary for pregnant women and the medical system. Even with the benefit of formal training and institutional knowledge, neither Ainsley nor Monique was immune to the feelings of anxiety and uncertainty experienced by women who were less connected to the medical system. Although they described their medical ultrasounds at the time as "terrifying" (Ainsley) or "uncomfortable" (Monique) both women viewed their medical ultrasound procedures as necessary, and as ultimately successful in that they both had healthy children at the time of our interviews.

Of all the participants in this research, Monique was the most direct in her criticism of the medicalization of pregnancy. Although she was clear that she "was not threatened by healthcare" Monique suggested that the setting in which medical ultrasounds are performed, treat pregnant women as if they are sick. She offered,

It is, you know, everything you don't want out of the medical system, at a time when things are great, you know so, you're not in the medical system because you're sick, you're there because you're having a baby...when you're sitting in their office, you're sitting there with a person hacking next to you!

For Monique, the distinction between being sick and being pregnant is a very important one. Given the number of ultrasounds she received during her high risk pregnancy, Monique had a lot of experience with both the technology and the technicians performing the scans. Most of these experiences she categorized as negative. Part of her negativity was due to more broad criticisms of the healthcare system in general, such as her suggestion that pregnant women should not be viewed the same as other patients, given that they are not sick. Her negativity was also, however, due to the anxiety she experienced around her diagnostic appointments. Monique explained,

I'm generally not a person who is threatened by healthcare but it's, umm, you are a little anxious, like this is the first time you get to see what the baby is like, and if there are any problems, and you know, that's why you're there, to see if there's any problems, so you know, by the end of your appointment, in your mind, you know, your baby has three heads [laughs]!

Monique went on to describe her medical ultrasound technician as “stone-faced” which was disconcerting for her as she was trying to read her technician's facial expressions for any signs of worry or danger. As previously mentioned, Monique described at length her frustrations that diagnostic information is gathered and disseminated between numerous individual medical practitioners (such as general practitioner, radiologist, ultrasound technician) before it is given to pregnant women as patients. Monique explained,

I am a strong proponent of people having the information that they want out of healthcare...in what other scenario is it okay for, umm, somebody who wants information about their own health or the health of their child to be told, I have the information and you're not allowed to have it, by your healthcare provider? Never. I can't think of [any other scenario]. So why is it suddenly okay when it comes to pregnancy and your own children, that people find that okay to withhold information?

The information to which Monique is referring is the sex of her fetus. She felt that the sex of her fetus was information that she wanted to have and thus strongly objected to her medical ultrasound provider's policy not to release that information until after a doctor has confirmed the results. Monique suggested that in part, due to this lack of information,

I just [felt] such anxiety about leaving that room, I [was] so glad to get out of there.

Monique's anxiety was due to the organization of the medical management of pregnancy which distanced her from information about her fetus, as well as the particular interactions she had with her technician. Perhaps especially because her pregnancy was considered high risk, Monique highly valued the reassurance that she felt could be provided by ultrasound. Although it was clear she understood the purpose and importance of diagnostic scans, she was critical of the fact that,

[They're] looking for negatives - like, I get that, I mean, that's why people go to their healthcare providers, but there's no focus on why you're actually there, right? And there's no reassurance, there's no nothing, you're just treated like you're sick.

Although Monique recognized that the purpose of diagnostic ultrasound is to detect fetal abnormalities, she felt that, more broadly, pregnancy should be treated as a celebration. In describing a lack of focus on "why you're actually there" Monique was referring to her understanding of pregnancy as separate from other kinds of medical concerns that might position her as a patient within the medical system.

The positioning of pregnancy as tenuous and risky reinforces the need for medical intervention. As participants responses indicate, the medical management of pregnancy shifts authority and much of the decision making from women to medical professionals. Given that pregnant women will encounter medical ultrasound prior to elective ultrasound, (if they choose to purchase) it is important to consider their experiences with ultrasound in medical settings, and to determine what impact these experiences had on their decision to purchase elective ultrasound. The next section will focus on participants' experiences with medical ultrasound.

4.4 Medical Experience

In all cases, participants premised their desire for elective ultrasound with descriptions of their medical ultrasounds. In diagnostic settings, ultrasound is determined and deployed by professionals who are positioned as authorities on pregnancy and prenatal care. Participants described being keenly aware that they were not in charge of decision making, around how and for what purpose ultrasound would be indicated. Most, though not all of the women interviewed,

suggested some level of dissatisfaction with their medical ultrasound experiences. This dissatisfaction was typically related to one of two factors; the level of engagement and demeanor of the ultrasound technician, and the ability to obtain desired information. Typically the information desired was related to the sex of the fetus, which most participants described as wanting to know, though not always being able to find out.

4.4.1 Interactions with Medical Personnel

Numerous participants described being dissatisfied with the ways they were treated by medical ultrasound technicians. They pointed to the utilitarian nature of the experience, and were critical of what was described as a lack of warmth and connection between themselves and their ultrasound technicians. For example, of her medical ultrasound experiences, Catherine suggested,

For any ultrasound that I've had in a clinic, they're very rush rush rush. They'll talk to you a little bit but it's - they're more focused on their work and I find that they, maybe, make you know that, you know, this is for medical reasons and not for entertainment value. Both medical ultrasounds that I've had, they've reminded me of that...for the morphology exam at 18 weeks, I really wanted to know the gender, and she was very quick to say "well, you know, that's not why we're here, you know, we're getting the measurements, that's what we're here for." And I thought, well okay, but she was very reluctant to even go there, she did not want to discuss gender or anything...I mean, I dropped the issue, I wasn't going to push it...but, you know, she could have been a little more tactful.

As a first time mother, and perhaps because her pregnancy came as a surprise, Catherine sought out all the information she could, in an effort to help her prepare for her baby's arrival. Her disappointment in not being able to find out the sex of her fetus was made worse by what she felt was an unnecessarily cold response from her medical ultrasound technician.

Rachelle described a similar encounter with her medical ultrasound technician. Like Catherine, Rachelle had wanted to find out the sex of her fetus but was unable to obtain that information from her medical ultrasound. She shared,

The lady was kind of a...ughh, I didn't really like her. I had a feeling, I had a gut feeling they weren't going to be able to see it or that she wasn't going to pass it on...the tech didn't really talk to me, my husband was only allowed to come in at the end for some viewing.

Rachelle interpreted her ultrasound technician's attitude as indicating that, even if she could determine the sex of Rachelle's fetus, she would not be willing to communicate this information. She understood the demeanor of her ultrasound technician as contributing to her ability to obtain the information she sought. Rachelle could not read the image herself to determine the sex of her fetus; she required the technical knowledge, and cooperation of a trained ultrasound technician. She was reliant on her ultrasound technician to mediate the image and communicate information. In this setting, Rachelle recognized her ultrasound technician as having the authority to determine what kinds of information would be sought and communicated to her.

While Rachelle and Catherine described the cold demeanor of their ultrasound technicians as contributing to their negative experience with their medical ultrasounds, Heather instead placed the blame on her physician, as she explained,

We had the 20 week standard ultrasound and to cut a long story short, we had a rather bad experience, and the doctor came in to talk to the tech and basically told me what sex the baby was...so my husband wasn't in the room with me at the time...he'd been left in reception. We have a background of miscarriage anyway, so I'd gone for like half an hour, he's in reception having a freak out. So I think his whole experience of the 20 week scan was just so appalling that we decided we'd have another one that would be nice, we could find out together what the sex was.

Although Heather had not expressed strong feelings either way about finding out the sex of her fetus, the fact that it was told to her by accident, without her husband, constituted a negative experience. Heather's description suggests that she felt ignored and overlooked by her physician and ultrasound technician, in that they seemed to lack regard for whether she wished to know the information they were openly speaking about. Contributing to this negative experience was the fact that Heather was alone when she learned this information. At other points in the interview

Heather referenced how involved her husband was, and wished to be, often lamenting the fact that he was excluded from her medical appointments, specifically her diagnostic ultrasound.

Kelsey also indicated that she was dissatisfied with her medical experience, primarily because of her physician. The hurried pace previously described by Catherine was echoed by Kelsey in her descriptions of her interactions with her obstetrician. She described,

She was in a hurry last time because I think it was, like, the last day their office was open [before Christmas holidays] so they were closing early. I felt kind of rushed, so I think [the elective ultrasound] will be a lot better. I'll feel a lot better...and I mean, [my doctor is] not telling me anything, I get in and out of there so fast, I don't really have a chance to ask and by the time I remember to ask her I'm like half way out the door so it's like, I'm not gonna go back now.

Here, Kelsey was speaking generally about her interactions with her physician. Earlier in the interview she expressed feeling “stupid” because she did not know a great deal about pregnancy. It is clear that Kelsey felt her physician was in a position of authority and should have been communicating information to her about what she should expect from her pregnancy. Her response also indicates that she did not feel she was in a position to ask for, or demand, this information. At the time of the interview, Kelsey had not yet been given a medical ultrasound, which she was both disappointed and confused by. The kind of quick and cold demeanor other participants described receiving from their medical ultrasound technicians, Kelsey received from her doctor. She experienced intimately the power differential between herself and her physician, in that she felt her doctor had information or access to information that she did not. Kelsey's descriptions suggest she felt ill equipped to understand and embody her pregnancy, and turned to her doctor as a means of support. Unfortunately the end result was that Kelsey felt unsupported in this way by her doctor, and sought out information and support elsewhere.

While participants described varying levels of friendliness and engagement from their medical ultrasound technicians, only Ainsley and Sarah suggested they had pleasant experiences with their diagnostic scans. Ainsley reasoned that perhaps her technicians were particularly nice to her because she experienced a high risk pregnancy, during which she had many ultrasounds and was confined to hospital for months prior to delivery. Ainsley was also a trained birth doula and as

such, was able to interact with doctors and hospital staff as (somewhat of) an insider. Similarly, Sarah shared that she was very comfortable in medical settings. Her father-in-law was a doctor and her mother a nurse, so she claimed a level of understanding about medical procedures that was perhaps lacking with other participants. When asked if she felt there was a difference between the ways her medical and elective ultrasound technicians spoke to her, Sarah explained,

You know what, we had really awesome ultrasounds all the way along so I wouldn't necessarily say the tech spoke to us any differently.

Sarah was also the only interviewee to describe her elective ultrasound experience as negative, so this may have contributed to her reflections on her satisfaction with her medical ultrasound technician.

Most interviewees expressed a level of understanding as to why their medical ultrasound technicians were interacting with them in ways that felt distant and sometimes cold. There was an understanding that medical technicians had a job to do, and that job did not necessarily involve making small talk with them as patients. However, this type of engagement would have gone a long way in making participants feel more at ease, and would have made for a more enjoyable experience.

4.4.2 Information

In addition to a cold or hurried demeanor on the part of their ultrasound technicians or physicians, an inability to obtain desired information led numerous women in my study to purchase elective ultrasound. For most, the information they sought was the sex of their fetuses. For these participants, like Catherine and Rachelle, obtaining a sex diagnosis was the sole reason for their seeking elective ultrasound. Rachelle explained,

I just wanted to do it because I went for my 20 week ultrasound and I really wanted to find out the gender and it came back that they couldn't see it, it was undetermined.

Rachelle had a clear idea of the information she wanted, and when it was not provided, she sought the opportunity to obtain it elsewhere. When asked if she thought she would have

purchased an elective ultrasound if she had been given the information she desired, Rachelle responded,

I don't think I would do it, no. I don't know because as it is we don't know, I guess, the long term effects of having a long, or a lot of ultrasounds.

Despite clearly stating the information she desired from her diagnostic ultrasound, the response of Rachelle's technician reinforced that it was not, in fact, up to her to decide. In her decision making, Rachelle had to weigh out the benefits of receiving the information she desired, and the potential harmful effects of engaging with technology in an unprescribed way. I will return to this point in the following chapters.

Similarly, Catherine expressed a desire to know the sex of her fetus, and described resistance on the part of her medical ultrasound technician. She explained,

I told them straight out that that's what I had wanted. Umm, I think about two weeks prior I had had the typical 18 week morphology exam, and that was through my general practitioner, umm and they wouldn't tell me the gender, so...and we really wanted to know, just for planning purposes, so that's why I contacted the 3D ultrasound place.

Again, the response of her medical ultrasound technician reiterated to Catherine that she was not, in fact, in control of determining what kind of information would be provided to her. In medical settings the ultrasound technician, along with the radiologist and physician are tasked with determining and disseminating diagnostic information. Even when participants voiced their desire for particular information, the ultimate power to decide remained with medical personnel.

Some participants felt very strongly about women being able to obtain the information they desire from medical ultrasound. Both Monique and Jamie, who were otherwise connected to the healthcare profession, were critical of the medical profession for what they felt was an unnecessary withholding of information. Monique was highly critical of the medical profession for refusing to provide women with the information they desired. She posited,

I am a strong proponent of people having the information that they want out of healthcare. Like, I read this blog online where people were like, you know, mothers

shouldn't be able to find out the sex of their baby because, you know - and they go into all these long arguments about abortion and child selection, and to me, that's not the argument. The argument is, in what other scenario is it okay for, umm, somebody who wants information about their own health or the health of their child to be told, 'I have the information, but you're not allowed to have it' by their healthcare provider? Never. I can't think of another one. So why is it suddenly okay when it comes to pregnancy and your own children, that people find it okay to withhold that information?

For Monique, an awareness that healthcare providers have access to information, and thus control over disseminating it, presents a major issue in terms of patient rights. She clearly viewed sex determination as diagnostic information that should be made available to those who desire it. Monique touched on the major argument against radiologists and ultrasound technicians providing fetal sex information to women, which is that it makes possible sex selective abortion. This argument has led numerous medical and governmental institutions to condemn the practice of releasing sex information to women and families prior to 20 weeks gestation, which is the legal cutoff in Canada for women to obtain non-medically indicated abortions (Health Canada, 2003; Weir, 2006). It is clear that, for Monique, this was not an acceptable argument. She viewed the larger issue as women being given a choice in terms of information regarding their health and the health of their children.

Although Jamie did not wish to find out the sex of her fetus prior to birth, she felt strongly that those who did should be given that information without question. Her concern had more to do with her ability to view her fetus via ultrasound, on demand. Because she had experienced fertility issues and became connected to online networks of women with similar experiences, Jamie had come to expect a certain number of ultrasounds. After becoming pregnant naturally, she found out she would only receive two routine medical ultrasounds. She explained,

This was predominantly from the fertility website...those women tended to talk about a lot of ultrasounds, right? And so when I went - and I ended up with a midwife - and I'm like, really? Two ultrasounds? That's it? Like, I was kind of disappointed that I wouldn't get to see my baby every month, like, what do you mean? And so when I found out that I could pay for, and have this option, I said "Well, why not?"

Jamie's concern was not necessarily for specific medical information, but for the opportunity to see her fetus via ultrasound. Because elective ultrasounds are not available through the healthcare system, Jamie was happy to discover that the option existed for her as a consumer.

The above responses indicate that participants felt distanced from medical decision making. A lack of control over the experience of ultrasound and the information provided, promoted participants to seek out a consumer alternative. The framing of elective ultrasound as a consumer alternative to prenatal ultrasound in medical settings will be discussed in the following chapter.

4.5 Analysis

The anxiety expressed by participants suggests that pregnancy presents as a paradox, in that it is seen as natural and instinctual, yet also highly managed. Pregnancy is understood as a biological process and is widely acknowledged to have taken place successfully for centuries without medical intervention. At the same time, medical intervention into pregnancy is so pervasive and routine in Canada, that it has become expected and anticipated. The medical management of pregnancy has contributed to the displacement of women's embodied knowledge and the reinforcement of institutionalized forms of authoritative knowledge. In other words, doctors are assumed to be experts on pregnancy, not women themselves. Many participants, particularly first time mothers, explained feeling unprepared for the changes they were experiencing, and sought out the advice of qualified medical personnel, as well as, to a lesser extent, other women and their individual experiences of pregnancy. Participant responses indicate that there is an assumption that women enter into pregnancy already at a knowledge deficit.

While knowledge of pregnancy is assumed to be natural to women, participants' responses indicate the opposite. For example, Kelsey deferred to her doctor almost entirely for information about her pregnancy, what she was feeling and what she could expect. The fact that her doctor did not always readily volunteer this information left Kelsey feeling "stupid" in relation to her pregnancy. Similarly, numerous participants described consulting their physicians for advice about purchasing elective ultrasound, specifically regarding their opinions of the safety of the practice. First time mothers like Catherine and Kelsey suggested that they felt ill prepared for their pregnancies and all the associated changes that were happening to them, as well as with the changes in behavior they would be required to undertake (such as refraining from playing contact

sports, as Kelsey described). This reflects an understanding that women pose an ever present risk to their fetus simply by engaging in their regular activities.

The sense of risk expressed by interviewees, echoes what many feminist theorists describe as the “risk discourse” associated with pregnancy (Ruhl, 1999; Lemke, 2002; Weir, 2006;). Risk discourse stipulates that all pregnancies are viewed as potentially risky, and that the list of things that can threaten a pregnancy is exhaustive: including environmental factors, diet, exercise regime, vitamin intake, working conditions, and exposure to chemicals, pesticides and environmental toxins, among many others. One effect of this discourse is to induce a constant state of fear in many women that their pregnancies may be in danger, at any time, due to any one, or any combination, of many factors. The responses of interview participants demonstrate some of the ways this sense of risk manifests and, as will be discussed in the following chapters, how it directs the decision to seek out elective ultrasound. Risk discourse functions to engage the medical community, or in this case, medical technology (made use of in a non-medical setting), in all aspects of pregnancy, from its earliest stages through to birth and beyond. If women perceive themselves as potentially presenting a risk to the health and well-being of their fetus, based on their health choices, occupation, environment, or even genetics, they are more likely to engage willingly in practices of surveillance, including ultrasound. I position ultrasound as a form of surveillance; given that the purpose, in both medical and elective prenatal ultrasound settings, is to check on or “watch” the fetus (the opportunity to “watch” the fetus was experienced by interviewees as reassuring in that it allowed them to see their fetus moving around in real time). I do not mean to suggest that there is necessarily a sinister motive to this surveillance but rather, that the use of ultrasound in these ways relies on an understanding that there is an ever present risk to the fetus that needs to be monitored throughout pregnancy.

The power dynamic between pregnant women and medical personnel contributes to the undervaluing or dismissal of women’s embodied knowledge. Jamie, Kelsey and Ainsley, each indicated that they were able to feel their fetus moving, had felt “kicks” or “jabs” or otherwise sensed the movement of their growing fetus. Despite this embodied feeling, each participant described the necessity of seeing an image of the fetus to confirm that indeed “everything was okay”. In this scenario, both medical technology and personnel are positioned as gatekeepers for information about the fetus. Because women’s embodied knowledge cannot be trusted, they

require the intervention of a doctor, or in the case of elective ultrasound, they require technology for definitive proof of fetal well-being. Narratives like Kelsey's and Jamie's suggest that there was a lack of recognition of their embodied experience as authoritative. In other words, feeling the movements of their fetus was not enough to confirm its well-being, their embodied knowledge of their own pregnancies was not deemed as evidence, in the same way the image was. The power and authority vested in, not just medical personnel but technology is indicative of an undervaluing of women's knowledge and experience. The fact that participants were not lamenting this fact, but rather simply stating their thought process in making the decision to purchase elective ultrasound, suggests that this is a widespread and pervasive belief relating to pregnancy. Despite being very clearly positioned as an elective or consumer practice, the elective ultrasound industry still benefits from the legitimacy assigned to the technology of ultrasound. Participants' experiences suggest that ultrasound imaging is trusted as an objective means to confirm the well-being of the fetus, whether it is medically supervised or not.

It is clear from participant's responses that the decision to purchase elective ultrasound was influenced by their experiences with medical ultrasound. Their experiences with ultrasound in medical settings suggested that their value and necessity as an integral part of the interaction, was not acknowledged by medical decision makers. Participants expressed an understanding of medical personnel as having both authoritative knowledge of pregnancy and the power to dictate diagnoses, whether they were physicians, ultrasound technicians, or hospital administrators. What many of their responses conveyed, was the feeling of being isolated or alienated from their embodied experience of pregnancy. For the majority of participants, the most important diagnostic decision they identified was the sex of the fetus. Numerous participants cited failure to obtain this information from the medical ultrasound as the primary reason they sought out elective ultrasound.

For participants like Rachelle and Catherine, who described communicating to their medical ultrasound technicians their desire to find out the fetal sex, their assertions were met with what they understood as outright dismissal. Rachelle suggested that the demeanor of her ultrasound technician indicated to her very quickly that she could not be trusted to provide the information Rachelle desired. Coupled with what she felt was a professional distance maintained by her ultrasound technician and a lack of small talk, Rachelle's response points to a lack of recognition

for, or validation of her feelings and desires as they related to her pregnancy. Similarly Catherine referenced the speed with which her medical ultrasound technician indicated that she did not view assessing the fetal sex as a necessary or important part of the diagnostic scan. Regardless of how Catherine felt about the issue, the decision was made by the person with recognized institutional authority. Articulating the dismissal she felt in very polite terms, Catherine suggested that her ultrasound technician could have paid more attention to her needs and perhaps considered her feelings by being “more tactful”. Though she did not elaborate, I take Catherine’s statement to suggest her ultrasound technician could have let her down more gently, rather than suggesting that indeed it was Catherine who should have been afforded the authority to make that decision.

Conversely, Monique was very clear in that assertion. She described at length her issues with the medical management of pregnancy, particularly as it related to fetal sex information. Not only did Monique view pregnant women as ultimately in charge of the decision, she took issue with the fact that even when a woman is able to learn the sex of her fetus via medical ultrasound, typically two or more people are given access to the information before the pregnant woman is. The people Monique identified held various roles in the healthcare system: including physicians, ultrasound technicians, and medical receptionists. Monique’s descriptions can be understood as resistance to the positioning of medical professionals as authoritative decision makers regarding pregnancy. She communicated a strong desire to reassert her power in decision making around her pregnancy, and to have that power recognized and validated by the medical institution.

In describing her negative experience with medical ultrasound, Heather pointed to her doctor’s literal failure to acknowledge her as an important and necessary part of the ultrasound session. Although she had indicated that she did not wish to know the sex of her fetus (despite not having strong feelings on the matter) she felt that as her doctor was talking to the ultrasound technician in front of her, he had carelessly revealed the fetal sex. The way Heather described the conversation between her physician and ultrasound technician suggested they were either ignoring her expressed wishes, or ignoring her presence all together in speaking to each other. In referencing her history of miscarriage, Heather suggested that her physician and ultrasound technician had been insensitive to her experience. Kelsey’s descriptions of her encounters with her doctor were similarly suggestive of inattention to her needs and concerns. She expressed

feeling rushed during her time with her doctor, to the point where she did not feel she could ask questions or gain reassurance from her doctor. In being critical of this treatment, Kelsey indicated an understanding that her doctor had access to more knowledge and information about her pregnancy than she had. This belief was seemingly so engrained, that the fact that her doctor was not willing to volunteer knowledge and information, was taken as a failure to acknowledge Kelsey as an important and valued part of their interactions. The power and authority invested in her physician limited Kelsey's ability to see herself as knowledgeable or authoritative in relation to her pregnancy.

4.6 Conclusion

When asked to compare their experiences with medical and elective ultrasound, most women pointed to a dissatisfactory medical ultrasound as a catalyst for their elective ultrasound purchase. In medical settings, participants experienced a lack of control, in that they often described not receiving the information or attention they desired, or had come to expect, from their ultrasound sessions and technicians performing the scans. Women's expectations for their ultrasounds centered on both the experience and the information they would receive about their fetus. Having a fun and joyous experience "seeing" their fetus and finding out its sex, were part of the excitement leading up to medical ultrasounds. So, for many interviewees when the reality of their medical ultrasound appointment did not meet these expectations, they sought out that experience elsewhere. Some participants experienced resistance from medical ultrasound technicians to their desire to find out the sex of their fetus. For others, it was the ability to experience an ultrasound alongside their husbands and families that drew them to the elective practice. Some women described the setting of medical ultrasound as "cold" and "sterile" while suggesting their medical ultrasound technicians were unfriendly or "stone-faced". Conversely, as I detail in the following chapters, most participants described their elective ultrasound experiences as organized around comfort and care for them as pregnant women. In other words, the consumer experience of elective ultrasound appears to prioritize women's comfort in a way that is lacking within medical settings. It was clear from participant responses that their experience with medical ultrasound had bearing on their decision to purchase elective ultrasound. The differences between medical and elective ultrasound suggest that women see

elective ultrasound as a choice they can make, which provides them with a level of control over their experience.

Some women suggested that the demeanor of their medical ultrasound technicians did more to increase their anxiety and discomfort around their pregnancies. The seemingly “cold” demeanor of medical technicians, coupled with an inability (due to professional regulations) to disseminate information such as fetal sex, led many women to describe their medical ultrasound experiences in negative terms. Although most participants expressed an understanding, from a practical standpoint, of the reasons medical ultrasounds are organized in such a way as to gather important diagnostic information about fetal well-being efficiently; they also expected a friendly, informative encounter with the ultrasound technician in order to put them at ease. Jamie suggested this could have been easily achieved through small talk and a minimum level of friendly engagement between the ultrasound technician and the pregnant woman. Questions like “how’s the weather?” or “is this your first child?” could help to put the woman at ease and to feel that a level of attention was being paid to her and her comfort. The medical necessity and functionality of diagnostic ultrasound, coupled with a desire for information they did not receive, led some women to feel they had missed out on an important celebratory moment of their pregnancy. The option to seek out and pay for this experience allowed some recourse for women who felt dissatisfied, the result of which was a sense of control over obtaining the information and the experience they desired.

Within the medical system, pregnant women are understood as patients, whose care is directed by physicians and medical professionals. While this system is not completely devoid of choice (for example, some women may choose the physician they wish to provide their prenatal care, though this is dependent on both location and a certain level of social and cultural competency. In other words, in order to exercise this choice, women must live in an area where there are numerous doctors to choose from, and they must have an awareness of their rights and ability to assert that choice) participants described being thankful for the choice presented by elective ultrasound. Ultrasound in particular is a highly managed medical technology. One must be referred by a doctor, for whom the ultrasound must be medically indicated. During the ultrasound session the technician and radiologist are looking for particular information that may or may not line up with the kind of information sought by the patient. For those interviewed,

their desired outcomes were rarely, if ever, sought by their medical ultrasound technician, and can be understood as secondary to the physician's concerns. Again, while many participants acknowledged the necessity of ascertaining measurements and other technical information using ultrasound, they often described wishing they had more control over the experience. Often the utility of medical ultrasound meant that participants did not enjoy the experience in the ways they had hoped; in this way elective ultrasound was positioned as a choice which could provide women with the opportunity to have the kind of experience they desired. To what degree their elective experiences lived up to this expectation will be discussed in the following chapter.

Chapter 4

5 Elective Ultrasound

Elective ultrasound businesses position themselves as a consumer alternative to medical ultrasound for pregnant women and their families. The elective prenatal ultrasound industry operates outside of the standard Canadian healthcare system, offering fee-for-service, non-diagnostic prenatal ultrasound imaging to interested women and families. Advertising for elective ultrasound clinics suggests that they organize their services around the care and comfort of their pregnant consumers. Women are treated to a warm, comfortable atmosphere: are encouraged to ask questions of the ultrasound technician, and are able to include partners, friends and family members in the experience. In many ways, prenatal ultrasound when performed in this setting appears to offer a welcome alternative to medical ultrasound. In this chapter I will situate elective prenatal ultrasound as a consumer practice, and begin to explain the ways in which participants experienced the practice, and specifically how they understood their decision to purchase elective ultrasound as a choice.

A discourse analysis of advertising and promotional materials for a selection of Canadian elective ultrasound clinics, as well as participants' discussions of the setting and atmosphere for the elective clinics they visited, reveals a common and arguably prescriptive experience. It is prescriptive in the sense that participants' narratives echoed the language of clinic advertising and promotional materials. Advertising suggests that clinics offer women and families an opportunity to bond with their fetus in a comfortable and relaxed setting. The responses of most participants indicated that the comfortable and relaxed setting helped them feel more at ease, and allowed them to enjoy the experience of seeing their fetus alongside partners, family and friends. The enjoyable experience that the majority of participants communicated was also prescriptive in the sense that it was designed specifically for that purpose. Without the burden of diagnoses, elective ultrasound technicians are free to look for and describe images of the fetus at the request of the pregnant woman as a paying client. By framing their services as "entertainment" or "keepsake" based elective ultrasound clinics suggest that pregnant women will be treated to a joyful and fun experience. The expectation of a fun and joyful ultrasound experience is one that often precedes any contact with prenatal ultrasound. Participants expressed an expectation that

their interactions with ultrasound would be pleasant, reassuring and informative (particularly in relation to the sex of the fetus) regardless of where it took place. The advertising material reviewed below indicates that the elective ultrasound industry both relies on, and reproduces these expectations as a means of enticing potential customers. Participants' experiences with elective ultrasound, for the most part, reflected the advertising in the sense that women felt they were recognized and valued as individuals within the clinic space.

Throughout this chapter, I suggest that elective ultrasound is positioned in relation to, but separate from medical prenatal ultrasound imaging. Elective clinics rely on the medical technology of ultrasound and gain legitimacy from its routine use by doctors and healthcare professionals. Additionally, as detailed in the previous chapter, some women seek out elective ultrasound as alternative means of getting the kinds of information and experience they did not receive from their medical ultrasounds. Conversely, the healthcare industry has gone to great lengths to distance itself from the commercial ultrasound industry. Some participants suggested that their physicians or other prenatal caregivers were explicit in discouraging them from purchasing elective ultrasound. More than simply the opinion of individual physicians, there is evidence to suggest that there is a broad medical condemnation of the elective ultrasound industry. Both the Society of Obstetricians and Gynaecologists, and Health Canada have issued statements cautioning against the practice of what they term "entertainment" or "keepsake" ultrasound imaging, citing a lack of medical necessity, and advising against the use of ultrasound technology without diagnostic purpose. I suggest that the complex relationship between elective and medical ultrasound imaging is reflected in women's expectations and anxieties around the practice.

In this chapter I frame elective ultrasound as a consumer practice and describe the ways it is advertised to pregnant women and their families. The voices of participants in this study will then be drawn upon to suggest some of the ways women experienced elective ultrasound as a consumer practice.

5.1 Framing Elective Ultrasound

Participants in my study pointed to the prominence of advertisements for elective ultrasound services on social media, "mommy blogs" and internet message boards. After first learning of the

option for elective ultrasound imaging, most participants indicated that they went online to search for the right business, and to learn more about their services. Asserting themselves as active, well-informed consumers involved participants initiating research into their elective ultrasound options, and deciding which clinic or service would meet their particular needs and desires.

As discussed in chapter three, part of this research involved a discourse analysis of four promotional websites for elective ultrasound clinics across Canada. Included in the discourse analysis were the websites for two clinic franchises, *UCBaby* and *3D Baby Vision*; and two independent elective ultrasound clinics, *Babymoon Ultrasound*, located in Winnipeg, Manitoba, and *Dr. Lederman ND 3D Baby Ultrasound*, located in Vancouver, British Columbia. The locations of the two independent clinics were reflective of the location of interview participants. I observed some general similarities in the layout of these promotional websites regardless of where they were located. Each website included in the discourse analysis appeared to take particular care to create a warm and welcoming online atmosphere, using soft colours and black and white images of newborn babies. The homepage typically included the name of the clinic, a slogan or mission statement, (as an example, the *UC Baby* website claim their services offer women “a chance to get a head start at loving your baby”) images of happy couples with newborn babies, and one or more testimonials from satisfied customers. A menu of options was provided on all sites which typically included a “Frequently Asked Questions” (FAQ) section, and information on pricing and packages available for purchase. Often there would be a separate page for testimonials, in addition to those provided on the homepage, as well as an area for returning customers to provide feedback. For the most part, these promotional websites employed a similar strategy to appeal to potential clients, though some differences in the tone and framing of the language around elective ultrasound services was observed. I will return to this point later in the chapter.

5.1.1 Bonding

It is important to reiterate that elective ultrasound clinics operate outside of the regulated health care system. Without physician supervision or diagnostic services, elective ultrasound clinics promote their services for entertainment, or to obtain high quality keepsake images of the fetus. Additionally, elective clinics advertise “gender determination” packages that can either be

purchased on their own (typically a short ultrasound session of between five and ten minutes), or as an add-on to other packages which include a much longer viewing time (typically thirty to forty five minutes). However, based on the information presented on the promotional websites reviewed, it is clear that in addition to being entertaining and producing a high quality 3D image of the fetus, the elective ultrasound industry is rooted in promoting and capitalizing on the idea that seeing one's fetus via ultrasound will deepen the connection felt by pregnant women and their families.

Ultrasound is positioned, in many ways as an introduction to the fetus. Within elective settings, women are encouraged to include partners, family and friends in an experience that will allow them to meet the fetus together. Work is done in this setting to position the fetus as a child, the woman as mother, man as father, and so on. In other words, the fetus is positioned as a baby, an autonomous being, in an effort to accelerate the bonding process. Some participants reported their ultrasound technicians talking directly to the fetus, as if coaching it into positions more conducive to imaging. In this way, the fetus is understood as an already fully constituted being. From this position, women and families are encouraged to develop deeper relationships with their fetus and to identify in stronger ways as parents, as will be discussed in one of the following chapters. Bonding is a motive that is particular to the elective ultrasound industry in that medical ultrasound practitioners rarely cite bonding as a reason for employing ultrasound. Rather it is the diagnostic potential of ultrasound that is highlighted in medical settings.

More than simply a fee-for-service ultrasound, elective clinics organize and promote their services in ways that appeal to the pregnant woman and suggest that she is at the centre of the experience. Such an approach is very effective given women's alienation from medical decision making and the diagnostic focus on the fetus. By highlighting the luxury elements of their services - a cozy, comfortable atmosphere, warm and welcoming staff, a fun and joyous experience with your family (including fetus) - elective clinics offer a service akin to spa pampering and directed primarily at pregnant women as consumers. Elective ultrasound clinic advertisements thus rely on post-feminist rhetoric to suggest to women that they deserve the kind of experience being offered (for a price). The implication that "you're worth it!" promotes a consumerist notion of choice, which presents for women a welcome alternative to an otherwise highly managed medical experience. The striking emotional and environmental similarities in the

descriptions given by participants, despite visiting different clinics located throughout Canada, suggest that elective ultrasound clinics reiterate a particular kind of familial experience through bonding with the fetus. It also suggests that the type of bonding promoted is prescriptive. In other words, elective ultrasound clinics as an industry, promote a particular kind of bonding between fetus and family which, in fact, positions the fetus at the centre of the experience. The pregnant woman is called upon to respond to the image in certain ways that make clear her excitement, and the emotional value of seeing her fetus. Although care and attention are directed towards the pregnant woman, it is in the context of, and in response to, the image of her fetus being projected.

Regardless of whether we understand the pregnant woman or the fetus to be at the centre of the experience of elective ultrasound, it is framed as an alternative to medical ultrasound imaging where the primary focus is on the fetus and ensuring it is healthy. In elective clinics there is a distinct emphasis placed on bonding and the potential for ultrasound to help women and families develop a closer relationship with their unborn baby. For instance, in 2010 (when I conducted a preliminary discourse analysis) *UC Baby* claimed to offer women a chance to “get a head start at loving your baby” (web, 2010). While the slogan has since changed, the message remains the same. *UC Baby* now offers “parents a unique bonding experience” as they “witness the miracle of life with UC Baby” (web, 2014). What is implied by such statements is that the bonding experience or witnessing of the miracle of life is entirely facilitated by this kind of consumption. Any bonding or witnessing which takes place outside the elective clinic does not compare with the opportunity to experience 3D ultrasound in a commercial setting. Although their slogans differ, the promotional message of each clinic included in this study is the same. *3D Baby Vision* claims to be a “provider of 3D ultrasound services for moms-to-be that want to capture the greatest of life’s moments” (web, 2014). Similarly, *Babymoon Ultrasound* offers “an early bonding experience” and suggests that “with 3D/4D ultrasound that bonding experience can occur before your baby is born” (web, 2014). The methods used for promoting bonding are not discussed, rather it is implied that women develop closer bonds to their fetus simply by viewing it through an ultrasound. Although not all of my participants agreed that they felt a closer bond to their fetus after their elective ultrasound, the experience did, in many ways, bring about a shift in how they felt about their pregnancy and their developing maternal identity. Numerous participants expanded the discussion of bonding to focus on, or at least include, the extended

members of their families present in the screening room. Viewing the fetus together in this way constitutes a kind of familial bonding that is foreclosed by the solitary practice of medical ultrasound. Deepening familial bonds is often a task assigned to women as the emotional figure head of the family. I will return to this discussion in more detail in the chapters that follow.

Only one clinic pointed to the reason behind their promotion of bonding between woman and fetus. A Vancouver clinic called *Dr Lederman ND 3D Baby Ultrasound* explains on their website, “our goal for offering 3D/4D ultrasound services is to allow the father a more direct means of experiencing the pregnancy and to allow the mother to connect with her baby to *confirm the importance of taking care of her own health*” (emphasis added, web, 2014). Rather than placing the pregnant woman at the centre of the experience, this description suggests that *Dr Lederman ND 3D Baby Ultrasound* places men, or fathers, at the centre of the experience and implies that women may need extra motivation in order to take proper care of themselves. It is inferred by this statement that the pregnant woman is not “taking care of her own health” in some way and thus requires a change in her approach to self-care. The website later mentions smoking in particular, suggesting that viewing an image of her fetus via ultrasound may help convince a woman to stop smoking for the health and safety of her unborn baby. None of the other websites reviewed made their motives so well known, however, a similar shift in attitude is implied by the suggestion that women “get a head start at loving your baby” (UC Baby, web, 2010). Both of these messages rely on an assumption that the woman is not taking proper care of herself, has not yet begun to love her baby, or is not doing so properly according to social norms and ideals. The technology of ultrasound, particularly when performed in this setting, is imbued with the power to change a woman’s behaviour and emotional response to her pregnancy. Such a suggestion denies the constant emotional work of gestation, and discredits non-visual forms of knowledge. In contrast, many participants described a high level of attachment to their fetus prior to their elective ultrasound and detailed the numerous ways they prepared themselves and their bodies for pregnancy. In particular, those interviewees who indicated they had been trying to get pregnant for a lengthy period of time described the various dietary, behavioural and mental changes they had already made to their daily routines. Such requirements are well known and reinforced by discourses of good mothering and countless public health initiatives (take, for example, the message that “there is no safe amount of alcohol during pregnancy” printed on liquor commission packaging).

In addition to increasing attachment between woman and fetus, elective ultrasound companies boast their clinics as providing a “warm, friendly service” for women and their families (3D Baby Vision, web, 2014). *3D Baby Vision* claims to “strive to make your visit an enjoyable and relaxing one with friendly staff in a warm and comfortable setting” (web, 2014) and *Babymoon Ultrasound* promises they will “ensure a warm and inviting environment where family and friends are welcome to attend the entire ultrasound session” (web, 2014). Published testimonials on each clinic’s website point to the experience as “fun” and “exciting” (UC Baby, Babymoon, 3D Baby Vision, Dr. Lederman ND 3D Baby Ultrasound, web, 2014), while the language of a fun and joyful experience was echoed by my research participants. The websites’ testimonials additionally place an emphasis on the service being “worth the cost” and boasts about the quality of the images obtained, a point that was not necessarily reflected by interview participants in this study. At least two participants, Ainsley and Sarah, suggested that they were not happy with the images they ended up with, and cited the promotional websites in particular as providing a false expectation of the quality of the images produced. Both *3D Baby Vision* and *Dr Lederman ND 3D Baby Ultrasound* indicate the type of ultrasound machine they use, at the same time suggesting that it is “top of the line” and the most “advanced machine on the market” (web, 2014). Interestingly *Dr Lederman ND 3D Baby Ultrasound* also explain on the website that it is the computer that renders the image that is more powerful than standard 2 dimensional ultrasound imaging, rather than the apparatus itself. I suspect that the reason for the inclusion of this information is to assuage any concerns about energy or radiation exposure, and to emphasize the similarities between medical and non-medical ultrasound imaging to increase its legitimacy.

5.1.2 Safety

From the time ultrasound was first adapted for use during pregnancy in the late 1950s, concerns have been raised as to the safety of exposure for both pregnant women and their fetuses. The routinization of prenatal ultrasound during pregnancy has always been accompanied by concerns over safe exposure. In fact, as detailed in the introduction, Ian Donald - arguably ultrasound’s greatest early supporter and advocate - spent much of his career researching and defending ultrasound as a safe procedure for both woman and fetus. He regularly called for the need to monitor the growth and development of babies exposed to ultrasound in utero, and vehemently defended the technology against its detractors. To date, none of the research conducted has

definitively proven that ultrasound is harmful for pregnant women or their fetuses, and thus it continues to proliferate as both a diagnostic and elective practice during pregnancy. In this case, an absence of evidence suggesting harm, led to the conclusion that ultrasound is safe.

The establishment of a non-medical or elective ultrasound industry has reignited debates over acceptable uses of the technology, particularly in non-diagnostic settings (Health Canada, 2003; Sawa and Burns-Pieper, 2012). As such, each of the promotional websites visited included varying degrees of safety information. While *UC Baby* and *3D Baby Vision* evidence the safety by discussing the length of time obstetric ultrasound has been performed (depending on the website, this is placed between 30 and 50 years) and a lack of direct evidence of harm, other franchise websites provided slightly more information. In the “FAQ” section of the *3D Baby Vision* website, one of the questions referenced is “Is 3D ultrasound safe?”. In response, the company indicates that it is safe, and points to a lack of evidence suggesting harm. However, the website further states, “We believe in informed consent and therefore offer you the following link and ask you to form your own opinion” (web, 2014). Rather than referencing “informed consent” in medical or legal terms, the company is suggesting that it will provide more information to help women in their decision making process. However, drawing on the language of informed consent increases the legitimacy of their safety claims, and suggests an altruistic (ie. non-monetary) concern for the well-being of potential clients. A link to the popular website “WebMD” is posted, which implies that the linked page will provide further evidence of the safety of prenatal ultrasound. Instead, clicking on the link takes the visitor to the main homepage of “WebMD” where one must search out the information oneself. After typing “prenatal ultrasound safety” into the search bar, a link appeared half way down a list of matching inquiries to an article that indicates the Food and Drug Administration, the Society of Diagnostic Medical Sonography, and the American College of Obstetricians and Gynaecologists take the position that prenatal ultrasound should only be performed as medically indicated, and advise against keepsake or entertainment ultrasound (Zamora, 2004). Such a strong statement condemning the practice suggests that, rather than promoting informed consent, *3D Baby Vision* is instead hoping that potential clients will not go through the process of finding the information they claim to be linking to.

Rather than providing evidence of ultrasound safety, *Dr. Lederman ND 3D Baby Ultrasound* takes a different approach; in citing three studies which purport to highlight the benefits of 3D/4D ultrasound for maternal/fetal bonding and the importance of bonding for healthy, successful pregnancies the site is sidestepping the question of safety in favour of promoting benefits (web, 2014). The studies cited suggest that viewing a 3D image of the fetus “enhances the prenatal-fetal bond” (as cited from Pretorius et al, 2007), encourages women to “share their ultrasonographic photographs with significantly more people than mothers receiving 2D ultrasound” (as cited in Ji et al, 2005), and suggests that ultrasound technicians (57% of the 520 questioned) “would like to have 3D/4D ultrasound done on their own pregnancy in the future” (as cited in Pretorius et al, 2004). Each of these citations sidesteps the question of safety by offering scientific evidence (that is, research conducted and published by and for reputable scientific journals, such as the *Journal of Obstetrics and Gynaecology*) for claims that are only tangentially related to ultrasound safety. *Babymoon Ultrasound’s* website also provided links under the question of safety. One link was to a BBC News article from 2004 that cited a long-term study out of the University of Western Australia that suggests that there are no harmful effects to fetuses of repeated exposure to ultrasound in utero (BBC News, 2004). The second link provided was to a National Geographic News article from 2005 which points to the diagnostic potential of 3D and 4D ultrasound technology. Specifically the article identifies its uses for diagnosing cleft lip and palette, and spina bifida (National Geographic News, 2005). Both articles discuss prenatal ultrasound in a strictly medical capacity, and neither makes any mention of elective or “keepsake” imaging. The inference here is that elective ultrasound is safe and useful by association.

5.2 Consuming Ultrasound

Aside from the fee-for-service set up, research participants in this study were very clear in their understanding that elective ultrasound was primarily a consumer practice. In most cases, participants were wise to position themselves as savvy consumers, indicating they were aware of the motivations of clinic owners and staff, and that they did not “buy into those kinds of things” (Shelley). Participants instead suggested that this consumer practice was a means to an end of achieving their desired ultrasound experience. They cited numerous obvious indicators of the commercial nature of elective ultrasound, such as the sales tactics of the clinic receptionist, the

availability of glossy images and other items relating to the 3D ultrasound session, including what one clinic termed the “heartbeat bear” which was a stuffed animal containing a recording of the fetal heartbeat. The availability of these and other items was suggested by participants to be a clear indication that the services were consumer based.

Shelley expressed a clear understanding of the commercialized setting of elective ultrasound imaging. Having purchased an elective ultrasound during her fourth pregnancy, She was acutely aware of the differences between the elective practice and the medical ultrasounds she was used to receiving. The atmosphere of the clinic particularly stood out for her. Shelley explained,

I mean it’s a beautiful - the place we went to was very beautiful inside, right? Like very elegantly decorated and whatnot but you could sense that it was very commercialized and it was almost like a retail setting.

From her explanations it is clear that Shelley saw the practice of elective ultrasound to be much more in line with retail business than with standard medical practices. She suggested,

I find it was very commercial because it’s kind of like how you go into a Sears. You know when you go into a Sears and take pictures and then you think you’re getting the \$9.99 package and then they sell you all those other pictures? That’s very much what it’s like, because you can buy the heartbeat bear, so, which is an extra, you know \$20. And then they let you go through a book with all these ultrasound pictures, it’s in the lobby to entice you to buy more pictures. And you can get packages, and you can get this and that, so ultimately, I mean, if you’re not watching your pennies, you could ultimately spend a lot of money just on, you know, a 20 minute experience.

Shelley saw the elective ultrasound business as more pushy than some other interviewees, although she clearly separated herself from those who “buy into those kind of things”. While she understood the practice to be a consumer one, Shelley expressed a great deal of agency in terms of understanding what it was she wanted out of the experience, and only being willing to engage with the practice to the degree to which it met those needs.

Like Shelley, Ainsley suggested that the person who greeted her at the front desk of the elective ultrasound clinic was “definitely a salesman” since he was suggesting the different kinds of

packages that were available to her. As well as experiencing prenatal ultrasound in a warm, comfortable setting, geared towards their comfort, participants explained numerous other indications that the practice was primarily a consumer one. As mentioned, Shelley and Ainsley felt that the business-like nature of the elective ultrasound clinic came through in the sales tactics of the person who greeted them prior to their ultrasound session. Kelsey and Sarah also described the numerous packages that were made available to them, including glossy images, DVDs of their sessions, and stuffed animals with a recording of the fetal heartbeat inside. Most participants indicated that they had decided prior to making their appointments exactly which packages they wanted and thus did not fall victim to high pressure sales tactics. Like Shelley, Sarah suggested that she and her husband were not “high pressure people,” meaning they were unmoved by the salesmanship of the clinic employees. By deciding which packages they wanted to purchase ahead of time, and by consulting websites and promotional materials, interviewees felt they were being conscientious consumers and paying for only the services they desired, or felt most necessary.

Chelsea and Kelsey both indicated that they had received their elective ultrasound sessions as gifts, for either a baby shower or for Christmas. Receiving gift certificates put them at a distance from the actual purchasing of the ultrasound, though it was made clear to them in other ways that this particular kind of ultrasound represented a consumer practice. Both women discussed the options they were given in terms of what they could get during their ultrasound. Chelsea described wanting an image of her son with a blue toned background because it was “cute” and because he was a boy it made sense to her to place his image within a blue background. For Kelsey, her excitement centered on the “heartbeat bear” offered by the clinic she chose to visit. She explained,

It’s just so cool! It’s like one of those talking dolls, like when you press [the heartbeat bear] and you can hear it, it’s really cute. ‘Cause the first time your hear the heartbeat it’s like your eyes just water, it’s like oh my gosh! It’s real!...the heartbeat bunny was really what sold me - and the gender. So I would’ve gone to [clinic] without even the 3D pictures or the videos or anything, I would’ve just gone for the gender and the bunny.

For Kelsey the heartbeat bear represented tangible proof of her pregnancy. Throughout our interview Kelsey expressed feeling disconnected from her embodied experience of pregnancy, unsure how to make sense of the things she was feeling. While Kelsey did not necessarily assign authority to the movements she was feeling, she was explicit in her recognition of the fetal heartbeat, and the fetal image as authoritative indicators that her pregnancy was progressing. In describing how she teared up at the sound of her baby's heartbeat, it is clear Kelsey experienced an affective connection. The stuffed animal functioned as a means through which she could hear her baby's heartbeat on demand, thus giving the toy a greater meaning. Kelsey connected these consumer items and the setting of elective ultrasound to her overall experience of pregnancy. She continued,

It's almost a memory that you wouldn't be able to really get anywhere else, right? And the heartbeat I just think is amazing, like you could never duplicate that.

Here Kelsey is describing the uniqueness of the experience of hearing the fetal heartbeat and having the sound memorialized in such a way that she could return to and recall that feeling whenever she wishes. Again, it is clear that this opportunity holds a great deal of meaning for her.

Similarly, Chelsea was really excited by the idea of the heartbeat bear and indicated that she used it throughout her pregnancy to help form a bond with her son. She explained,

I let him listen to it when I was pregnant, so I would like, push the bear and then put it against my stomach so he could hear his own heartbeat...he would start moving around a lot, it was awesome! And then we just kept it so like, when he's older he can listen to it...like sometimes when he's crying I'll give him the bear and he'll squeeze it and like, it soothes him.

Clearly for Chelsea the heartbeat bear served an important function in developing a relationship with her son. The fact that she still uses the bear to soothe him when he's crying indicates the meaningfulness of such an item to her. The potential of consumer items, such as the heartbeat bear, to contribute to maternal identity and relationship building is indicated in both Kelsey and Chelsea's descriptions. It also suggests that there is a lot of desire to take up a maternal identity,

even prior to birth, and that this is circulating in ways which allow it to be attached to consumer practices. The potential for elective ultrasounds to contribute to the maternal identity and relationship building of participants will be discussed in more detail in the following chapters.

Aside from the consumer items available for purchase, participants suggested that the consumer nature of the practice was made obvious by the amount of advertising they came in contact with, both in the clinic and elsewhere in the community. By being pregnant, the environments that these women circulate in, whether on or off line, put them in the path of such advertising. Both Ainsley and Jamie were given coupons for elective ultrasound clinics at a prenatal fair they each visited while pregnant. Monique agreed with the ubiquity of the advertising and stated,

[Elective ultrasound clinics are] pretty much advertised, like, all over the place, every prenatal health fair.

Understandably elective ultrasound clinics target their advertising to areas where they know pregnant women will frequent, though they also appear in public spaces as well. Catherine suggested that she became aware of the services of the clinic she visited thanks to a large billboard placed along her route to work. Catherine also described being given a bag full of sample items as a gift after her elective ultrasound session. For her, this went one step further in solidifying this service as primarily consumer based. She explained,

So umm, after the ultrasound was done, umm, and we paid for everything...they gave us a big box of samples actually, while we were there! Which was kind of nice...like your Palmers Coco Butter cream, umm, you know, baby bottles, formula samples, coupons, stuff like that...I think they probably go through these places to sort of, push their products, or I mean, it was a good way to get samples, but it was definitely an advertising thing. I mean, the bag I got it in was a Similac bag! So yeah, definitely advertising.

The kind of advertising that Catherine described was showcased in both obvious and subtle ways. Obviously, receiving a “Similac” bag full of free samples struck Catherine as a clear cut advertising attempt. Whereas Shelley suggested that in her experience the advertising was more subtle. She offered,

Now there's not really anything in the actual room itself that would showcase advertising, right? Like it's not like "oh you should buy this and buy this and buy this", they catch you out in the lobby before you go in.

Shelley described discreet signs being placed in the waiting room to suggest that you purchase the heartbeat bear, or a package with extra pictures or a DVD of your session. She felt this was subtle manipulation because,

You're extra emotional when you're pregnant, right? So that's something like, "oh! I have to have that! I have to have that!"

By preying on women's emotions at a particularly emotional time, Shelley qualified such tactics as manipulative, although she was clear to position herself outside of such influences.

While Catherine was the only participant to suggest that she received free samples during her elective ultrasound session, others indicated that they had received more than they felt they had paid for. Rachelle described only having paid for a 5 minute "gender determination" package, but receiving at least 15 minutes of time with the ultrasound, and two images to take home. Ainsley described feeling that she had "got out of paying" for her elective ultrasound because, due to difficulty obtaining an image, she had made an appointment to go back for another ultrasound. Ultimately she cancelled the second appointment and had not been asked to pay. Shelley also described her ultrasound technician taking more time with her than what she felt she had paid for, as the technician was showing her kids the image and answering their questions. Shelley indicated early on in our interview that her primary reason for seeking out elective ultrasound was to involve her three older children in the experience.

For those like Ainsley, for whom technicians had trouble producing an image, they had been offered the option to go back for another session free of charge. Monique accepted this offer and explained,

They had a sort of computer problem the second time so I had to go back a few times...they were wonderful though, they were like "you know what, we're really sorry about the inconvenience, we'll give you some free photos or whatever".

Monique was confident that the motive for this offer was business based. Having a client leave unhappy would be bad for their business, and thus offering extra sessions or free images was a way to ensure their customers left feeling happy about the service they had paid for. Far from being critical of the consumer nature of the elective ultrasound, Monique connected the “wonderful[ness]” of her experience to the business of ultrasound. She stated earlier in our interview that “you feel respected when you go in there because you are a customer”.

Sarah had also been offered the opportunity to come back for another session, free of charge, after her ultrasound technician was unable to get a good image of her fetus. Due to her anxiety about the practice in general, as I talk about in the next chapter, Sarah did not return for a second session. Although she was very critical of the practice in general, she was clear about the fact that she felt the technician had done the best she could, and treated both Sarah and her husband with kindness. Her only criticism of the technician came from the fact that she did not feel she should have had to pay for the DVD of her session,

I don't think it was worth the almost \$200 we spent, at all. We saw nothing. Nothing...I felt like the tech should have said something to [the owner] in terms of the DVD, like I don't think we should've had to pay for that DVD either, I mean we saw nothing, like there's nothing on that DVD, it's just a baby with its hands in front of its face, so I felt like she should have said something to [the owner] like, you know “the session didn't go well” but it wasn't like that at all, it was just like, “okay well, see ya!”...I don't know, if I was running a business and that was what I sent my person home with, I would feel like we scammed them a little bit.

Sarah later qualified that she did not necessarily feel scammed by the experience in general, though she felt she should not have been asked to pay for the DVD she had originally decided to purchase. Sarah took a great deal of personal responsibility for the decision to purchase an elective ultrasound, and it came through in her self-blame for the negative experience she had, discussed in detail in the following chapter.

Conversely, Jamie felt she had been given a “deal” in that she took advantage of a special half price offer advertised by the clinic. Unlike Sarah, Jamie was ultimately pleased with her elective ultrasound, and felt particularly content that she had taken advantage of a sale. She explained,

We went on a Tuesday - actually we were talking about this just before you got here - when we looked it up it was very expensive and so at the time we felt that - and they had a variety of packages and so we were discussing, sort of, what the options were, and they ran a special on Tuesdays, for \$99 and so you got, I think it was a \$300 package for \$99, so of course, I mean, I like a bargain, so I'm like, we're gonna make it work on a Tuesday!

Jamie later indicated that she would not have purchased the service if it had cost the \$300 advertised, but because she felt she had gotten a "bargain," the purchase was justified.

The experiences described by participants make clear that ultrasound, when performed in this setting, is primarily a consumer practice. This fact was understood in no uncertain terms by those who chose to purchase the service, and each interviewee's purchasing decision was based on an individual set of reasoning that she felt was justified at the time. In large part because of negative experiences with medical ultrasound, participants welcomed the choice to purchase the kind of experience or information they wished to obtain. Choice in this case is framed as a potential means for empowerment, as it encourages women to seek out the experience they were denied (or simply did not receive) during their medical ultrasound. I return to a discussion of consumer choice and empowerment in the discussion chapter.

5.3 Analysis

The findings presented in this chapter and the previous one indicate the significance of gender to the practice of ultrasound. Not only is ultrasound used as a means to identify what is often described as the gender of the fetus, (though in actuality ultrasound is able to image fetal sex and from there the fetus is assigned a gender) it is also performed in both medical and elective settings within a set of engrained gender norms which appear in subtle and interesting ways in participants' responses. For instance, in their descriptions of the differences in atmosphere of medical and elective ultrasound clinics, participants placed each practice on either side of the gender binary. Women spoke about their medical ultrasounds as being "cold," "sterile," and utilitarian or, in other words, unemotional and masculine. They expressed a clear understanding of the diagnostic purposes of medical ultrasound, and therefore often ignored their own desires for a particular kind of treatment within that setting. In keeping with the patriarchal history of

medicine, (as discussed in chapter two) ultrasound in this setting is understood to be diagnostically productive, based on sound science, and objective in its concern for information about the fetus. Even though many participants expressed dissatisfaction with this experience, it was not attributed to distinct and engrained gendered differences between the care they received and the care they desired. Rather, it was thought to be the result of individual negative experiences that for many were interpreted as unconnected to the medical management of pregnancy more broadly. In fact, only Monique articulated a broader critique of prenatal health care as treating pregnant women as patients, rather than celebrating their impending motherhood.

Alternative to the highly regulated and arguably masculine practice of medical prenatal ultrasound, participants described how their elective ultrasounds presented a gentler, more feminine approach with which they could identify. The terms they used to describe the atmosphere of their elective ultrasound clinics are telling: “warm,” “comfortable,” “soft,” “gentle,” “beautiful,” “elegant”. These adjectives are often the same as those used to describe proper or ideal femininity (Greer, 1971; Brownmiller, 1984; Bartky, 1988; Wolf, 1991). As women, and particularly as mothers, women are expected to be warm, gentle and comforting to others (in addition to presenting themselves as beautiful and elegant). Nowhere was this association more clear than in Chelsea’s description of the elective ultrasound clinic she visited as feeling like she was “in someone’s house”. The home-like setting appeals to notions of women’s domesticity, and assumes a feeling of comfort associated with private settings. In this sense, even the setting and atmosphere of the elective ultrasound clinics participants described, relied on and reinforce essentialized notions of femininity.

Gendered terminology was also reflected in the advertising materials analyzed in the content analysis. Clinics often boasted “warm and friendly service” geared towards women and their families. The contrast between the masculine space, within which medical ultrasound takes place, and the feminine space, which entices women to purchase elective ultrasound, can be understood to draw on and reproduce particular gendered assumptions in both obvious and subtle ways. The kind of care and attention women expected and received from the staff at elective ultrasound clinics reflects the kind of care and attention women are expected to give to others in their relationships, particularly as mothers. While none of my participants used the words “masculine” or “feminine” to describe either space, the gendered distinctions are apparent in

their descriptions of both the atmosphere of the clinics, and their treatment by ultrasound technicians.

The work performed in both medical and elective ultrasound settings can also be divided along gendered lines. In the medical setting, information is gathered for the purpose of making decisions about the pregnancy, both whether to continue or terminate the pregnancy, as well as how to properly manage the pregnancy as it proceeds. For example, locating the placenta is a standard aspect of medical ultrasound practice, and could determine whether or not the pregnant woman is placed on bed rest for a duration, or the remainder of her pregnancy. This information was understood by participants to be objective and fact based. Physicians command a level of respect within the medical paradigm, and are therefore trusted (for the most part) to be making authoritative and objective diagnoses. In describing some of their anxieties around medical ultrasound and the ways in which their medical experiences led them to seek out elective ultrasound, numerous participants referenced the diagnostic approach as “detecting errors” (Monique) and their state of mind leading up to the diagnostic ultrasound as “you’re always in a bit of a panic until you hear the heartbeat” (Ainsley). Although important for the purposes of confirming fetal health and growth, participants suggested that this kind of approach to medical ultrasound felt antithetical to their joyful and celebratory feelings about their pregnancy.

Elective ultrasound, however, is understood to be performing a service that is geared towards joy, excitement and the building of relationships between pregnant women and families. Aside from advertising their services as such, the work performed in elective ultrasound clinics revolves around the introduction of the fetus to family members. It is described variously as “entertainment” or “keepsake” ultrasound, and is purposely distanced from medical ultrasound imaging in that it is clear that no diagnostics will be performed. Elective ultrasound clinics work to nurture the bonds between women, their fetus, and members of the extended family. More pointedly, elective ultrasound clinics provide the atmosphere in which women perform the work of fostering and building relationships between family members. As will be discussed in the following chapters, most participants expressed their desire to help their partners, husbands and older children feel more connected to the pregnancy, often ignoring their own yearning for connection. Women, and the elective ultrasound sessions they purchase, perform the care work of pregnancy, nurturing attachment and promoting bonding. Medical ultrasound practices are

thus understood to perform the essential, objective and necessary diagnostic work. The fact that Health Canada and other regulatory bodies (Society of Obstetricians and Gynaecologists,) have cautioned against the purchase of elective ultrasound precisely because of the lack of diagnostic work, indicates a dismissal of the importance of care work, both within the pregnancy relation and beyond. A failure to recognize the necessity of nurturing relationships, reflects broad social and cultural understandings of the value of care work (Gilligan, 1982).

In their descriptions of negative experiences with medical ultrasound, participants pointed specifically to ultrasound technicians and their demeanor. Much of their dissatisfaction arose from an unmet desire to be nurtured and comforted within the medical ultrasound setting. Sonography is a largely female-dominated occupation (Sullivan, 2009) and is often juxtaposed with the male dominated field of obstetric medicine. Within the medical screening room gendered divisions are highlighted in that the ultrasound technicians (or sonographers) perform the scans, and gather diagnostic information, yet have no authority to interpret the results. For liability reasons, medical ultrasound scans must be interpreted by the physician. Again, even in the relationship between ultrasound technicians and physicians, the traditionally male physician is afforded authority over the typically female ultrasound technician. Further, based on gendered assumptions about women's gentle and nurturing demeanor, participants described being particularly put off when their medical ultrasound technicians did not relate to them in caring and attentive ways. Catherine, Rachelle and Monique each suggested that their medical ultrasound experience had been negatively impacted by the cold and distant demeanor of the ultrasound technician. Their expectations were perhaps more in line with elective ultrasound practices in that they wanted the technician to make small talk and approach their individual pregnancies as a cause for joy and excitement. This expectation, again, follows gendered assumptions about women's maternal ability. The fact that the ultrasound technician would have been performing her job, (perhaps in line with occupational protocols and clinical regulations) was noticeable, because it violates gender norms that link femaleness to femininity and femininity to maternity. Here, femininity would be reflected in the demeanor, joy and excitement displayed by technicians towards the patient's pregnancy and impending motherhood.

5.4 Conclusion

Data collected from the discourse analysis of the promotional websites of four elective ultrasound clinics or franchises, suggests that elective ultrasound is a fun, family experience designed to deepen the bonds between pregnant women, family members and the fetus. The websites were similar in layout and purpose, including images of happy couples and newborn babies alongside testimonials about the emotional value of the elective ultrasound experience. Each website addressed the safety of ultrasound when used in elective settings, though they differed in the extent to which they provided evidence of safety. For instance, the websites for *3D Baby Vision* and *Dr. Lederman ND 3D Baby Ultrasound* offered links to news articles and studies published on prenatal ultrasound safety, while *Babymoon Ultrasound* and *UC Baby* simply stated that ultrasound is safe due to its routine use in obstetric care. The many products and packages available from each of the clinics included in the discourse analysis also work to situate the service as primarily a consumer practice.

The fact that elective ultrasound is available represents a choice for women within a medical context of pregnancy that is otherwise void of much choice. The choice presented by elective ultrasound contrasts an otherwise highly managed and, in many cases alienating medical experience. Within medical settings, ultrasound technicians are looking for certain information in order to make correct diagnoses. Thus women's desired outcomes for ultrasound are rarely, if ever ascertained and if they are, they are understood to be very much secondary to physician's concerns. Therefore the ability to consume ultrasound in this way is understood to represent a choice for women, in that they can choose to purchase the type of experience or the information they desire.

Having made the choice to consume ultrasound in this way offered women a chance to regain a sense of control over decision making as it concerned their pregnancy. Making the choice to purchase ultrasound in a non-medical setting gave women the ability to dictate the kind of information (primarily gender) and experience they desired. As discussed in the previous chapter, little attention was paid to participants desires by their medical ultrasound technicians and even in some cases, their physicians. In keeping with the sense of risk discussed in the previous chapter, many participants sought out elective ultrasound as a form of reassurance and a way to alleviate some of their anxiety. The positioning of elective ultrasound as a fun and

exciting experience was reflected in the ways most participants described their experience. It is clear that while they rely on similar technology, medical and elective ultrasound practices, and the ways women experience ultrasound within these contexts, differ in significant ways. The following chapter will take up participants' descriptions of the ways they experienced ultrasound in the consumer setting.

Chapter 6

6 Experiencing Elective Ultrasound

As previously discussed, elective ultrasound functions apart from, yet still in relation to, medical ultrasound. Most participants were clear that their experiences with medical ultrasound influenced their choice to purchase ultrasound in an elective setting. Promotional material indicates that elective ultrasound businesses position themselves as a consumer alternative to medical ultrasound imaging, with the major distinction of offering a fun and celebratory atmosphere. This presented a welcome contrast for participants to the functionality of diagnostic ultrasound. The level of anxiety participants described experiencing, in relation to their medical ultrasounds specifically, and their pregnancies more generally, was a major catalyst for seeking out elective ultrasound. Participants' descriptions suggest, that for the most part elective ultrasound served to reassure them of the successful progression of their pregnancies, and to increase the joy and excitement they felt. However, as will be discussed in this chapter, elective ultrasound is not without risk. In fact most participants described being very aware of the specific risks associated with elective ultrasound, and negotiating this risk, alongside the reassurance they were seeking.

In this chapter I will discuss the ways participants described their experiences with elective ultrasound. Elective ultrasound as a method of reassurance, prompted different fears and anxieties related to the technology of ultrasound and its effects on fetal and child development. Although no conclusive research has been published nor conducted that would suggest elective ultrasound is any more dangerous to a fetus than standard medical ultrasound, participants described having to work through this fear and decide for themselves the level of risk they were willing to take on. Participants were aware that elective ultrasound functions as an unregulated industry in Canada, and because of this they may not observe the same kinds of safety regulations in place for diagnostic ultrasound. Most interviewees acknowledged the potential risks posed by elective ultrasound, yet described these risks as less serious or less worrisome than the fear and anxiety they were experiencing without it. Thus, the risk posed by exposing a fetus to elective ultrasound was judged against the risk present without it.

While risk certainly played a part in participants' decisions to purchase elective ultrasound, for the most part they described their experiences as pleasant and reassuring. Those who wished to find out the sex of their fetus received the information they desired, and those who wished to share the experience with their partners and family were able to do so in a fun and celebratory environment. Some interviewees were able to leave their elective ultrasound sessions with clear images of their fetus, others were not so lucky. Though participants like Ainsley expressed disappointment regarding this fact, it did not prevent her from concluding that her elective ultrasound experience had been overwhelmingly positive. How participants experienced reassurance from their elective ultrasounds was highly individual and reflective of the particular context of each pregnancy. For instance, Chelsea, my youngest interviewee felt reassured by the fact that the 3D image of her son confirmed that he was "cute", while Shelley felt reassured by the fact that she had been right about the sex of her fetus. It was clear from participants' responses that reassurance was an important part of their decisions regarding elective ultrasound.

6.1 Risk Regarding Ultrasound

All of the women interviewed expressed some degree of concern over the safety of ultrasound, particularly when being used for non-diagnostic purposes. The use of ultrasound technology in elective settings has, again, raised questions about the effects of ultrasonic waves on fetuses in utero. Elective ultrasound is an unregulated industry, thus there are no requirements for the training of technicians or standards of practice. There are also no limitations placed on the length of exposure, either for the overall number of ultrasounds or for the duration of individual ultrasound sessions, which is why some women described their elective ultrasound sessions taking an hour or longer. Most participants described speaking with their prenatal care providers (doctors, midwives, prenatal instructors) to get their opinions on the safety of elective ultrasound, and/or engaging in further research about prenatal ultrasound and its effects. The responses they received from healthcare providers were inconsistent, and most found the research about ultrasound safety available on the internet to be at best sparse, and at worst non-existent. Interviewees described searching for scientific studies about the long term effects of ultrasound exposure, government regulations, and/or institutional protocols for the safe use of ultrasound on pregnant women to no avail. As discussed in the introduction to this thesis, the Society for Obstetricians and Gynaecologists, as well as Health Canada have each issued statements urging

the restriction of prenatal ultrasound for medical purposes only. They are, however, unclear as to the specific reasons or scientific evidence behind their assertions (Health Canada, 2003; Society of Obstetricians and Gynaecologists, 2007). Without any clear answers, women were left questioning their options and their decisions to purchase the service. Each participant described an internal assessment of risk related to ultrasound exposure that involved determining for themselves what they were comfortable with. This assessment resulted in the women developing their own set of reasons, in the end, as to why the procedure was justified.

6.1.1 Research

The varied responses participants received when conducting their own research or consulting their healthcare provider, suggest that there is no standard medical or scientific position regarding elective ultrasound. The information obtained through internet research and medical consultations was often contradictory. While most of the women were advised against purchasing elective ultrasound by their physicians, a few were encouraged to do so. For instance, Rachelle mentioned that she had talked to her doctor about purchasing an elective ultrasound to find out the sex of her fetus. Prior to consulting her doctor, Rachelle had conducted research of her own, online, and was left unsure as to which information was trustworthy. Rachelle explained,

So I asked [my doctor's] opinion on them, because I know they're controversial, and um, everything I was reading was just making me kind of nervous, I don't know. And then she said if I'm just doing the gender test, which is like 10 or 15 minutes or something, um, then its fine. It's like when people have like, the hour and a half viewing, that's maybe more controversial, but she said don't worry about it, and I was like, "Great!" And I booked it for as soon as possible! [laughs].

For Rachelle, receiving the "go ahead" from her doctor was enough to calm her fears about the safety of elective ultrasound. She was also able to justify her decision based on the length of time she and her fetus would be exposed to the ultrasound waves. Because she was purchasing the ultrasound just to find out the sex of her fetus, rather than to "watch" her fetus for an extended period of time, Rachelle determined that whatever risks were present during the short duration of exposure were not significant enough to counter her desire to find out the sex of her fetus.

Similarly, Heather sought a medically educated opinion about ultrasound from her prenatal care provider. She explained,

I was under a midwife and I spoke to her about getting the 3D scan and she said - I mean I totally get it, but she basically said, “Don’t - we don’t recommend it.” And I was like, do you not recommend it for a reason or is it just it’s an unnecessary procedure? And she’s like “Umm, well, we just don’t recommend it.”

The midwife’s stance is clear, and her reasons behind it are left unexplained. Understandably this kind of response would leave a patient with more, rather than fewer questions. Perhaps sensing her midwife’s hesitation and being unconvinced of her reasoning, Heather was comfortable disregarding her advice. The potential reasons behind medical resistance to elective ultrasounds could be attributed to any number of factors, including tension between the medical and elective ultrasound industries. It could also be related to safety, or concerns about the training of technicians in the private sector. Again, because of the lack of regulation of the elective ultrasound industry, there are no enforced standards of training and practice for elective clinics. Unfortunately for most of the women in the study, their questions were met with inconclusive or “on the fence” (Heather) responses from medical personnel. The vagueness of Heather’s midwife’s response led her to conduct research of her own into ultrasound safety. Heather added,

I’m like okay I need to look this up, like why aren’t you recommending it? But all the research came back as it’s just an unnecessary procedure, so do you really want to have it done? And you are exposing yourself to ultrasounds but I...I...I just thought you know, lots of people have had it done without any problems, and I’ll take the chance.

The notion that purchasing an elective ultrasound is commensurate with “taking a chance” is indicative of the lack of research and understanding about the effects of ultrasound on a fetus. Also, intuitively prenatal ultrasound is associated with safety, because if there is a concern with the pregnancy (like a high risk pregnancy) ultrasound is recommended. Therefore, in medical settings, ultrasound is used to off-set risk and to reassure women of a normal, healthy pregnancy. Perhaps because of this association, evidence of risk must be firmly established in order to trump the assumption that prenatal ultrasound is safe for use on both pregnant women and their fetuses. However, since its riskiness cannot be confirmed or denied, particularly for the women in the

study, elective ultrasound becomes a chance that is taken, rather than a neutral or benign activity. A passive or noncommittal stance on the part of prenatal care givers increases the pressure on pregnant women to make the “right” decision. Women learn early on in pregnancy that they should direct all their questions and concerns to doctors, nurses and midwives. Yet for many women in the study, the responses they received were insufficient and lacked the kind of robust, definitive, evidence based reasoning that would have put them at ease about their decision. As a result, women developed their own threshold for exposure, which often relied on deductive reasoning and other women’s experiences shared through word of mouth or via social media websites. In other words, elective ultrasound has not **conclusively** been found to pose a risk for pregnant women, and there are numerous examples of women who have purchased elective ultrasounds and gone on to have perfectly healthy babies, therefore the women in this study, with one exception, tended to conclude that the rewards outweighed the potential risks.

6.1.2 Safety

Rachelle and Heather’s narratives indicate that there is not a standard medical opinion regarding the safe use of ultrasound in elective settings. Though it was not intended to be a direct consultation, Sarah described overhearing a conversation about elective ultrasound in front of a prenatal class instructor that resulted in strong caution against the practice. Sarah began her explanation by stating that she and her husband had been very excited to go for their elective ultrasound and that she “hadn’t heard any negatives about it,” particularly from her father-in-law, who is a doctor. Sarah then described an incident that took place at a prenatal class, which changed her perspective entirely. She explained,

we were at a prenatal class, and someone mentioned that they had had [a 3D ultrasound] done, and the instructor **stopped the class** and just said, um you know, “I want to make it very clear that we don’t suggest you do that, and there’s not been conclusive research one way or another as to whether or not 3D ultrasounds are safe”.

For Sarah, this interaction raised a significant cause for concern. The instructor’s adamant assertion that she did not recommend 3D ultrasounds for safety reasons, made Sarah question the safety and level of risk involved in obtaining an elective ultrasound in a way that she had not previously. The fact that the suggestion that elective ultrasound may cause harm to her fetus

from a para-medical prenatal class instructor was enough for Sarah to question her decision, even without similar concerns being raised by her physician father-in-law. This points to an underlying sense of worry and danger that her decisions would negatively affect her fetus. Sarah continued,

It just kind of got us thinking, like yeah, is there a lot of research on this? And, you know, is it completely safe?...we started to panic a little bit, thinking, is this *really* safe?

Unlike other participants, Sarah described her fears about ultrasound being initiated by a response from her prenatal caregiver, rather than calmed by it. She described leaving the class and spending the next two days researching ultrasound safety. Much of the research Sarah, and others, were able to find on the internet were opinions from other mothers about their experiences, most of which Sarah described as being very positive. She then described coming across research on a reputable website, the name of which she could not recall, but remembered it being from an organization like the Food and Drug Administration or Health Canada, that confirmed her fears about ultrasound safety. The website suggested,

The research was inconclusive and they weren't recommending it at the time, and then there was something about the heat that is given off from the ultrasound probe, and it said that there were some concerns about it heating up your amniotic fluid and burning the baby, or irritating the baby's skin, and that really got me, got me upset and thinking, like, is this something we really want to do?

For Sarah, even the suggestion that such a procedure may not be safe, or may pose a risk, however minimal, to her fetus was enough to scare her and make her question her decision. Perhaps the particularly graphic nature of the potential harm, that radiation from the ultrasound probe might heat up the amniotic fluid and burn her fetus, led Sarah to think carefully about the level of risk she was willing to undertake. She went on to describe two days of agonizing over the decision, feeling at once nervous about the risk it might pose, and silly about feeling so much anxiety. During this two day period, Sarah was weighing out her fear against her desire to have the fun, exciting experience of elective ultrasound and to get the pictures she had been looking forward to. Eventually Sarah and her husband decided to go ahead with their appointment, though their resulting experience was described in very negative terms. Sarah classified the

ultrasound as their “first parenting mistake,” and attributed it to not listening to her intuition and canceling the appointment when she began to question the safety of the ultrasound. She described feeling like she was being “too sensitive,” an “overprotective parent” and that she and her husband were “being a little bit silly” or “ridiculous” given that so many other couples had opted for the procedure and had a positive outcome. Again, for Sarah, the research she conducted and opinions she sought, served to increase her worry and anxiety, rather than assuage it. Although she did not view herself as a pregnancy expert, Sarah still held herself responsible for making the right decisions for herself and her child. Sarah’s response is in line with social and cultural expectations that similarly hold women responsible for researching and implementing the right decisions for their fetuses. These same social and cultural expectations lead to the apportioning of blame to women if and when they fail to make the “right decisions”.

Sarah described her elective ultrasound experience overall, in negative terms. Combining her existing fear about ultrasound safety with the inability to get a nice image of her fetus during the ultrasound, Sarah concluded that she regretted the decision to go ahead with the elective ultrasound. For Sarah, getting a good image of her fetus was very important. She suggested that prior to hearing the caution from her prenatal class instructor,

I just thought, like, “Oh great! I get to see what my kid looks like before she comes out!” You know?...the website and the pictures they have on the website are a little bit misleading. I think that, you know, they post these beautiful pictures and it just doesn’t always work like that, you know?

Earlier in our interview Sarah described herself as very “curious” about what her daughter would look like, and having seen the images advertised by the elective ultrasound clinic she chose to visit, her assumption was that she could have an image like that of her daughter. Unfortunately for Sarah, her elective ultrasound did not result in the nice image she was hoping for. During her session, Sarah’s fetus was described as “uncooperative” because it was difficult to get a clear image of her face. The image Sarah saw of her fetus was of her pressed against the uterine wall, and holding her hands in front of her face. Sarah explained,

Then, because she kept covering her face, then I started to think, like, is she uncomfortable? Is this hot for her? I just don’t know...it just seemed like she was

upset...every time [the technician] clicked over to 3D, she looked upset, she looked irritated, and I don't know if that's because - if that's in our head because we had been worried about it already.

Sarah interpreted her fetus's feelings based on the image, coupled with the information she obtained researching the safety of ultrasound, attributing what she understood as irritation to the heat given off by the ultrasound equipment. She suggested that, in part because it had been so difficult to get a clear image of her fetus, the ultrasound session lasted for over an hour. The length of time of her ultrasound increasingly became a concern for Sarah, so much so that, once she left her appointment she wrote a letter to the owners of the ultrasound clinic, expressing her concerns. She described being very disappointed with the response she received, which simply stated that "the length of your ultrasound *should not* be a safety concern" and gave no reason as to why it should not be a concern. Sarah interpreted this lack of concrete evidence confirming the safety of the duration of her ultrasound as being dismissive of her concerns.

6.1.3 Length of Exposure

Length of the ultrasound session is one of the most significant ways in which elective ultrasound differs from medical ultrasound. This disparity is the result of differing objectives between the two procedures. In a medical setting, the objective of the ultrasound is to gather diagnostic information, thus the length of the ultrasound is determined solely by how long it takes to obtain this information. Most interviewees described their medical ultrasounds as lasting between twenty and forty minutes, while elective ultrasounds averaged between an hour and fifteen minutes and an hour and half, with the exception of elective ultrasound for the purpose of sex determination only, which averaged for participants at about fifteen minutes per session. Because the main objective of non-medical ultrasound is to produce a clear image of the fetus, and women have paid for this service, it appears the ultrasound business approach is to continue with the session until a good image is obtained. For example, Sarah described having been in the screening room for over an hour, feeling increasingly uneasy about the effect of the ultrasound waves on her fetus. Interpreting her fetus's emotions through the image presented, Sarah explained,

because her hands were in front of her face like this [puts hands in front of face] and she seemed irritated or agitated, because you know, she would have kept going, that tech, and finally I pulled the plug, I finally said, I was just looking at the screen and I said you know, this is just not a happy baby, I'm pulling the plug on this and I said, 'you know what, I think we're done for today' and I ended it.

Sarah's experience highlights the main motivation of elective ultrasound businesses, to provide good, clear images of fetuses for expectant parents. Although consumers of elective ultrasound are paying for a particular experience, they are also paying for the fetal image as a product of the experience. Obtaining nice, clear images may also increase the likelihood that clients will pay for additional pictures or packages, increasing revenue for the clinic. The motivation to obtain an attractive image of the fetus, combined with a lack of conclusive research regarding safety and length of exposure, complicates women's decisions to engage in the practice.

While Sarah was the most descriptive participant about her fears regarding the length of her ultrasound, other interviewees also expressed concerns. Numerous participants reasoned that by opting for the shorter, sex determination ultrasound, the danger of exposure was mitigated. Shelley determined that because she had chosen the much shorter sex determination package for her elective ultrasound, the length of time of potential exposure during her session was not a cause for concern. She suggested,

Well, they say it's kind of controversial so they say it's not something that you should necessarily do, because the people aren't really qualified, they don't have a lot of experience, right? So I did, like, the 5-10 minute ultrasound because I figured like, 5 or 10 minutes, it's not going to hurt anybody.

Shelley felt that the risk posed by 10 minutes of extra exposure did not present a safety issue. Unlike other participants, Shelley did not express very much worry or anxiety in relation to her pregnancy. She was the only interviewee who had four children, and thus she viewed herself as somewhat of a pregnancy expert. Shelley disclosed that she had purchased an elective ultrasound, primarily for the sake of her older children, so they could come with her into the room and be a part of the experience. It was also important to her that she could find out the sex of her fetus, primarily for the benefit of helping her older children get used to the idea of a

sibling, but also in order determine if she needed to purchase new items for the baby. Shelley was already mother to an 11 year old son and two younger daughters, and was eager to find out if she could reuse the baby items she had collected for her daughters, or if she would need to re-purchase the items she had given away in the 11 years since her son was born. Reassurance for Shelley was also more about confirming her assumption that she was having a girl rather than calming fears or anxieties she experienced in relation to her pregnancy. Shelley did not feel obligated to consult a medical professional about the safety of elective ultrasound; instead she felt comfortable making that decision for herself.

The pattern of reasoning which led to the decision to purchase elective ultrasound was quite evident for a few interviewees, and often related to the collective length of exposure to ultrasound throughout an entire pregnancy. For example, Catherine explained,

I'm definitely the type of person that doesn't think you should have a whole bunch of ultrasounds. I mean, I know people who've had them done every couple of weeks and I mean that seems excessive to me, I mean especially when we don't really know what the effects of ultrasounds are on babies. But, I mean, I've only had two other ultrasounds, so I mean, to me, three ultrasounds overall throughout the pregnancy? Not a big deal.

Clearly for Catherine, it is the collective amount of ultrasound exposure throughout her entire pregnancy that she viewed as a problem, rather than the length of a particular ultrasound session. Catherine pointed to other women she knows as bench markers for what is and is not deemed to be excessive; it was this reasoning that contributed to her ultimate decision to purchase an elective ultrasound.

Jamie expressed a similar sentiment about ultrasound exposure. She saw the lack of research and evidence on the effects of ultrasound as being indicative that it was safe enough. The lack of research, again combined with knowledge of other women's experiences with ultrasound, led Jamie to feel confident in her decision to go ahead with her appointment. Jamie reasoned,

I mean, if you look at the research, they really don't know what the exposure - and what it is and what the impact is and you know, part of our - part of my thinking was that I think women do - and there are women who have issues and so do potentially have to

have ultrasounds, maybe a lot, maybe much more than I did, and so, you know, I guess you take the chance, like you do with any **parenting decision**, right?

Framing her ultrasound as a parenting decision indicates that Jamie already views her role as a protector for her child and sees herself as responsible for her baby's well-being. Like Catherine, Jamie understood herself as having received relatively few ultrasounds in comparison to other women, which gave her a sense of ease about her decision. She went on to compare the risk posed by ultrasound to the risk understood to be posed by caffeine or hot showers. Jamie equated capitulating to these potential risks as putting her life on hold, which she did not view as necessary in the context of her pregnancy.

As previously mentioned, a couple of the women interviewed had been identified by their doctors, early on, to have high risk pregnancies. Having high risk pregnancies meant that Ainsley and Monique were among the group of women who received more than the average number of ultrasounds. For both women, the level of fear or worry they experienced in relation to their elective ultrasounds, was heavily influenced by their familiarity with medical ultrasounds. Comparatively, Ainsley seemed unconcerned about the risk of exposure, especially given her role as a doula. She explained,

I mean, I had a lot of ultrasounds, I was diagnosed as high risk half way through my pregnancy so I ended up having [a lot of ultrasounds]...I don't know, because I had complications - but if you don't, you're only getting one or two ultrasounds during your pregnancy, so a lot of people are paying for the 3D just to get an extra ultrasound, which I was shocked at, but I guess that's common.

Ainsley clearly viewed her reasons for purchasing an elective ultrasound as different from women who "just [want] to get an extra ultrasound". Perhaps because of her risky pregnancy she felt she had missed out on a particular kind of medical ultrasound experience she understood other women to have had, and thus felt that her purchase of an extra ultrasound was more justifiable. Ainsley shared that, due to her high risk pregnancy, she was admitted to hospital where she spent a significant length of time prior to her delivery. In part because of this experience, ultrasound seemed very routine for her in ways it did not for other women. The

number of medical ultrasounds she received led Ainsley to believe that whatever risk was posed by the technology, it was minimal enough not to warrant concern.

Similarly, Monique's experience with multiple medical ultrasounds provided her with a sense of ease about the procedure that seemed almost dismissive of potential safety concerns. Monique suggested,

Some people are really afraid of ultrasounds and what effect they may have and I said, you know, I don't have a scientific reason, you know, I haven't read the studies, I just know that my son had 9 ultrasounds...he had so many medical ultrasounds that it, you know, could it ever do something - could you ultrasound for way too long at one time? Maybe, right? But this wasn't - you weren't in there for hours, you just weren't.

For Monique the length of time she considered "too long" for an ultrasound was unclear, however it was clear that, for her part, she did not feel she had reached that threshold. She went on to compare the risk of exposure to ultrasound, with the risks involved in other activities while pregnant. She continued,

I've heard people say, well, it heats up the amniotic fluid and you know, well so does a hot shower...but the reality is, nobody takes a cold shower for 9 months, and you know, it's the same sort of thing.

Monique's response is indicative of an awareness of the risks commonly associated with pregnancy, and her way of negotiating them. She came across as somewhat blasé about the risks of ultrasound, in part because she seemed aware that many activities are framed as risky during pregnancy, without much concrete evidence of their impact. In response to the potential risks associated with elective ultrasound, Monique concluded,

I think people are more cautious when they're pregnant, about everything, but I think you have to be reasonable as well...you take certain precautions, but you don't stop living.

Here, Monique's response equates concerns about the risks posed by elective ultrasound to an interruption in the daily practice of living one's life. In some ways Monique was comparing the

fear of risk to paranoia about the potential negative effects of ultrasound. Again, Monique's particular experience with a high risk pregnancy and numerous medical ultrasounds puts her opinions about risk into perspective, as does her medical background as a nurse. Clearly if her doctor was willing to perform nine ultrasounds during her pregnancy, she reasoned the potential risk of harm could not be that significant.

6.2 Reassurance

Despite the sense of risk associated with elective ultrasound in particular, participants' responses indicate that once they had arrived at the decision to purchase the service, they experienced it as reassuring. Some attributed the sense of reassurance to their overall experience of pregnancy, specifically women who indicated that they had experienced previous pregnancy loss or a high risk pregnancy. Others attached their sense of reassurance to the confirmation of fetal sex they received, or to the ability to experience an ultrasound alongside their partner and family. Regardless of how they experienced reassurance in the context of elective ultrasound, all except one participant spoke positively about her elective ultrasound session.

6.2.1 Information

As discussed in previous chapters, first time mothers in this study were motivated by a desire for more information about their fetus, specifically information relating to fetal sex and well-being. For Catherine and Kelsey, movement, or the appearance of movement via ultrasound, functioned as a way of gathering information about the well-being of their fetuses. Having a visual representation of her fetus was important in different ways for first-time mother Rachelle. She described seeking out elective ultrasound to find out the sex of her fetus, and was clear about the fact that her intention was to obtain information, rather than to simply "watch" it. Although she denied the notion that her elective ultrasound experience made her feel more attached to her fetus, she did explain,

Every day is like a new surprise, you know? Even finding out I was pregnant was a surprise, like we weren't actually planning - we weren't trying that hard not get pregnant but we weren't trying hard to get pregnant, so that was - everything was a surprise, so...it makes you feel like - for me - that I could get to know her a little bit more.

For Rachelle, “getting to know” her fetus meant learning its sex. Rachelle was emphatic that she did not have a preference for the sex of her fetus, but suggested that the knowledge provided her a better opportunity to “plan” and to “prepare” for her baby. This planning and preparing was accomplished through gendered consumption, purchasing clothes and other gender specific baby items. The ability to plan and prepare for the arrival of her baby was reassuring for Rachelle in that it allowed her to begin forming a relationship with her fetus by engaging in activities of benefit to her child, such as setting up the nursery and shopping for clothes. For Rachelle, reassurance functioned primarily through information, particularly sex information.

First time mother Chelsea explained that finding out what her fetus looked like was really important to her. Chelsea, who was 17 at the time of her pregnancy, described being given a gift certificate for the ultrasound by her boyfriend’s mother. At that point she already knew she was having a boy, and her main concern was what he would look like and if he was going to be “cute”. Interestingly, Chelsea did not express the same level of fear and concern as other interviewees. Despite being close in age and similar in circumstance to Kelsey, Chelsea’s lack of planning for her pregnancy did not instill the same anxiety or fear of the unknown as it did for Kelsey. Her lack of expressed anxiety could also have been related to the fact that at the time of our interview, Chelsea’s son was a healthy 8 months old. Of seeing her son for the first time via 3D ultrasound, Chelsea described,

[the ultrasound technician] showed the side of his face and I was like, ‘he’s sooooo cute! I can’t wait to meet him!

For Chelsea, her sense of reassurance was tied to her son’s appearance, rather than his movements or sex characteristics. Interestingly Chelsea was the only participant who seemed particularly impressed by the 3D image. She understood the 3D image to present a more realistic representation of her son’s features, confirming that, indeed, he would be cute.

Chelsea went on to explain that her father had recently passed away and that, in many ways, the ultrasound functioned as a way to build family connections. Chelsea’s mother, boyfriend, boyfriend’s mother and boyfriend’s sister were in the room with her for her elective ultrasound, and she explained that they were all very curious about what her son would look like. In some ways this experience appeared to be a family bonding moment for Chelsea, one which reminded

her of her late father. Despite her young age (17 at the time of her pregnancy), from her descriptions all of Chelsea's family seemed to be excited about the pregnancy and looking forward to her son's arrival.

Rachelle and Chelsea described the value of elective ultrasound as helping them to get to know their babies. For Rachelle, getting to know her baby meant learning of her sex, which allowed her to properly prepare for her daughter's arrival. It is important to note that in this case, Rachelle's elective ultrasound provided her the information necessary to begin consuming. The act of preparing for her baby's arrival served to assuage Rachelle's fears about the uncertainty of pregnancy, and to feel like she was engaging in activities that were of benefit to her daughter. For Chelsea, knowledge of her fetus was tied to his appearance. Getting to know her son meant seeing what he looked like. Once she became familiar with his features, Chelsea could begin to see family resemblances, and to visualize his arrival and their life together. Chelsea's fears about being unable to relate to her son were described through his appearance. In worrying that he might be "ugly," Chelsea feared she would not feel a proper sense of love and attachment to her son. For her, it appeared a distinct possibility that her son might be "ugly," in which case she would be unsure how to relate to him.

First time mothers suggested feeling some level of anxiety throughout the entirety of their pregnancies because they were never sure if "everything was okay" (Rachelle). For most, the experience of having an elective ultrasound was able to alleviate some of that anxiety, even if only temporarily. Although first time mothers were similar in expressing a sense of fear and uncertainty in relation to their pregnancies, it is clear that this fear manifested differently for individual women. Depending on their circumstances, age, and general preparedness for their pregnancies, participants described being calmed by different aspects of the elective ultrasound experience. The same was true of first time mothers who had experienced fertility issues, which was reflected in their descriptions of the value of reassurance.

The sense of overall anxiety in relation to pregnancy appeared to increase for women who had fertility issues in the past, or who had experienced previous pregnancy losses. Understandably, experiencing a prior miscarriage or pregnancy loss, underscored the possibility that at any moment something could go wrong in the present pregnancy, heightening the women's sense of

anxiety and need for reassurance. Interviewees, like Heather, who had experienced pregnancy loss, described not wanting to get too excited about their pregnancies for fear that it would be more difficult to cope, should another loss occur. At the same time, they described being thrilled about their pregnancies and wanting to experience all the joys of pregnancy while they had the chance. Whether achieved through fertility treatments or naturally, the value placed on these risky pregnancies was tremendous, thus the reassurance provided by elective ultrasound was highly coveted.

For participants who had experienced previous pregnancy loss or fertility issues, the anxiety they experienced began even before they became pregnant. For example, Jamie suggested that prior to her first pregnancy, she and her husband, “had really lost hope that I was ever going to get pregnant”. After going through numerous cycles of fertility treatments, and deciding to step away from the stress the treatments involved, Jamie was able to get pregnant without intervention. While going through fertility treatments, Jamie sought out online communities of women also struggling with fertility. She described becoming very active on social media sites and connecting with other women at various stages of fertility treatments. The experiences of these other women helped shape Jamie’s understanding of what would or should be a part of her antenatal care. When she learned that she “wouldn’t get to see [her] baby every month” on ultrasound, the way many other women who had experienced fertility issues had, Jamie began researching elective ultrasound. Aside from the expectation and anticipation that reassurance in the form of multiple ultrasounds would be available to her, Jamie suggested that her main motivation for purchasing elective ultrasound was to “just sort of feeling some sense of security around the pregnancy”. She indicated that having a visual image of her fetus via ultrasound would alleviate some of the stress and anxiety she was feeling, and provide her with some reassurance that her son was healthy and developing normally. For Jamie, seeing her fetus in utero was important in producing both a sense of security around the pregnancy and, like other first time mothers, understanding the movements she was feeling. Jamie suggested,

it’s a bit strange to try to picture this thing in your body, this little person, and where they are at any given time...I mean it was hard to sort of visualize and know where the baby was, so being able to see it and correspond it to what I was feeling, sort of helped with that I think.

Like Catherine, for Jamie, being able to visualize her fetus and understand his movements in relation to his positioning in her uterus, gave her a sense of reassurance that what she was feeling was normal. She suggested that seeing her fetus gave her an opportunity to “bond” with him in a way that she would otherwise not have been able to do. While Jamie described being disappointed by her elective ultrasound experience because they were unable to get a clear image of her fetus for her to take home, she was able to separate this disappointment from the broader value of the experience, which was reassurance. For Jamie, the quality of the image was not what wooed her, nor was it what made the experience a success or failure. Rather it was the symbolic value of knowing her fetus was moving and breathing. She explained,

it’s important that I know his heart is beating and I know that I’ve seen - and part of it was like, it was our first child so just even going to see the two dimensional images was really enough for us. And so I don’t know necessarily that we went because of the 3D piece, I think it was more of, it was another opportunity to see our baby on ultrasound.

In some ways, the ultrasound functioned for Jamie like a visit with her baby. She was able to hear his heartbeat, check on him and make sure everything was okay. Her disappointment with not getting a clear image to take home was kept separate from her joy at seeing her fetus on the ultrasound screen. Although she had never experienced a pregnancy loss, due to her struggles with infertility, Jamie understood her pregnancy to be perhaps even more tenuous than others and thus she sought out reassuring experiences. Being given another opportunity to see her fetus, further confirmed for Jamie that her hopes of getting pregnant were not unfounded, and allowed her to revisit the joy and triumph she felt about conceiving. For Jamie, feeling celebratory about her pregnancy was just as important as the reassurance provided by the image.

Previous experience with miscarriage again increased the desire for reassurance. Heather disclosed that she had a background of miscarriage, which meant that her feelings of uncertainty in relation to her pregnancy were heightened by her experience of loss. Reassurance was very important to both Heather and her husband, and she pointed to ultrasound as a particularly significant practice that would allow her the comfort of knowing her baby was healthy and developing properly. She indicated that seeing her son via ultrasound and his resemblance to a baby gave her a sense of reassurance that,

It's happening!...It's also really, really exciting to see it up on the screen and realize that you have a - not quite perfectly formed baby, but getting closer, like, everything you can see is very...formed. So it's really exciting!

Heather's excitement toward the image can be understood as in part due to the reassurance it provided her that indeed her pregnancy was progressing and her son was developing normally. Heather later described her experience with medical ultrasound as "appalling" in that she was separated from her husband for the duration of the scan, while he was left anxious in the waiting room. Heather connected her husband's high level of anxiety to their previous experiences with pregnancy loss,

we have a background of miscarriage anyway, so I'd gone for like half an hour, he's in reception having a freak out, so I think the whole experience of the 20 week scan was just so appalling we decided we'd have another one that would be nice, we could find out together what the sex was.

Based on her education and previous experiences with pregnancy, Heather did not come across quite as unsure about the process of pregnancy as other first time mothers. However, she did indicate that there is a difference between knowing about pregnancy from an intellectual standpoint, and knowing about pregnancy through your embodied experience. She described ultrasound as having a positive effect in that regard because it acted as visual proof of her pregnancy. Heather explained,

I mean, I've seen the pictures, like other people's, before but, I don't know, there's something a bit different about it being your own, especially when you know you're pregnant, you totally understand what's going on, you made the decision to get pregnant, but it's like 'oh! we are! that's our baby on the screen!'...there's no going back now, we made this decision, it's happening!...so it's really exciting!

For Heather, the feeling of excitement replaced her feelings of anxiety prior to her ultrasound. The confirmation of her son's development that she received from viewing the image, coupled with her husband's presence in the room allowed her to feel excited by the experience, rather than "appalled".

Heather and Jamie's experiences highlight the value of ultrasound to calm anxieties about spontaneous pregnancy loss and infertility. Their descriptions also show how a positive experience with elective ultrasound can increase the level of excitement women feel about their pregnancies, particularly if they have had prior issues getting or staying pregnant. The reassurance provided by seeing their fetus and hearing the heartbeat was understood as permission to become more excited about the pregnancy. Both women also pointed to the value of the practice for their husbands in calming similar anxieties they were feeling about the pregnancies. Both described their husbands as being very involved in their pregnancies, attending doctors' appointments and getting happy, anxious, and excited alongside them. Reassurance for Heather and Jamie functioned to shift their emotional responses to their pregnancies from anxiety and worry, to joy and excitement.

6.2.2 Celebration

Participants who had been diagnosed as having high risk pregnancies described a slightly different motivation for seeking out elective ultrasound. Instead of looking to elective ultrasound to alleviate their fears and anxiety, for these women, the option to engage in a practice with which they felt some sense of pleasure was very important. Perhaps it was taken as a given that they would experience anxiety for the duration of the pregnancy due to the high risk diagnosis. For both Ainsley and Monique, the medical requirement of ultrasound (as many as 12 throughout one pregnancy) was contrasted with their desire for a particular ultrasound experience. Having a pleasant ultrasound experience, at the time and location of their choosing, was highly coveted and meaningful. In other words, they were able to experience the best parts of the ultrasound without the stress of diagnosis, or a desire to, as Monique described, "detect errors". Ainsley suggested,

It was a fun ultrasound, as opposed to going to making sure everything's okay, it was a neat thing to do.

Here, Ainsley contrasts the functionality of medical ultrasound with the frivolity of elective ultrasound. I do not mean frivolous in a dismissive context but rather in a whimsical sense. At numerous points during our interview Ainsley expressed that she had been "excited" about her elective ultrasound that she thought it would be a "fun" and "neat" experience, words other

participants also used. The exciting, fun and neat experience described by most participants, also echoes the descriptions of what to expect from the experience in the promotional materials for many elective ultrasound clinics.

Of her elective ultrasound, Monique desired an experience that was more celebratory, more in line with how she felt more generally about being pregnant. She suggested,

I wanted the nice experience, you know, I wanted my husband in the room, I wanted them to point out the baby's heart and their head and their hands and their feet, and you know, have this is as umm, more of a celebration and less of a, you know, we're just going to detect errors.

The type of reassurance Monique was looking for involved a friendlier, more celebratory approach to both her as a mother, and to the image of her fetus. To have the images she was viewing explained to her, meant a higher level of understanding about the changes taking place, and a sense of ease and reassurance that this was a joyous event, perhaps not so unlike other pregnancies that were not understood to be high risk.

For both Monique and Ainsley, their sense of fear around their pregnancies was heightened by their high risk diagnoses. Both struggled to feel joyous about their pregnancies in spite of the numerous medical interventions they experienced. In this way, they viewed the elective ultrasound as an example of the more fun, reassuring experience to which they felt they should have had access. Both women had an idea in mind about how they should feel during and after having a prenatal ultrasound, which involved joy and celebration, as well as reassurance. Having the ultrasound technician smile and engage with them went a long way in contributing to both Monique and Ainsley's sense of reassurance, both during and after their elective ultrasounds, something that they identified as notably absent during their many medical ultrasounds.

Although Monique and Ainsley's sense of risk in relation to their pregnancies may have been heightened, their sense of risk in relation to the safety of ultrasound was alleviated, likely because they had already received more than the average number of ultrasounds during their pregnancies. Typically in Canada, pregnant women receive two ultrasounds; one during the first trimester (first 12 weeks) to confirm the pregnancy and more accurately predict a due date; and a

second ultrasound at about 18-20 weeks gestation, referred to as the “morphology scan”. This scan checks the fetus for indicators of proper growth and development such as size, spine length and skull circumference, as well as determining the location of the placenta in order to diagnose, or rule out, placenta previa (a condition where the placenta sits at or near the opening of the cervix, increasing the possibility for spontaneous, early labour). The number of ultrasounds, and the risk of exposure this potentially posed to their fetuses, did not appear to be a concern for Ainsley and Monique, primarily because they understood that the scans were medically necessary. Perhaps because they had been exposed to ultrasound to such a degree, and because of their familiarity with the healthcare system, (due in part to occupational training), both Ainsley and Monique were unconcerned about the threat of exposure posed to their fetus by elective ultrasound.

6.2.3 Shared Experience

One of the advertised selling points of elective ultrasound is the ability for women to involve their partners and families in the experience. Numerous interviewees described only wanting to have their partners in the room with them, while others talked about inviting members of their extended families. Participants like Sarah and Catherine described the elective ultrasound session as an intimate moment between themselves and their husbands, their first experience as a “little family” (Sarah). For others, this was an opportunity to involve parents, siblings and friends in the ultrasound experience. For example, Kelsey explained her excitement about involving many of the people she was closest to,

I invited my parents to come, I invited my best friend, and my boyfriend invited his family, so it’s a little bit more - like you can have anybody there, whereas the hospital, or your doctor’s office - like my doctor’s office is honestly, her room is probably the size of this table! So like, for me and my boyfriend and the doctor to even sit in there it’s really small, so I wouldn’t be able to bring anybody...it’s nice that he can be there and be part of it, not just **excluded**.

For Kelsey, having her boyfriend in particular, in the room with her was very important. Later in the interview she described being self-conscious about going places without him, as she felt that if he was with her, her pregnancy did not feel so obvious,

It's nice for me too because then I'm not going there myself and I'm not dragging myself there by myself. And I hate going out in public by myself right now anyways because I'm like - I just don't feel the same, like your body feels completely different. So it's like, I don't want to go anywhere alone, I feel fat, I want [him] with me at all times, I don't want people to look at me, like, if my stomach's sticking out. So, like, it's really a nice reassuring thing, like I know he's going to be literally right beside me, so it's nice. It's nice to experience that together.

Kelsey described having a lot of difficulty wrapping her mind around the fact that she was pregnant. She experienced a lot of anxiety about what she should be doing and how she should be feeling during her pregnancy. It is clear from her description that having her boyfriend by her side gave her a great deal of comfort, and by involving him in her ultrasound experience, she could better enjoy the process. At other points in the interview Kelsey expressed feeling "stupid" in relation to her pregnancy, which may have contributed to her discomfort in being alone. Including her boyfriend in the ultrasound experience alleviated some of the pressure and discomfort Kelsey felt in being by herself. Though welcomed, Kelsey's pregnancy was unplanned, and meant that she and other members of her family needed to adjust to new roles and relationships. Kelsey and her boyfriend were young and unmarried at the time of her pregnancy, and she alluded to the fact that her parents initially were not especially excited by the news. The fact that Kelsey's boyfriend immigrated to Canada from Nigeria, and that her child would be mixed race, also seemed a point of concern for Kelsey's extended family. Therefore, including her extended family in her elective ultrasound experience allowed them an important opportunity to begin developing a relationship with Kelsey's unborn daughter. Equally, it was an opportunity for everyone to experience the moment as a family.

Although Kelsey felt very attached to the idea of having her boyfriend in the room with her during her elective ultrasound, she clearly appreciated the fact that she could involve other members of her family in the experience. As her pregnancy progressed, Kelsey described her parents feeling more comfortable with the idea of a grandchild and pointed to the elective ultrasound as a particularly "exciting" experience for her family. She explained,

My parents got [a gift certificate] for me for Christmas...they are really excited!...I am super excited, my parents are so excited, so yeah, it's awesome!

Kelsey's excitement about her elective ultrasound and the ability to involve her parents and her boyfriend distinctly counteracted her otherwise nervous and anxious experience of pregnancy up until that point. The attention paid to her during her elective ultrasound served to validate her role as a mother, and counteract her negative medical experiences. Kelsey explained that she felt judged by medical professionals, particularly her doctor, which served to reinforce her feelings of stupidity in relation to her pregnancy. Conversely, she felt that in an elective setting, she would be able to enjoy the experience of seeing her fetus, alongside her boyfriend and family, in a warm, non-judgmental environment.

For Kelsey, and similarly for Chelsea, the elective ultrasound functioned as a way to build and reinforce familial bonds between themselves, their fetus, their partners and extended family members. Interestingly, both Kelsey and Chelsea, who were the youngest participants in the research, and whose pregnancies were unplanned, described wanting to have their extended family experience the ultrasound with them. Chelsea explained,

They took me into the room, with me, my boyfriend, my boyfriend's mom and my mom...I'm really close with my boyfriend's mom, our parents have been best friends for like 30 years...so it was nice having them together [the mothers] because we had already decided that both of them were going to be in the room with me when I gave birth, so it was like, they got to see him too, knowing that this is what he's going to look like when he's born.

Chelsea's description gave the sense that her pregnancy was understood as a family event, perhaps even a welcome turning point in more formally bringing two families together who had been friends for so long. The experience served to strengthen an already very close relationship between the two families. At another point in the interview Chelsea shared that her father had recently passed away, but that she knew he was pleased that she and her boyfriend had begun a relationship. She shared,

My dad actually was trying to get us together before he died, it was like, his big mission, so we were together, I think, about 4 months and then [my dad] passed away.

As members of two families who had been close and who had recently experienced a significant loss, Chelsea's desire to include them is both understandable and touching.

Chelsea explained during the interview that she was particularly interested in what her son would look like, and described her mother and her boyfriend's mother as being excited by this prospect as well. She suggested,

[The mothers] were really excited, they kept talking about, like his feet, it was sort of a running thing, but umm, they were really excited, they kept talking about how it was getting closer, like, him being born and they couldn't wait and stuff, so I think [the ultrasound] made it more real for them too.

Chelsea's comment about her son's feet came after the ultrasound technician showed an image of them and exclaimed that they were the biggest feet she had ever seen on an ultrasound. Chelsea related this to her experience after her son was born in that she mentioned he had never worn a size one shoe, because he had been born with feet larger than a size one. She also related this characteristic to her boyfriend who she said had large feet as well, and noted that they were both happy that their son had taken after his father in that way. Chelsea explained that it was important for her boyfriend to know that they were having a boy, and to see what he would look like because,

I think he felt connected no matter what, but, just knowing what he looked like, I mean, I think it was more like, it wasn't just a belly that had a baby in it, it was our son, and [this] was what he was going to look like exactly, [this was] who he was and stuff.

Chelsea's disembodied description of her "belly with a baby in it" highlights the ways in which fetal subjectivity, or understanding the fetus as a baby, had the effect of re-framing her own subjectivity as well. The connection she was able to establish between herself, her son and her boyfriend brought depth to her experience of pregnancy. For both Chelsea and her boyfriend, the ultrasound acted as a turning point in how they felt about the impending arrival of their son. She suggested,

I knew I was pregnant but that was, like, the first moment where I was like, there's actually, like, a little guy inside of me...I became more in tune with him, I wanted to talk to him more.

For Chelsea, seeing an image of her son that was recognizable to her initiated a practice of bonding. In saying that she felt "more in tune with him" Chelsea placed importance on the ways in which the image and the experience of elective ultrasound facilitated a point of connection for her with her son that she had not yet experienced. Perhaps because Chelsea and her boyfriend were both teenagers at the time of the pregnancy, both families, particularly the mothers, took an active interest and role in Chelsea's pregnancy. So having them all in the room with her for this experience was important and meaningful for Chelsea.

Having family members present during the ultrasound was also important for Rachelle. She suggested,

The fact that you can have your family there for the whole thing, like when you have the medical ultrasounds, it's very medical, they - sometimes they chit chat with you but for the most part they, like the tech didn't really talk to me, my husband was only allowed to come in at the end for some viewing...it should be a joyous moment so it's all about the joyous moment there...my aunt and my Dad came with me, my husband couldn't come unfortunately...[but] he was on the phone, like we called him. I forget why he couldn't come, I think he was writing an exam or something, so we put him on speaker phone when the guy told us [the sex, so] we found out at the same time...I just had my cell phone, and I was like 'don't tell me yet! I have to call my husband!'

Although Rachelle's husband could not be there physically, she was still able to involve him in the experience of finding out the sex of their fetus. The fact that she was able to dictate the terms of her ultrasound experience, allowed her to have family members present, both in person and over the phone. So despite their physical distance, Rachelle could feel that they were experiencing the ultrasound, the "joyous moment" she described, together in some way.

Similarly Monique described that part of the draw of elective ultrasound, besides the entertainment aspect, was, for her, the fact that she could involve her family. She stated,

Part of it was involving my family...the first time I brought a friend of mine, because she was baby crazy and really wanted to come with me, and my husband and my mother in law and my sister...and the second time, my mother was in town, but that's when the computer broke.

Previously Monique described needing to go back to the elective ultrasound clinic a couple of times as they had technical difficulty during her first try at the 3D ultrasound. More than for herself, Monique felt that this was a meaningful experience for her family members. She spoke at length about her critiques of the healthcare system, one of which was the lack of involvement of her husband. Of her medical ultrasound she explained,

They brought my husband in and they showed him a few things, and you know, he was in there for probably under 30 seconds.

The 30 seconds her husband was present in the room was not enough for Monique, or for her husband, to feel that he was being made to feel a part of the experience.

While involving family members was at least part of the motivation for purchasing elective ultrasound for most participants, only Shelley described her primary motivation as involving her older children in the experience. Shelley had wanted to find out the sex of her fetus in order to know whether she could reuse her daughters' baby clothes and items, or whether she needed to purchase new clothes and toys for a son. However, more than being motivated by consumption, Shelley described wanting to do what she could to involve her older kids in the pregnancy, and to get them excited about the arrival of a new sister or brother. She talked about what a positive experience it was for her kids to get to experience the ultrasound with her. She suggested,

I think they were more excited, right? Because they get to see her up close, and even though she was tiny, tiny, they got to see, sort of, what she was doing and you could see her on the screen moving around, and kind of waving her hands and that sort of thing, right? And so I think it was a good experience for them. Because anything I can do to bring them closer to her was a good thing, right? I needed to get the kids involved, and excited. Even the one that wasn't a big fan of having another little sister, I mean, even he

got into it because he was asking [the ultrasound technician] questions, you know, ‘what’s this? and what’s that? and what’s she doing?’ you know, that sort of thing.

For Shelley, it was important that her elective ultrasound technician made a point to speak to her kids and answer their questions. Shelley’s description highlights some of the ways women used elective ultrasound as a means to foster and build relationships between members of their families. As a mother, Shelley felt responsible for nurturing relationships between her family members, particularly her children. She discussed the value in getting her kids excited about her pregnancy and the arrival of their new little sister. She explained,

Once we knew it was a girl, I think they were more comfortable with the idea of it being a girl and they wanted to come up with a name, right? And then she needed a nickname, and that sort of thing, so it was more familiar that we’re having a little sister, whereas before it was an ‘it’ sort of thing. So now they can kind of personalize themselves to the idea that they are having a sister, instead of, you know, a brother OR a sister.

Understanding that kids might have a more difficult time getting used to the idea of a new sibling, Shelley felt it was important for her kids to know if they were having a brother or a sister. From her explanations, it was a fun experience for her kids to find out they were having a sister, to help come up with a name for her, and to give her a nickname. Interestingly, Shelley’s kids came in at the end of our interview and she asked them what they thought of seeing the ultrasound. Both older children agreed that “it was cool” though they did not necessarily understand the image to be one of a baby. When Shelley asked them if they thought it looked like a baby, her daughter responded “no! It looked like an alien! She looked like an alien and a dinosaur!” while her son disagreed saying “no! She looked like an alien skeleton!”. So while the image was not necessarily easy for Shelley’s kids to recognize as a baby, they understood, after age appropriate explanations, that what they were viewing was an image of their new sister inside their mom’s “tummy”.

Though not referencing her own experience, Jamie talked about a friend of hers seeking out elective ultrasound for reasons similar to Shelley’s. Jamie stated,

One woman, I remember, it wasn't around for her first two kids, but they did it with the third, because they had not intended on having a third, that child was a surprise, and so what she said is that it was a great exercise because they could bring the older children, and sort of have them see the baby...she said she felt that it helped the older kids, because I think, I want to say there was a 5 or 6 or maybe even 7 year age difference between the last child and the expecting child, so she was particularly concerned about...the older kids adjusting to the new baby.

This type of motivation for elective ultrasound is highlighted in most clinic's advertising, and based on Shelley's experience, seemed to be something the ultrasound technicians in particular were adept at navigating. It is clear from Shelley's description, and Jamie's recounting of her friend's experience, that there is value in involving siblings and extended family in viewing an ultrasound. Because they were clear on the motivation for this ultrasound in particular as being for pleasure, rather than for medical reasons, it was an experience they felt comfortable involving other children in.

6.3 Analysis

The significance participants assigned to elective ultrasound suggests, again, that they are positioned at a distance from their embodied experience of pregnancy. As previously discussed, the discourse around pregnancy is that women's embodied experience and knowledge cannot be trusted, and that authoritative knowledge resides with medical personnel and medical technology. Participants' descriptions of the value of their elective ultrasound reinforce the notion that the ultrasound image is understood to display authoritative, objective information. The visual confirmation of the ultrasound image allowed women to give themselves permission to get excited about their pregnancies, and to be reassured that they were progressing as planned. Catherine and Heather described their elective ultrasounds as permission to get excited about their pregnancies, due in large part to the information conveyed by the image. Though their experiences with pregnancy differed - Heather described experiencing previous pregnancy losses, while Catherine was unable to feel her fetus moving - the authority of the image to confirm the continuance of their pregnancies was taken as a sign that they could now become more excited and feel more confident in their pregnant state. However, even for women who were able to feel their fetus moving, or who had not experienced previous pregnancy loss, the

authority afforded to the ultrasound image allowed them to shift their understanding of their pregnancies. For example, Ainsley, who was also a trained birth doula, described pregnancy as being difficult to understand from an embodied perspective. For her, the image functioned as a recognizable point of connection that allowed her to deepen her understanding of pregnancy and for it to feel “more real” for her. Similarly Jamie suggested that her ability to recognize her son’s movements in the image, gave her a deeper understanding and connection to her son.

Along with the assumption of risk, participant responses also identified the fear that they would not or were not performing pregnancy properly, or in such a way that a positive outcome could be ensured. I observed an underlying sense that participants felt there was always the potential that they themselves were posing a risk to their fetus. The need for reassurance was emphasized by interviewees and suggests that the experience of pregnancy is one that needs, as Catherine explained, “comforting”. Comfort, in this instance, comes from technical intervention. The image produced by ultrasound technology is understood to present an accurate, real-time window into the womb. Therefore, if the image produced shows the fetus moving and displaying other human characteristics, the inference is that “everything’s okay”. Interestingly, it appears that this reassurance is temporal in that some women suggested there was a need to check in on their fetus numerous times throughout their pregnancy for the same purpose, to ensure everything was (still) okay. In other words, one image of the fetus was not enough to confirm its continued well-being. This understanding again points to pregnancy as an always risky and tenuous state of being. Some participants also suggested that hearing the fetal heartbeat was similarly recognized as indicating the health and well-being of the fetus. Doppler technology is employed in elective ultrasound clinics and is often positioned as the background “music” for the elective ultrasound session (except if the pregnant woman has brought her own music with her, which is also an option advertised by many clinics). Often it was the heartbeat, combined with seeing an image of the fetus in real time that confirmed for women the safe and normal progression of their pregnancies.

The anxiety expressed by participants suggests that pregnancy presents as a paradox in that it is seen as natural and instinctual, yet also highly managed and decentralized. Pregnancy is understood as a biological process and is widely acknowledged to have taken place successfully for centuries without medical intervention. At the same time, medical intervention into

pregnancy is so pervasive and routine in Canada that it has become expected and anticipated. The medical management of pregnancy has contributed to the decentralization of women's embodied knowledge and the reinforcement of institutionalized forms of authoritative knowledge. In other words, doctors are assumed to be experts on pregnancy, not women themselves. Many participants, particularly first time mothers, explained feeling unprepared for the changes they were experiencing and sought out the advice of qualified medical personnel, as well as, to a lesser extent, other women and their individual experiences of pregnancy. Participants' responses indicate that there is an assumption that women enter into pregnancy already at a deficit. While knowledge of pregnancy is assumed to be natural to women, participants' responses indicate the opposite. For example, Kelsey deferred to her doctor almost entirely for information about her pregnancy, what she was feeling and what she could expect. Similarly numerous participants described consulting their physicians for advice about purchasing elective ultrasound, specifically regarding their opinions of the safety of the practice. This type of anxiety around pregnancy can be attributed to an assumption of lack and ill preparedness. First time mothers like Catherine and Kelsey suggested that they felt ill prepared for their pregnancies and all the associated changes that were happening to them, as well as those they were under an obligation to engage with. For instance, Kelsey suggested that prior to her elective ultrasound, she was still participating in the same activities she enjoyed before she became pregnant, particularly hockey. She inferred awareness that she probably should not be playing hockey while pregnant, and suggested that seeing an image of her fetus via ultrasound would make her "more cautious" and encourage her to change her behaviour. Although Kelsey did not explain why she thought she should no longer play hockey while pregnant, the implication was, that because she understood pregnancy in general to be risky, it would be necessary to alter her behaviour to ensure she would not take on any further risk. This reflects an understanding that women pose an ever present risk to their fetus, simply by engaging in their regular activities.

In addition to pregnancy being positioned as always tenuous and risky, ultrasound technology has a history of suspicions regarding safety, thus positioning it as potentially risky. Participants were very attuned to the possibility that exposing their fetus to ultrasound could pose a risk, despite being unsure as to what the risks would be. Within the healthcare system ultrasound technology is considered safe and diagnostically productive. Because it is understood to be

medically necessary to produce a diagnosis or more accurately date the pregnancy, the use of ultrasound in hospitals and medical clinics is rarely questioned. Interestingly, once ultrasound is taken out of the formal healthcare system, its use invites skepticism and caution on the part of medical professionals. In some ways the formal cautions issued against elective ultrasound by Health Canada (2003) and the Society of Obstetricians and Gynaecologists (2007) (even while medical ultrasound continues to be a standard and accepted part of prenatal care), constitutes a kind of fear-mongering around the practice. Perhaps because women are able to exert a level of power over the decision to purchase an elective ultrasound, and may gain a sense of agency or empowerment from the experience, it must be further entrenched in the formal healthcare system. Participant responses demonstrate that there is a fairly pervasive understanding among pregnant women that elective ultrasound is controversial, at least in part because of the issue of safety, yet they understand themselves to be ultimately responsible for making the right (i.e. safe) decision for their fetus. This often meant that participants were forced to decide between fulfilling their own desire for a particular ultrasound experience or for information relating to the sex of their fetus, and acting in the best interests of their fetus. For at least one participant, Sarah, the decision to fulfill her own desires and receive an elective ultrasound created the cause for high level of guilt and anxiety that she had done something that could potentially harm her fetus. So while elective ultrasound is advertised and framed as a happy, joyful experience, it is also steeped in suspicion and controversy which pregnant women must individually wade through in order to arrive at their decision.

6.4 Conclusion

Regardless of how risk manifested for participants, each woman suggested that they sought out elective ultrasound as a means of reassurance. First time mothers described their experiences of pregnancy as “scary,” being unsure of what to expect and feeling responsible for ensuring that their babies arrived healthy and without complication. For them, elective ultrasound functioned as a check-in point during their pregnancies that confirmed the health and well-being of the fetus, even though no diagnostic information was provided during these procedures. Feeling surprised by, or unprepared for, the pregnancy in the first place, seemed to increase the desire for reassurance among my participants. For first time mothers, their experiences with elective ultrasound were, for the most part “comforting,” “happy and uplifting”. Seeing an image of the

fetus, watching it move around, and learning of its sex were all significant factors which contributed to these first time mothers' sense of reassurance in relation to their pregnancies.

Women who had experienced fertility issues, pregnancy loss, or were diagnosed as having high risk pregnancies understandably required much ongoing reassurance that their pregnancies were progressing normally. In some cases, these women received many more than the average number of medical ultrasounds, which provided at least some measure of the reassurance sought by other women. Interestingly, those interviewees who had been exposed to medical ultrasound more frequently viewed their elective ultrasounds as a pleasant experience, unlinked to the fear of a possible negative diagnosis. The reassurance provided by a nice experience with elective ultrasound helped these participants in particular, to shift their emotional responses about pregnancy and the procedure from anxiety and fear, to joy and excitement.

The risks associated with the non-medical use of prenatal ultrasound were discussed to some degree by all participants. Most deferred to their doctors or other medical personnel for information on the safety of elective ultrasounds. All of the interviewees described awareness that ultrasound in elective settings was “controversial” and that its safety was questionable, or at least open to debate. A lack of consistent, reliable and definitive information meant that women negotiated their own boundaries, which itself was a process fraught with anxiety and uncertainty. Participants' responses pointed to the tension raised around the desire for an elective ultrasound experience and the uncertainty felt in relation to it. For some, this negotiation meant opting for the shorter sex determination ultrasound, while for others this meant comparing the number of ultrasounds they received during their pregnancies with the experiences of other women they knew. For those whose doctors suggested there was no significant cause for concern, this opinion was enough to convince them of the safety of elective ultrasound. While Sarah felt in hindsight, that the risk to her fetus posed by elective ultrasound, was significant enough for her to regret her decision and vow never to do it again.

More than the quality of the image, the determination of fetal sex, or the entertainment value of elective ultrasounds, women overwhelmingly described seeking out the service as a means of reassurance, even if this was not the reason they initially identified. For all of the women interviewed, pregnancy was understood to be always tenuous and in flux. In other words, a

degree of fear that something had or could possibly go wrong was omnipresent. Women described being unsure whether something had happened, from one appointment to the next, which would jeopardize the success of their pregnancies. Thus, interviewees described elective ultrasound as providing a sense of reassurance to counteract their fears; hearing the heartbeat was reassurance that the fetus' heart was still beating; seeing the fetus move was reassurance that the fetus was still active and growing; having the fetus' sex characteristics pointed out in detail was reassurance that the fetus was of a particular sex, for which women could now properly plan and prepare. Making preparations for the arrival of their baby functioned for many women as an important component of building a maternal identity. Participants described elective ultrasound in particular as helping to encourage their maternal identity building, as well as offering a way to include others in the building of relationships. The relational value of elective ultrasound is discussed in the following chapter.

Chapter 7

7 Elective Ultrasound and Maternal Identity

For participants, elective ultrasound presented an opportunity to access medical technology in an explicitly non-medical setting, geared towards their comfort and enjoyment. Elective ultrasound was also understood as a means by which women could gather information about the sex of their fetus. In many cases, the desire for this kind of experience was prompted by negative feelings about medical ultrasound. Participants often described the ways they were treated by medical ultrasound technicians in negative terms, and spoke of their desire for more control over the experience such as: who they were able to have in the scanning room with them, or how many ultrasounds they could expect to have throughout their pregnancies. For those interviewed, the option to pay for the service was accepted as a means by which to obtain the information or experience they desired. In addition, most participants sought out elective ultrasound as a form of reassurance, where they viewed it as a way to check in on the fetus and to ensure its continued healthy development. Chapter six revealed that even though no diagnostic information was provided during elective ultrasound scans, the act of “seeing” or “watching” the fetus as it moves around in utero was described as reassuring by interviewees. It was clear that participants understood elective ultrasound to be a consumer practice, and they appreciated the choice it presented them to gain a level of control over their ultrasound experience. This consumer experience was discussed by participants in overwhelmingly positive terms. In particular, the women interviewed were, for the most part, particularly positive about the increased level of attachment they felt, and the realness the ultrasound brought to their experience of pregnancy. As a result, they described the ways in which elective ultrasound was made meaningful for them in the context of bonding with their fetus, building relationships, and encouraging their development of a maternal identity.

In this chapter, I will discuss the ways in which participants negotiated their maternal identity through their elective ultrasound experience. Particularly important was the setting of the ultrasound and the ability to include partners and loved ones in the experience. The inclusion of their male partners was especially meaningful for participants because they often worried that their partners felt “disconnected” or “detached”. Some participants described their male partners

as feeling “excluded” from pregnancy in general, and described their specific exclusion from the medical ultrasound experience. Due to restrictions, the practice of medical ultrasound typically involves only the pregnant woman and an ultrasound technician, with partners being called in to the room for “viewing” at the end of the session. Monique suggested that her husband was able to be in the ultrasound screening room with her for “less than 30 seconds”. Because of the focus on family and relationship building, elective prenatal ultrasound presents a distinctly different experience. Therefore women often discussed their elective ultrasound session as a turning point in their pregnancies, (rather than their medical ultrasound) and placed greater importance on their elective experience. The technical, utilitarian nature of diagnostic ultrasound did not serve the purpose of fostering maternal identity in the same way as the welcoming, interactive elective ultrasound experience. More than simply a “fun” and “exciting” experience, women described their elective ultrasound experience as necessary in order to more fully embody their pregnancies.

7.1 Building “Our Family”

Based on their descriptions, within the elective ultrasound setting, women were positioned as mothers, men as fathers and the fetus as a baby, by the ultrasound technician. Regardless of whether women already thought of themselves, to some degree, in these terms, maternal and fetal subjectivity were encouraged by the ways their ultrasound technicians spoke to and interacted with them. For example, Sarah described her elective ultrasound technician as talking to her baby, coaxing and encouraging her to move so they could obtain a better image. Feminist theorists such as Ann Oakley, (1984) Barbara Duden, (1993) and Donna Haraway (1997) suggest that prenatal ultrasound imaging helps to personify the fetus and encourages the development of a separate identity for the child to be. Interestingly it would appear that ascribing subjectivity, or personhood, to the fetus - a major feminist critique of ultrasound - was secondary in many ways to participants’ understanding the reality of their pregnancy. In other words, conceptualizing the fetus as an autonomous person was a means to an end for participants in developing their own maternal identity. Ultrasound acted as a means by which women became mothers. Rather than fetal subjectivity taking precedence over the subjectivity of the mother, or vice versa, these two states were deeply intertwined. Participants suggested needing to identify what they were feeling, in terms of “flutters” and movements, as the movements of a “little person” in order to fully

understand their embodied experience. For all of the women interviewed, building or ascribing subjectivity, to both their fetus and themselves as mothers, was an ongoing, multi-layered process, which was helped along in significant ways by their elective ultrasound experience.

Developing a maternal identity was seen as an important preparation for the women interviewed. Participants described how understanding themselves as mothers, or soon-to-be mothers was a gradual process. For example, Ainsley explained her confusion and the difficulty she experienced “wrapping [her] mind around” around the fact that there was a baby growing inside her. Once a connection was made between what the participants were feeling, and the expected outcome (the birth of a healthy baby) they could begin to view themselves as mothers. Each woman interviewed described a different process of arriving at this conclusion. For instance, Chelsea began talking to her son in utero after having the experience of an elective ultrasound. In communicating her hopes and dreams to her son, Chelsea was working to build an identity for herself as a mother. Similarly, Sarah pointed to her elective ultrasound as a turning point in how she felt about her pregnancy. In Sarah’s case, her maternal identity manifested as an instinct to protect her daughter from further exposure to the ultrasound waves that she understood as disruptive and uncomfortable for her baby. Nurturing, love and protection are traits widely associated with women, in particular with mothers, thus fostering and developing such characteristics is an important part of building a maternal identity. Some feminist criticism of ultrasound technology (Oakley, 1984; Petchesky, 1987; Hartouni, 1997; Stabile, 1999) and its ability to personify the fetus, suggests that in recognizing the fetus as an autonomous human being, we may be privileging the personhood of the fetus over that of the woman gestating it. However, the descriptions given by research participants indicate that rather than privileging the personhood of the fetus over that of the pregnant woman, understanding the fetus as an autonomous being is secondary to, or in service of, building a maternal identity. Developing a maternal identity allowed participants to feel more at ease with their pregnancy, more prepared for their baby’s arrival and more capable of shifting into the role of mother once the baby was born. Particularly for first time mothers, building a maternal identity was necessary for helping them to feel more at ease with their pregnancy.

Pregnancy as a process seemed particularly difficult to grasp for some participants, who described difficulty in, to use Ainsley’s term, wrapping their minds around the reality of their

impending motherhood. This feeling was most strongly expressed, understandably, by first time mothers and women who had difficulty getting pregnant. Ultrasound, performed in the elective setting, offered a means of grasping this reality that was recognizable, welcomed, and an otherwise “fun” experience. The fact that participants described feeling more connected to their fetus and to the idea of becoming mothers, much more so after their elective ultrasound than after their medical ultrasounds, is indicative that the setting, and comfort level is important. It also indicates that the social aspects of elective ultrasound are significant, as is the way women are treated and spoken to by ultrasound technicians. By organizing ultrasound as a social experience, including partners and other family members, women expressed a significant decrease in anxiety from their diagnostic appointments. They were able to build their maternal identity alongside other family members who also engaged in relationship building with the fetus. Common among the participants was the value they saw in the practice, in particular for their husbands and partners. Experiencing ultrasound together meant that both women and their male partners were building parental identities in relation to their fetus.

While some participants conceived of the experience as one that involved extended members of the family, others understood the practice to be a place where they could initiate their own family bonds between what Sarah described as “our little family”. For these participants, having the experience with only their husbands or partners, functioned as a meaningful way for both partners to build a parental identity. For example, Catherine explained her reasons for choosing only to involve her fiance in the experience:

We wanted to know the gender before anybody else did, pretty much! And I mean, of course we went home and called everybody, but we wanted to know first...it was kind of like a private moment between the two of us.

Catherine understood the privacy of the moment between herself and her fiancé in which they found out the sex of their fetus as an intimate moment, which forged their new family. In this way, an image of the fetus can work to produce new notions of family and parental identity. By describing their elective ultrasound as a “private moment between the two of us” Catherine positioned herself and her fiancé as observers of their fetus. What they are observing is a representation of their soon-to-be child. Much like new parents would observe a sleeping baby in

a nursery, Catherine's description points to the ways in which ultrasound can accelerate the process of becoming parents. For Catherine, who had chosen to visit an elective ultrasound clinic in large part because she wanted to find out the sex of her fetus, the ability to share the knowledge she and her husband gained during the appointment was a highly anticipated experience. She wanted her and her husband to be the first to know, and to be able to share the information with friends and family when and how she saw fit.

Similarly Sarah chose to have only her husband in the room with her during her elective ultrasound. Like Catherine, being able to dictate the terms under which she shared photos and information with her friends and family was important to Sarah. She described,

We kind of felt like, we knew we wanted to get the pictures, we knew we were also going to purchase the DVD - that was an add-on you could get - so we thought if we want to share it with our family down the road, then we will, but we just wanted it to be the two of us in the session.

For Sarah and her husband, part of the parental identity they were building revolved around making decisions for their child. At various points during the interview Sarah referred to her role as protector for her daughter. The decision to keep their elective ultrasound as a private moment between them, with the understanding that they may share the information or images obtained in their own way and in their own time, meant that they could control who was given access to these images. Making decisions for her family was an important part of Sarah's maternal identity. Her insistence that purchasing an elective ultrasound constituted her "first parenting mistake," in part because she felt she had put her own curiosity above the safety of her child, demonstrates the complex ways in which maternal identity can come into being through ultrasound. During our interview, Sarah reflected on her experience, and indicated that perhaps her elective ultrasound had facilitated a level of bonding with her daughter that she had not yet experienced. She pointed to the moment where she stepped in to end her ultrasound session as evidence of this, particularly because she felt that her fetus was uncomfortable and that it was her responsibility as a mother to protect her child from discomfort.

Jamie also chose only to have her husband in the room with her, though she described this as less of a conscious choice. Jamie explained,

Honestly that had never - it had never occurred to me that I should bring, like, my parents and my siblings and stuff like that, it never occurred to me...and again, right, because we had to book it on a Tuesday, in the middle of the week, right?...even though a girlfriend had said ‘oh yeah, I took my husband and my kids and whatever’ and I’m just like well it just never dawned on me that that would be something I should do.

In questioning whether she “should have” included other family members, Jamie draws attention to the pervasive notion that there is a correct way to perform pregnancy and parenting. Her statement reveals the way in which, as a soon-to-be mother, she is not only responsible for creating bonds between herself and her fetus, but is also responsible for fostering relationships between her fetus and her extended family. Later in the interview Jamie described the experience as being an important bonding moment for both her and her husband, though, based on the above quotation this was not necessarily an anticipated or orchestrated outcome.

So, regardless of the individuals in the room and their relationship to the expectant mother, the experience of elective ultrasound helped to foster relationships, both among the parents of the fetus and their extended family. Seeing an image of the fetus, and for some, learning its sex, helped women position themselves as mothers and helped them connect more fully to the impending reality of motherhood (i.e. there was a “little person” growing inside). In this way, through making the products of pregnancy visible, elective ultrasound works to close the gap between expectant mother and mother.

7.2 Becoming Mother

In previous chapters, reassurance was discussed as one of the primary motives for many women in seeking out elective ultrasound. Often, obtaining this reassurance spurred attachment in that participants felt more comfortable getting excited about their impending motherhood once they were reassured by seeing their fetus via ultrasound. The ability of ultrasound imaging to promote bonding between woman and fetus is a major selling point in the advertising for commercial ultrasound businesses. In fact, most participants indicated that seeing an image of their fetus via ultrasound made their pregnancy feel more “real” to them.

Chelsea gave perhaps the most touching description of the type of connection that can be fostered through viewing the fetus via ultrasound imaging. Chelsea described her feelings on seeing the fetal image thus:

I was surprised by how much you could actually see, like it actually looked like - well obviously I knew I was pregnant, but like, it looked like a human! And then I was like, oh wow, there's a little person inside of me!...I became more in tune with him. I wanted to talk to him more and stuff like that...I started talking to him, like, every night I was like, talking to him, having a conversation every night before bed I would just sit there and talk to him for like, an hour. And then after that I realized that he really liked music so I would sing to him all the time, and then, like, I'd talk about what I want for him, and like, my dreams and how we're going to live, and stuff like that.

Once Chelsea had seen what her son would look like, which was her primary motivation for wanting an elective ultrasound, it solidified for her that, indeed, she was going to be a parent. Talking to her son in-utero made Chelsea feel more connected to him, and by communicating with him, sharing her hopes and aspirations, she was working to build her maternal identity. She continued,

It was emotional. Like, I was excited but I was also pretty concerned, [about] what he was going to look like but then like, I saw him and I felt so much more connected to him and that's when, like, all the talking to him and everything started. Like, before that I'd rub my belly or whatever, but I didn't really talk to him or anything - my boyfriend did, but I didn't - so when I saw what he looked like, it was like, an instant connection.

For Chelsea, having a visual image of her son was necessary in order for her to begin to feel a connection. It was not clear why Chelsea's medical ultrasound had not functioned in the same way for her, though perhaps it was the quality of the image that made it more easily recognizable as a baby, as her baby. Until her elective ultrasound session, Chelsea understood her pregnancy in abstract terms. She knew she was pregnant, but had not really connected that experience to her son's arrival, until she saw "what he looked like". The value of seeing this image for Chelsea was significant in that she was able to position herself as a mother, and was able to connect with her son in ways she had not previously. The "instant connection" she described has often been

discussed in relation to birth narratives, in which women explain feeling a deep bond or connection with their baby, immediately following birth. Prior to the widespread use of ultrasound technology, birth would have been a woman's first opportunity to see her baby. In Chelsea's case, her elective ultrasound functioned as her first opportunity to "see" her son, and therefore she described the connection as happening in that moment. In other words, the ultrasound image is taken up as a visual representation of (or stand-in for) the child soon-to-be born, around which a relationship can be fostered.

This visual connection was echoed by other participants. When asked if her experience with elective ultrasound changed the way she felt about her pregnancy, Jamie responded,

It made it more real. That's for sure...there was a definite 'okay, this is real, this is really going to happen' you know it's not - because prior to being pregnant I was always very grossed out by pregnancy and having something in you, moving and oh my God, what's happening? What's that going to feel like? I was always curious, like, is it going to feel like - is it Jamie Lee Curtis in that movie 'Alien' where that thing comes out of the middle of her body! I'm like, oh my God, it's the alien! So I do remember thinking, like, after the ultrasound, "okay this is very real: this is going to happen". And yeah, I want to say there was more focus at that point around labour and delivery and what was coming.

Where the denial piece was a little bit more prevalent prior to the ultrasound, Jamie's response is indicative of a somewhat abstract relationship to her pregnancy. Prior to confirming that her fetus was indeed a fetus, the possibility, however remote, existed for Jamie that her fetus could instead have been alien waiting burst from her stomach. Despite being a well-educated woman in her 30s and her pregnancy being very much planned and desired, Jamie still experienced a significant disconnect between what she was feeling, and what she knew to be the impending outcome of her pregnancy. Jamie's response highlights the complexity of fostering a maternal identity while experiencing a range of feelings that are difficult to qualify. For Jamie in particular, it was important to connect what she was feeling, to a visual image. She explained,

I mean, I could feel him moving and could feel him kicking but then I could see it...I was feeling flutters and stuff but had not actually felt, you know, a boot to the rib or whatever, so by the time this ultrasound happened, he was bigger, he was stronger and he had

really been kicking me, particularly towards my cervix. So yeah, when I could see it, but also feel it, it was sort of like, “oh yes! It’s not just a pain I’m feeling there, there’s actually somebody kicking me there!”...because I mean, it’s a bit strange to try to picture this thing in your body, this little person, and where they are at any given time, right?...I mean it was hard to sort of, visualize and know where the baby was, so being able to see it and correspond it to what I was feeling, sort of helped with that I think, for me anyways.

Having a visual for what she was feeling helped Jamie personify the things she was feeling and allowed them not to feel so alien to her. The image gave her a visual that helped to explain what she was feeling: it was not just an uncomfortable intermittent sensation which she felt, it was her son kicking. Being able to identify this feeling reassured Jamie that her feelings were typical and that she knew what to expect from pregnancy.

Like Jamie, Ainsley had a hard time understanding what was going on in her body. Also like Jamie, Ainsley related her experience to something she had seen on television. She suggested,

It’s so hard to even wrap your mind around what’s going on, that there’s a baby and just, like I said, we had so many ultrasounds, but they were very - you know that episode of “Friends” where Rachel goes [for the ultrasound] and she can’t see anything? That’s what I felt like! Like, I don’t see anything, I don’t know what I’m looking at!...I don’t see anything! It just looks like a blob to me...I mean, I think it’s just that [the 3D ultrasound] puts it into perspective, it’s so hard to wrap your mind around...I’m a very visual person and I always - I tried to visualize my birth and tried to visualize everything so it’s very hard not to be able to visualize what this little being looked like...and I think what the doctor said about her looking like me, I was like “oh! let me see!”...but it was really grainy, and I really wanted to see the little baby’s face.

For Ainsley, seeing what her baby looked like was an important visual image for her in terms of being able to fully grasp her pregnancy. Confirmation of visual resemblance was sought as a means of developing closer familial bonds to the fetus, in this case, the fetus’s resemblance to herself. Similar to Chelsea, Ainsley was concerned about who her daughter would look like, herself or her husband. Ainsley was one of the only participants who described being enticed by

the 3D image in that she understood it to be a clearer image than the 2D images she was used to, and with which she struggled. Like Jamie, having a visual connection for what she was feeling was also important to Ainsley,

You can feel the baby moving around so much and I would always think, I wish I could see what she was doing...I was always very curious, I would always say, I wish I could see what she was doing, like you would picture her doing something, I just really wanted to see that.

4D ultrasound imaging offered Ainsley the chance to see her daughter's movements in utero. Making a visual connection with what she was feeling was important for Ainsley in order to understand what her daughter "was doing". (Unfortunately, Ainsley never got a clear image of her daughter as her head was already engaged when she went for her elective ultrasound appointment at 35 weeks).

For Catherine, having a visual image of her fetus was particularly important because she had been diagnosed as having an interior placenta, and was told she would likely be unable to feel the flutters and movements of her fetus until later than most women. Being unable to feel her fetus moving gave Catherine considerable anxiety about whether her fetus was growing and developing as it should. In turn she experienced this uncertainty as a lack of attachment or connection to her fetus. She explained the significance of her experience with elective ultrasound,

I mean, I'd say I felt more connected to the baby. And this was not a planned pregnancy so it came as a bit of a surprise to us, so at first it's kind of like, "Oohhh, okay. What are we going to do?" You know? We weren't planning for this, but once you get that ultrasound and you see everything that's going on, it's a very, like, happy and uplifting moment and you definitely start to feel like, an attachment. And maybe, you know, it wasn't there before, because **I couldn't feel anything.**

Being both surprised by her pregnancy and unable to feel the fetal movements she understood to be normal during pregnancy, noted in the previous chapter, Catherine sought out alternate forms of reassurance. In addition to this reassurance, or possibly because of it, Catherine's elective

ultrasound in particular, acted as a turning point for her in terms of how she felt about her pregnancy. Catherine explained at numerous points during our interview that she felt “uplifted” by her experience with elective ultrasound and that it helped her connect to fetus in ways she had not previously connected.

Perhaps because of her previous experiences with pregnancy loss, the sense of reassurance Catherine described above, was particularly important for Heather as well. Heather connected this feeling to seeing an image of her fetus specifically. She suggested,

There’s something a bit different about it being your own...[it’s] really exciting to see it up on the screen and realize that you have a not quite fully formed baby, but getting closer.

Connecting the image she was viewing to it being “our baby” enabled Heather to feel that her pregnancy was more real for her. The opportunity to get excited about the pregnancy was significant for Heather in terms of her previous experiences with pregnancy loss.

Kelsey also found it difficult to fully grasp the fact that she was indeed pregnant and would eventually give birth to a baby. She felt that experiencing ultrasound in an elective setting would help her feel more attached to her pregnancy. She explained,

I think it’s, like, a bonding thing too, because, I mean, right now I don’t really - the only time I really feel that there’s a baby in there is when he’s moving around or when I’m sick, or when I go and hear the heartbeat, so for me to actually be able to go and see it, it’s just like, oh my gosh, like it’s just so exciting...I think it’s just going to make - like - reassure me that I’m pregnant still and that my baby’s healthy and it’s just going to be so cool to see! Because I’m so curious, like, how is there a baby in there? Like, I don’t get it! How does this work?

For Kelsey, what she was able to feel was not as significant as what she was able to see from the ultrasound. Clearly she was able to feel movements, though her response indicates that she did not necessarily attach them to her embodied experience of pregnancy in a way that was understandable to her. At other points during the interview, Kelsey described feeling really

unsure of her general knowledge about pregnancy and thus placed a lot of value in the experience of seeing an image of her fetus that was immediately recognizable to her as a baby.

Conversely, Monique seemed very comfortable with the idea of being pregnant and what that meant. For her, elective ultrasound was more about having an experience that was enjoyable. Of her elective ultrasound, Monique said,

It did make the pregnancy experience more enjoyable. I mean, there's lots of things about pregnancy that are wonderful, but there's lots of things that are, you know, not so wonderful either...it increased the things that you can be joyful [about] and celebrate.

More than simply seeing the image, Monique was concerned with the whole experience of elective ultrasound, how she was treated, how it made her feel, and how comfortable and cared for she felt in the setting. During our interview Monique referenced her belief that pregnancy was fundamentally a happy and joyous experience, worthy of celebration, and indicated that the ways in which pregnancy was medically constructed and managed, positioned it as more of a condition than a normal part of life. However, the care and attention Monique received from her elective ultrasound technician was understood as more in line with how she felt pregnancy should be treated within the healthcare system. In many ways, the care and attention Monique, and others felt during their elective ultrasounds, acted as a support system for their development of a maternal identity. What was being celebrated within the screening room was the impending arrival of a child and the consequent shifting of identity from expectant mother, to mother.

Alternatively, for Sarah, the difference between her experience with medical ultrasound and with elective ultrasound did not make her feel better, but rather, increased her anxiety about her pregnancy and was understood as a negative experience. Interestingly, in terms of their building of maternal identity, the outcome of the elective ultrasound for both Sarah and Monique was similar. Sarah described being excited about her elective ultrasound until she was alerted to potential health risks to her fetus by a prenatal class instructor. She had already, to some degree, understood herself to be responsible for the well-being of her fetus in terms of the choices she made throughout pregnancy, and in that way, she had begun to position herself as a mother. Sarah's inability to locate conclusive evidence of the safety of elective ultrasound made her very uneasy and forced her to question her decision. She shared,

We tossed and turned over [the decision] and we kind of started to think, you know, are we being too sensitive? Are we just, you know, being those **overprotective parents** already? And we've already had two ultrasounds, and is it really that different from the two ultrasounds we've already had? And kind of just thinking we were being a little bit silly, you know, we had seen all these people that have done it and had fine, healthy babies, with no burns or anything, so you know, are we being silly about it? And we kind of just came to the conclusion that we'd been looking forward to it for a long time, we've been so excited to go and see her and what she looks like, and you know, we were just going to go for it. But, it just didn't feel right inside, for either of us at the time, so you know, we just kind of look at it as our **first parenting mistake**.

What is clear from Sarah's description is that she already viewed herself and her husband as responsible for the care and protection of their fetus. Her struggle with the decision was entirely based on what she felt was safe for her fetus, and in understanding her decision to go forward with the elective ultrasound as a "parenting mistake", she expressed a significant level of guilt about her eventual decision. Sarah's explanation of her elective ultrasound communicated a great deal of guilt and anxiety about whether she had jeopardized the safety of her fetus by engaging in an activity she described as "selfish" in that it was purely for her and her husband's "curiosity".

Numerous participants, including Ainsley and Kelsey, described a similar sense of curiosity about their fetus and described seeking out elective ultrasound, like Sarah, as a means of satiating that curiosity. However, for participants like Ainsley and Kelsey, addressing their curiosity, whether it involved learning the sex of the fetus or seeing what the baby was going to look like, was understood as a positive experience that secured for them a degree of connection to their fetus, and thus their developing maternal identity. Their desire for information was framed as maternal, in that the end goal was to develop closer bonds with their fetuses. Although in the end Sarah described connecting with her fetus through her elective ultrasound experience, this connection was brought about in a different way. For Sarah, her curiosity was not understood as maternal, but rather, as selfish. In describing her decision in those terms, Sarah was revealing some of the ways she conceptualized what it meant to be a good mother. Because she felt she had not put the interests of her fetus above her own, Sarah described feeling guilty about her decision. However, when asked if she felt the ultrasound had provided any reassurance

or an opportunity for her to bond with her fetus, it prompted a slight change of heart. She reasoned,

We didn't find that, like, I didn't feel any kind of reassurance, except of the fact that they were like "yup they were right, it's a girl" so all the stuff we bought that's pink doesn't have to be returned! But I didn't find the bonding - well, actually, maybe a little bit of bonding in the sense that we were like, she doesn't like this, you know, because her hands were in front of her face like this [motions with hands in front of her face] and she seemed irritated or agitated. Because, you know, she would have kept going, that tech, and finally I pulled the plug, I finally said - I was just looking at the screen and I said, you know, this is just not a happy baby, I'm pulling the plug on this and I said ' you what what, I think we're done for today' and I ended it. So maybe there was a little bit of bonding and I just haven't looked at it like that yet!

Sarah's actions, that she then interpreted as being a result of a level of bonding between her and her fetus, were understood as such from the perspective that she felt she had intervened in a practice she understood to be upsetting her fetus. Although her desire was to get a good image of her fetus which she had not yet obtained, Sarah reasoned that because of the position of her hands, her fetus was irritated by the ultrasound and ended the session. Counter to her description of her decision to purchase the ultrasound, Sarah's description of ending the ultrasound session suggests that she put the well-being of her fetus above her own curiosity. In asserting herself and stopping the ultrasound session, Sarah felt she was acting in the best interests of her child. Reading what she understood as the response of her fetus to the ultrasound waves, Sarah was able to assert her maternal identity as protector, and prevent the ultrasound tech from continuing until they obtained a good image. Even in describing her initial decision as a "parenting mistake" Sarah was asserting a sense of maternal identity. Unfortunately it was one she was not proud of. However, in the end she was able to, in some ways, redeem her sense of maternal care and concern through subsequent decision making.

Only a couple of interviewees indicated that their elective ultrasound sessions did not make them feel, in one way or another, either more attached to their fetus, or any differently about their pregnancy. Because Rachelle indicated that her primary reason for seeking out elective

ultrasound was to find out the sex of her fetus, the question of attachment was framed around knowing what sex her baby would be. To this, Rachelle responded,

No, I wouldn't say that. Because I really - no I wouldn't say that because I didn't care what [the sex] was and I didn't feel like it made me feel more attached at all.

Her response suggests that Rachelle's concept of being a good mother means not caring what sex her child is. Perhaps because it was framed around learning the sex of her fetus, Rachelle may have interpreted this question as related to whether or not she was more attached to having a girl or a boy. Rather, Rachelle viewed anything that would provide her with more information about her fetus as a welcome and enjoyable experience to add to what she already felt was a welcome and enjoyable experience.

Like Rachelle, Shelley did not ascribe an increased level of attachment, on her part, to her pregnancy or fetus following her elective ultrasound; rather she identified it as providing an opportunity for her older children to form an attachment to the fetus. In part because this was Shelley's fourth pregnancy, she felt that not much could surprise her about the experience and suggested "what's one more, you know?". Rather than seeking out elective ultrasound for her own sense of attachment and bonding, Shelley's motivations were centered on fostering this opportunity for her older children. To that end, she felt the appointment had been successful as she described her older children being excited to pick a name for their new sister and to give her a nickname. Instead of being directed solely towards her fetus, Shelley's sense of maternal identity came from being able to give her older kids a chance to experience "meeting" their soon-to-be sibling. Shelley expressed a sense of maternal responsibility in helping to build relationships between her kids and their new sister. Although none of the other participants in the study described bringing other children along for the elective ultrasound, many expressed a similar sense of maternal responsibility to help build and foster relationships between the fetus and the expectant father.

7.3 Becoming Father

Most participants spoke about the value they ascribed to the experience for their husbands and partners in particular. Speaking on their behalf, interviewees described their concern with how

their husbands and boyfriends felt detached from their pregnancies in certain ways. They discussed how elective ultrasound was a way to involve their partners more fully in the experience. For instance, Heather was very clear about the value she saw in the practice for her husband. In describing their previous experiences with pregnancy loss and the resulting anxiety they both had about her pregnancy, she suggested,

It's just a much more coupled environment, they were much nicer with us...I mean she answered our questions and talked us through what we could see.

Heather had previously described her experience with medical ultrasound as “appalling,” in part because she felt that her husband had been left out in the waiting room with no information, which caused him to “freak out”. Clearly Heather’s husband experienced a lot of anxiety in relation to the medical ultrasound, both in terms of obtaining a positive diagnosis for the pregnancy and being left by himself to wonder if everything was okay. Based on past medical history, Heather’s husband’s concern was for both his wife, and their child. In turn, Heather described her concern for her husband at being “left out” of the ultrasound experience. She recounted her husband’s response after their elective ultrasound session,

I mean, I had asked him a few times because of how it'd gone at the 20 week [medical] scan, how he found this one, and he's like “that was just the perfect way to finish it” and they give you a CD and a DVD and they gave us a couple of photos as well, so it was - it put a nicer end to all the scans for him as well.

The fact that Heather’s husband was included in the experience was meaningful for both of them. She described the fact that they both felt he had been left out of her medical ultrasound, and went on to give a broader critique of the medical practice of prenatal ultrasounds in general. Due to their previous experiences with miscarriage, both Heather and her husband experienced increased anxiety about the health and well-being of their fetus. Heather explained that she had checked ahead of time to make sure that her husband could come into the room with her during the elective ultrasound,

Like I said to them on the phone, look, can I just check that my husband can come in with me? And they were like “yeah, sure, sure, sure”, because you know, the 20 week scan he

wasn't allowed, it was all a bit difficult and they said "well, to be honest, you know we don't let the guys in at the 20 week scan either" so it was obviously a bit of different approach between the ones you pay for and the ones you turn up for as a standard prenatal test...but that seems to be what they do around here, like the guys don't come in which, you know, is quite sad. You know, society judges a guy that doesn't take a part with their baby, and then we don't let them in for the stuff for the guys that want to be a part of it.

It is clear from Heather's description that she viewed her pregnancy as a joint experience for both her and her husband. Their decision to become parents was made together, and the devastation of previous pregnancy losses was felt deeply by both. Following this, she felt that the joys of pregnancy should also be experienced by both partners. Aside from disappointment that her husband was not included in her medical experience of ultrasound, Heather's response conveyed the same confusion many participants felt about the reasons why men were excluded from medical ultrasound appointments. Heather described earlier that the clinic she chose for her elective ultrasound also seemed to provide medical ultrasounds, hence their explanation that they would not let the husbands in the room for the morphology scan either. This was clearly a wider critique of diagnostic ultrasound practices in general as Heather felt she and her husband should have been able to decide together whether or not he would be in the room with her.

Other participants discussed similar critiques of the healthcare industry's lack of involvement of men in prenatal care. Because the reasons for only allowing partners in at the end of medical ultrasound scans are unclear and unexplained, many participants expressed disappointment and frustration while pointing to this experience (or lack thereof) as a motivating factor for purchasing elective ultrasound. For some participants, the elective ultrasound presented a counter experience where their husband's and partner's involvement was encouraged and supported. Jamie explained,

I remember [my husband] being really emotional and actually being quite teary because he was just thrilled to be a Dad. And our son was the first grandchild on both sides so it was very exciting times for everybody, and he - my husband, is a very sensitive, emotional guy to begin with, but then add, again, the visual piece and him actually being

there - and I mean, he showed up to all my - every appointment during that pregnancy, and the second one too actually. So [he was] very excited, very emotional and I remember him tearing up and sort of being like “oh my goodness, this is real!” and I’m like, yes it is! Because he would always talk about how he was **detached**, right? And as I was sort of going through the aches and pains and delights of being pregnant, I would say, you know, you can have some of them! Right? Like, you can carry the next one! Let’s make that medical marvel happen! So yeah, I think it provided a definite, sort of, reality check for him as well.

It is clear from Jamie’s description that her pregnancy was a joyous occasion for her whole family. Part of fostering her own maternal identity meant that Jamie was working to include her family, particularly her husband, in her experience of pregnancy. She discussed her husband’s detachment from her physical experience of pregnancy, and pointed to it as one of the reasons he needed a “reality check”. Jamie’s description of her husband as an “emotional guy” suggests that feeling a sense of connection to her experience of pregnancy was important for him. Her sensitivity to his emotions contributed to Jamie’s maternal identity formation in that she was caring for him and nurturing his relationship with their fetus. The evidence for this was provided by Jamie’s husband’s emotional response to the image of their fetus. His tears signaled for Jamie a shift in his connection to his child and her pregnancy more generally. In joking that he could carry their next child, Jamie solidified her pregnancy as a joint venture and pointed to the fact that rather than simply her becoming a mother, together they were becoming parents. This fostering of parental identity seemed especially important for Jamie because, like Heather, she had experienced difficulties in becoming pregnant. The fact that both pregnancies were very much planned and wanted meant that the value of including their husbands in this experience went beyond the ultrasound itself. In part because Jamie and Heather’s husbands were already heavily involved and invested in the pregnancies, their exclusion was felt more directly and acutely.

Monique expressed similar sentiments about the involvement of her husband in her experience of ultrasound. She suggested,

It was important for me, the visit, and the inclusion of my husband and there's so many things that they, you know, like the husband can't participate in. Anything beyond conception and then they're pretty much out of the picture until birth, right? And this was an opportunity for - especially for my son who was the first born, for us to have this little experience together, as opposed to me having the experience and sort of just tell him...because the Dads are, often times are **denied a voice** in the process...[the experience] increased the things you can be joyful about...I got to see my baby and to meet the baby with my husband, you know?

Monique's description suggests an acknowledgment that men are often cast in supporting roles in pregnancy. Though not referencing her husband specifically, Monique pointed to men's involvement during conception and birth but indicated that in terms of gestation, men are largely "out of the picture". Clearly this was not how she felt pregnancy, as a coupled experience, should be. In suggesting that fathers are "denied a voice" Monique was again referencing, perhaps in more subtle ways, her dissatisfaction with the medical management of pregnancy. It was not that Monique's husband did not want to participate, nor was it that she was unwilling to allow him to participate. Instead he was being "denied a voice" by a system that focuses attention solely on the well-being of the fetus. In framing the experience as getting to "meet the baby" Monique described her ultrasound as a sort of introduction, in which she felt strongly that her husband should be involved. Again, an experience that, at one time, would have taken place at birth, is instead accelerated to occur during pregnancy. Understanding ultrasound in this way underscores the importance of Monique's husband's involvement because there would be no question as to whether he would be present at the birth of his son.

Ainsley suggested that her husband felt similarly disconnected from her pregnancy. They both thought that having him be a part of the ultrasound experience would be beneficial in terms of helping him feel better connected. Unfortunately Ainsley had scheduled her ultrasound for later in her pregnancy and they were unable to get a good image of her fetus, which she described as disappointing. She shared,

I think it was like, for him, like they are so **disconnected**, men just don't have the same connection, so for him to see the image, even though we didn't really see anything, like

you couldn't really see what was going on, but for him to see the image of the baby, like, I think he was really looking forward to it, and so he was really disappointed...he really was just excited about it. I mean, I think it's just that [the ultrasound] puts it into perspective, it's so hard to wrap your mind around.

The visual confirmation of the ultrasound image allowed Ainsley and her husband to personify their fetus. The kind of perspective she discussed is linked to the personification of the fetus in that it moves from something that is abstract, to a confirmed reality. For Ainsley's husband, elective ultrasound presented him a chance to connect with his baby through the image. The fact that the image was not as clear as they had hoped was disappointing for both Ainsley and her husband. Like some of the other participants, Ainsley and her husband were looking to their elective ultrasound as way to "meet their baby". Because they were unable to get a clear view of her face, they did not equate their elective ultrasound experience with having "met their baby" in the way they had hoped. While Ainsley's consolation was that she was able to feel and experience the movements of her fetus, her husband could not, and therefore seeing an image of their fetus held particular importance for him. Ainsley expressed a lot of sympathy for her husband in that she felt he desired more of a connection than he was able to feel without the experience of seeing a clear image of their fetus's face via the ultrasound image.

Like Heather and Jamie, Catherine suggested that the experience of her elective ultrasound was particularly meaningful for her fiancé as well. She explained,

He very much enjoyed it, I mean, he had a smile on his face the whole time! And yeah, I think he thought it was pretty cool. You know because, I imagine it's pretty difficult being the father and not really getting to experience any of that, you know, the feelings going on inside or anything. Yeah, so it definitely made it more real for him.

Sympathizing with the distance her fiancé felt from the experience of pregnancy, Catherine highlighted how important seeing the image was for him. Ultrasound images can act as recognizable proof of the reality of a pregnancy, particularly for men, as Catherine's description suggests.

The visual image was especially important for men as it allowed them a point of connection with the pregnancy that they did not have otherwise. Having their partners feel connected to the experience was highly coveted and for many of the women interviewed, well worth the cost. Being included in the experience of ultrasound, being welcomed into the room and talked to as a couple, allowed both parents to feel comfortable and cared for. In this setting, both women and their male partners were able to foster their parental identities. For women in particular, including their male partners gave them the sense that they were doing right by the men in their lives in ensuring they were a part of the ultrasound experience. Their elective ultrasound experiences offered a contrast to what was described by some participants as the exclusion of their partners during medical ultrasound appointments.

7.4 Analysis

While participants were very clear about the ways in which they saw their male partners as excluded from the experience of pregnancy, descriptions of their own exclusion were much more subtle. Looking to their elective ultrasound sessions as a way to connect with and more fully embody their experiences of pregnancy, indicates that prior to the ultrasound women felt some degree of distance or disconnection. To admit this distance or disconnection puts women at risk of being viewed as bad mothers because the assumption is that for women, connection is biological. Many popular opinions of pregnancy suggest that women “just know” and develop an immediate and unbreakable bond with their fetus, seemingly without effort. The notion that women are natural nurturers and care givers reinforces the belief that these are innate qualities and thus do not need to be encouraged and supported. It is an underlying assumption that women are always, already deeply attached to their pregnancies in ways they are able to recognize and take ownership of. So for women who do not experience this immediate connection, (which includes most of the participants in this study), to articulate this reality means that they run the risk of being viewed as bad mothers, or at least not appropriately prepared for motherhood. This is not to suggest that the women in this study did not experience a connection or bond with their fetus, rather I suggest that this connection was negotiated over time, it did not simply appear as a natural or biological phenomenon. To this point, the institution of motherhood suggests that women possess maternal “instinct rather than intelligence” (Rich, 1977: 42). Maternal instinct can be thought of as the appearance of an immediate connection upon viewing an image of the

fetus, while maternal intelligence indicates the gathering and contemplating of information regarding the pregnancy (or in this case the soon-to-be baby) in service of fostering a maternal bond. Since the institution of motherhood demands maternal instinct rather than maternal intelligence, there is more at stake for women to admit they need or desire more information in order to connect with, and bond with, their fetus.

Conversely, it is widely accepted that men are disconnected from pregnancy generally, and from their fetuses specifically, because there is not a similar assumption that men are capable of innate biological connection. Participants could articulate the disconnection between their male partners and their fetus because it is socially acceptable and understood. As such, the same risk is not present for women to suggest that their husbands or male partners were detached or disconnected from their pregnancy. The expectation is that men will be detached and women will be attached. Further, the attention women paid to this fact meant that they were able to express maternal care and concern for the father of their child. Participants like Heather, Ainsley and Jamie each expressed loving concern for their husbands, and worked to make them feel included in their bodily experience of pregnancy. Jamie even joked that she would be glad for her husband to carry their next child. Elective ultrasound served to replace an embodied connection to the experience of pregnancy, with a visual one. Jamie suggested that in absence of feeling the fetus, it was important for her husband to “see what’s going on”. Thus, the meaning ascribed to the ultrasound image was what enabled her husband, and others, to develop a connection to the fetus.

Although they did not use the term “disconnected” in relation to themselves, participants’ insistence that elective ultrasound helped them to form connections and attachments to their pregnancies they had not yet experienced, points to a similar kind of disconnection they discussed in relation to their male partners. In fact, at the times in the interviews where women were discussing their husbands and male partners, the implicit feelings they explained in relation to themselves, became explicit when discussed in relation to their partners. Monique is a great example of this. She stated explicitly that she felt her husband was “denied a voice in the process”. The process of which she was speaking is pregnancy, specifically the medical management of pregnancy. Although she did not use these same terms to describe her own experience, it became clear throughout the interview that in many ways, Monique felt she was denied a voice within the medical management of her pregnancy. She was highly critical of

medicalized pregnancy care, at various points indicating that women's feelings and desires were not taken into account by medical professionals. Monique's request to find out the sex of her fetus was not fulfilled, which left her feeling annoyed and anxious after her medical ultrasound appointment. She felt strongly that this was information relating to her health and the health of her fetus that should be made available to her. Monique's voice in requesting fetal sex information was denied by the individual in the position of power to provide the information. So while Monique's responses suggest that she felt her own desires were silenced within the medical system, she did not use this terminology until speaking about her husband. In confirming her husband's desire to be involved, Monique reflected her own desire to be seen as an authoritative knower within a medical system she experienced as dismissive of her desires.

Ainsley provided a similar description of her husband's disconnection from her pregnancy. In speaking both about her husband and herself, Ainsley described it as difficult to "wrap [their] minds around" the concept of pregnancy. However, it was only in relation to her husband's experience that she used the term "disconnected". The fact that Ainsley had received ten or twelve medical ultrasounds during her pregnancy, and yet still expressed difficulty in wrapping her mind around the fact that there was indeed a fetus present, points to her own disconnection from her embodied feelings of pregnancy. The stakes for Ainsley to admit this disconnection for herself are much higher, in that she is assumed by virtue of her pregnant state, to be intimately connected to her fetus, and any suggestion otherwise might be taken as evidence of her unsuitability for motherhood. Similarly, although both Heather and her husband had a negative experience of her medical ultrasound, she attributed their decision to purchase an elective ultrasound as an effort to remedy her husband's exclusion from the medical ultrasound. Even though Heather felt she was told the sex of her fetus accidentally, after she had indicated that she did not want to know, her concern was not for herself and being given information she did not want, but for her husband having been left out in the waiting room when the mistake occurred. This deflection of concern from oneself to a loved one follows an ideology of motherhood that casts women as self-sacrificial and focused mainly (or entirely) on the comfort and well-being of family members.

The distancing of women from their embodied experience of pregnancy helps to position ultrasound as a way of introducing a woman to her fetus. The fact that most participants claimed

very little knowledge about pregnancy and fetal development generally helped to position the ultrasound as an important first introduction. For example, in Catherine's description of her elective ultrasound as a "private moment between the two of us" it meant that she and her partner were introduced to the fetus first, and could then take on the task of introducing the fetus to others using gendered pronouns. While "meeting the baby" was at one time reserved for the moments immediately following birth, the proliferation of ultrasound imaging and the ways it is taken up, accelerates this introduction as taking place earlier in pregnancy. Discovering the sex of the fetus and getting the first glimpse of what she or he would look like were also, at one time, milestones that took place around birth. I suggest that ultrasound, particularly elective ultrasound, facilitates these introductions earlier in pregnancy, a discussion I take up in the following chapter.

For some participants, this introduction to the fetus was literal in that they expressed a desire to know what their baby would look like. Elective ultrasound was understood to present this opportunity. The clarity and detail of the 3D and 4D images that can be produced during elective ultrasound highlight this practice in particular as capable of introducing the fetus. However, it is not always the case that elective ultrasound produces these kinds of images, as both Ainsley and Sarah's experiences suggest. Both indicated that they wanted a clear image of their fetus, like the ones they had seen online or from friends, though neither of their elective ultrasound sessions resulted in these kinds of images. Ainsley and Sarah both indicated a curiosity about what their babies were going to look like, and an understanding that elective ultrasound would be able to provide that information. Other participants shared in this understanding. For instance, Chelsea suggested that knowing what her baby would look like was important for her, her mother and her boyfriend's mother as a way to know what to expect in the delivery room. Chelsea's main concern appeared to be whether or not her son would be "cute"; however, this can be understood as a means through which to display an appropriately maternal identity. The implicit worry in wondering whether or not her son would be "cute" was that she would not form the right kind of attachment (i.e. unconditionally loving and adoring) to her son. Chelsea's fears subsided when she was able to see the image of her son and confirm that he was "soooo cute". Aside from just his appearance, Chelsea pointed to the fact that her elective ultrasound allowed her to "see who he was". This belief echoes much of the literature on the interactions between ultrasound technicians and pregnant women wherein a lot of work in the screening room is done around

describing the autonomy and personhood of the fetus. For example, Mitchell and Georges (1998) suggest that ultrasound technicians often employ gendered and descriptive terminology in communicating ultrasound images to pregnant women. For instance, if a female fetus appears to be moving around a lot, the technician might suggest that she's going to be a gymnast, where for a male fetus she might suggest he will become a soccer player. Although these descriptions may seem innocuous or benign, I suggest that they contribute to an understanding of the fetus as an autonomous being, separate from the woman gestating it. I want to be careful not to suggest that there is something inherently wrong with this understanding. In fact, from the responses of participants in this study, understanding the fetus as its own person contributed to the development of a maternal identity, and thus could be conceived of as empowering to a certain extent. Within the institution of motherhood, as will be described in the following chapter, a particular maternal identity is both necessary and assumed to be natural for women. This maternal identity involves unconditional love, complete self-sacrifice and a shift in focus from one's own well-being to the well-being of another. As previously discussed, the fear that one was not or could not perform motherhood in the right way, led many participants to feel an ever-present sense of anxiety and to question their maternal capabilities. If, as Chelsea's experience indicates, they are offered a means through which to generate and display the ideal image of motherhood, women's fears and anxieties may be (temporarily) calmed. I argue that, based on participants' discussions of an omnipresent sense of anxiety and worry, that the relief provided by elective ultrasound is only temporary. Also, given that participants like Ainsley and Monique indicated that they had received between ten and twelve medical ultrasounds over the course of their pregnancies, yet still sought out elective ultrasound, this suggests that the reassurance provided by prenatal ultrasound is not unlimited.

7.5 Conclusion

Common among all of the women interviewed was that their elective ultrasound experiences were complex and layered with meaning. More than simply being entertained by the images, participants described the elective ultrasound in particular, as a turning point in how they felt about their pregnancies. For many, it solidified the abstract notion that they were pregnant and allowed them to personalize the new edition to their family. For many participants their elective ultrasound was understood as a means through which to "meet their baby". It offered visual

confirmation to unfamiliar sensory experiences. Whether this was achieved through obtaining information about the sex of the fetus, or simply seeing an image that was recognizable to them, participants described elective ultrasound in particular, as helping them connect with the fact that they would shortly be welcoming a baby. Even participants who claimed a high level of intellectual knowledge about pregnancy, whether through occupational training or self-directed research, described difficulty in understanding their embodiment. For example, Kelsey and Ainsley expressed similar difficulties in understanding that there was indeed “a little person growing inside”. Ainsley was a trained birth doula and prenatal massage therapist, while Kelsey was admittedly surprised by her pregnancy and claimed to feel “stupid” in relation to the kind of knowledge she felt she should have about the experience. The similarities in their experiences highlight the distance many women feel between what they think they should know about pregnancy and what they feel they do know.

The ability to include their partners and family members more fully in the experience aided in the building of relationships and acted as a significant support system for the women interviewed. Particularly in relation to their husbands and partners, women described the men in their lives as feeling “detached” and “disconnected” from the experience of pregnancy. Participants were critical of the healthcare system which they saw as actively leaving men out of the experience, by not allowing them in the scanning room during medical ultrasounds. Even those who expressed an understanding of why it was that men would be left in a waiting room during a diagnostic scan, felt that there should be a way for their partners to be included that would not jeopardize the work of the radiologist and the ultrasound technician. Particularly for those women who experienced pregnancy loss, or difficulties getting pregnant, the exclusion of their partners during medical ultrasounds often greatly increased the anxiety for both parties. Conversely, participants described their partners, for the most part, as very pleased with their elective ultrasound experiences because it allowed them to feel more like a family.

Understanding the reality of their pregnancies and feeling a connection was important for participants to begin to position themselves as mothers. Though they were fully aware of their pregnancies in the abstract sense, and numerous participants described actively trying to get pregnant, understanding that there was indeed, a baby growing inside of them, proved to be more difficult for some. Interviewees like Jamie shared that although she and her husband had been

trying to get pregnant for years, it was not until she saw an image of her son via ultrasound, that she really understood that, indeed, she was going to be a mother. In describing that the ultrasound made their pregnancies feel more real to them, participants identified a kind of connection that they had, up until that point, not experienced. Each embodied this new connection in different ways. For instance, Chelsea began talking to her fetus about her hopes and dreams for him, while Sarah asserted her role as protector and intervened to end her ultrasound when she felt her daughter was telling her, by her motions in utero, that she was irritated or agitated by the sound waves. Positioning themselves as mothers was a significant preparation for impending parenthood that was welcomed by each participant in her own way.

Chapter 8

8 Maternal Identity and the Neoliberal Subject

While the intention of this research was to learn about women's experiences with elective ultrasound, participants' responses indicated a clear relationship between their medical experiences and their consumer choices. Anxiety, risk and reassurance emerged as major themes in the research, both in relation to participants' feelings about their pregnancies in general, and specifically in relation to their medical ultrasound experiences. Elective ultrasound was positioned as both calming and instigating anxiety and as a method of reassurance, not without its own set of risks. The medical management of pregnancy was understood as necessary, and while some participants were critical of their treatment by physicians and other healthcare professionals, none questioned its necessity. Participants' criticisms of their treatment in medical settings suggested they felt isolated, ignored or invisible. The exclusion of women's partners from medical ultrasound appointments sparked feelings of isolation for participants like Kelsey and Monique. A refusal to provide fetal sex information led Rachelle and Catherine to suggest that they felt their desires were being ignored by their medical ultrasound technicians. Despite clearly communicating their desires, Kelsey's description of the lack of information provided to her, and Heather's experience of having too much information provided to her, indicated that both women felt invisible in the medical ultrasound setting. I suggest that these emotional responses can be understood as a major catalyst in participants' decisions to purchase elective ultrasound. Aesthetically, elective ultrasound clinics appear to address each of these emotions in their promotion of a family friendly, woman-centered, consumer experience. However, I suggest that the anxiety and need for reassurance participants articulated is, in fact, the result of much broader social and cultural ideologies of motherhood that position pregnancy as risky, and pregnant women as responsible for positive outcomes. The influence of these ideologies accounts for the fact that for many participants, their anxieties were calmed, though not eliminated by their elective ultrasound experiences, or, as in Sarah's case, new anxieties were prompted by her engagement with elective ultrasound. It was this sense of responsibility, coupled with a desire for a pleasant experience that led participants to seek out and purchase elective ultrasound.

As a consumer practice, elective ultrasound is positioned as an attractive alternative to diagnostic medical ultrasound. Promotional websites promise a warm and friendly atmosphere where pregnant women and their families are treated to a fun and joyful experience. The specific services offered by elective ultrasound clinics appear to speak directly to broad criticisms of the medical management of pregnancy, such as the cold demeanor of medical ultrasound technicians or the sterile atmosphere of diagnostic screening rooms. Most participants in this research articulated similar aesthetic criticisms of their medical ultrasound experiences, and indicated that they sought out elective ultrasound in direct response to their dissatisfaction with medical ultrasound. Each interviewee expressed clear differences between her medical and elective ultrasound experiences, such as the ability to include partners, family members and friends, or the ways their elective ultrasound technicians explained or narrated the fetal image. For most, these differences were experienced as welcomed, perhaps even anticipated outcomes of their consumer decisions. The warmth and attention they received was understood as much more in line with their desires to feel happy and celebratory about their pregnancies and, more specifically, about their impending roles as mothers. In fact, participants' descriptions of their elective ultrasound experiences suggested that ultrasound played a significant and meaningful role in their development of a maternal identity.

The kinds of maternal identities that are open to women reflect broader social and cultural ideologies about motherhood. I suggest that the institution of motherhood, as first articulated by Adrienne Rich (1977), is the overarching ideology, or ruling relation, (Smith, 1987) that prescribes and forecloses particular maternal identities. Ultrasound can be understood as a site in which these ideologies are enacted, by considering the ways that the technology promotes "prenatal maternity" (Davies, 2009). The fact that prenatal ultrasound is deployed in both medical and elective settings, sometimes many times throughout a pregnancy, is indicative of its centrality within the broader experience of pregnancy for women in Canada. In this chapter I situate participants' descriptions of both their medical and elective ultrasound experiences in relation to the institution of motherhood. I suggest that while medical and elective ultrasound are positioned in opposition to each other, in that one (elective ultrasound) purportedly seeks to address the failings of the other (medical ultrasound), in fact they both work to uphold the same, ultimately impossible ideal image of motherhood. The consumer element involved in elective ultrasound adds a layer of autonomous decision making that is not reflected in the medical

deployment of ultrasound; however it does not mitigate the influence of the institution of motherhood. Due to the consumer nature of elective ultrasound, participants described a level of control over their purchasing decisions that I connect to the concept of neoliberal subjectivity articulated by Foucault (2008) and taken up by scholars of health (Crawford, 1980; Rose, 1999; Lemke, 2001) and consumer culture (Rose, 1999; Read, 2009).

In keeping with the goal of my research, which was to produce knowledge which situates women in the realities of their everyday lives, and exposes the social and cultural ideologies that come to bear on their experiences with elective ultrasound; it is important to acknowledge participants as knowing and knowledgeable subjects. To this end, I engage with Michel Foucault's knowledge/power distinction and, in particular, the ways that human beings become subjects. I take as a given, that Canada is a neoliberal society that promotes citizens' individual engagement with the economy. I suggest that elective ultrasound presents women with an opportunity to assert an identity through consumption. I begin with an explanation of neoliberal subjectivity.

8.1 Neoliberal Subjectivity

In his article *The Subject and Power* Michel Foucault sought to theorize "how human beings are made subjects" and the particular ways in which power/knowledge functions in the creation of self. Foucault understood power to be "the multiplicity of force relations immanent in the sphere in which they operate" (1978: 92). That is, power is not situated in one place or with a particular institutional body (government, prison, hospital) but is rather, "exercised from innumerable points in the interplay of nonegalitarian and mobile relations" (1978:94). These innumerable points of interplay can also be understood as ruling relations, as described by Dorothy Smith (1987, 1989). In a series of lectures entitled *The Birth of Biopolitics*, Foucault adapted his theory of power to reflect the rise of neoliberalism in society. What distinguished post-19th century modern societies was an economic system that positioned individuals within a marketplace, and positioned the marketplace in relation to the state, and in particular, to governance. The economic foundation of neoliberal societies necessitated for Foucault an understanding of "man as an economic subject" (Read, 2009: 27). In other words, neoliberalism positions "economic activity [as] a general matrix of social and political activity" (Read, 2009: 27). He argued that the neoliberal subject differed in fundamental ways from the legal or juridical subject which he had previously written about extensively. Specifically, neoliberal subjectivity entails recognition of

“one’s body, brains and genetic material” as human capital (Read, 2009: 28). This recognition is particularly applicable in the context of pregnancy, given the literal production of human capital involved in reproduction. Other scholars have since referred to this as the commodification of reproduction (Fletcher, 2006). While Foucault understood there to be natural limitations to the improvement of human capital (i.e. one cannot simply change their race or physical abilities to reflect a desired subject position) he argued that many limitations could be overcome through technologies (Foucault, 2008). Foucault was working with a particular definition of technologies (of power, of the self, of the market) which I will explain later in this section.

However, it is interesting to think about the technology of ultrasound in relation to human capital. In particular, the ways neoliberal subjectivity can be exercised through one’s engagement with technologies designed to build upon, or transform human capital. Participants’ descriptions suggest that ultrasound functioned as a transformative technology: meaning the image produced by ultrasound had the effect of bringing their abstract understanding of pregnancy into concrete or tangible terms. In particular, the flutters and movements participants like Jamie, Kelsey and Ainsley were feeling prior to their elective ultrasound sessions, were put into perspective by way of a visual representation. The visual, or technological, representation prompted participants to relate differently to their pregnancies. For instance, the visual image of Chelsea’s fetus initiated a shift in her understanding of her pregnancy, which meant she no longer felt in possession of a “belly with a baby in it” but instead, began to position herself in relationship to her child-to-be. The fact that this shift occurred from the deployment of ultrasound in an elective, rather than medical setting, is a manifestation of the neoliberal position that “economic activity is a general matrix of social...activity” (Read, 2009). In this case, the social activity can be thought of in relation to both the ultrasound session itself, (in that Chelsea described having numerous family members present for the screening), and in relation to pregnancy and motherhood as a social practice (Dubriwny, 2010).

The consumer identities and practices made possible in neoliberal societies necessitate individual action. Foucault positioned neoliberalism as a form of governmentality which emphasized the governing of the self. In order for neoliberalism to function as a governing of the self, “subjects must have a great deal of freedom to act - to choose between competing strategies” (Read, 2009: 29). Freedom to act within a capitalist economy can be understood as the freedom to purchase, or

to consume. Engaging with elective ultrasound businesses as consumers represented for many participants their “freedom to act - to choose”. Participants like Monique and Rachelle described being grateful for the opportunity to choose to engage with the elective ultrasound industry. In their decisions to purchase, they were acting as consumers, and making choices which reflected the kind of information and experience they desired from the deployment of ultrasound technology. However, according to Foucault, this “freedom” cannot be understood as outside of the relations of power that produce rights and obligations. He suggests that “liberalism must produce freedom, but [that] this very act entails the establishment of limitations, controls and forms of coercion and obligations relying on threats” (2008: 63). For this project, coercion and obligation comes from the relationship between ultrasound and the institution of motherhood as a ruling relation. The obligation to embody a certain type of maternal identity (under threat of being viewed as a bad mother) functions as a coercive element in decision making around the purchase of elective ultrasound. To illustrate this point, I will draw on the work of Dorothy Smith (1987) in order to situate the institution of motherhood, as articulated by Rich (1977) and others (O’Reilly, 2004; Green, 2004; Dubriwny, 2010) as a ruling relation, before returning to Foucault and a more detailed discussion of governmentality as it relates to women’s experiences of elective ultrasound.

8.2 Ruling Relations

To understand the impact of dominant ideologies on women’s experiences with elective ultrasound, Dorothy Smith’s (1987) concept of ruling relations and locating women’s voices within them, proves a useful analytic strategy. Like Foucault, Smith suggests that, rather than a system of domination, “ruling relations are forms of consciousness and organization that are objectified in the sense that they are constituted externally to particular people and places” (2005:13). In other words, ruling relations can be thought of as ideologies and ways of doing things that are socially constructed and reinforced through the systems and institutions that organize our lives. Ruling relations are objectified in the sense that they are understood as overarching truths or objective facts. For this project, I suggest that the image of the good mother forwarded by the institution of motherhood and supported by the medical management of pregnancy, constitutes the ruling relations that organized the experiences and actions of research participants. In keeping with a Foucauldian analysis of power, the ruling relations can be thought

of as “the terminal forms power takes” (1978: 92). The institution of motherhood is not imposed on women by threat of force but is rather inscribed and re-inscribed through a “complex strategical situation in a particular society” (1978: 93). I contend that the practice of elective ultrasound be understood as new site in which these ideologies are re-inscribed.

8.3 Institution of Motherhood

The institution of motherhood, both historically and contemporarily, assigns women the sole responsibility to care for and nurture children, yet affords them limited power to determine the conditions under which this care and nurturing takes place. In neoliberal societies, the limited power available to women exists in the marketplace, or, in other words, in their ability to consume. This lack of power can be understood as the subtle, yet significant remaining influence of the patriarchal system Adrienne Rich (1977) first detailed in her groundbreaking work *Of Woman Born*. Rich summarized the institution of motherhood as follows: “Institutionalized motherhood demands of women maternal ‘instinct’ rather than intelligence, selflessness rather than self-realization, [and] relation to others rather than the creation of self” (1977:42). Our social and cultural understanding of motherhood reinforces the suggestion that maternal instinct is biological, and something any and all women inherently possess. We take the self sacrifice and denial of needs and desires of mothers as evidence of their love for their children, and position women as responsible for the nurturing of relationships within the family. As such, the institution of motherhood is the ideal against which women and others define their success and/or failure as mothers. By aligning particular practices of motherhood with biology, the institution of motherhood is prescriptive of the ways women must perform the work of mothering in order to be recognized as good mothers. Rich refers to women’s position as one of “powerless responsibility”. Reflecting on Rich’s work, Andrea O’Reilly reminds us that “mothers do not make the rules...they simply enforce them” (2004: 6). It is not for women themselves to determine what kind of care and nurturing they wish to take on, this has been predetermined by the prescriptive ideology (or institution) of motherhood.

Numerous feminist scholars of motherhood have taken up this concept in reference to the shifting social and cultural norms around mothering. Sharon Hayes, (1996) Pamela Courtney Hall, (1999) and Petra Buskens (2001) have discussed powerless responsibility in relation to what Hayes termed “intensive mothering” (1996). Intensive mothering sees women devote every

part of themselves exclusively to the work of mothering, while at the same time having that work undermined by being framed as “natural”. Self-less love and devotion to children is supposed to underlie every aspect of women’s public and private lives. In other words, if a woman works outside the home, it must be for the benefit of her children; if she takes care of herself through diet and exercise, it must be so that she can better care for her children; if she exposes herself to non-medical ultrasound, it must be so that she can form a deeper bond with her fetus, rather than to fulfill her own curiosities or desires. The primacy given to women’s role as caregivers must therefore be reflected in every decision she makes. What is at stake here is the perception of her as a good or bad mother.

The dominant belief in motherhood as biological obscures the varying ways social, cultural, political and economic ideologies come to bear on motherhood throughout time and place. It allows for the reinforcement and reinscription of essentialized and hegemonic ideologies of motherhood, which also maintain a clear division between good and bad mothers (Gillis, 2004; Dubriwny, 2010). Tasha Dubriwny explained that “this formulation of motherhood broadly suggests that mothers are guided by natural feminine instincts that allow them to happily and successfully nurture their children” (2010: 287). Following Rich’s description, a good mother is one who is selfless, nurturing, and concerned only with the happiness and well-being of her children and family. She exists to care for and serve others, and does not require or desire recognition for her efforts. A good mother makes use of all the tools and technology at her disposal to ensure that she has done everything in her power to give her children the best opportunities to succeed. Drawing on the work of Paula Nicolson (1999) and Patrice DiQuinzio, (1999) Dubriwny contends that to be socially recognized as a good mother, women must have the “race (white), class (upper or middle), and sexual (heterosexual, married) characteristics that are valued by patriarchal ideology” (2010: 287). Further, she must display emotional and behavioural characteristics which signal the joy and happiness she feels in regards to her maternal role, and the selfless nurturing she provides for her children. In my study most participants fell within the identity categories listed above; most were white, middle class, and involved in a heterosexual relationship with the father of her child, though not all were legally married. As well, most participants in this study identified accessing feelings of joy and happiness, or fostering relationships between family members as their primary motivations for

seeking out elective ultrasound. Thus the experience of elective ultrasound can bring women (momentarily) closer to the good mother ideal.

The ideal of the good mother is positioned against the socially abject image of the bad mother. Rich (1977) draws on high profile examples of mothers who commit infanticide as being the exemplars of bad (perhaps even evil) motherhood, while Lorna Weir (2006) addresses the social stigma of the drug addicted mother. Pregnant drug users are understood as lacking the self-control and unconditional love necessary to treat their addictions for the benefit of their fetus (Weir, 2006). They are, therefore, positioned as actively placing their needs above or before the needs of their fetus. This belief ignores the neurological aspects of addiction, and simplifies women's (or anyone's) ability to "kick the habit". Tasha Dubriwny (2010) takes up public discussions of postpartum depression and psychosis, concluding that the effect of pathologizing and individualizing women's emotional responses to early motherhood reinscribes motherhood as a biological drive, and positions postpartum disorders as a "temporary disruption". Citing the high profile case of Andrea Yates, who was eventually acquitted for killing her 5 children as a result of postpartum psychosis, Dubriwny argued that Yates was positioned as an otherwise good mother (white, married, devoutly religious, conservative) whose motherhood was interrupted by an individual medical condition (2010: 286). What this narrative suggests is that all women have the potential to be bad mothers, even those who display all of the qualities and characteristics heralded by the institution of motherhood. The women referenced by Rich, (1977) Weir, (2006) and Dubriwny (2010) are so obviously going against the notion of the selfless, nurturing and devoted mother, their examples serve as cautionary tales to all women. Susan Brownmiller suggests that the prominence of such examples, and women's identification with the possibility of exhibiting these characteristics and behaviours (save perhaps for the drug addicted women discussed by Weir) is in part why there is a pervasive sense among women of what she calls the "fear of maternal inadequacy" (1984:214).

The fear of maternal inadequacy was present in participants' descriptions of their motivations for seeking elective ultrasound, and the anxieties they felt in relation to their pregnancies in general. The drive to make sure "everything's okay" with the fetus reflects an understanding that risks are omnipresent and that it is the woman's responsibility to ensure fetal well-being. Participants described feeling responsible for "doing their homework" and researching the safety of elective

ultrasound to ensure that they were not taking on any undue risks. While most were satisfied with the information they could find, Sarah reflected on her choice to purchase elective ultrasound as “selfish” because of the perception that she did not prioritize the safety of her fetus over her own curiosities and desires. In other words, she did not embody the self-denial necessitated by the institution of motherhood and therefore risked the consequences of being labeled (and labeling herself) a bad mother. Sarah took on full responsibility for her decision in a way that obscures the social conditions that underlie it. Sarah, like other participants in this study, had no power to ensure the safety of ultrasound, or to dictate the way in which it is employed in medical or elective settings, yet she assumed this responsibility by way of guilt. In this way, elective ultrasound should be understood as a site in which powerless responsibility is reinforced in relation to motherhood. I will return to a discussion of responsibility as it relates to neoliberal subjectivity in the sections that follow.

8.4 Institution of Motherhood as Ruling Relation

Understanding the institution of motherhood as a ruling relation requires a Foucauldian analysis of power, one that sees the “omnipresence of power...[that] power is not an institution, and not a structure; neither is it a certain strength we are endowed with; it is the name one attributes to a complex strategical situation in a particular society” (1978:93). Rather, power is produced and reproduced at points of relation between the social and cultural systems that organize our lives. Included in this matrix, and particularly applicable in this context, is the healthcare system, media and consumer culture. Due to their experiences with the formal healthcare system, participants sought out elective ultrasound as a means of establishing, displaying and solidifying their maternal identity according to a common and particular understanding of what it means to be a good mother. The behaviours and practices associated with good motherhood are communicated in many ways, including mass media and popular culture. In fact, numerous participants referenced television shows, magazines or movies as points of connection for them to examine their own experiences. Consumer culture offers consumption as one of the most important ways for an individual to express her identity. The opportunity to purchase elective ultrasound functioned in many ways to bring participants closer to the image of the ideal mother. Each of these broad social systems can be understood to interact with the institution of motherhood as ruling relations which influence women’s experiences of pregnancy.

How this relation of power works has been variously referred to as: “disciplinary power” (Foucault, 1978) “intensification” (Read, 2009) or “internalization” (Bartky, 1988). Sandra Bartky has argued that power, as it functions through the disciplining of the body, is internalized, or, “incorporated into the structure of the self” (1988: 77). The disciplining of the body is taken up as a means of distinguishing oneself from other selves. In other words, through the disciplining of bodily practices, subjectivities are produced. Although a freedom to choose from innumerable subject positions may be implied by the language of neoliberalism, possible subjectivities are in fact constrained by dominant ideologies and institutions which constitute the (ruling) relations of power. Bartky takes up the relational nature of power specifically by suggesting that “the sense of oneself as a distinct and valuable individual is tied not only to the sense of how one is perceived, but also to what one knows...discipline can provide the individual upon whom it is imposed with a sense of mastery as well as a secure sense of identity” (1988: 77). Within dominant ideologies of motherhood, women’s value as individuals is tied to their execution of disciplinary practices specific to a particular image of the good mother. Disciplinary practices in this case would be any action deemed to be in the best interests of the child, such as the cessation of smoking during pregnancy. The emphasis on the ability of ultrasound technology to foster deeper bonds and connections between a woman and her fetus, position it as in the best interests of both mother and child, given the centrality of maternal love within the institution of motherhood. I suggest that mastery in this case, is a moving target which implicates evermore disciplinary practices in the pursuit of idealized motherhood. Pregnant women are thus positioned as responsible for engaging in disciplinary practices which demonstrate this aspiration. Neoliberalism offers women a way to engage with these disciplinary practices through consumption. Based on the neoliberal ideology of individual responsibility for health (among other things), which I describe in more detail in the sections that follow, the marketplace appears to present individuals with greater choice, and thus greater freedom, to demonstrate an identity via consumption practices. However, rather than offering subjects freedom, in the sense that their choices are unconstrained, neoliberalism as a form of governmentality “becomes more intense, saturating the field of actions and possible actions” (Read, 2009: 29). In other words, as the fields of possible actions expand, so too does the responsibility of individuals to act in ways that reflect dominant ideologies.

8.5 Elective Ultrasound and Prenatal Maternity

Participant responses made clear that although elective ultrasound is performed during pregnancy, it is very much an activity aligned with motherhood and maternal identity. Whether it functioned as an introduction to the fetus, provided information about fetal sex, or was enjoyed as a fun and exciting experience, participants indicated that their elective ultrasound experiences helped position them as mothers. Although the actual experience of elective ultrasound is a temporal one, participants suggested that the effects of their (mostly) positive experiences, and the resulting shifts in identity, lingered long after the ultrasound session. Elective ultrasound was one of a series of experiences that allowed women to develop and build a maternal identity, which they understood to be both expected and necessary. I suggest that prenatal ultrasound, in particular elective prenatal ultrasound, functions to speed up the process of maternal identification, or what Jacqueline Davies (2009) described as “prenatal maternity”.

Though she did not speak directly to the institution of motherhood, Davies argued that ultrasound images present a sentimentalized portrait of a particular cultural story. For her, this cultural story is the idea of sacrificial maternity, or as I contend, the institution of motherhood. The images produced via ultrasound are understood as representative of the life of a fetus, a gateway into relationship building, a tangible stand-in for an inevitable outcome. However, as participants’ responses indicate, understanding ultrasound images in this way initiates, or at least reinforces, women’s responsibilities to engage in maternal behaviours. Some of the maternal behaviours discussed by interviewees included talking to the fetus, naming the fetus, and positioning the fetus as the youngest member of a growing family. It is not my intention to suggest that such behaviours are inherently negative. In fact, participants described this change in behaviour in wholly positive terms. However, because the institution of motherhood is so pervasive as a ruling relation, what is understood as maternal behaviour is in fact often self-sacrificial deference to the identity and well-being of the “Other”. Davies (2009) positioned the fetus as the Other in this scenario and suggested that in viewing an ultrasound image of her fetus, a woman enters into an ethical relationship with defined parameters. This ethical relationship cannot be denied, lest the woman be viewed as a bad or unfit mother. If this sounds particularly dire, Davies’ discussion was taking place in the context of the use of ultrasound technology by anti-abortion groups in the United States. Thus, the purpose of such ultrasound sessions is to

solidify the life of the fetus and to persuade women that they are already ethically bound to that life. Though not in the context of abortion Kelsey's narrative provided a perfect example of this intended shift. She explained that while she enjoyed playing hockey well into her pregnancy, she felt confident that after viewing the image of her fetus via elective ultrasound, she would be more inclined to change her behaviour. In other words, seeing an image of her fetus would enter Kelsey into an ethical relationship in which her responsibility for the safety and protection of her fetus would be emphasized. Underlying Kelsey's description was an understanding that she was not acting in the best interests of her fetus when engaging in contact sports. Sarah identified a similar shift in perception occurring during her elective ultrasound. She read the ultrasound image as signifying that her fetus was uncomfortable and in distress. Relating her interpretation to her anxieties about the safety of ultrasound equipment, and what she had read about the possibility that ultrasonic waves could heat up the amniotic fluid, Sarah asserted her desire to end the ultrasound session. The ultrasound image, therefore, worked to help position Sarah as a protector and advocate for her fetus. Sarah's description suggested that, in this instance, she acted on behalf of her fetus in insisting that they end the ultrasound session. In both Kelsey and Sarah's narratives, the persuasive quality of the image was assumed, though not explained.

Davies argued that the ability of ultrasound to "reveal the fetal face" places women in an ethical relationship with the Other (the fetus) because, according to Emmanuel Levinas, "it is the encounter with the face of the Other that constitutes the ethical moment" (2009:185). This ethical relationship develops as one between a mother and her child, thus all of the expectations that accompany the institution of motherhood become immediately applicable if a woman is to understand herself, or assert herself as the mother of the child to be. Davies (2009) pointed specifically to the ways ultrasound technology is taken up by anti-abortion groups as unproblematically revealing a relationship that already exists. In other words, prenatal maternity is positioned as a logical next step after being shown the face of the Other (the fetus) via ultrasound imaging. This suggestion lacks necessary nuance in that it assumes that ultrasound technology can, and indeed does, reveal the fetal face, rather than a heavily mediated technological representation of it, and, that all women will respond to it in the same ethical way.

We also assume that individuals know how to read and understand prenatal ultrasound images in a way that signals a particular reaction and accompanying behavioural changes. Participants'

responses were indicative that ultrasound images can be difficult to decipher. Even women with levels of professional or medical knowledge of pregnancy, such as Ainsley, a birth doula, or Monique, a nurse, sometimes had difficulty interpreting their ultrasound images. Women's reactions to the image and their subsequent behavioural changes are judged against social ideals, or as I contend, the institution of motherhood, to determine whether or not they have responded appropriately and thus, whether or not they will be good mothers (Mitchell and Georges, 1998). Elsewhere, I have argued that ultrasound images are presented in ways that intentionally position the fetus as an "icon" imbued with particular meanings meant to elicit particular emotional responses, such as joy and love (Chisholm, 2011; Sturken and Cartwright, 2001). The particular ways that joy and love can, or should be expressed by pregnant women are, I argue, dictated in large part by the institution of motherhood. Davies acknowledged the authority with which ultrasound images are imbued both in medical and lay discourses in her suggestion that "ultrasound technicians can present [a woman] with an image of her maternity whose authenticity she is afforded no authority to reject" (2009: 190). Therefore, women's post-ultrasound self-identification as mothers is an intended (or at least anticipated) outcome of the deployment of ultrasound. The authenticity of ultrasound images has been reinforced through the proliferation of ultrasound images in medicine and popular culture. Indeed, the authoritative accuracy assigned to ultrasound images can be said to have begun with Ian Donald, in his assertion that the technology provided more reliable information than women themselves. This belief is also evident in participants' descriptions of their elective ultrasound experiences as helping to manifest the "realness" of their pregnancies.

Davies' argument and the authenticity afforded to ultrasound images raises an important and controversial question: at what point does a fetus become a person? Although significant, this question necessitates a much larger discussion and is beyond the scope of this thesis. However, fetal personhood does appear to be a precondition to the kind of maternal identification Davies (2009) discussed. In most debates about personhood, the fetus is given primacy over the pregnant woman. Interestingly, participants in this study indicated that recognizing their fetus as a fully constituted being was a means to an end in helping them form their own maternal identities. In other words, to recognize oneself as a mother, women must first recognize that they have, or will have, a child. In this sense, it seemed extremely important for participants that they establish good mothering practices, even while pregnant. For instance, Sarah felt she should have been

more protective of her fetus against the potentially harmful effects of the ultrasound waves, while Chelsea saw the ultrasound image as an opportunity to begin talking to her son in utero. Although they differ in approach, both Sarah and Chelsea, as well as other participants, described altering their actions and behaviours in such a way as to position the needs and well-being of the fetus (or child) ahead of her own. In this way, elective ultrasound imaging can be seen to uphold and reinforce ideologies of sacrificial motherhood. I suggest that this is accomplished through responsabilization.

8.6 Power and Responsibility

The governing of the self-emphasized in neoliberal societies is accomplished through what some Foucauldian scholars refer to as “responsibilization” (Rose, 1999; Newman, 2006;). Responsibilization requires that individuals take up the responsibility for ensuring what could otherwise be understood as collective social goods, such as health, wealth and employment. Rather than viewing the state as responsible for ensuring the health and prosperity of the population, responsibility is reframed under narratives of self-care and consumption (Lemke, 2001; Giesler and Veresiu, 2014). Individuals are offered opportunities to practice self-care and self-improvement through consumption, for example, purchasing a gym membership, or a low fat cookbook. Such items are offered in the marketplace as a means for individuals to take charge of their own health, and practice healthy living so that they may optimize their health and well-being. This responsibility is underscored for women as mothers because they become responsible, not only for their own health and well-being, but for passing on these practices and values to their children. Responsibilization in the context of health has been referred to as “healthism,” with an emphasis on individual motivations for ensuring health and well-being (Crawford, 1980, 2006; Rose, 1999). In other words, an orientation towards health is presumed present in all neoliberal subjects. Although the particular practice I am critiquing is an elective one, and thus cannot be considered a health practice in the same way that medical ultrasound might, I suggest that individual responsibility fostered through healthism is related to the powerless responsibility Rich (1977) described in relation to the institution of motherhood. Except rather than an orientation towards health being presumed present, it is an orientation towards an idealized maternal identity that is presumed present in all women as neoliberal subjects.

Much attention is now paid to the ways individuals can determine and maintain their health status through a series of practices and behaviours that are socially acknowledged to support good health. Engaging with the formal medical system and diagnostic medical technologies are understood as a part of this responsibility. Questioning medical authority or foregoing medical advice is understood as irresponsible, as are many other behaviours and practices in the context of pregnancy, such as smoking, consuming alcohol, or risking exposure to environmental toxins. Robert Crawford has argued that “personal responsibility for health is widely considered the sine qua non of individual autonomy and good citizenship” (2006: 402). For no one is this more true than for pregnant women; health as individual responsibility underscores and supports an ideology of motherhood that positions women as largely (if not solely) responsible for healthy outcomes to pregnancy. Women are responsible for both their own health and the health of their fetus. The image of the good mother, supported by the institution of motherhood, requires women to position the needs of their children above their own, thus fetal health becomes paramount. Motivations derived from a desire for fetal health and well-being are understood as virtuous and indicative of good motherhood. However, this understanding also creates a paradox where women become responsible for ensuring that which cannot be ensured. In other words, despite the ways in which the riskiness of pregnancy might be overstated, it is still the case that many women experience pregnancy loss, or less desirable pregnancy outcomes, regardless of the individual actions they undertake to prevent it. That sense of responsibility was then experienced by some participants as anxiety, guilt, fear and shame, in part because they felt powerless to ensure positive pregnancy outcomes.

Individual responsibility for health, particularly during pregnancy, is compounded by the powerless responsibility afforded to women within the institution of motherhood. Within the context of patriarchy, Rich (1977) argues that women are assigned the responsibility for motherhood, yet are afforded none of the power to determine its parameters. Women are responsible for performing a particular kind of motherhood, one that is characterized by a denial of self as a projection of love and devotion. Andrea O’Rielly suggests that the contemporary incarnations of this patriarchal ideology can be found in parenting books, physician’s advice, and anything else which communicates “the values and expectations of the dominant culture” (2004: 6). Ultrasound as a prenatal practice can be understood to communicate such values, through expectations around women’s responses to ultrasound images. This is particularly true for

ultrasound in elective settings because, as the review of advertising and promotional materials included in this study demonstrates, the expectations of prenatal maternity are clearly defined. Women are told to “get a head start at loving your baby” (UCBaby) or “capture the greatest of life’s moments” (3D Baby Vision). Implicit is the assumption that the technology of ultrasound can initiate maternal love by providing the conditions to develop a maternal relationship (the ultrasound image), and that love can be demonstrated, or made apparent to others, by “capturing the moment”. The ability of ultrasound technology to initiate maternal love is premised on the notion that love does not, or cannot exist to its fullest potential without intervention. This is implicit in the suggestion that viewing an image of her fetus enters a woman into an ethical relationship because it suggests that the only way to “get a head start at loving your baby” is by “seeing” it via ultrasound imaging. In other words, seeing is believing. Again, this belief relies on the dismissal of women’s embodied knowledge in favour of technological, authoritative knowledge.

8.7 Motherhood, Technology and Ideology

One of the ways individuals are implicated in self-governance is through what Foucault referred to as technologies of power. Technologies of power can be understood as techniques, behaviours or practices which are “imbued with aspirations for the shaping of conduct in the hope of producing certain desired effects and averting certain undesired ones” (Rose, 1999:52). The deployment of prenatal ultrasound in both medical and elective settings can be understood as a technology of power in this respect. The ability of ultrasound images to elicit affective responses from pregnant women has been well established in the literature reviewed for this project (see Mitchell and Georges, 1998; Davies, 2009; and Taylor, 2002, 2008 as examples). This understanding was supported by participants’ articulations of their experiences with elective ultrasound, and the ways in which seeing an image of her fetus transformed the way women thought and felt about their pregnancies. Therefore, the desired effect of the use of ultrasound on pregnant women can be understood to be a deeper sense of connection between woman and fetus. Particularly when employed in elective settings, prenatal ultrasound can be understood as a technology of the self and a technology of the market, both of which Foucault identified as groupings under the larger category of technologies of power.

For Foucault, technologies of the self were practices undertaken by individual subjects for the purpose of establishing and communicating a particular understanding (or image) of self (Rose, 1999). Under this definition, the ways in which participants engaged with elective ultrasound as a means of obtaining the information or experience they desired can be understood as in direct relationship to the maternal identity to which they aspired. For example, to foster the connection and bond necessitated by the institution of motherhood, participants like Rachelle, Monique and Shelley felt that they needed to know the sex of their fetus. Fetal sex information allowed these participants to better conceptualize their maternal roles by way of naming the fetus, and/or engaging in specifically gendered consumption (such as the buying of pink or blue clothing, toys and accessories). The fact that this information, which they felt was important, had been denied to them in the context of their medical ultrasounds, meant that participants felt they had to engage with elective ultrasound as consumers. Through these practices of consumption, participants sought to communicate a particular maternal identity. As a consumer practice, elective ultrasound is positioned as a choice that women can make, that can among other things, facilitate the gathering of desired information. In this way, elective ultrasound can also be understood as a technology of the market in that it involves the buying and selling of a service designed to enable maternal identification. Nikolas Rose (1999) has suggested that the meaning with which a commodity is imbued reflects upon individuals and communicates the kind of person they aspire to be. Again, this identification is based on an established set of attitudes, behaviours and practices that align with the dominant ideology of motherhood.

8.8 Consumer Choice and Empowerment

Responsibilization has also been taken up in relation to consumption. Nikolas Rose has argued that within neoliberal societies, “individuals and pluralities [are] shaped not by the citizen-forming devices of church, school and public broadcasting, but by commercial consumption regimes and the politics of lifestyle” (1999: 46). Rose’s account suggests a “suturing together of citizen and consumer” (Barnett et al, 2008). Particular to this project are the ways in which participants articulated their maternal identities through their consumption choices. Here, the image of the good mother aligns with the image of the good neoliberal subject who engages with the marketplace in order to reflect an idealized image of motherhood through her consumer choices. The positioning of women as purchasers rather than patients implies a level of consumer

empowerment that suggests pregnant women are proactively seeking out the kind of experience they desire. However, consumer choices cannot be separated from the operations of power that prescribe and foreclose certain actions (Shankar et al., 2006). As I have suggested in this chapter, the institution of motherhood and the image of the good mother it promotes, can be understood as ruling relations of power which work to constrain consumer choice.

Consumer choice and responsibility came up in interesting ways in the research, particularly in relation to safety. The safety of ultrasound was referenced frequently and emerged as an important theme in the research. Both the literature reviewed and participant responses indicate ultrasound safety as a major concern. Interestingly perceptions of the safety of ultrasound depend on where it is being deployed. The safety of medical ultrasound is assumed, due to its medical justification and authoritative status, while the same technology is questioned in elective settings because it is not deemed necessary in the same way. Rather, in these settings women are assumed to have control over the decision to purchase elective ultrasound. Here again, the distinction between medical and elective ultrasound is significant, in that the consumer nature of elective ultrasound affords a level of authority over decision making that does not apply to medical ultrasound. For instance, pregnant women rarely opt out of medical ultrasound because it is understood to be a safe and necessary diagnostic procedure within the medical management of pregnancy. Engaging with the medical management of pregnancy is understood as a responsibility women have, and reflects a level of powerlessness akin to Rich's discussion of powerless responsibility. In contrast, elective ultrasound as described by participants in this study represents a choice for women to purchase and engage in a particular experience that is enticing precisely because of its difference to medical ultrasound. Since choice and control are often perceived as aspirational for an experience that is otherwise understood to be devoid of much choice and in many ways out of women's control (although they are still framed as responsible for positive outcomes), elective ultrasound can be seen to offer a method of consumer-based empowerment for women as mothers. Empowerment comes from the ability to make choices and the relationship of those choices to the level of control women have over their experiences of pregnancy. The overwhelmingly positive ways most participants described their elective ultrasound experiences indicate that, in some ways, elective ultrasound served to temporarily empower them as mothers. I say temporarily because for most participants, their experience of

empowerment was transient in that it was experienced during and immediately following the elective ultrasound session, but did not necessarily continue throughout the rest of the pregnancy.

Participants like Monique and Rachelle described being grateful that the opportunity existed for them to get the kind of experience and information that they desired. Monique's frustration with her treatment during her medical ultrasounds, combined with the opportunity to purchase a different kind of treatment, meant that she experienced elective ultrasound as a welcome choice and more reflective of her celebratory feelings regarding motherhood. Rachelle was determined to find out the sex of her fetus, so the opportunity to do so via elective ultrasound satisfied Rachelle's desire and helped her feel more prepared for her baby's arrival. In this way, empowerment is presumed to be achieved through purchasing. Monique, Rachelle and other participants in this study understood themselves as empowered consumers in that they sought out the type of care and information they desired through consumer means. However, despite the potential for agency on behalf of pregnant women (i.e. purchasers), the practice of elective ultrasound operates within, and reproduces the ideologies of the institution of motherhood. The focus on bonding and the building of relationships between family members reinforces women's role as emotional care givers for the family. The practice is premised in many ways on the notion that women have not developed adequate bonds with their fetus in the absence of technology. For these reasons, elective ultrasound cannot be viewed as a wholly empowering practice, despite the benefits of increased choice and control.

8.9 Conclusion

For many participants, their medical ultrasound experiences were marred by worry and anxiety. An internalized sense of risk seemed to underscore their relationship to their pregnancies which were understood as tenuous, and subject to a change in status at any time. This belief is one of the driving forces behind the medicalization of pregnancy, in that medical and technological intervention are offered as a means of mitigating these risks. The positioning of women as patients aligns pregnancy with illness in ways that a few participants were both aware and critical of during our interviews. The treatment many participants described at the hands of their healthcare providers suggested that engaging with the healthcare system during pregnancy was understood as an obligation, but was far from enjoyable. Such descriptions of their medical ultrasound experiences align participants' narratives with the institution of motherhood,

particularly powerless responsibility, in that they were unable to dictate the kind of information and experience they desired from their ultrasounds. In particular, the treatment many participants received was not reflective of their feelings about their pregnancies, nor was it reflective of a broader appreciation of pregnancy and motherhood as valuable social practices. Heather's description of having her expressed wishes ignored by her radiologist, Kelsey's categorization of her physician as unhelpful and unsupportive, or Monique's frustration with the number of people given access to information about her fetus before she was, are each indicative of a lack of recognition of them as important and valuable subjects within the medical management of pregnancy.

The consumer nature of elective ultrasound is attractive in large part, because it allowed participants to assert themselves as active subjects by way of consumption. Elective ultrasound, as a consumer practice presents as a remedy for both the alienation, and the lack of care and attention participants described experiencing during their medical ultrasound sessions. I suggest that ultrasound, performed in elective settings, is still connected to broader ideologies of motherhood (consumption does not negate ruling relations) in ways that are both more obvious and more subtle in their reinforcement of a disempowering image of ideal motherhood. The emphasis placed on bonding, and the inclusion of extended family, could be considered an obvious reinforcement of the institution of motherhood. What is subtle are the ways in which this emphasis is enacted. Many participants described their experiences as being centered on them and their enjoyment, from the ways the ultrasound technicians spoke to them, to the comfortable atmosphere provided by way of furniture selection and lighting choices. The most distinct difference women expressed between their medical and elective ultrasound experiences were the ways in which they engaged with the latter, in an effort to alleviate and calm the anxieties created or fostered by the former. In other words, participants described temporary relief from their anxieties through the act of viewing their fetus via ultrasound in elective settings. However, our discussions revealed the myriad ways in which their fears and anxieties were redirected or internalized. For example, the controversy regarding the safe use of ultrasound in elective settings was cited by many participants as a cause for concern. They had to figure out how to negotiate their desire for information, or for a particular experience, with the knowledge that as consumers rather than patients, the responsibility for any danger or damage caused to the fetus would be theirs to bear. The responsibility borne by pregnant women in this scenario is not

reflective of their power or ability to control these outcomes. Rather, I suggest that it is reflective of the ways in which powerless responsibility is manifest in the practice of elective ultrasound.

Chapter 9

9 Conclusion

In the introduction to this thesis I described the elective ultrasound industry in Canada as disparate, unregulated and growing rapidly. The relative infancy of elective ultrasound as an industry has meant that little research exists that takes up ultrasound particularly in elective settings. My study reveals the spectrum of uses for prenatal ultrasound technology, as well as the varying ways women engage with the technology to serve particular ends. Public conversations and debates about prenatal ultrasound tend to sit on either end of this spectrum: sex selective abortion facilitated by elective ultrasound and increasingly frivolous uses of elective ultrasound. The research, specific to the Canadian context that does exist, is skewed towards the troubling relationship between elective ultrasound and sex selective abortion. I see this use of elective ultrasound as residing on one end of the spectrum, and have identified two problems arising from this way of framing women's engagement with elective ultrasound. The first problem is that, like participant Monique, I believe that premising conversations about elective ultrasound around the potential for sex selective abortion, overstates the extent to which the service is used for these purposes. It is also the case that public conversations around sex selective abortion and elective ultrasound clinics tend to reify stereotypical and often racist assumptions about particular ethnic and religious communities and their preferences for male children over female children. These stereotypical assumptions also speak to the idealized image of motherhood, discussed in the previous chapter, which tends to cast racialized women in the role of the bad mother. Based on the descriptions given by participants in this study, and many anecdotal conversations with women who have had, or are considering elective ultrasound for their current pregnancies, it appears that curiosity, reassurance and consumer choice are far greater motivators for purchasing elective ultrasound than a desire to abort a fetus of a particular sex. To this end, more research which takes women's voices and experiences as the starting point for investigations about how elective ultrasound is being taken up, are necessary in order to reorient the conversation.

The second problem I see arising from the framing of debates about elective ultrasound around its potential to facilitate sex selective abortion, is that they ignore the role to be played by the owners and operators of elective ultrasound businesses, the companies that manufacture and sell

ultrasound equipment, as well as government regulatory bodies. In other words, suggesting that the elective ultrasound industry must be regulated in order that **women** do not misuse the service denies the ways that women and fetuses should be protected from fraudulent, irresponsible, or potentially even dangerous business practices. Having established industry standards that dictate, for example, the energy output of the ultrasound machines used, the training and qualifications of the ultrasound technicians employed, or the maximum length of time pregnant women and their fetuses can be exposed to ultrasound in a given session, would do well to position such regulations as in the best interests of the pregnant women (and their fetuses) that choose to engage with elective ultrasound. The current conversations about the use of ultrasound technology in elective settings, is premised on the notion that women, through their decision making, present a risk to the health and well-being of their fetus. Even the potential negative health effects of ultrasound for fetuses are discussed in relation to women's responsibility to ensure that they "minimize [their] risks" and "do everything [they] can to give [the] baby a healthy start in life" (Health Canada, 2008). This rhetoric of risk implies the kind of powerless responsibility Adrienne Rich (1977) detailed, and reflects the ways participants discussed their own feelings of responsibility for ensuring the safety of elective ultrasound. Regulatory measures which involve the study and tracking of the effects of ultrasound exposure, and easy, public access to safety information about the type of ultrasound equipment being used, the energy output, the recommended length of exposure and the reasons for this recommendation, would do much more to serve the interests and concerns of pregnant women accessing elective ultrasound services than policing the reasons why women would want to know the sex of their fetus.

The expansion in use of prenatal ultrasound from medical to elective settings continues to facilitate its deployment for even more creative non-medical uses. Recently we have seen a trend in North America where families are hosting "gender reveal parties". I suggest that this iteration of elective ultrasound in practice resides at the opposite end of the spectrum from the more sinister, sex selective motivations described above. A gender reveal party involves either a mobile ultrasound service, brought to a clients' home, or prior patronage of an elective ultrasound clinic to determine the sex of the fetus. In the second instance, the results are kept secret from the commissioning couple, and sent to a bakery that makes a cake with either blue or pink filling. The cake becomes the focal point of the gender reveal party, akin to a baby shower, with the couple "cutting the cake" in front of friends and family in order to reveal the sex of their

fetus. More recently, some clinics offer mobile ultrasound services such that the technician will come, with an ultrasound machine, to a client's home and perform the scan in front of her friends and family. An announcement is then made to the whole group, as to the sex of the fetus. This new trend speaks to one of the main findings of my research, which is that the interest in, and consumer demand for elective ultrasound, is significant. The technology is well established in medical settings, and on its way to becoming normalized as a consumer practice during pregnancy. While I do not claim that my findings should be extrapolated, what they do reveal are the myriad ways women take up ultrasound in elective settings in order to assert a maternal identity, to assuage anxiety and to counteract negative medical experiences. These findings, coupled with evermore creative uses for ultrasound technology, suggest that the industry will continue to expand from here. It is clear that the vague warnings and cautions issued by government agencies and medical professional organizations are not necessarily effective in dissuading women from engaging with ultrasound for non-medical purposes. Gender reveal parties represent, perhaps, an even greater consumer motivation than elective ultrasound in clinical settings, and emphasize the relational component of elective ultrasound practices.

I suggest that participants in my study represent a small sample of the kinds of motivations and experiences that exist somewhere in the middle of this spectrum. Although not all participants' pregnancies were planned, they were wanted, and as such, the possibility of sex selective abortion was not a consideration. Framing conversations about elective ultrasound around the potential for sex selective abortion leaves out the experiences of participants in this study, and, I would suggest, the majority of women who engage with elective ultrasound (although currently we have no way of knowing exactly how many women are opting for elective ultrasound). Equally, the personal and measured ways participants discussed their justifications for the expense of elective ultrasound, and the consumer nature of the practice suggests that they were not simply cultural dupes who engaged in rampant consumerism without much forethought. Rather, their purchasing decisions were based on the information and experience they desired, measured against their fears and anxieties about pregnancy and the safety of ultrasound in elective settings. This finding indicates that more research needs to be done that accounts for the differing motivations which might lead women to choose elective ultrasound. I suspect that there are many other women, like Monique and Ainsley, who are looking for a "fun" ultrasound experience to counteract their more stressful, medically indicated ultrasounds. Equally, other

women may follow Kelsey and Chelsea in seeking out elective ultrasound as a means of asserting a maternal identity, which is especially important for women who are distanced from the ideal image of the good mother. For Kelsey and Chelsea, this distance was a function of age, marital status, and lack of family planning, however for others race, class and/or sexual orientation, may also distance them from the ideal image of the good mother. Rachelle, Sarah and Shelley are likely to reflect the desires of many women to find out the sex of their fetus as a means of preparation, to satiate curiosity, or to begin including the fetus as a part of an already established family dynamic.

Motivations, like those of Rachelle, Sarah and Shelley, that revolve around fetal sex information are particularly interesting, and, I think, point to some important questions for further investigation. Despite asserting a strong desire to know the sex of the fetus, each participant was emphatic in the assertion that they did not have a preference for the sex of the fetus, just a desire to know. Perhaps in light of conversations about sex selective abortion, women must be particularly vigilant in asserting their lack of preference for a child of a particular sex. This preference could be taken as evidence that the woman is not exhibiting self-less, unconditional love for her child, as required by the institution of motherhood, and thus could be understood as a bad mother. So, while the sex of the fetus was not suggested to matter to Rachelle, Sarah or Shelley, knowledge of fetal sex did matter. This begs the question: if the sex of the fetus, or baby, does not matter, *why does it matter?* In other words, why is it important to know? What kinds of planning and preparation are initiated by knowledge of fetal sex? The obvious answer appears to be gendered consumption, the buying of pink or blue clothing, toys or accessories which correspond to the sex of the child. I suggest that these questions would be useful to explore with further research.

What this research has shown however, is that there are likely many valid and underlying reasons why knowledge of fetal sex matters to women, apart from consumption based motivations. For instance, although it may be presented in this way, assessing fetal sex via ultrasound is not an exact science. There are many instances in which the supposed sex of the fetus was found to be incorrect once the child was born. The technical and visual nature of ultrasound as a diagnostic tool means that technicians and physicians rely on the quality of the image for accurate diagnoses. A lower quality image or an improperly trained technician might mean the difference

between an accurate and an inaccurate fetal sex diagnosis. However, despite these widely acknowledged errors, fetal sex diagnosis via ultrasound is often taken up as a certainty. Even the ways this motivation was described by participants as a desire to “know” the sex of their fetus, and in the ways this service was advertised by elective ultrasound businesses as “gender determination” (again, the conflation of sex with gender here is interesting) suggests a level of certainty which does not correspond to the level of certainty such diagnoses actually provide. Given the ways participants’ spoke about their general lack of certainty surrounding their experiences of pregnancy, it is easy to see why fetal sex diagnoses are so attractive. Perhaps the certainty with which fetal sex information is presented, provides women an avenue to feel a sense of certainty around some aspect of their pregnancy. Further research might consider why certainty is so important when it concerns pregnancy, what role elective ultrasound plays in furthering this notion of certainty, and how knowledge of fetal sex relates to motherhood and maternal identity.

The ability of ultrasound to make fetal sex characteristics visible also raises interesting questions about sexual ambiguity and the validity of prescriptive sex diagnoses. While Ainsley indicated that, due to the positioning of her fetus, her elective ultrasound technician could not accurately determine fetal sex, there was no indication from her, or other participants, about what might happen if the ultrasound revealed sexual ambiguity. In both the literature and the narratives discussed in this study, little attention is paid to the possibility of indeterminate fetal sex characteristics, which suggests it is an area that requires more research. Perhaps, in response to the question posed earlier regarding why fetal sex information matters, confirmation that the fetus is, in fact, sexed, motivates the desire for this service. In other words, confirmation that the fetus is a girl *or* a boy, removes much of the anxiety (if any exists) around sexually ambiguous children. There is also literature which points to fears around monstrosity (Butler, 1999, 2011; Shildrick, 2009) and the desire to confirm that the fetus is human. While participants in this study did not discuss this in any detail, there was indication, from both Jamie and Kelsey that the possibility existed (however slight) that her fetus might “have three heads” (Jamie). Also, Shelley’s children’s description of their baby sister as looking like “an alien” or “a dinosaur” in the ultrasound image, suggests that the potential for monstrosity is present, even in the imaginations of children. Further study might take up questions around monstrosity or sexual

ambiguity as it relates to the imaging potential of 3D ultrasound. In other words, would the more advanced 3D ultrasound technology better image, and thus diagnose, genital ambiguity?

One of the most significant findings of my project was the centrality of relationships to the practice of elective ultrasound imaging. The service is promoted by elective ultrasound businesses as providing women with an opportunity to bond with their fetus, to include family and friends in the experience and to begin relating to the fetus as an autonomous, and in many cases sexed, individual. The methodological approach of this project meant that women were asked to discursively reconstruct their experiences with elective ultrasound, and their motivations for engaging with the practice. As such, participants described particular narratives which aligned in many ways with dominant ideologies of pregnancy and motherhood. In other words, the ways in which participants described their experiences were likely to reflect common cultural understandings of what it means to be a good mother. Based on the social and cultural imperative of good motherhood, as evidenced by Rich, (1977) Dubriwny, (2010) Weir, (2006) there is a lot at stake for women if their motivations appear to contradict the image of the ideal mother. Reflecting on the feminist standpoint theory employed in this study, a number of issues arise in relation to the ethical and political motivations of feminist standpoint research, and feminist standpoint research in practice. While the voices of participants were positioned as the starting point for this investigation, I acknowledge the influence of my own interpretation and the necessity of asserting my voice in discussing and analyzing the findings. Thus, a commitment to feminist principles guided this project, though it was not without methodological conundrums. It is important, then to reaffirm the partiality (Bhavnani, 1993) of these findings, while acknowledging what they can contribute to discussions around ultrasound, pregnancy and motherhood.

A way around the narrative reliance reproduced in this study would be to employ institutional ethnography as a method of investigation into elective ultrasound practices. Institutional ethnography maintains the centrality of women's voices and experiences to the research questions, but also includes an observational component which would allow the researcher, as someone outside of the emotional relationship to the fetus or to the pregnancy, to observe interactions and motivations that might elude participants. An institutional ethnography involving elective ultrasound clinics may also shed light on the organization of elective

ultrasound practices, and respond to questions like: what kinds of clients and what type of information is privileged in elective ultrasound settings? What roles do the ultrasonographer, pregnant woman, and her family and friends play in constructing relationships? What kinds of narratives are being constructed? What is the value of these narratives, and how do they function within women's broader experiences of pregnancy?

This kind of institutional ethnography formed my original vision of this research project. The fact that I was approaching elective ultrasound clinics for permission to conduct observational research at the same time that damaging information came to light, via the CBC investigation into the relationship between elective ultrasound businesses and sex selective abortion practices, likely impacted the cold shoulder I received from the clinics I approached. Understandably they may have been wary to invite the kind of scrutiny assumed to come from research into their business practices. At no point was my intention to malign the industry, nor was it to valorize the practice of elective ultrasound imaging. My motivation was, and still remains, to understand how elective ultrasound functions within the context of pregnancy and motherhood, how women engage with the practice, and what kinds of meanings are associated with elective ultrasound and the products and services it provides. For this reason, rather than offering a conclusion, I suggest that this research has only just begun.

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Appendices

10 Appendix A: Participant Profiles

Participant #1: Monique

Monique is a married mother of two children. She has recently gone back to school to become a nurse. She indicated that she and her husband both have “good jobs” and thus the price of non-medical ultrasound was not prohibitive. Given her current educational path, Monique was more aware of medical language and approaches than others may have been. As a result she is critical of the healthcare system in the way(s) they deal with patients generally, and pregnant women specifically.

Monique received 3D ultrasounds with both of her pregnancies, at different locations. She is very familiar with ultrasound as she indicated that during her pregnancy with her son, she required 9 medical ultrasounds due to being identified as high risk. She connected ultrasound specifically to healthcare and suggested that the information it provides (ie. sex determination) should be widely available at the request of pregnant women.

Monique often compared her level of knowledge of the healthcare system to other women, and felt confident that she had an “insider’s” perspective. Alternately, she was uncritical of 3D ultrasound and clearly viewed it as an assertion of her consumer choice. The experience of the ultrasound was important to Monique, to have the experience revolve around her, her comfort and the communication of the information she desired, was the role she felt ultrasound should play in her pregnancy. She clearly viewed herself as the authority on her pregnancy and was frustrated by the fact that someone else, like a doctor or ultrasound technician, could have knowledge of certain aspects “before” her.

Although she seemed very sure of herself in hindsight within the context of pregnancy and motherhood, she conceded that she was “a little anxious” at that stage in her pregnancy because she was unsure if everything was alright with her baby. Even though she seemed very sure of herself in many ways, Monique still desired the “reassurance” she felt that ultrasound could provide in relation to her pregnancy. She suggested that at points during her pregnancy - particularly prior to her 3D ultrasound she felt “helpless” because “there’s nothing you can do really - you can’t see them, you can’t go check on them, you can’t do anything”. 3D ultrasound in the non-medical setting assuaged these fears for Monique and allowed her to feel that everything was ok.

Participant # 2: Kelsey

Kelsey is pregnant with her first child and has not yet received her 3D ultrasound. She has been together with her boyfriend for two years, but they are not married. She is quite young, in her early twenties, and came across as slightly less mature than other women I interviewed. Her pregnancy was not planned, but both she and her boyfriend are excited by the prospect of having a baby. She indicated that her boyfriend has become attentive to her needs as a pregnant woman and would go out at all hours of the night to get her whatever she wanted/needed.

Kelsey had very little information about 3D ultrasound and also seemed to have very little knowledge of ultrasound more generally. She seemed pretty anxious about her pregnancy, likely due (at least in part) to a general lack of information or knowledge. She described not being given much information by her doctor and also described not feeling as though she could ask questions. She suggested that her doctor always seemed to be “in a rush” or “in a hurry” during her appointments and so she felt she couldn’t ask a lot of questions. She described feeling generally unsure about what was happening in her body and what was “normal” during pregnancy. In many ways, for Kelsey, pregnancy was something that was happening to her, as opposed to some kind of practice she was engaged in. Kelsey indicated that the majority of her knowledge about pregnancy and child birth came from her friends who had recently had children.

She received a gift certificate for the 3D ultrasound as a Christmas gift from her parents. She was very excited by the possibility of “seeing” her baby and indicated that her main reason for

wanting the 3D ultrasound was to find out the sex of her baby. The ultrasound functioned as a way to build her family, which included extended family members like her parents and her boyfriend's parents. She also expressed enthusiasm for the consumer goods she would be able to purchase at the 3D ultrasound such as a "heartbeat bunny", images and video.

Participant #: Sarah

Sarah is married and currently pregnant with her first child. Her mother and father in law both have/had careers in healthcare and she described herself and her husband as "science minded" people. Sarah indicated that both she and her husband are working "good jobs" and thus the cost of 3D ultrasound was not prohibitive. She described herself as inquisitive and mentioned several circumstances where she asked questions or pushed for information that was not offered. She expressed concrete knowledge that 3D ultrasound was a consumer practice and indicated that the staff, aside from the ultrasound technician, came across very much as "salesmen".

Although she had originally approached the 3D ultrasound as a "really exciting" and "neat experience" after hearing from a prenatal instructor that there were questions about the safety of ultrasound, Sarah became very worried about the effects. Sarah described her experience with 3D ultrasound negatively, in that she was not satisfied with the safety evidence presented. She interpreted the difficulty in obtaining an image, and the positioning of her baby (with hands in front of her face) as being in response to the ultrasound.

In hindsight, Sarah described feeling a lot of anxiety leading up to her ultrasound session but being "too embarrassed to vocalize it" worrying that she was just "being ridiculous" or "being silly" in regards to her fears. She appeared very worried that she had done something to harm her baby and her guilt was evident in the way she spoke about her experience. She did not seem convinced that her baby had not been harmed by the non-medical ultrasound and seemed to adopt an "only time will tell" attitude. She suggested that not listening to her gut instinct and canceling her ultrasound session when she had concerns about its safety was representative of her "first parenting mistake".

She was proactive in the sense that she wrote to the 3D ultrasound company twice to express concerns about the safety of the procedure and her particular experience (being asked to pay for

images and video that were not clear). Sarah seemed to adopt an individualistic approach to the decision to purchase 3D ultrasound in that she stated she would not discourage others from the service, but rather allow them to make their own choice.

Access to information seemed incredibly important to her as she searched for empirical evidence of ultrasound safety and described reading through in great detail all of the small print on the consent form she was asked to sign at the 3D ultrasound clinic.

Participant #4: Chelsea

Chelsea is a young, first time mother. She was 18 at the time of the interview, though had her 3D ultrasound and gave birth to her son while she was 17. Although not married, Chelsea is in a committed relationship with her son's father who is also 18. She received a gift certificate for 3D ultrasound as a baby shower gift from her boyfriend's mother, and indicated that her boyfriend, his mother and sister, along with her mother and herself, attended the 3D ultrasound. She appeared very excited about the technology of the ultrasound and indicated that she had shown the images and video to friends and family, posted the images online, and even showed me the ones she had saved on her cell phone. Her main concern was to find out what he looked like, as she described being worried that her baby would be "ugly".

The 3D ultrasound appeared to be a significant turning point for Chelsea as she described feeling much more connected to her baby after the ultrasound. From the way she described the reactions of her mother and her boyfriend's mother, they did not seem to be upset or angry at the fact that she was a teenage mother, rather, through her descriptions they sounded quite excited about becoming grandparents. Chelsea indicated that her mother had given birth to her when her mother was a teenager. She also confided that her father had recently passed away, and that she is an only child, so this may have had some bearing on the reaction of her mother.

Chelsea described her 3D ultrasound as a turning point in her pregnancy that allowed her to feel more connected to her son. She explained that after the ultrasound, she began talking to her son, singing to him, and starting to imagine what their life would be like. She seemed concerned as to which features her son would share with her boyfriend and which he would share with her. It was

really important to Chelsea that her son was “cute” and after receiving confirmation of this she became “excited to meet him”. The ultrasound gave her a sense of what was to come in a way that helped her feel more at ease with her pregnancy and her impending role as mother.

At the time of the interview, Chelsea had graduated high school, although she gave birth in May of her final year of high school. She described being very committed to finishing high school, indicating that she had only taken 6 weeks off after giving birth to her son, and writing her high school exams when he was only a month old. She described aspirations of attending college and gaining a social work degree or a degree in early childhood education. Chelsea came across as a very responsible, though young, woman. She described living with her boyfriend and his parents while working to raise their son.

Participant #5: Ainsley

Ainsley is a married mother of a one year old daughter. She works as a prenatal massage therapist and a birth doula. She indicated that she had heard about 3D ultrasound from a client, and often referenced interactions with clients in her responses. It seemed apparent that Ainsley was part of a large network of mothers and/or prenatal specialists who communicate and share advice about everything from pregnancy to parenting.

Ainsley described her experience as negative in the sense that she did not get the 3D images she had wanted. She described being disappointed by not getting the images, though she appeared to enjoy the experience of the ultrasound. Her 3D ultrasound was scheduled at 35 weeks and by that point her baby was already low and they weren't able to get a clear image. She seemed genuinely disappointed but would still recommend the service to friends and clients - making sure to indicate that they should schedule their session earlier in their pregnancies. She lamented about not having the image to show her daughter when she gets older.

Ainsley and her husband did not want to know the sex of their fetus. The ultrasound tech had to go to significant lengths to hide this information as so much of the images they were able to capture were of the lower half of her body. Getting a good picture or image was really important

to Ainsley and a lot of her disappointment was due to the fact that they were never able to “get a good image” of her baby.

Given her line of work, Ainsley was very knowledgeable about practices and services associated with pregnancy. Although she did suggest that “it’s so hard to wrap your mind around what’s going on” referring to the embodied experience of pregnancy. Ultrasound provided her with a visual, concrete reference point which was understood to be reassuring. She seemed very non-judgemental of other’s choices and repeatedly stated that what matters is what’s best for the woman herself. Ainsley also indicated that her pregnancy was high risk and that she had had numerous medical ultrasounds prior to her 3D ultrasound. In attempting to recall how many medical u/s she received, she made an educated guess of 11.

Participant #6: Heather

Heather is a first time mother, living in Vancouver. She immigrated to Canada from England along with her husband. Heather indicated that she had recently completed a physiology degree where she required interview participants for her research, which gave her sympathy for the difficulties involved in recruiting and prompted her to respond to my participant call on Baby Center. She did not provide her specific age, though my assumption would be she is in her mid-thirties. She and her husband are both employed, though she is currently on maternity leave as her son was 9 weeks old when we spoke.

Heather described her 3D ultrasound experience positively - and indicated that part of the reason they were so excited about the ultrasound was so they would be able to share the images and video with their families overseas (her husband is also from England). Heather indicated that after a few miscarriages, and a negative experience with her medical ultrasound, her and her husband were wanting some reassurance and positive experience, which led them to choose 3D ultrasound. She recounted that her medical ultrasound technician had let slip the sex of her baby while she was alone in the ultrasound room, which was difficult for both she and her husband. Heather was sympathetic to the fact that her husband had been “left out” of much of the experience of pregnancy, which came to an apex when she found out the sex of their baby without him.

Due to a background of miscarriage, reassurance was important to Heather. She described feeling a general sense of dis-ease and anxiety around pregnancy due to past losses. Heather was impressed by the “more gentle approach” of the 3D ultrasound and suggested it was less “functional” than medical ultrasound. The diagnostic elements of medical ultrasound were concerning to Heather due to her previous negative experiences and history of miscarriage. She understood the purchasing of a non-medical ultrasound to represent a kind of choice she felt was lacking in regards to pregnancy in general.

Participant #7: Catherine

Catherine is a first time mother, who is still pregnant with her first child at the time of the interview. She lives with her fiance in Ottawa. When we spoke she was just about to take maternity leave from her job and was about 38 weeks along in her pregnancy. She described the pregnancy as being unplanned, though she appeared excited for the arrival of her child. She did not appear to have a great deal of experience with other women around her getting/being pregnant and seemed to be “figuring things out as she goes along”. She and her partner both appeared to be employed, though I am not sure their exact professions. Catherine is also in her early-mid thirties.

Catherine indicated that she lives very close to a 3D ultrasound clinic and that this was how she found out about the service, she hadn't known anyone else who'd received 3D ultrasound. She suggested that her main motive for visiting the clinic was that her and her fiance wanted to know the sex of their baby but that her medical ultrasound provider would not release this information. She believed this to be a result of the technician being unwilling to secure this information as it was not the purpose of the ultrasound, rather than the technician having this information but not releasing it for liability or regulatory reasons.

Catherine expressed some trepidation about her pregnancy, finding it to be, at times, “intimidating” or “scary”. She described her 3D ultrasound in opposite terms, suggesting it was “comforting” and “reassuring”. Knowing the sex of her baby was important for Catherine's social experience of pregnancy, in that she could share this news with family and friends. In addition to obtaining this information, Catherine pointed to her 3D ultrasound experience as a

turning point in her pregnancy, which she described as a “very happy uplifting moment” that allowed her to feel “more positive” and “excited” about her pregnancy.

Participant #8: Jamie

Jamie received a 3D ultrasound for her first child, though she is a mother of two. Her son, whom she had the ultrasound for is now five years old, so she believes she went for the 3D ultrasound in 2007. She is married and works as a social worker. She described having a Masters degree and discussed plans for returning to school to get her PhD. Her partner was also employed and they had recently moved homes to live in suburbs.

Jamie indicated that her main reason for seeking out 3D ultrasound was as form of reassurance. She discussed experiencing a lot of fertility issues, though she did end up getting pregnant naturally, twice. She discussed hearing about 3D ultrasound through online forums she belonged to that dealt specifically with women who were experiencing fertility issues. In rationalizing her choice, she compared her experience to other women she'd been in contact with through online forums who had had many ultrasounds, and even described one woman who acquired an ultrasound machine for her home and would give herself ultrasounds daily to “check on” her fetus.

Jamie did not wish to know the sex of her baby prior to birth and was emphatic about this point with the ultrasound technicians. She indicated that her husband “desperately” wanted to know, but she felt that the anticipation of that surprise would help her get through the final pushes of labour. She described how the ultrasound allowed her to spend time with her baby and get to know it in a way that she had not prior to the ultrasound. She did not discuss needing “information” about the fetus, but rather emphasized “seeing” her baby. She indicated that it was only she and her husband in the room, though they shared the DVD they received with extended family and friends.

Based on her interactions with other moms, Jamie assumed she would receive more than the standard 2 medical ultrasounds and described being “kind of disappointed that I wouldn’t get to see my baby every month”. The “interactive” and “engaging” parts of the ultrasound allowed

Jamie to feel like she was spending time with her son. In addition, Jamie suggested it was “important that I know his heart is beating”, highlighting the capacity for ultrasound to provide reassurance. She pointed to the experience as a turning point that allowed her pregnancy to feel “more real” explaining that being able to simulatenously see him and feel him moving around made the connection for her.

Participant #9: Rachelle

Rachelle is a married, first time mother to a 6 month old daughter. Prior to her pregnancy she worked as a massage therapist and yoga instructor. Rachelle’s husband immigrated to Canada from Israel and works two jobs, one in construction and a catering job which he earned through attending culinary school. She and her husband are both under 30 and could be described as middle class, due in part to the fact that they both (until recently) worked two jobs.

Rachelle disclosed that she had lost her mother to cancer when she was young. They were very close. Her father seems to have played a big role in her pregnancy, he attended the 3D ultrasound session with her, and Rachelle and her husband lived in his house until shortly before their daughter was born.

Rachelle indicated that her pregnancy was not planned, though it was welcomed. As such she suggested that everything about pregnancy felt like “a surprise”. Obtaining this information was important to Rachelle so she could better “plan” for the arrival of her daughter. She suggested that knowing the sex of her baby gave her permission to begin preparations like “getting their room ready and start doing things and buying things”.

Unlike other participants, Rachelle only wanted to find out the sex of her baby at the ultrasound and was indifferent to the “3D experience” though she did enjoy what she saw. She was clear that she felt it was a business, though indicated that she felt the information provided by the business, should be provided by the formal healthcare system. Her husband wasn’t able to attend the 3D ultrasound, though she brought him in to the experience by calling him on a cell phone and placing him on speaker phone when the ultrasound tech announced the sex of their baby.

Rachelle actively sought out information about 3D ultrasound. She mentioned doing her own research on the internet, as well as consulting with her family doctor as to her professional

opinion about the safety of non-medical ultrasound. Given the go-ahead by her doctor, Rachelle seemed confident that the decision she made would not be harmful for her baby.

Participant #10: Shelley

Shelley is a married mother of four kids, between ages 11 and 9 months. She purchased a 3D ultrasound during her pregnancy with her fourth child. Her motivations were to find out the sex of her baby and to have an experience where she could include her older children and help them get used to the idea of having another sibling. Shelley had one son and two daughters at the time of pregnancy so she was particularly concerned about whether or not she could reuse the baby items she had for her daughters, or if she had to purchase new “boy” items (her son was 11 at the time and she had already gotten rid of much of his baby items).

Shelley’s three older children were present in the room during her 3D ultrasound, though her husband was not. He is a long haul truck driver and was on the road at the time. Being a family of five (soon to be six) meant that Shelley and her husband were conscious of their finances. She described “budgeting” for a 3D ultrasound, primarily for the sake of her older children. She did, however, criticize the practice as being “very commercial” and “very expensive” which she described as “slightly ridiculous”. She positioned herself as being a savvy consumer because she “didn’t buy into” the “upselling” that she felt was typical of the non-medical ultrasound business.

Shelley seemed very comfortable with the experience of pregnancy, and felt that there was not much that could surprise her about the experience. Although she received confirmation of the sex of her baby, she suggested that she “already knew” she was having a girl, because she had “a hunch”. She was pleased with how the ultrasound had functioned to help her older kids feel more connected to her pregnancy and more at ease with the idea of having another sibling. After the ultrasound she explained that her kids wanted to name the baby and began speaking about her as a person, rather than an “it”.

11 Appendix B: Recruitment Advertisements

Are you pregnant and considering 3D ultrasound?

If so, I am interested in talking to you about this issue. I am a PhD student at the University of Western Ontario currently conducting a research study which looks at the reasons why women visit 3D ultrasound clinics and their experiences with 3D ultrasound. Your participation in the study will involve a a one on one interview of (approx. 45mins-1 hour in length with me at a location of your choice.

If you are interested in participating or would like more information, please contact Jennifer at REDACTED

This project has received Research Ethics Approval from the University of Western Ontario and is supported by the Social Sciences and Humanities Research Council. It is supervised by Dr. Susan Knabe, Assistant Professor at the University of Western Ontario (REDACTED)

Did you receive a 3D ultrasound during your pregnancy?

If so, I am interested in talking to you about this issue. I am a PhD student at the University of Western Ontario currently conducting a research study which looks at the reasons why women visit 3D ultrasound clinics and their experiences with 3D ultrasound. Your participation in the study will involve a a one on one interview of (approx. 45mins-1 hour in length with me at a location of your choice.

If you are interested in participating or would like more information, please contact Jennifer at REDACTED

This project has received Research Ethics Approval from the University of Western Ontario and is supported by the Social Sciences and Humanities Research Council. It is supervised by Dr. Susan Knabe, Assistant Professor at the University of Western Ontario (REDACTED)

ARE YOU PREGNANT?

Are you considering 3D
ultrasound?

If so, you are invited to participate in a research study being conducted at the University of Western Ontario!

If you are interested in being interviewed about your plans for and experience of 3D ultrasound, or would like more information, please contact:

Jennifer Chisholm

PhD Candidate

HAVE YOU HAD A 3D PRENATAL ULTRASOUND?

If so, you are invited to participate in a research study being conducted at the University of Western Ontario!

If you are interested in being interviewed about your plans for and experience of 3D ultrasound, or would like more information, please contact:

Jennifer Chisholm

PhD Candidate:

12 Appendix C: Information Letter

“Women’s Experiences with 3D Prenatal Ultrasound” Participant Letter of Information

DESCRIPTION: You are invited to participate in a research study on 3D ultrasound imaging. This project focuses on women’s experiences with commercial 3D ultrasounds. This research is being conducted by PhD candidate, Jennifer Chisholm.

PURPOSE: The aim of the research is to gain a greater understanding of why women choose to visit commercial 3D ultrasound clinics and how women experience ultrasound in a non-medical setting.

YOUR PARTICIPATION: You will be asked to participate in an interview with the primary researcher, Jennifer Chisholm. The interview will last between 45 minutes - 1 hour and take place in a location of your choice. Questions will focus on why you chose to visit a 3D ultrasound clinic, and what your experience was like. You will be asked for permission for the interview to be audio recorded. Only the primary researcher and lead investigator for this project will have access to interview tapes or data.

You will also be asked to complete a short demographic survey at the end of the interview. The survey will seek basic background information and include questions about your age, marital status, and level of education.

TIME INVOLVEMENT: Your participation will take approximately one hour. The interview will take place at a location of your choosing (the researcher is happy to arrange a location on The University of Western Ontario campus, should you prefer a formal research setting).

RISKS AND BENEFITS: Participation in this research is low-risk. If at any point you feel uncomfortable or sad in relation to the questions being asked and your current or previous

experiences, please let me know and I will stop the interview. The benefit of participating in this project is the opportunity to speak about your experience with 3D prenatal ultrasound.

PAYMENT: You will not be compensated for your participation in this research study.

CONFIDENTIALITY: All interview data will be kept confidential. All interview participants will be assigned a pseudonym and referred to only by their assigned pseudonym in all transcripts and analyses. Typed transcripts will be kept on a password protected computer or in a locked cabinet at all times. Only the primary researcher will have access to this data.

PARTICIPANT'S RIGHTS: Participation in this study is voluntary. **You may refuse to participate, refuse to answer any questions or withdraw from the study at any time.** The results of this research study may be presented at academic conferences or published in scholarly journals. All names will be changed for the purpose of participant anonymity.

CONTACT INFORMATION:

Questions: If you have any questions, concerns or complaints about this research, its procedures, risks and benefits, please contact the Lead Investigator for this project, Dr, Susan Knabe. Dr. Knabe's full contact information appears at the end of this information letter as well as on your consent form.

Dr. Susan Knabe

Assistant Professor, Women's Studies and Feminist Research and the Faculty of Media and Information Studies, The University of Western Ontario

OR

Jennifer Chisholm

PhD Candidate

Women's Studies and Feminist Research

The University of Western Ontario

OR

The Office of Research Ethics, The University of Western Ontario

13 Appendix D: Consent Forms

The University of Western Ontario
“Women’s Experiences with 3D Prenatal Ultrasound”
Research Participant Consent Form

DESCRIPTION: You are invited to participate in a research study on 3D ultrasound imaging. This project focuses on women’s experiences with commercial 3D ultrasounds. This research project has been approved by the Research Ethics Board of The University of Western Ontario as part of a PhD dissertation in Women’s Studies and Feminist Research.

PURPOSE: The aim of the research is to gain a greater understanding of why women choose to visit commercial 3D ultrasound clinics and how women experience ultrasound in a non-medical setting.

YOUR PARTICIPATION: You will be asked to participate in an interview with the primary researcher, Jennifer Chisholm. The interview will last between 45 minutes - 1 hour and take place in a location of your choice. Questions will focus on why you are choosing to visit a 3D ultrasound clinic, and what your expectations of the ultrasound are. You will be asked for consent to audio record the interview. Only the primary researcher and lead investigator for this project will have access to interview tapes or data.

You will also be asked to complete a short demographic survey at the end of the interview. The survey will seek basic background information and include questions about your age, marital status, and level of education.

Lastly, you will be asked if you would consider allowing the primary researcher (Jennifer Chisholm) to observe your non-medical ultrasound session. Observation includes allowing Ms. Chisholm to be present in the room during your ultrasound and to take notes. Should you indicate that you would consider allowing your ultrasound to be observed, you will provided

with a separate, consent form outlining the purpose of observation in greater detail. Your participation in the interview portion of this research is **not** dependent on your willingness to allow observation. There is no penalty for refusing.

TIME INVOLVEMENT: Your participation will take approximately one hour. The interview will take place at a location of your choosing (the researcher is happy to arrange a location on The University of Western Ontario campus, should you prefer a formal research setting).

RISKS AND BENEFITS: Participation in this research presents no significant risk to the individual. The benefit of participating in this project is the opportunity to speak about your experience with 3D prenatal ultrasound.

PAYMENT: Participation in this research is voluntary and thus no payment is offered.

PARTICIPANT'S RIGHTS: If you have read this form and have decided to participate in this project, please understand that your participation is **voluntary** and **you have the right to withdraw your consent or discontinue participation at any time** without penalty. You have the right to refuse to answer particular questions. The results of this research study may be presented at academic conferences or published in scholarly journals. All names will be changed for the purpose of participant anonymity.

CONTACT INFORMATION:

Questions: If you have any questions, concerns or complaints about this research, its procedures, risks and benefits, please contact the Lead Investigator for this project, Dr, Susan Knabe. Dr. Knabe's full contact information appears at the end of this consent form.

CONSENT: Please initial the following:

I give consent to participate in this study.

_____Yes _____No

I give consent for my interview to be audio recorded.

_____Yes _____No

I would consider allowing the primary researcher to observe my non-medical ultrasound session. (If answered "yes" you will provided with a separate consent form detailing the procedure for observation)

_____Yes _____No

The extra copy of this consent form is for you to keep.

PARTICIPANT SIGNATURE_____

DATE _____

Further Questions or Inquiries about this project may be directed to:

Dr. Susan Knabe

Assistant Professor, Women's Studies and Feminist Research and the Faculty of Media and Information Studies, The University of Western Ontario

OR

Jennifer Chisholm

PhD Candidate, Women's Studies and Feminist Research, The University of Western Ontario

The University of Western Ontario
"Women's Experiences with 3D Prenatal Ultrasound"
Research Participant Consent Form

DESCRIPTION: You are invited to participate in a research study on 3D ultrasound imaging. This project focuses on women's experiences with commercial 3D ultrasounds. This research project has been approved by the Research Ethics Board of The University of Western Ontario as part of a PhD dissertation in Women's Studies and Feminist Research.

PURPOSE: The aim of the research is to gain a greater understanding of why women choose to visit commercial 3D ultrasound clinics and how women experience ultrasound in a non-medical setting.

YOUR PARTICIPATION: You will be asked to participate in an interview with the primary researcher, Jennifer Chisholm. The interview will last between 45 minutes - 1 hour and take place in a location of your choice. Questions will focus on why you chose to visit a 3D ultrasound clinic, and what your experience was like. You will be asked for permission for the interview to be audio recorded. Only the primary researcher and lead investigator for this project will have access to interview tapes or data.

You will also be asked to complete a short demographic survey at the end of the interview. The survey will seek basic background information and include questions about your age, marital status, and level of education.

TIME INVOLVEMENT: Your participation will take approximately one hour. The interview will take place at a location of your choosing (the researcher is happy to arrange a location on The University of Western Ontario campus, should you prefer a formal research setting).

RISKS AND BENEFITS: Participation in this research presents no significant risk to the individual. The benefit of participating in this project is the opportunity to speak about your experience with 3D prenatal ultrasound.

PAYMENT: Participation in this research is voluntary and thus no payment is offered.

PARTICIPANT'S RIGHTS: If you have read this form and have decided to participate in this project, please understand that your participation is **voluntary** and **you have the right to withdraw your consent or discontinue participation at any time** without penalty. You have the right to refuse to answer particular questions. The results of this research study may be presented at academic conferences or published in scholarly journals. All names will be changed for the purpose of participant anonymity.

CONTACT INFORMATION:

Questions: If you have any questions, concerns or complaints about this research, its procedures, risks and benefits, please contact the Lead Investigator for this project, Dr, Susan Knabe. Dr. Knabe's full contact information appears at the end of this consent form.

CONSENT: Please initial the following:

I give consent to participate in this study.

_____Yes _____No

I give consent for my interview to be audio recorded.

_____Yes _____No

The extra copy of this consent form is for you to keep.

PARTICIPANT SIGNATURE_____

DATE_____

Further Questions or Inquiries about this project may be directed to:

Dr. Susan Knabe
Assistant Professor, Women's Studies and Feminist Research and the Faculty of Media and Information Studies, The University of Western Ontario

OR

Jennifer Chisholm
PhD Candidate

The University of Western Ontario
"Women's Experiences with 3D Prenatal Ultrasound"
Research Participant Consent Form

DESCRIPTION: You are invited to participate in a research study on 3D ultrasound imaging. This project focuses on women's experiences with commercial 3D ultrasounds. This research project has been approved by the Research Ethics Board of The University of Western Ontario as part of a PhD dissertation in Women's Studies and Feminist Research.

PURPOSE: The aim of the research is to gain a greater understanding of why women choose to visit commercial 3D ultrasound clinics and how women experience ultrasound in a non-medical setting.

YOUR PARTICIPATION: You are being asked to allow the primary researcher for this project, Jennifer Chisholm, to observe your 3D ultrasound session. Observation involves Jennifer being present in the room when you receive your 3D ultrasound and writing notes (with pen and paper, not laptop or tablet). Jennifer will observe the ultrasound and the social interactions that take place in the room. You have the right to ask Jennifer to leave at any time or to discontinue your participation at any time during the ultrasound.

TIME INVOLVEMENT: Your participation will take approximately one hour, or the length of the ultrasound session.

RISKS AND BENEFITS: Participation in this research presents no significant risk to the individual. The benefit of participating in this project is to help provide useful information about the experience of 3D ultrasound.

PAYMENT: Participation in this research is voluntary and thus no payment is offered.

PARTICIPANT'S RIGHTS: If you have read this form and have decided to participate in this project, please understand that your participation is **voluntary** and **you have the right to withdraw your consent or discontinue participation at any time** without penalty. You have the right to refuse to answer particular questions. The results of this research study may be presented at academic conferences or published in scholarly journals. All names will be changed for the purpose of participant anonymity.

CONTACT INFORMATION:

Questions: If you have any questions, concerns or complaints about this research, its procedures, risks and benefits, please contact the Lead Investigator for this project, Dr, Susan Knabe. Dr. Kanbe's full contact information appears at the end of this consent form.

CONSENT: Please initial the following:

I give consent to participate in this study.

_____Yes _____No

I give consent for Jennifer Chisholm to observe my 3D ultrasound session.

_____Yes _____No

The extra copy of this consent form is for you to keep.

PARTICIPANT SIGNATURE_____

DATE_____

Further Questions or Inquiries about this project may be directed to:

Dr. Susan Knabe

Assistant Professor, Women's Studies and Feminist Research and the Faculty of Media and Information Studies, The University of Western Ontario

OR

Jennifer Chisholm

PhD Candidate, Women's Studies and Feminist Research, The University of Western Ontario

Curriculum Vitae

Name: Jennifer Chisholm

Post-secondary Education and Degrees: Acadia University
Wolfville, Nova Scotia, Canada
2002-2007 B.A.Honours in Sociology and Women's and Gender Studies

Acadia University
Wolfville, Nova Scotia, Canada
2007-2008 M.A. in Sociology

The University of Western Ontario
London, Ontario, Canada
2009-2015 Ph.D.

Honours and Awards: Social Science and Humanities Research Council (SSHRC)
Doctoral Fellowship
2012-2013

Ontario Graduate Scholarship
2012-2013 (declined)

Related Work Experience Instructor
The University of Western Ontario
2011-2015

Teaching Assistant
The University of Western Ontario
2009-2014

Publications:

Chisholm, J. (2011). *A Moot Point: Discussion and Debate in the Arts and Humanities Classroom*. Teaching Innovations Project Journal. Vol.1(2).

Chisholm, J. (2011). *For Keeps-Sake: The Fetal Image Industry and the Prenatal Commodity*. International Journal of the Image. Vol. 1(3). Pgs. 175-186.