

**EXPLORING CHILDBIRTH OUTCOMES:
AN ANALYSIS OF THE INTERACTIONAL COMPONENTS OF
PREGNANCY, LABOR, AND BIRTH**

By
Tanya N. Cook

A dissertation submitted in partial fulfillment of
the requirements of the degree of

Doctor of Philosophy
(Sociology)

At the
UNIVERSITY OF WISCONSIN-MADISON
2013

Date of final oral examination: 8/01/2013

Dissertation Committee Members:

Joan H. Fujimura, Professor, Sociology (advisor)

Douglas W. Maynard, Professor, Sociology

Cecilia E. Ford Professor, Sociology and English

Claire L. Wendland, Associate Professor, Anthropology

Barbara J. Bowers Associate Dean and Professor, School of Nursing

**EXPLORING CHILDBIRTH OUTCOMES:
AN ANALYSIS OF THE INTERACTIONAL COMPONENTS OF PREGNANCY, LABOR, AND
BIRTH**

Tanya N. Cook

Under the supervision of Professor Joan H. Fujimura

At the University of Wisconsin-Madison

Abstract: Cesarean birth reached an all-time high of 32.9% in the US in 2010. In the context of a rapid increase in the rate of cesarean birth over the past 16 years, this dissertation explores how *interactions* affect mothers' experiences of prenatal care, labor, and birth outcomes. Three types of interactions pertinent to expecting mothers are the focus of this research: 1) Interactions between mothers, birth professionals, and labor monitoring technologies (Electronic Fetal Monitoring), 2) Decision-making interactions between mothers and providers about planned type of birth, and 3) Patient and provider communication during prenatal visits. I interviewed 27 mothers pre and post-birth in addition to observing prenatal visit interactions between mothers and birth professionals. This research shows how sociocultural phenomena, such as patient-provider communication about risk, affect childbirth outcomes including delivery type and mothers' experiences of labor and birth. Chapter One explores how Electronic Fetal Monitoring enables high-risk women to birth vaginally but may constrain laboring women in low-risk categories. In Chapter Two, I explore mothers' decision making about Vaginal Birth After Cesarean (VBAC) and repeat cesarean. I identify how assumptions about "bodily failure" affected their choices. Half of the women I spoke with who experienced a previous cesarean framed their difficult labor in terms that assumed their bodies had failed them and would do so again. These notions of bodily failure were co-constructed with providers. Finally, Chapter Three elaborates a spectrum of prenatal visit interactions from Checklist to Coaching Session that are more or less enabling of maternal autonomy. This dissertation contributes to the sociology of childbirth and reproduction literature as well as to science and technology studies and medical sociology more broadly. The combination of data derived from interviews with mothers and providers, observations of prenatal visits, and participation in training courses for nurses and midwives enabled a unique study in the sociology of childbirth.

TABLE OF CONTENTS

ABSTRACT.....	i
TABLE OF CONTENTS.....	ii
PREFACE AND DEDICATION.....	iv
Introduction: Exploring Childbirth Outcomes.....	1
Problematizing Cesarean.....	1
Towards a Symbolic Interactionist Perspective of Childbirth.....	20
Participants by Birth Type and Outcome.....	23
Overview of Chapters.....	26
Acknowledgements.....	29
List of Acronyms.....	30
Chapter 1: Hooked Up: How Electronic Fetal Monitoring Affects Maternal Agency and Autonomy.....	31
Introduction.....	32
Contextualizing EFM Use.....	37
How EFM Use Could Enable Maternal Agency.....	54
EFM Use and Birth Professional-Mother Interaction.....	60
Conclusion.....	62
Chapter 2: Choosing Cesarean: How Assumptions about Bodily Failure Affect Mothers' Decisions About Vaginal Birth After Cesarean.....	65
Introduction.....	66
Communicating Risk.....	74
VBAC and Beliefs about Bodily Failure.....	80
Conclusion.....	91
Chapter 3: Checklist versus Coaching Session: Prenatal Visit Interaction Patterns and Maternal Autonomy.....	93
Introduction.....	94
Data and Methods.....	96
Constraining Maternal Autonomy Through Checklist Prenatal Visits.....	105
The Coaching Session Model: Enabling Maternal Autonomy.....	117

Maternal Resistance.....	127
Conclusion.....	133
Chapter 4: Exploring Mothers' Relational Autonomy as a Childbirth "Outcome".....	135
Redefining Outcomes.....	136
References.....	144

Preface

I found out four weeks before my third child was due that he was breech. My doctor attended my previous births, which were very low intervention, and some told me to request as close to a midwife-attended birth as possible in a hospital. My doctor was very aware of the value I placed on spontaneous vaginal birth. After an ultrasound confirmed my son's breech position, however, her interaction pattern immediately changed. Now I was in a different category and no longer her responsibility. This was the same provider who patiently navigated a ten page birth plan with me during my first pregnancy. I had to ask about the possibility of cephalic version or attempting to turn the baby into a head-down position prior to birth; my doctor did not offer it. I only knew about this possibility because I had already begun preliminary research for this project. I was shocked when my doctor told me “External cephalic version usually doesn't work and it hurts! I would just schedule the cesarean if I were you.”

I opted to try the external cephalic version. Two weeks before my estimated due date, the obstetrician and a resident attempted to turn my son into a head-down position while continuously monitoring his heart rate. The version was performed in the hospital and I had to be prepared for an emergency cesarean if something went wrong during the version such as the umbilical cord wrapping around my son's neck. I realized later the resident was encouraged to try because they did so few versions it was an opportunity for her to practice a technique she had only read about. My son's body was gently pushed into a lateral position that, while not as painful as labor contractions, was very uncomfortable for me. From this lateral position instead of completing a turn into a head-down position, however, he would shift back into breech. On the third attempt his heart rate decelerated marginally and the doctor stopped the procedure. After the obstetrician and resident left the room, the nurse began unhooking the monitors and preparing us for discharge. As she chatted with my husband and me, this nurse expressed that she thought the doctor should not have let the resident attempt the version and that they had not “tried hard enough” to turn my

son. She had been a labor and delivery nurse for over 30 years and had experienced the transition from vaginal breech to cesarean breech birth first-hand. In her opinion, cesarean section was overused as a way to deal with more complicated births.

While I wished that things had gone differently with the version, I was out of options. My only “choice” at this point was to attempt a vaginal breech birth at home or schedule a cesarean. Having birthed two large babies without epidurals (8 pounds 13 ounces and 9 pounds 6 ounces), I was confident in my ability to achieve a vaginal breech birth, but I was not comfortable with the risks associated with a breech home birth. My oldest daughter (born vaginally with minimal intervention) had respiratory distress shortly after birth and had to be hospitalized for 5 days in the neonatal intensive care unit. The fact that I felt had *no choice* in the matter was the most frustrating part. We scheduled the cesarean for the following week.

As I lay in my hospital bed after the surgery, groggy from the spinal anesthesia wearing off, I knew what I was missing. With my daughters I was able to hold them immediately and put them to the breast. I felt a rush of adrenaline post-birth. By the time my son was given to me, I could barely hold his tiny bundled body. I felt numb not only from the waist down but emotionally. That night, I took my son from the layette and put him in bed next to me. As I stared down at him, I felt relief and gratitude for this healthy baby and that we had made it through the surgery. But I was also grateful that I had experienced this difficult birth because it cemented my decision to study childbirth.

While lowering the overall rate of cesarean is probably a positive thing because it lowers risks for complications and maternal mortality, I do not assume hospital birth or cesareans are inherently bad for women. There are labors in which cesareans save lives. Given what I just stated about my assumptions, I

do not pretend objectivity. I want what I perceive as being in the best interest of birthing women and their children. But I don't think we achieve the most positive research by assuming women are unthinking cultural dopes, hopeless victims of obstetric patriarchy, or perfectly autonomous rational decision makers for that matter. Instead, I hope this research will demonstrate how the choices mothers make for cesarean or vaginal birth are situated and constructed. I also hope to explore how—during pregnancy, labor, and birth—boundaries between birthing mother, fetus, and electronic apparatuses are negotiated and constructed. This construction of subject and object is what we do not get through quantitative studies of demographic data or interviews of midwives and OBGYNs. Different parties draw the risk acceptability line in different places, depending on their positions and on the situation. In the situation of cesarean, we need to understand who is focusing on whose interest, what the stakes in each situation are, and how birth recommendations and decisions are made within these different parameters.

Dedication

I dedicate this dissertation to my mother, Cynthia Sprick O'Donahoe, for sparking my fascination with childbirth by allowing me to play “doula” at age 11 while she birthed my brother. I also dedicate this dissertation to the memory of my mother-in-law, Debbie Ledo, who inspired me by sharing Iroquois origin stories about Skywoman who birthed a daughter who in turn gave birth to the people of Turtle Island (Earth). Finally, I dedicate this work to all of the amazing, intelligent, and strong women who shared their stories with me.

Introduction: Exploring Childbirth Outcomes

This dissertation explores how *interactions* among participants affect mothers' experiences of prenatal care, labor, and birth outcomes. Three types of interactions pertinent to expecting mothers are the focus of this research: 1) Interactions between mothers, birth professionals, and labor monitoring technologies (Electronic Fetal Monitoring), 2) Decision-making interactions between mothers and providers about planned type of birth, and 3) Patient and provider communication during prenatal visits. The goal of studying these interactions was to understand the complex processes through which mothers make decisions about birth. This research shows how sociocultural phenomena, such as patient-provider communication about risk, affect childbirth outcomes including delivery type and mothers' experiences of labor and birth. This dissertation contributes to the sociology of childbirth and reproduction literature as well as to science and technology studies and medical sociology more broadly. The combination of data derived from interviews with mothers and providers, observations of prenatal visits, and participation in training courses for nurses and midwives enabled a unique study in the sociology of childbirth.

I begin with a review of sociological and medical literature on childbirth and follow with a description of the research design and data. I then summarize the three interrelated empirical chapters.

Problematizing Cesarean

In 2009 the percentage of children born in the U.S. via cesarean section reached an all time high of 32.9% (Martin et al 2012). Rates of cesarean section birth had declined in the mid to late 1990s, in response to the vaginal birth after cesarean (hereafter VBAC) movement that challenged the notion "once a cesarean, always a cesarean." Beginning in 2000 however, rates of primary and repeat cesarean have increased across all age and ethnic groups. Non-Hispanic black women had the highest rate of cesarean at 35.5% in

2010. Non-Hispanic white women had the next highest rate of 32.6%; Hispanic women had a 31.8% rate of cesarean (Martin et al 2012). By comparison, in 1970, the overall cesarean rate was about 6%.

Cesarean section delivery is now the most commonly performed major surgery in the U.S. However, there is little evidence to suggest that the increase in cesarean section delivery has reduced maternal and infant mortality. Furthermore, there are more negative health consequences for mothers and infants from cesarean versus spontaneous vaginal birth. Mothers who deliver via planned cesarean versus planned vaginal birth are 2.3 times more likely to be re-hospitalized in the 30 days following the birth for infection and complications with the incision (Declercq et al 2007). Other studies suggest a link between cesarean delivery and the increased likelihood a child will suffer allergies and asthma (Hampton 2008) and the decreased likelihood a mother will breastfeed (Perez-Escamilla, Maulen-Radovan and Dewey 1996). Cesarean has also been associated with increased rates post-partum depression in some studies but not in others (Bland – see <http://clearinghouse.missouriwestern.edu/manuscripts/59.php>). Cesarean deliveries are also *more costly* than vaginal births; cesarean delivery now averages \$27,866 versus \$18,329 for a vaginal birth (Eugene Declercq for CNN - <http://www.cnn.com/2013/07/09/opinion/declercq-childbirth-costs/index.html>). In a nation currently struggling to reduce health care costs, reducing the rate of cesarean birth would seem advantageous. There are high-risk birth situations in which cesareans save lives, but of particular concern for public health scholars is the growing rate of cesareans for low-risk mothers without a medical indication (MacDorman et al 2008b). One study found a 69% higher risk of neonatal mortality when comparing planned vaginal to cesarean deliveries without labor complications (MacDorman et al 2008b).

Given the negative infant and maternal health outcomes and the higher costs of a 32.9% cesarean rate, why does the cesarean section rate continue to increase? Studies of cesarean section in the United States fail to adequately explain the rise in rates. Cesarean delivery as a public health issue is intermixed with

issues of gender, race/ethnicity, authority, and public understanding of risk. As public health scholar Robert Wood Johnson-funded Health Policy Investigator Eugene Declercq has argued, we need to focus on the interaction between birthing women and their providers (MacDorman et al 2008, Gamble et al 2007). As MacDorman et al (2008: 304) state: “*A more detailed examination is needed...of the nature of the interaction between mothers and their obstetric care providers in decision making about the method of delivery.*” Perhaps due to fear of malpractice suits, doctors unintentionally fail to inform women of alternatives to cesarean. However, a recent study by Sakala, Yang, and Corry (2013) challenges the notion that fears of being sued drive obstetrics practice. The authors argue that because far more women and babies suffer birth-related injury than sue, the idea that providers adjust practices because they fear lawsuits is unfounded (Sakala, Yang, and Corry 2013). Although these statistics may not prevent the fear of suit, they do show that the evidence does not favor cesarean over vaginal birth methods. Thus, we need more information about the processes of decision-making about birthing choices. For example, how are doctors constrained in their decision making about delivery options based on institutional policies, such as certain hospitals having a no VBAC policy? How does the reality of maternal/fetal complications such as a breech presentation affect decision-making? My dissertation research speaks to this gap in childbirth research.

Possible Causal Explanations of Cesarean Rate Increase

Other studies have attempted to explain the increase in cesarean birth rates as the result of other associated variables including advanced maternal age, mother’s overall health, a reduction in the rate of VBAC, and a larger percentage of women requesting cesarean birth. A closer examination of the data reveals that many of these associations do not sufficiently explain the increase in the primary cesarean rate over the last decade.

Because increases in maternal age and body weight correlate with an increased cesarean section rate, scholars have attempted to determine whether or not a causal relationship exists between advanced maternal age and cesarean and between maternal obesity and cesarean. Based on a study of 512 women giving birth in 2006 in the UK, Naftalin and Paterson-Brown (2008) found a statistically significant relationship between obesity and cesarean section. Obese first-time mothers were found to be more than 5 times more likely to have a cesarean than non-obese first-time mothers (Naftalin and Paterson-Brown, 2008). Maternal age was not found to be significant as a predictor of cesarean in this study. The authors suggest obese patients may be more likely to experience a cesarean because their overall lack of conditioning results in a woman's uterus being unable to contract enough during labor. They also relate that obese patients may suffer from "...the deposition of adipose tissue along the birth canal impeding the fetal passage (Naftalin and Paterson-Brown 2008: 397)."

But might doctors' own personal beliefs about obese women's ability to labor be just as influential in determining birth outcome? Turning to the US, while it is true that overall Americans are getting heavier, rates of cesarean are rising across demographic groups, not only in obese women (MacDorman et al 2008). Furthermore, comparing increases in rates of obesity among Americans and rates of cesarean section birth over the past 10-15 years shows that the rate of cesarean does not necessarily increase at the same rate over the same period of time as the rate of obesity. The rate of obesity has climbed steadily, increasing approximately 1% per year from 1995 to 2006 from 15% to 26% (MacDorman et al 2008). Over the same time period, however, cesarean rates rose at a slower pace in the late 90s from approximately 18% in 1995 to 21% in 2000. From 2000, however, when the overall cesarean rate was 21%, the cesarean section rate rose 10% in six years, reflecting a more rapid increase in the rate of

cesarean than in the rate of maternal obesity. If the rise in cesarean section rates were mostly due to advancing maternal age and obesity, one would see associated steady growth in cesarean section rates over time as we have seen in rates of obesity.

Key to understanding the apparently dramatic increase in the rate of cesarean after the year 2000, is the American College of Obstetrician and Gynecologists' (ACOG) 1999 recommendation that women attempting a VBAC (vaginal birth after cesarean) have the ability to deliver surgically, that is via cesarean, "immediately available (Roberts et al 2007)" if attempting a trial labor. As Roberts et al (2007) show in their study of hospitals in four states between 2003 and 2005, this policy had the consequence of limiting access to VBAC delivery because smaller hospitals were unable to have the recommended surgeons and anesthesiologists readily available for the duration of an attempted VBAC labor and delivery. Some hospitals shifted policy on VBAC, instead opting for scheduled cesareans as a way to manage risk and scarce personnel resources. Women who sought VBAC, then, had to travel greater distances to find a hospital that would support VBAC. This policy shift has led to a return to the guideline "once a cesarean, always a cesarean" for more and more women.

In July 2010, responding to recommendations from a panel on VBAC convened by the NIH in March, ACOG revised its 1999 statement with the intention of increasing access to VBAC (<http://www.nytimes.com/2010/07/22/health/22birth.html?scp=4&sq=vbac&st=cse>). For women in low risk conditions and fewer than two prior cesareans, VBAC may not involve more risk than cesarean, say the new guidelines. The language that surgical and anesthesia care be "immediately available" for emergency delivery remains in the revised guidelines, however, leading some childbirth advocates to speculate that the policy change may not correspond to an increase in VBAC. The rate of VBACs peaked

in 1996 at 28.3% but declined dramatically to approximately 8-9% nationally in 2006 (NVSS 2009). Reductions in the rate of VBAC, however, are not sufficient to explain the rise in overall cesarean section rates. Primary cesareans, cesareans for women who have not had a previous cesarean, declined between 1989 and 1996 but rose after 1996 to a high of 23.5% in 2006. In a research article describing cesarean rates in the US, Zhang et al (2010) found that in induced births half of all cesareans may have been performed too early (before 6cm cervical dilation). Zhang et al (2010) argue that reducing the cesarean rate is dependent on reducing primary cesarean. It may also depend on reducing the rate of induction, as the authors found that cesarean rate was twice as high for women who experienced induced versus spontaneous labor (Zhang et al, 2010).

Some have argued that increases in the rate of primary cesarean are due to the trend of maternally requested cesarean that is considered not medically necessary. I will refer to these as CDMRs (Cesarean Delivery based on Maternal Request). Some studies, however, have found as few as 1 in 1600 women saying they prefer a cesarean delivery without a medical indication (Declercq et al 2006). In a critical literature review of articles documenting CDMRs, Gamble et al (2007) argued that much of the inflation in the rate of women requesting cesareans was the result of decision making done in a specific context heavily influenced by provider suggestion, lack of informed consent about the safety of cesarean birth, and a mis-categorization of the reason for some cesareans as maternally requested when they could have been listed as medically indicated. The authors (Gamble et al 2007) conclude that more studies need to be done to determine why women and their providers are continuing to turn to cesarean delivery. Specifically, they state that "*Studies involving observation of interactions between women and their caregivers would yield results about the process of care* (Gamble et al 2007: 338)."

Beckett (2005) reaches a somewhat similar conclusion after examining the debate over CDMR (elective cesarean) through the lenses of the alternative birth movement and feminist perspectives. Arguing that the alternative birth movement tends to over-generalize women's birth experiences and unquestioningly champion "natural" birth, Beckett (2005) also points out that feminist approaches may assume women who chose cesarean are suffering from false consciousness. While Beckett (2005) acknowledges that we cannot assume women who choose cesarean are cultural dopes (Garfinkel 1967), we also cannot fail to examine social and cultural forces that may enable and constrain decisions about childbirth. Instead, Beckett (2005) states, "The situations in which women make these choices therefore require analysis and critique (Beckett 2005: 269)."

In addition to examining the context of the situations in which women are making decisions about childbirth, this study also explores how technological innovations influence mothers' decision making. The development of electronic fetal monitoring and its routine use in labor management, along with increasing reliance on cesarean as a management tool for risky birth situations has dramatically altered the decision-making context for both birth professionals and expecting mothers. I explore the effect of Electronic Fetal Monitoring on maternal agency and autonomy in Chapter 1.

Increasingly cesarean section is being used in a prophylactic sense to manage risk to the fetus. Medical professionals turn to cesarean, which is *presented as* an alternative with low risk to mother and even less risk to fetus, as a way to manage other risks. Cesarean is the go-to intervention for formerly vaginal births with higher risk such as breech, which may have previously been assisted with forceps or vacuum extraction. Birth data continue to show a downward trend in forceps and vacuum-assisted delivery. Vacuum and forceps were used in only 3.62% of all births in 2010 (Martin et al 2012). By comparison, in

1996 vacuum extraction was used in just under 8% of all births. The use of vacuum extraction had risen from 1990-1996 as it replaced forceps use which has steadily declined since 1990 (about 6.5% of births) (Martin et al 2012). The decline in vacuum use, like the decline in VBAC, is associated with a rise in cesarean over the same time period (1996-2010).

Some studies have suggested that the increase in the use of cesarean perpetuates a cycle where cesarean becomes the dominant risk-management tool for difficult labors and other methods are lost, which in turn leads to more cesarean (Block 2007). In the case of a breech presentation, in the past medical professionals would attempt to turn the baby into a head down position prior to delivery (external cephalic version), or attempt a vaginal breech delivery with the use of forceps. With the increase in cesarean as a treatment for breech delivery, however, the likelihood that a new doctor will learn the external cephalic version technique is reduced. A birthing mother who is carrying a breech baby is faced with the difficult decision to attempt a somewhat painful procedure which may not work and carries a small amount of risk, or the option of scheduling a "safe" cesarean. Cesarean, however, is not without risk. Although the surgery has become much safer over the last 30 years, risks to the mother include: bladder injury, abdominal pain, intrauterine infection, uterine rupture, blood transfusion, risk of subsequent pregnancy ending in stillbirth, and death (Baxter 2007). *Whether or not women agree to cesarean delivery in the context of full disclosure or informed consent about these risks* is another issue raised in the literature (Baxter 2007, Bergeron, 2007). For children born via cesarean, the risk of asthma and allergy increases, suggesting a link between the mode of delivery and immune system response (Hampton 2008). Cesarean delivery is also much more expensive than vaginal birth as mentioned previously. A 2009 survey of 2800 hospitals nationwide by the International Cesarean Awareness Network (ICAN), however, indicated that up to 30% of hospitals nationwide have similar prohibitions with an additional 20% of hospitals reporting they had no current doctors on staff who would accept a VBAC patient (<http://www.ican-online.org/>).

Childbirth in the 20th Century: Shifting Paradigms, Changing Practices

The latest policy shift by ACOG on VBAC in 2010 is but one example of the constant negotiation around guidelines for best practices. Looking at the history of childbirth over the past century reveals how interested parties interacted with one another, often in the context of new technological developments, to redefine childbirth practices in the 20th century. A review of this history provides information to help gauge how rapidly dramatic change can happen with respect to childbirth practices and how that change in the past has been the result of interaction between consumer demand (driven by expecting mothers) and the professionalization/legitimation of obstetrics as a field of medicine.

Early 1900s through 1950

In 1900, childbirth practices in the US were already in the midst of what would be a dramatic change. In the 18th and 19th centuries in the US, women gave birth in their homes surrounded by almost always female birth attendants of their choosing. Maternal and infant mortality rates were high during this period and one in thirty women in the early 19th century died as a result of childbirth or complications resulting from childbirth (Leavitt 1986). In this context, middle and upper-class women began to invite mostly male physicians to attend them in their homes. They did this in hopes of making the childbirth experience safer for themselves and their offspring. Although obstetrics was not yet a specialty area available for most physicians at this time, some doctors had begun to take on obstetrics cases. They used technology and education to distinguish themselves from neighbor lay midwives and even trained midwives (Leavitt 1986; Borst 1995). Only physicians had access to two technological developments that women and doctors believed would help to increase the chances of a favorable labor outcome: drugs and delivery instruments (forceps) (Leavitt 1986). At first, general practice physicians and then later obstetricians re-defined birth as their exclusive sphere of authoritative knowledge. They established educational

institutions and professional associations that mobilized to increase this sphere of influence. According to them, lay midwives and even school-trained midwives simply lacked education and an "...appreciation of the fundamental knowledge of nature that the new scientific medical training instilled (Borst 1995: 90)." Midwives were not able to control the production and professionalization of their claimed field of expertise in an America that increasingly associated "physician" with "scientific expert." Furthermore, midwifery largely died out when the American-born daughters of immigrant midwives did not replace their mothers (Borst 1995). Doctors and communities, however, continued to rely on midwives to serve certain populations well into the 20th century, for example, rural African Americans in the south. As Borst (1995) and others argue, however, the rise of doctors and the decline of midwives need to be placed within a context that includes attention to the role of class, gender, and culture.

As long as birth was an event that happened primarily in the private sphere of women's homes, Leavitt (1986) argues that the woman giving birth largely retained control over where she would give birth, who would attend her, and what technological interventions would be employed. This changed, however, with what Leavitt (1986: 195) labels the "most important transition in childbirth history," the move from birth in the home to birth in the hospital. By the mid-twentieth century, women had been both pushed and pulled into the hospital. Increasing specialization of obstetricians and a belief that maternal and infant mortality could be reduced within a standardized, institutional antiseptic environment pulled women into the hospital. Hospitals were marketed to women of means as safer places to birth and providing a more pleasant experience in terms of labor (drugs were available) and post-delivery care (a vacation from household duties) (Leavitt 1986). Women were pushed into the hospital by increasing urbanization and mobility and also the continuing trend of women calling on male physicians for home birth. Women no longer had the social support networks for a woman-attended home birth experience that had been available to them only fifty years previously (Leavitt 1986). Thus, although demographic shifts and changes in professionalization influenced the rise of obstetrics and the move to the hospital, both Borst

(1995) and Leavitt (1986) also emphasize the importance of how these changes occurred within the ideological context of an increasing cultural emphasis on science and technology and the belief that they could improve life for Americans.

Mid- to Late 1900s: Responses to the Medical-Technical Model of Hospital Birth

The shift to hospital-based, obstetrician-attended birth did correlate with improved, lowered rates of both maternal and infant mortality (However, these rates remain disproportionately high among minority and lower SES groups). Women giving birth, however, traded increased safety for loss of control over their labor and delivery experiences. Women giving birth between the 1950s and 1980s were routinely subjected to standardized obstetrical practices including: generalized anesthesia, pubic area shaving, episiotomy, enema, IV, labor-inducing drugs, vaginal exams, fetal monitoring, moving from labor to delivery room, and delivery in the lithotomy (or flat on one's back with feet spread and raised in stirrups) position (Davis-Floyd 1992). Furthermore, women's significant others or family members were often excluded from the delivery room and women had to undergo separation from the newborn immediately after birth in which the newborn was taken to a nursery for observation. In reaction to these practices, alternative models of birth and their associated movements gained popularity in the 1960s and 1970s.

Alternative models of birth are many and varied. I will include under the general term alternative models: the natural birth movement, the home birth movement, the holistic model of birth (Davis-Floyd 1992), as well as the Lamaze and Bradley methods and models suggested by famous birth advocates such as Ina Mae Gaskin and Michael Odent. These alternatives represent variations along a continuum. Some, like the Lamaze method, are more technique that incorporates breathing and relaxation as a pain management tool. Others, like the home birth movement, represent a radically different view of birth than the hospital-based paradigm. What all of these have in common, be they methods or movements, however, is the fact that they present philosophical alternatives to what has been called the biomedical or

technocratic model of birth (what I call hospital-based or medical/technical model.) Some of the less radical alternatives, such as Lamaze, mesh well with the medical/technical model.

Generally, alternative birth models take as a point of departure the viewpoint of obstetrics that sees pregnancy as a pathological condition and birth as something that must be managed. Instead, for the majority of women, pregnancy, labor, and birth are natural processes that require little intervention to proceed safely. The mother and fetus are seen as one and connected, so that what is good and empowering for the mother is good for the child (Davis-Floyd 1992). In this view, pain during labor is viewed as normal and acceptable, and women should be surrounded by family and friends and in a place (the home) they are comfortable as environment affects the birth. No time limits are placed on the duration of labor, and the midwife/attendant is viewed as a guide who assists the mother to birth the child versus the doctor who manages and “produces” the baby. More specifically, women began to demand a more personalized birth experience in the 1970s. Middle-class, educated women began to turn to midwife-attended home birth as an alternative (Mathews and Zadak 1991). Natural childbirth, as a movement, gained power by linking with the feminist and consumer movements. Women wanted more control and decision-making power (Mathews and Zadak 1991). Threatened by an increase in birth centers and home births as an alternative to hospitals, hospitals attempted to provide more home-like settings for birth and to de-routinize some interventions such as enemas, shaving, episiotomy, and moving from labor to delivery room (Mathews and Zadak 1991). More recently, home birth movement participants and midwives have been advocating for state licensing of lay midwives, or midwives who are not certified nurse midwives (Beckett and Hoffman 2005). Many of the analyses of alternative birth movements and paradigms emphasize that the movements’ ideologies arose out of contention with the dominant technocratic model (Davis-Floyd 1992, Mathews and Zadak 1991, O'Connor 1993). Beckett and Hoffman (2005) go a step further and argue that in the dominant model's attempt to secure legal dominance, their hegemony has been effectively challenged by home birth advocates. Historical works

such as Borst's (1995) and Leavitt's (1986) also underscore the importance of cultural and ideological elements.

Cultural/Ideological Elements and Childbirth Practices

Snow and Benford (1998) highlight the importance of frame resonance or a fit between the way issues are framed and a participant's lived reality. Frames are also more resonant when they align with existing cultural narratives. Given the attention scholars of birthing have paid to the importance of ideology and culture and given Snow and Benford's (1988) emphasis on the importance of frame resonance for movement mobilization, how do these cultural elements and their framing constrain and enable the success of alternative birth movements? Starting with frame analysis, I explore how both the medical-technical and alternative birth models have attempted to utilize ideological elements to influence the behavior of individuals. These insights into the importance of examining how movements link specific interpretive frames to larger ideological elements shed light on the successes and failures of alternative birth movements. However, framing as analytical lens breaks down when we look at the interactions of stakeholders and the role of technology. Cultural or ideological explanations ignore the role of technology and the importance of the interaction between mother and birth professional. Further, they tend to portray the expecting mother as a cultural dope, passively deferring to the recommendations of authority figures. My dissertation research speaks to these shortcomings of framing as an analytical approach with respect to childbirth.

In their work on frame resonance, Snow and Benford (1988) conceptualize ideological factors to include values, beliefs, and meanings. Snow and Benford (1988) emphasize that movements produce meaning as well as transmit it. Frame alignment (Snow et al 1986) occurs when social movement actors link individual interpretations with those of the organization (464). Frames make events meaningful for participants. Interests, values, and beliefs held by the individual, the social movement, and society are

seen as existing in a systemic way that can be used to mobilize individuals (Snow et al 1986). Frame alignment includes: frame bridging, or linking two ideological elements: frame amplification, or clarifying a frame; frame extension, or extending the frame beyond the boundaries of the movement; and frame transformation, where new values are created (Snow et al 1986, 467). In some ways the alternative birth movement has successfully deployed frame bridging, such as in the case of the Lamaze breathing method to manage the pain of contractions. Many hospitals now offer childbirth preparation courses for expecting parents that incorporate such elements. Frame resonance, on the other hand, refers to cases when social movements successfully link their frames with individual frames in a way that is meaningful for the individual and encourages action (Snow and Benford 1988). But what makes this linking or what Snow and Benford (1988) call frame alignment, successful or not? Snow and Benford (1988) argue that the success of framing efforts depends on the structure of the larger belief system that the frame is trying to align with as well as on the extent to which the frame is relevant to the life world of the participants. A failure to make home birth movement frames resonate with expecting mothers may partially explain why this movement has not been as successful at moving birth out of the hospital.

In *Birth as an American Rite of Passage*, Davis-Floyd (1992) argues that the medicalized model of childbirth common in the US is no less ritualized or symbolic because of its supposed rationality. Instead, Davis-Floyd (1992) analyzes birth as a rite of passage that re-creates society literally and culturally by transmitting key cultural values. New members are produced and women are re-produced as mothers through the socialization process of their birth experience. Davis-Floyd's (1992) analysis moves beyond various stakeholders simply being more successful at mobilizing and bridging frames. Although birth challenges the technocratic model's emphasis on the importance of technology's dominance over nature and its view of society, ritualization and standardization of the childbirth experience through hospital birth serves to legitimate patriarchy (Davis-Floyd 1992). Under the medical/technocratic model, women's biology is seen as pathological and birth is an involuntary process that a woman's anatomy "does."

Martin (1987) argues that this model views a woman as a worker producing a product (baby) with her machine (uterus) and being managed by a doctor (146). Women are thus alienated from both the product of their labor, their child, and from the process of producing the product, the birth. Casper's (1998) work on the developing field of fetal surgery also shows how medical professionals decontextualize the fetus by removing the mother from view in training materials. They do this in order to construct the fetus as an acceptable work object distinct from the mother (Casper 1998). As Casper (1998: 18) states: "Fetal subjectivities, like other social categories, are produced within social interactions rather than being endowed by nature-although materiality may be significant as we shall see." Women who experience cesarean deliveries speak most strongly about this alienation/separation. They mourn a loss of control over the process of birth and feel disconnected from the product – their child (Martin 1987, 79). Furthering the production/consumption metaphor, Taylor (2000) argues that prenatal technologies increase the commodification of fetuses. Women are the alienated unskilled workers whose production is increasingly subjected to the quality control of ultrasound and other prenatal diagnostic technologies. Parenting is defined as a commodity the child consumes, and women are encouraged to see their consumption as the way to act effectively on behalf of the next generation. The problem with this is that larger social and economic structures that reinforce a gendered division of labor within and outside of the home are not challenged (Taylor 2000).

Alternative birth movements are successful or not depending on how well they engage the broader ideological/cultural elements described above including the value of technology and science, the view of the body as a factory, and the rhetoric of consumer rights. Alternative birth movements have been most successful, for example when they do not challenge the cultural values of science and technology but rather work within this frame. Beckett and Hoffman (2005) relate how home birth advocates effectively challenge hegemony when they stress that lay midwives are competent and comfortable with some technological interventions including oxygen, drugs, IV and suturing equipment. Furthermore, home

birth advocates cite epidemiological (scientific) evidence that supports their claims that birth should not be viewed as a medical emergency but as a normal process. Thus, home birth advocates uphold science as a cultural value and the value that birth should be as safe as possible for both mother and fetus. What these advocates do challenge is the view that birth should be a medicalized event that is the exclusive domain of a class of professionals. Advocates have lobbied successfully for lay midwife licensure based on framing it as a traditional profession (Beckett and Hoffman 2005). Also, they have challenged dominant concepts of professionalization by simultaneously arguing that lay midwives are autonomous providers with a specific area of expertise and by re-framing the established medical community's opposition as amounting to a "turf war." Legislators were especially concerned that physicians were acting to prohibit lay midwife licensing based on their economic interests rather than on real evidence that proved hospital birth was safer (Beckett and Hoffman 2005). But the most effective frame alignment occurred when home birth advocates linked licensure of lay midwives with the rights of a pregnant woman as a consumer to choose the kind of birth experience she wanted. As one legislator related: "...the midwives have data and justification to back up their feelings and...As long as those are presented to the consumer...that's their choice. I mean some of us take herbs for colds and some of us take flu shots (Beckett and Hoffman 2005)."

Mathews and Zadak (1991) also show how alternative birth movements emphasized consumer choice in order to motivate hospitals to change procedures. Organizations developed in the 1970s, like the International Childbirth Education Association and the American Society for Psychoprophylaxis in Obstetrics, advocated for changes in what had been seen as routine hospital procedures (Mathews and Zadak 1991, 44). When educated women began looking for alternatives, hospitals responded by allowing husbands/partners/labor support people to attend deliveries and by developing more home-like birthing centers within maternity wards. Stand-alone birthing centers opening around the country also put pressure on hospitals to respond to consumer demand. 80% of US hospitals with maternity care had

single room care (labor and delivery in same room) available by 1987 (Mathews and Zadak 1991). The American College of Nurse Midwives and the American Public Health Association endorsed free-standing birth centers and established proposed guidelines for their use and screening out “at risk” cases. The American College of Obstetricians and Gynecologists and the American Academy of Pediatrics, however, issued a statement supporting hospitals as the only safe place for labor and delivery in 1983 (Mathews and Zadak 1991). The established institutions have been threatened by changing consumer demands and the fact that stand-alone birth centers can often provide the same services for half of the cost of an OB-attended hospital birth. Thus, not only is a small population taking birth back to the home, insurance companies may view certified nurse midwife-attended deliveries and deliveries in birth centers as effective cost-reduction strategies.

As several authors (Martin 1987; Davis-Floyd 1992; Mathews and Zadak 1991) point out however, alternative birth options are usually most available for well-educated middle class women. These women educate themselves about their birth options and advocate for the choices they want (Mathews and Zadak 1991). As Davis-Floyd's (1992) research also suggests, most of these women find their birth philosophies somewhere in between the continuum of technocratic and holistic approaches to birth. They want control but also believe in the safety and security science and technology supposedly provide. But less well-educated and minority women may not have these options. Additionally, women whose pregnancies have been identified as high risk will be more constrained with their birth choices. Women may also be constrained by economic factors including whether they have insurance or not and just what type of birth experience the insurance will cover.

Alternative birth movement advocates have been most successful when they have been able to bridge frames between the goals of their movement and consumer rights and feminist movement goals. They have made their frames resonate (Snow and Benford 1988) by identifying the problem – lack of choice

and positive birth experience – and proposing a solution – opting out of hospital birth all together or refusing to consume hospital services until compromises are achieved. These movements have also been effective at what Snow et al (1986, 470) label “belief amplification.” They have convinced proponents that this is a serious problem and identified a target for their blame and critique – the established medical community. Furthermore, as Beckett and Hoffman's (2005) analysis shows, they have been most effective when they are able to argue against the medical community/for the licensure of lay midwives from within the dominant, accepted frames. Advocates stress that they believe in larger cultural values of science and technology and their roles in a safer birth experience. They successfully delegitimize opponents' attempts to exclude them by employing frames of individual choice and frame the opposition as primarily motivated by their economic interests. Beckett and Hoffman (2005) also argue, however, that this mobilization did not occur in a vacuum. Rather, it was largely motivated by attempts on the part of the dominant medical community to make lay midwifery illegal. This point is not necessarily counter to what Snow et al (1986) and Snow and Benford (1988) claim about mobilization, but it does expand the picture. When faced with legal harassment, alternative birth advocates mobilized and strategically employed dominant frames to their advantage. They also avoided linking their movement, in this case, with the feminist concept of choice as related to abortion rights (Beckett and Hoffman 2005). Beckett and Hoffman (2005) argue that the example of mobilization in this case, challenges static notions of structure and culture as separate and theories of hegemony as fixed. Rather, they attempt to show how the movement generates new cultural meanings and understandings through their strategic use of framing (Beckett and Hoffman 2005).

Framing Can't Explain Everything

Framing is a useful concept for understanding many of the successes achieved by alternative birth movement activists. It may be less useful, however, in explaining movement failures. As much as birth practices have changed over the last thirty or forty years, home birth and “natural” birth with few medical

interventions remain a small minority of all births in the US. A majority of women (68%) now opt for an epidural and birth without some form of anesthetic is virtually unheard of. Stories of home birth gone wrong undermine the efforts of advocates and contribute to legislative efforts to make home birth illegal. If alternative birth experiences are safer and more empowering for women as advocates claim, why do so few American women seek out these options? If the goal is to understand how women understand risk and make decisions about childbirth options, we cannot take for granted the assumptions of either the medical-technical or alternative birth movements.

Martin's (1987) and Davis-Floyd's (1992) interview data point to the cultural dominance of the technocratic model of birth. According to these authors, women buy into the legitimacy of medicalized birth and the authority of obstetricians. They value science and technology and believe they provide the safest options for birth. Women want personal choice, but sometimes that means choosing pain medication and cesarean sections over more "natural" alternatives. Birth is painful and difficult, and some women view elective C-sections as the ultimate feminist control over nature and their biology, rather than as succumbing to the power of a patriarchal medical system. Indeed, much of the move to the physician-attended birth and hospital birth in the earlier part of the century was influenced by feminist women who believed in the ability of technology to liberate them from their biology. Bottle-feeding, anesthetized labor, and hospital stays were seen by some as freeing them from what had been defined as biological necessity of their sex (Davis-Floyd 1992). Some birth methods, such as Lamaze, fit well within hospital routines because they emphasized the mother's help during labor without calling for a dramatic restructuring of hospital routines or a return to home birth. Other methods, like the Bradley method did not convert many women because it simultaneously argued against all intervention and emphasized the ultimate role and responsibility of woman as mother (Davis-Floyd 1992). Retracing this history sheds light on how expecting mothers are enabled and constrained by their socialization within a larger social context dominated by the medical technical model of childbirth (Davis-Floyd 1992). Yet, it

also shows that women have successfully used frames from both the medical technical and alternative birth movements in order to achieve their own goals.

But it is not only whether or not an individual woman believes more in the technocratic or holistic philosophy of birth that will determine her experience. As Leavitt (1986) pointed out, when birth moved to the hospital, women no longer had the social networks of home birth available to them. Although this is changing, many women do not know that home birth is a true option. Also, insurance and economic issues may rule out certain birth alternatives. Many insurance companies will only cover physician-attended hospital births. Birth centers in Colorado, for example, have many restrictions on the types of birth services they offer, including a no VBAC policy. Although home birth may be a less costly option, depending on insurance coverage, if a company agrees to cover all of the costs of a hospital birth versus none of the costs of a home birth, this may influence a woman's decision. Given the rise of family-friendly birth centers in hospitals, also, laboring at home, especially if a woman has other children, may not sound as attractive as laboring in the hospital. Finally, the dominant medical community has been able to continue to perpetuate the cultural understanding of birth as something inherently risky that requires medical intervention and supervision. Women in the U.S. place trust in doctors and other medical professionals and believe they are acting in their patient's best interests.

Towards a Symbolic Interactionist Perspective of Childbirth

Understanding how both the medical technical and alternative birth models have used frames to achieve legitimacy or achieve practical change (such as baby rooming-in with mother), is crucial for examining interactions between expecting mothers and their birth professionals. By knowing which frames have been successful (or not) we gain insights into which decision heuristics are guiding each stakeholder as well as how change has been facilitated. Framing allow us some insight into how people interpret and ascribe meaning to objects and actions. Framing, however, gives insufficient attention to how both the

meaning of social objects (for example, the frames themselves) and individual selves are constructed through the action of talking. Similar to childbirth studies that focus on demographic population level changes (such as advancing maternal age or increasing maternal obesity) or the purported increase in demand for CDMR, looking only at the success or failure of frames fails to account for individual agency within interactional contexts. A symbolic interactionist perspective allows for the agency of mothers while acknowledging the influence of context and values on her understanding of information given by her provider (Blumer 1969, Strauss 1978, Becker, Geer, Hughes and Strauss 1961). If there is an interpretive space in the individual mind between information/stimulus and decision/reaction then perhaps there is a parallel space at the level of interaction between people in which both individual selves and broader socio-cultural values and meanings (frames) are (re) constructed. In this way, mothers as actors make and interpret the meaning of their own experiences of pregnancy and birth in a context heavily constrained by expectations to minimize risk to the fetus but simultaneously enabled by values of individual rights to choose treatment and have that choice be an informed decision. Like patients, providers, as social beings, also come preloaded with values and assumptions. Providers, though, are also steeped in the knowledge, values, and understandings of their scientific training. What we are missing from a framing approach and other analyses trying to explain a rise in cesarean, though, is the crucible (of social action) where influential meaning is made and interpreted – interactions between patients and providers.

Following Heritage and Maynard (2006) I see conversations between patients and providers as meaning-making negotiations that have very practical outcomes. In interactions with providers, how do mothers understand and interpret what providers are telling them about their pregnancies? How do mothers and providers together make decisions that affect how babies are born; how are these decisions enabled and constrained by broader values and authoritative knowledge (Jordan 1997)? How does experiencing pregnancy and birth alter a woman's concept of self (Chapter 2)? Is it possible for expecting mothers to

exercise agency and autonomy with respect to making decisions about childbirth (Mackenzie and Stoljar 2000; Chapter 3)? In what ways might pregnancy and childbirth be made more empowering for mothers? These are some of the issues this dissertation seeks to explore. Similar to the ways some approaches in science studies want to problematize "...science and society [as]...the things to be explained, not the explanations" (Fujimura 1996: 241), I want to refocus on and re-problematize the outcomes of childbirth research. By "outcomes" I mean the proportion of babies born via cesarean, the dominance of the medicalized form of childbirth, the success or failure of alternative childbirth movements, and the ability of expecting mothers to act autonomously, or free from coercion. I want to understand how those outcomes are challenged, accepted, resisted, or in other words – achieved.

Data and Methods:

Expecting Mothers Sample/Method Details:

Between August of 2011 and November of 2012, I interviewed 27 expecting mothers at least twice: once before the birth of their child and once within four months post birth. I first interviewed mothers in their second and third trimesters of pregnancy when their pregnancies were anywhere between 16 and 39 weeks along. I conducted follow up interviews with most mothers within 8 weeks of the birth of their child. I interviewed four mothers more than 8 weeks after the birth of their child due to scheduling conflicts and labor and birth complications. Each of the interview sessions lasted between 45 and 90 minutes with the follow up interviews typically being shorter than initial interviews. I interviewed mothers at a public location of their choosing, typically a local coffee shop.

I did not explicitly ask about participants' racial or ethnic backgrounds. One mother self-identified as Asian American; one self-identified as Jewish; and one mother mentioned that she had emigrated from South Africa. All mothers were in committed heterosexual relationships with the father of their child and

all but one were married. Two mothers resided near a large city in Wisconsin and the remaining 25 lived in the Denver-Boulder metro area of Colorado at the time of the interviews. Mothers were between 26 and 39 years old at the time of the initial interview with the median age of 33, modal age of 33, and the mean age of 32.7 years. Thus, women in my sample were older than the average age of 25.4 years for first-time mothers in the U.S. Seven mothers were expecting their first child, fifteen their second child, four their third child, and one mother was expecting her fourth child.

I did not ask specifically about individual or household income level. Instead, I asked mothers about their post-secondary educational attainment and current employment status as indicators of general socioeconomic status. Nine mothers were employed in full-time (more than 35 hours per week) occupations. Mothers who worked full-time worked as teachers, dentists, scientists, corporate trainers, public health workers, and health care workers. Thirteen mothers were employed in part-time occupations (between 10 and 30 hours per week). Examples of part-time careers included specialized teaching positions, museum workers, nurse's aides, massage therapists, food service positions, office/clerical support workers, direct sales representatives, and librarians. The remaining five mothers identified as stay-at-home moms and generally did no paid work outside of the home. All of the mothers in my sample had some post-secondary education. Most had a bachelor's degree and many had master's or professional degrees.

I interviewed five birth professionals over the same time period. Two of the birth professionals were second and third year OB residents at family practice clinics in Wisconsin. I also interviewed an OBGYN doctor at one of the clinics in Wisconsin with approximately 30 years of experience in the field. The final two birth professionals I spoke with were doulas who shared a practice in Denver, Colorado. My family relocated to Denver at the end of 2010 which made recruitment of birth professionals more difficult because I had to "cold call" clinics instead of relying on established institutional arrangements between

the university and the family practice clinics. Although I attempted (for about 12 months) to recruit midwives and OBGYNs in Denver, I was unsuccessful in birth professional recruitment in Denver, with the exception of the doulas mentioned previously.

Interviews were digitally recorded and transcribed for analysis. After line by line coding of selected interviews, I also used Nvivo for subsequent coding. In addition to interviews with 27 mothers and 5 birth professionals, I was able to observe four prenatal visits. I recorded hand-written field notes at these visits but did not record them per IRB restrictions. I analyze the patient-provider interactions I observed at these visits in Chapter 3.

Recruitment:

Wisconsin: I recruited mothers through local family practice clinics. I posted flyers in the waiting room area of two clinics. Additionally, I prepared consent to contact forms and mailed them to mothers in their second or third trimester of pregnancy as identified by the clinic staff (per IRB instructions). This recruitment method was largely unsuccessful resulting in the return of only five out of approximately 50 mailed forms. Out of the five women who responded, I successfully contacted and enrolled two as participants.

Colorado: Per an IRB Change of Protocol filed in January of 2012, I recruited expecting mothers in Colorado via flyers posted in public places. After the change of protocol, I was also able to add a \$25 gift card as an incentive for participants who completed two interviews. I also circulated the basic study and contact information through doula email networks. The majority of participants responded to the request via email versus telephone. I gave further study information upon request and established plans for an initial meeting most commonly through email communication. The proportion of women who were successfully recruited in this manner was much higher than the method used in Wisconsin and is

estimated to be 75-80% of those who initially emailed or called about the study. Once initial interviews began, I also used snowball sampling to recruit additional participants. After meeting me and making sure I was not a scam artist, expecting mothers would often email forward my study and contact information to other mothers who would then independently contact me. I also attempted to sample by intended birth type category. I wanted to speak with women who were in each of the following categories: planned vaginal hospital birth (with or without pain medication), planned vaginal home birth, planned cesarean, and planned Vaginal Birth After Cesarean (VBAC). After conducting several interviews I realized I had not spoken to enough women in the planned cesarean, home birth, or VBAC categories. As a part of snowball sampling, then, I asked women if they might pass along my study information to women who were intending these types of births. I did not find any women to interview who were planning a cesarean without a medical indication – the elusive Cesarean Delivery by Maternal Request (CDMR), also sometimes called “Too Posh to Push” in the U.K. One mother I interviewed, however, mentioned that the trend of CDMR was on the rise in Vail, Colorado. She had been told by a doula that women often scheduled their cesareans along with a tummy tuck and sometimes breast augmentation. I was unable to verify this information about the rate of cesarean in Vail, but the notion of so-called “designer births” would make an interesting topic for future research.

Participants by Intended/Planned Birth Type:

	Planned Vaginal Hospital/Birth Center Birth	Planned Vaginal Home Birth	Planned Cesarean	Planned VBAC	Total
Number of Participants	19 (70%)	1 (4%)	4 (15%)	3 (11%)	27 (100%)

Participants by Birth Type Outcome:

	Hospital/Birth Center Vaginal Birth	Vaginal Home Birth	Planned Cesarean Birth	Unplanned Cesarean Birth	VBAC (one planned, one unplanned)	Total
Number of Participants	16 (59%)	1 (4%)	3 (11%)	5 (19%)	2 (7%)	27 (100%)

Cesareans by Medical Indication:

	Repeat Scheduled Cesarean	Scheduled Cesarean Delivery for Twins or Multiples	Uterine Rupture	Cephalopelvic disproportion (baby's head did not fit)	Failure to Progress	Total
Number of Participants	2	1	1	1	3	8

Overview of Chapters:

In three separate but interrelated chapters I analyze human-human and human-machine interactions related to prenatal care childbirth. In the first chapter, *Hooked Up: How Electronic Fetal Monitoring Affects Maternal Agency and Autonomy*, I examine how the near ubiquitous use of Electronic Fetal Monitors during labor enables or constrains maternal agency and autonomy. EFM use for low-risk women threatens their autonomy in several ways: by privileging the status of the fetal patient, by delegitimizing (or making less valid) women's embodied experience of childbirth, and by constructing EFM data as objective science despite evidence to the contrary. In birth situations defined as high-risk, however, EFM may lead to greater maternal agency by enabling women to choose vaginal over cesarean birth. Viewing doctor-patient interactions as a co-construction in the context of an understanding that sees EFM as a social as well as technological construction may improve autonomy in childbirth. I return to the potential for interactions to be a space where women can develop relational autonomy as a skill in

chapter three.

My second chapter, *Choosing Cesarean: How Assumptions about Bodily Failure Affect Mothers' Decisions about Vaginal Birth After Cesarean*, explores maternal decision making about planning a Vaginal Birth After Cesarean (VBAC) or a scheduled repeat cesarean. Although women reported feeling unconstrained in their decisions, I identified how inexplicit assumptions about “bodily failure” affected their choices. Half of the women I spoke with who experienced a previous cesarean framed their difficult labor in terms that assumed their bodies had failed them and would do so again. Women who attempted a VBAC did not frame their bodies as causing their cesarean. Instead the women who attempted VBAC saw their prior cesarean as resulting from a unique series of events not necessarily linked to an intrinsic problem with their body. Women reported being presented with a choice of VBAC or repeat cesarean by their providers but they also reported not being given specific information about the comparative risks of each birth type. Based on interviews with mothers, doctors seemed to offer the choice of VBAC without giving women enough information to achieve informed consent.

In Chapter Three, *Checklist versus Coaching Session: Prenatal Visit Interaction Patterns and Maternal Autonomy*, I present analysis of prenatal visit interactions between expecting mothers and their doctors or midwives. I identify how interaction patterns fall along a spectrum of either more or less enabling of mothers' potential to develop the skills necessary to exercise relational autonomy. By examining types of interactions I show how decisions are made that may result in an increasing proportion of children born via surgery. I analyzed data from interviews with expecting mothers and birth professionals as well as field notes from prenatal visit observations in order to generate theoretical concepts that help to explain why the rate is increasing. In the context of constrained maternal autonomy, informed choice becomes symbolic.

Finally, in Chapter 4 *Exploring Mothers' Relational Autonomy as a Childbirth 'Outcome,'* I summarize the main results of the empirical chapters and suggest directions for future studies of childbirth and maternal autonomy.

Acknowledgements

I want to thank my advisor, Joan Fujimura, for her support, encouragement, and understanding when dealing with my many time and energy-consuming lifeworld constraints over the course of this dissertation process. Joan's generous support and advice were crucially important in enabling me to continue working on this project while facing the many challenges life threw at us including my appendicitis, my husband's two month-long medically-induced coma and hospitalization due to complications from swine flu, and my father's unexpected passing all of which occurred over a tough five month period in 2009. I also want to thank Doug Maynard, Claire Wendland, and Felix Elwert for their insightful and constructive comments on earlier versions of these chapters. Thank you to Barb Bowers for her advice and consultation on both the subject matter of this dissertation and navigation of the unfamiliar Health Sciences IRB territory. Thank you also to Barb and to Ceci Ford for agreeing to serve on this committee. I also want to thank the friends and colleagues who have made suggestions, read and commented on drafts, and even entertained my children so that I could work on this project. Special thank you to the mothers, doctors, and doulas who took time to talk with me and the clinic staff who supported my research and recruitment efforts.

Finally, I want to thank my husband, Levi Cook, and my children for their love and support.

This research was supported by funding from the Robert F. and Jean E. Holtz Center for Science and Technology Studies and from the Sociology Department through the Small Grant Award Committee.

LIST OF ACRONYMS

ACOG – The American Congress (Formerly college) of Obstetricians and Gynecologists

AWHONN – Association of Women’s Health, Obstetric, and Neonatal Nurses

BCMw – Birth Center Midwife

CDMR – Cesarean Delivery by Maternal Request (not medically indicated)

EFM – Electronic Fetal Monitoring

HBMW - Home birth Midwife

OBGYN – Obstetrician / gynecologist

TOLAC – Trial of Labor After Cesarean

VBAC – Vaginal Birth After Cesarean

Chapter 1:

Hooked Up:

How Electronic Fetal Monitoring Affects Maternal Agency and Maternal Autonomyⁱ

Abstract: In this chapter, I analyze studies conducted in several disciplines to investigate the effects of electronic fetal monitoring (EFM) during childbirth on both maternal agency and maternal autonomy. I demonstrate that EFM use for low-risk women threatens their autonomy in several ways. It privileges the status of the fetal patient; it delegitimizes women's embodied experience of childbirth, and EFM's use constructs EFM output data as objective science despite evidence to the contrary. In birth situations defined as high-risk, however, EFM may lead to greater maternal agency by enabling women to choose vaginal over cesarean birth. Viewing doctor-patient interactions as a co-construction in the context of an understanding that sees EFM as a social as well as technological construction may improve autonomy in childbirth.

Introduction

Feminist theorists have criticized the concept of autonomy as being too narrowly understood as an individual capacity to act in rational ways. Mackenzie and Stoljar (2000: 4) argue that a reworked conceptualization “relational autonomy” enables an understanding of how broader social structures affect individual action and how individuals’ social selves are constructed through interaction¹. Autonomous action is action free from coercion, force, or what Sherwin (1998: 33) labels “oppression.” Following Mackenzie and Stoljar (2000) and Sherwin (1998), in this paper I will distinguish between the narrower concept of maternal agency defined as an agent choosing from available options within a given context and the broader concept of maternal autonomyⁱⁱ viewed through a relational lens as the way social environments constrain or enable the self governance of individuals (Lothian 2008)². I analyze the literature on electronic fetal monitoring (EFM) to illustrate the ways in which the use of EFM enables or constrains maternal agency and why EFM can undermine autonomy in childbirth, despite enabling the choice of birth method in some situations.

Electronic fetal monitoring (EFM) allows medical professionals to monitor fetal heart rate (FHR) and uterine contractions during labor in order to ensure adequate fetal oxygenation. Continuous EFM use, however, is associated with a greater likelihood of cesarean birth. Studies estimate that as many as 24% of cesarean sections may be due to “fetal distress” as identified in EFM data (Cherniak and Fisher 2008). Accurate interpretation of EFM data is complicated and doctors do not always agree on which EFM data indicate a fetus in distress (Brody 2009). Thus, some doctors would advocate cesarean sections when others would not. This chapter examines the effects of routine electronic fetal monitoring (EFM) for low-

¹ The idea that social selves are constructed through interaction has been a basic sociological understanding since George Herbert Mead’s (1934) influential work. I use Mackenzie and Stoljar (2000) because they specifically address a feminist reworking of autonomy as a skill developed through interaction. The writings of symbolic interactionists including Blumer 1969 and Shibutani 2000 also inform this work.

² In Chapter 3 I further explore the concept of relational autonomy as a skill or capacity that can be developed through interaction (Mackenzie and Stoljar 2000).

risk women on maternal agency and autonomy. It argues that EFM reduces maternal agency and autonomy and increases the likelihood of cesarean section in at least four overlapping ways. It prioritizes seemingly objective machine-based information that must be interpreted by a medical expert over the embodied knowledge and lived experience of the mother and simultaneously delegitimizes her choices. It leads to a greater likelihood of a false positive indication of fetal distress, thereby leading to a greater likelihood of cesarean birth. It limits maternal mobility during labor and maternal control over her immediate bodily position, thereby removing a potential method she may use to affect the course of labor. It prioritizes the status of the fetal patient, implying that labor is inherently risky for the fetus, and prioritizes fetal oxygenation over maternal needs and actions. The use of EFM, however, does not have to imply loss of maternal agency in birth. In certain labor and birth situations deemed potentially risky for the fetus, EFM may be used to support a vaginal breech birth or a vaginal birth after cesarean by establishing adequate fetal oxygenation. By examining how the meaning of EFM use changes in specific birth contexts, I show how EFM is both a socio-technical construction, as we have learned through science and technology studies. I argue that interactions between expecting women and birth professionals co-construct EFM in ways that decrease or increase maternal agency and autonomy in childbirth. In low-risk situations, continuous use of EFM constrains the mother's right to choose health care options (Sherwin 1998). In contrast, in high-risk situations, women may choose vaginal birth, as opposed to cesarean birth, when EFM shows that the fetus is healthy and not in distress. Drawing on Sherwin's (1998, p. 36) concept of "relational autonomy" which argues that the *capacity* depends on the social context, I argue that continuous EFM use during a low-risk pregnancy implies serious constraints on the potential for maternal autonomy.

Distinguishing Maternal Agency from Maternal Autonomy

Long before a dramatic upward trend in cesarean section rates over the past 15 years, feminist scholars

have critically analyzed interventions such as EFM and cesarean as examples of the unnecessary medicalization of childbirth that limited women's autonomy in birth (Bergeron 2007, Davis-Floyd 1992, Martin 1987). Used in this sense, autonomy implies informed decision making from a range of choices (Kulka et al 2009). Informed decision making, however, is better understood as agency or the ability to choose (Sherwin 1998). Some have posited that so-called elective cesarean or "cesarean delivery on maternal request" (CDMR), is an example of increasing maternal agency because it offers women choice of birth method and control over birth time and date (Leeman and Plante 2006). Scheduling birth is also convenient for the delivering physician (Leeman and Plante 2006). Bergeron (2007), however, argues that CDMR normalizes surgical birth, implying that women cannot birth on their own and acceptance of CDMR as ethically valid serves interests not related to women's agency and well-being (Bergeron 2007: 479). Leeman and Plante (2006) also argue that normalization of CDMR and eliminating the choice of vaginal birth for women facing breech or twin birth limits the ability of women to choose vaginal birth.

Alternative birth movements such as the natural childbirth movement or the home birth movement attempt to return agency to the mother by educating women about the number and type of interventions to which they may be subjected in the hospital and about the implications of birthing in the home, a birth center, or a hospital. Women are encouraged to write birth plans that specify the type of fetal heart rate monitoring done during labor by choosing between continuous EFM and intermittent auscultation³ with hand-held Doppler or fetoscope, for example. However, these movements have been largely unsuccessful at achieving ideological or demographic change in childbirth patterns (see Introduction page 24). This chapter argues that the failure has to do with the difference between efforts to improve maternal agency versus maternal autonomy. Based on my analysis of EFM literature and interviews with expecting mothers and providers, I suggest that attempting to inform women about labor and birth options is akin to

³ Auscultation – to listen to the body with a stethoscope or in the case of pregnancy, to listen to the fetal heart rate with fetoscope or hand-held Doppler directly versus recording the heart rate by machine and looking at a display.

Heberlein's (1974) concept of a "cognitive fix." Heberlein's (1974) differentiated between technical (increasing or improving technology), cognitive (changing attitudes or values), and structural fixes (changing system level or societal level processes) in order to explain why individuals claimed to value environmental goods such as clean air and water but did not take action to support these values.

Heberlein (1974) argued that in order encourage people to recycle, for example, public awareness campaigns promoting recycling alone would fail (cognitive fix) unless cities made recycling simple by developing household pick up services (structural fix). We need both cognitive and structural fixes to change individual behaviors. Heberlein (1974) is correct to problematize the gap between values and behaviors, but in order to understand mothers' decisions we also need to understand their interactions with providers. The concept of autonomy may help to explain how women make choices that are not always in their best interest and also how women could be more empowered.

Trying to increase agency (defined as choice) may not encourage more women to choose a type of birth that is more in line with their values. Improving the information and options women have access to may improve their ability to act, but it may not challenge the broader sociocultural norms that constrain the context in which the decisions are made. The majority of women in the U.S. will give birth in the hospital, and the majority (approximately 61%) will receive an epidural or spinal anesthesia (NVSR 2010). Continuous EFM use often accompanies epidural anesthesia. Improving childbirth experiences for women then involves not only improving patient provider communication about specific risk/benefit information, but it also implies respect and support for the decisions birthing women make, such as providing access to vaginal breech birth in a hospital or birth center (Kotaska 2011a). Currently most

breech babies are delivered via cesarean⁴. Few practicing providers have the necessary skills to safely attend a breech birth.

Other researchers have included notions of control over what happens to one's person and respect for birthing women's "embodied knowledge" as a legitimate source of expertise as crucial for improving maternal autonomy or self governance (Lothian 2008: 36). The concept of informed consent is related to the ethical guideline of respect for persons in *The Belmont Report* written in 1979 as a guideline for the protection of human research subjectsⁱⁱⁱ. Under this guiding principle, subjects are treated as autonomous decision makers who have the right to be informed of the risks and benefits of treatments and alternatives to suggested treatments. As Andrew Kotaska, M.D., relates in an article discussing the problems with relying on cesarean as a management tool for breech birth:

For consent to be informed a woman must first be made aware of her options, including the option of doing nothing; and the risks and benefits of each option must be discussed. She should then have the freedom to choose without prejudice, even if it is not the option recommended by the consultant (2011a, pg. 163: emphasis in the original).

However, even this expanded notion of informed decision-making, in which birth professionals must support mothers' decisions, conflates agency with autonomy. Expanded choice is not sufficient to ensure maternal autonomy. Improving opportunities for maternal agency will not effectively change the structural conditions that lead to the choices that are perceived as legitimate. Furthermore, focusing on

⁴ See http://www.babycenter.com/0_breech-birth_158.bc?page=2 for a summary of ACOG policy statement changes on vaginal breech. After a large term breech trial study in 2000, the American College of Obstetricians and Gynecologists issued a recommendation that breech babies be delivered via cesarean. After further studies called into question the validity of the term breech trial's results, ACOG issued another statement in 2006 saying that some types of breech may be safe to deliver vaginally. Finding a provider who has expertise in vaginal breech delivery, however, is very difficult.

expanding choice options or opportunities for informed consent obscures status and power differences that constrain and enable doctor patient interactions.

Contextualizing EFM Use

Routine use of EFM must be understood in the context of a rise in the rate of cesarean birth over the past 15 years. In 2009 the overall rate of cesarean birth in the U.S. reached another all-time high of 32.9 % continuing a decade-long trend of record-setting rates (NVSR 2010). By comparison, in 1970, the overall cesarean rate was about 6% of U.S. births. Several variables have been associated with this increase including advancing maternal age, an increase in primary cesareans and then repeat cesareans, and the switch to cesarean birth as standard birth method for breech and twins.⁵ There are situations in which cesareans save lives but because of the associated increased risks of maternal mortality and morbidity, public health scholars are concerned with the growing rate of cesarean for first-time low-risk mothers that do not seem to have a clear medical indication (MacDorman et al. 2008b). Some studies have found that as many as 12 to 24% of cesarean sections in the U.S. are performed because of fetal distress as identified by electronic fetal monitoring (EFM) technologies, which have been shown to display high false-positive rates (Cherniak and Fisher 2008, Zhang et al. 2010). Understanding the increase requires a deeper analysis of why technologies such as EFM continue to be used despite the lack of evidence to support their effectiveness in significantly reducing the rate of cerebral palsy (Pateman et al. 2008).

First used in 1958 at Yale University, continuous electronic fetal monitoring (EFM) was established as regular clinical practice by the 1970s. Originally intended to manage the complications of a high-risk pregnancy during labor and birth, EFM has become widely-used in low-risk labors (Sweha et al 1999). It

⁵ For a general discussion of some proposed reasons cesarean rates have increased since 1970 and why these reasons are insufficient to explain the increase please see the Introduction pgs. 8-15 and also <http://emedicine.medscape.com/article/263424-overview>.

was thought that rates of cerebral palsy could be reduced by using EFM's to identify a fetus in distress and intervening with a cesarean birth to prevent fetal hypoxia (Pateman et al 2008). However, as Pateman et al's (2008) review of studies of the use of EFM's shows, rates of cerebral palsy have not been significantly affected by use of EFM's. Furthermore, the common intermittent episodes of asphyxia that occur during labor and birth have not been shown to be associated with neurologic abnormalities such as cerebral palsy (Kripke 1999). Indeed, it has been hypothesized that labor and vaginal birth are beneficial to the fetus because they help to activate the immune system and promote post-birth respiration by reducing the amount of fluid in fetal lungs (Grivell and Dodd 2011, Neu and Rushing 2011). For children born via cesarean, especially without labor, the risk of asthma and allergy increases suggesting a link between the mode of birth and immune system response (Hampton 2008). Dominguez-Bello et al (2010) among others have established that babies born vaginally versus via cesarean have different kinds of bacteria in their systems based on mode of delivery. Other studies have established an association between cesarean delivery and a greater likelihood a child will have celiac disease (gluten intolerance) (Decker et al 2010). It will be interesting to note whether the results of this research affect cesarean rates.

Today EFM's common use in labor and birth for *low-risk* pregnancies is associated with an increased likelihood of cesarean and forceps or vacuum-assisted vaginal birth (Pateman et al. 2008). Furthermore, routine use of EFM has not resulted in improved fetal outcomes defined as fewer perinatal deaths, higher APGAR scores⁶, or fewer infants admitted to the NICU (Kripke 1999). Reliance on the fetal heart rate as an indicator of how labor is progressing and affecting the fetus is not a new concept. For the past two centuries, labor support personnel have relied on auscultation of the fetal heart rate to make assessments about the fetus's tolerance of labor and overall status (Tucker et al 2009). An introductory course in fetal

⁶ Appearance, Pulse, Grimace, Activity, Respiration = The Apgar score is represented as a number between 0 and 10 was created in 1952. It is used to assess the health status of newborns immediately after delivery. Typically fetuses who suffer inadequate oxygenation during labor will have lower APGAR scores than those who did not.

heart monitoring states: “fetal well-being cannot be assumed or confirmed without assessing the fetal heart rate (AWHONN 2011).” This course from the Association of Women’s Health, Obstetric, and Neonatal Nurses (AWHONN 2011) also stresses that listening to the fetal heart rate is only one signal that must be interpreted within the context of immediate and older clinical history, in order to ascertain how well the fetus and mother are tolerating labor and whether interventions are suggested. In contrast to this earlier practice, current practice separates the source of information about fetal well being from the context of the maternal body and prioritizes the information provided by the EFM technology.

Electronic fetal monitors work by recording fetal heart rate either externally through an ultrasound transducer strapped around the birthing woman’s abdomen or internally through an electrode screwed into the fetus’s scalp. The fetal heart rate is recorded and graphed in 10-second increments along with uterine contractions so that variability, accelerations, and decelerations in the fetal heart rate may be compared with the timing of contractions. The duration and intensity of uterine contractions are measured using either an internal intrauterine pressure catheter (IUPC), which is inserted through the cervix, or an external tocodynamometer (toco). If the toco is used, the intensity of uterine contractions must be measured via palpation. Monitoring may be done intermittently or continuously, but the American Congress of Obstetricians and Gynecologists (ACOG)⁷ recommends the establishment of a baseline reactive strip upon a woman’s entry to the hospital. Intermittent monitoring is recommended 15 minutes out of every hour for the first stage of labor and 5 minutes out of every 15 minutes for the second stage.

Continuous monitoring limits the laboring woman’s mobility, in addition to eliminating her body’s role in fetal monitoring. Limiting mobility during labor restricts maternal agency in that it limits the ability of the mother to use mobility and position changing to affect the course of labor. Use of the EFM may be

⁷ Formerly the American College of Obstetricians and Gynecologists.

psychologically reassuring or stressful for the laboring woman. Of the 27 mothers I interviewed, several reported EFM as physically constraining and psychologically distracting during labor. Others found the continuous monitoring reassuring in that they felt their baby was tolerating labor. Either way, using EFM implies that monitoring is necessary to ensure fetal safety. When birth professionals focus on machine output they often ignore the lived experience of the laboring mother. Instead of asking the mother what she is feeling or experiencing, the focus is on the monitor's display. A laboring woman who has received an epidural may also be unable to feel her contractions and may become on this machine to produce knowledge about her contractions. One mother I interviewed explained her experience with fetal monitoring after having an epidural with her first labor:

They put two belts on you: one that monitors the baby and then one that monitors your contractions. So I mean you're basically just laying [SIC] there um probably at like a 45 degree angle in bed kind of watching on the monitor what's going on. You can see – oh we're having a contraction. Oh – the baby feels it; its heart rate is going up a little bit!

Sherwin (1998) has argued that implicit in the use of the monitor is the notion that the priority of childbirth is fetal physiological well-being. She argued that traditional conceptualizations of autonomy cannot speak to the fact that women often make decisions considering the needs of others who are important to them. If we understand autonomy in a relational sense as dependent upon social context, the question for continuous EFM use during birth then becomes how does the socially embedded use of the technology impair or enable maternal autonomy?

Fetal heart rate is taken as reflecting overall fetal tissue oxygenation. The pressure of uterine contractions affects the fetal heart rate because oxygenated blood flow from the uterus to the placenta is restricted (AWHONN 2011). By monitoring fetal heart rate during labor, medical professionals seek to identify

cases of fetal tissue hypoxia, which may lead to cerebral palsy or birth asphyxia (Sweha et al. 1999). Fetal heart rate is mapped onto grid paper or monitor display along with a simultaneous display showing the duration and intensity of each contraction. The fetus's heart rate should vary over the duration of the contraction because as the uterus contracts, blood flow to the placenta is affected thereby increasing or decreasing the amount of oxygen to the fetus. The fetal body responds to the differential oxygen flow by adjusting heart rate (AWHONN 2011).

In order to affect fetal outcomes, medical professionals must accurately read and respond quickly to EFM data. EFM records are not interpreted in isolation, however, as other interventions including epidural or Pitocin (labor induction hormone) use affect fetal heart rate patterns. Labor and birth nurses must determine whether a potentially problematic deceleration in fetal heart rate was caused by cord compression or by anesthetics (AWHONN 2011). Assessing the fetal heart rate as reassuring, nonreassuring, or ominous (and requiring intervention) depends also on pre-existing maternal or fetal conditions such as pre-eclampsia or gestational diabetes. In this way the meaning of the data produced by EFM is dependent not only on the woman's personal and recent labor history but also on the communication between members of the labor and birth staff. If there is missing information, if a staff member fails to note that decelerations were occurring with vaginal exams, a subsequent staff member could interpret the decelerations as an indicator of a more ominous condition.

Although the interpretation is often problematic, the visible display of data from the EFM may be taken for granted as representative of reality by consumers (Duden 1993). From the AWHONN (2011) course: "The electronic fetal monitor is, in essence, a translator. Information is gathered that reflects fetal heart rate activity and uterine activity." Interpreting output from the EFM in the context of clinical history and preexisting conditions in order to determine if intervention is recommended is a complicated and non-

uniform process. In one study, four obstetricians agreed only 22% of the time when interpreting 50 fetal heart rate tracings. Upon re-evaluation of the tracings two months later, the same doctors changed their original interpretations on 20% of the sample (Brody 2009). Standardization of these interpretations is an ongoing problem, and new guidelines from the National Institute of Child Health and Human Development (NICHD) list three possible categories (I, II, and III) of tracings that aim to replace the ambiguity of the “nonreassuring” category. By revising these categories, it is hoped that birth professionals will have more specific information about when a cesarean birth is imminently needed and when it is appropriate to wait. Revising these categories may help to improve maternal agency by increasing the ability of women to continue with a trial of labor, if categories are more precise and more specifically tied to plans of action. However, reliance on the EFM to monitor fetal heart rate also limits maternal agency because other ways of monitoring may become obsolete when birth professionals lack the opportunity to practice them. Continued use of the EFM also more broadly restricts maternal autonomy because it implies isolation and prioritization of fetal needs while simultaneously disempowering women’s lived experience of birth (assuming that EFM data is not read in the context of labor and communicated to the mother). Also, the birthing woman may not be aware of the ambiguity of interpreting EFM data and is possibly more convinced of the need for a cesarean.

In the case of maternal obesity, external monitoring of the fetal heart rate with the ultrasound transducer may give a signal that is low quality. Also, AWHONN’s (2011) introductory EFM training course states that use of a tocodynamometer to measure the pressure of uterine contractions may not be possible for “...a woman who has a large amount of abdominal adipose tissue.” What qualifies as ‘a large amount’ seems to be specific to the individual case and a potential retrospective rationale for opting for the internal FSE (fetal spinal electrode) to monitor fetal heart rate and IUPC (intrauterine pressure catheter) to

measure the strength and duration of contractions. Thus, individual differences in anatomy affect the use of EFM and thereby the quality of the information produced.

The FSE (fetal spinal electrode) and IUPC (intrauterine pressure catheter) used for internal fetal monitoring give more accurate information about fetal heart rate and uterine contractions, if functioning properly, but their use carries implications that may affect the course of labor. For example, the FSE is inserted by means of a tiny screw into the fetus' scalp and it carries increased risk of infection. FSE and IUPC cannot be used until the bag of waters containing the amniotic fluid has ruptured⁸, and they restrict maternal movement during labor. Restricted movement, particularly lying on one's back in a supine position can decrease blood flow to the uterus which, in turn, affects fetal oxygenation; lithotomy position (lying flat on one's back) can also inhibit the strength and frequency of contractions thereby stalling labor. Cases of uterine, placental or cord perforation have occurred during the insertion of the IUPC (AWHONN 2011). One mother I interviewed about her labor and birth experiences told me that her son had been monitored internally with a fetal spinal electrode (FSE) during labor. As she explained: "After I had the epidural, they lost his heart rate again just with the belly bands (external monitoring), so they actually put a heart monitor inside...and that gave him a big hematoma on his head." She said the hematoma cleared up quickly and was unlikely to have any lasting effects. When I asked if the doctor or nurses had explained the risk of a hematoma she said they had not warned her about it.

In these ways, use of EFM cannot be understood apart from both the immediate contexts of labor and broader beliefs about birth, including the notion that fetal oxygenation must be both monitored and prioritized because labor threatens the fetus's viability. Birthing women may accept fetal monitoring in

⁸ The bag of waters can rupture spontaneously at any point during labor. Alternately, providers sometimes rupture the membranes on purpose in an attempt to induce labor or insert internal monitoring devices.

part because of strong cultural pressure to prioritize fetal needs over personal desire for a particular type of birth experience (Martin 2003, Bryant et al 2007). The mother quoted above whose son was internally monitored also described how her doctor offered reassurance about her son's heart rate decelerations while simultaneously justifying continuous monitoring as a "just in case" intervention.

As she explained:

They [doctors and nurses] just said that he probably grabbed the cord and that's probably what it was [the cause of the fetal heart rate decelerations], 'cause it was only for like a couple of seconds but it made them concerned enough that they felt like they wanted to keep a monitor on me the whole time. But she did say, you know, it's just one of those things he could have been doing it the whole time but we just happened to see it...and if we wouldn't have seen it we wouldn't have worried about it. She said it's not that big of a deal but since we saw it, we just want to make sure that everything's gonna be okay.

The Persistence of EFM

Despite 40 years of clinical use, EFM use has not significantly reduced rates of cerebral palsy (Pateman et al 2008). The failure of EFM to significantly reduce the rates of cerebral palsy relates to the reliance on fetal heart rate as an indicator of fetal hypoxia. In fact, fetal heart rate is not necessarily the best measure of fetal hypoxia, and studies suggest that as few as 10% of cerebral palsy cases are caused by events that occur during labor. The remaining 90% are most likely due to events that occur during fetal development in utero prior to labor such as random genetic mutations and infection

(<http://www.mayoclinic.com/health/cerebral-palsy/DS00302/DSECTION=causes> accessed 8-22-13,

Pateman et al 2008). The use of EFM in low-risk women has been associated with a high false-positive

rate, up to 99.8%, as a predictor of cerebral palsy (Pateman et al. 2008). As alluded to earlier, the complicating issue is isolating the underlying cause from among a multitude of variables that could affect the fetal heart rate - everything from maternal anxiety to maternal position to congenital fetal heart problem (AWHONN 2011).

EFM Use and Malpractice

Given the failure of EFM to reduce rates of cerebral palsy and its association with an increased risk of surgical intervention, why does it continue to be used in routine, low-risk labor and birth? Some critics have pointed to the fact that EFM records are admissible in court as an explanation for its prevalence. The practice of defensive medicine – ordering procedures out of fear of litigation versus ordering procedures because they are what the patient needs - has been implicated in both proliferation of EFM and the rise in the cesarean birth rate (Basset 2000, Sartwelle 2012a). Medical practitioners risk being found guilty of malpractice if any abnormality can be found on the EFM display and they failed to perform a cesarean (Block 2007, Pateman et al. 2008). Providers are likely to be sued if there is a physiological problem with the fetus that can potentially be associated with labor and birth events. When used in malpractice cases, the EFM provides what is seen as an objective record of fetal status during labor and can be argued to show that a fetus was in distress and the doctor should have ordered a cesarean (see for example <http://www.childinjurylaws.com/medical-malpractice/cerebral-palsy/delay-in-performing-c-section-costs-doctor-3-million/>). This legal precedent reinforces the belief that labor and birth are risky for the fetus. The cesarean then comes to represent the doctor's final method of protecting the fetal patient and themselves from risky vaginal birth. U.S. states with caps on medical malpractice lawsuit awards have lower rates of cesarean than states without caps suggesting an association between cesarean rate and fear of litigation (Block 2007).

Analyzing case studies of labor and birth, Basset et al (2000) identify physicians' concerns with the laboring woman's birth experience, personal commitment to using fewer interventions, responsibility to the community, and paramount concern with the status of the fetal patient as affecting their decisions about intervention. In one case, a woman's family members were pressuring the attending physician to perform a cesarean because they had been told by another doctor the woman's small pelvis would require a cesarean birth and EFM data indicated the possibility of fetal distress. The doctor saw the data as more ambiguous, however, and used the data to reassure the family that the fetus was not at risk and cesarean should be postponed. A cesarean birth did occur a few hours later when the EFM displayed some variable decelerations indicating fetal distress (Basset et al 2000). In this case, EFM data were initially used to support the doctor's decision in delaying a cesarean despite social pressure and the recommendation of a colleague. Later, however, decelerations on the EFM display were used as a reason to perform a cesarean delivery. This case shows the complexity of the interactions that occur during labor and birth between patients (mother and fetus) and physician as well as with nurses and the woman's family members.

The legal precedent for using EFM data in malpractice suits (Sartwelle 2012a) may affect the cesarean rate and surely contributes to the continued use of EFM (Sartwelle 2012a). Sartwelle (2012a) argued that the use of EFM data as evidence that a jury can examine in malpractice trials has contributed to EFM's proliferation. One mother I spoke with was very aware of the association between EFM use, increased likelihood of cesarean, and malpractice lawsuits because of her professional training as a labor and delivery nurse. As she explained: "...you're on the monitor...that means you have a higher risk of C-section because they're noticing more things that were maybe happening anyway but now they're – if they see them and they're documented at some point they have to do the C-section just to protect themselves in court." In a courtroom setting, doctors, as expert witnesses, must testify that the physician

being sued did not follow standard of care and was negligent because he or she did not intervene at the appropriate moment. When presented as evidence of malpractice, the EFM record is used to argue that cerebral palsy could have been prevented had the doctor acted (performed a cesarean) at the precise moment claimed to show fetal distress. The problem with this argument, according to Sartwelle (2012a) is establishing the causal link between oxygen deprivation during labor and fetal neurologic injury (including cerebral palsy). In most cases, the cause of neurologic injury is not known and the theory that this injury is caused by fetal oxygen deprivation dates back to 1843 (Sartwelle 2012a). Without other doctors qua experts claiming EFM records indicate fetal distress, there is no basis for lawsuit.

Doctors may point to EFM data as evidence justifying their decision to perform or delay a cesarean as described above (Bassett et al 2000). Because of the increased likelihood of EFM identifying a false positive scenario of fetal distress and the use of cesarean as the standard of care response to this problem, using EFM to protect providers against lawsuits contributes to the rising rate of cesarean. As Bassett et al. (2000: 534) conclude, in order for patterns of EFM use as defensive medicine to change “reform of medical practice to diminish defensive medicine during hospital birth is likely to require a new generation of practitioners who do not see birth as a time of high-risk for the fetus and who do not manage birth in the name of fetal health.”

Medical doctors are taught that labor is a stress on the fetus (Basset et al. 2000). As Simonds (2002) argues, the use of EFM is an attempt to ensure that labor is happening on time by comparing the frequency and duration of contractions with statistical averages. Fetal heart rate patterns must also be assessed over time to establish the category within which the pattern fits. Ensuring that babies are delivered within a certain time window also helps to regulate human resources such as staff availability.

Furthermore, EFM provides a seemingly objective data record with which to communicate technical information to members of the lay public (Bassett et al 2000). If fetal heart rate indicates decelerations that do not occur at what is deemed the appropriate time of the contraction they are labeled “late.” If late decelerations go on too long, intervention must happen.

In this way, time becomes another constraint against which the laboring woman must contend (Simonds 2002). By using time as a standard to which labor events must conform, Simonds (2002) argues that obstetrics as a discipline is able to exert seemingly objective control over women and implies a pathologization of birth. Maternal autonomy is undermined because mothers may not be able to argue for more time during labor⁹ or be able to argue that the decelerations the EFM are showing as “late” are not problematic. This has to do with the dominance of medical knowledge as authoritative (Jordan 1997). Focusing on agency alone is not sufficient to explain how time constraints discipline mothers. An individual mother’s particular embodied experience of labor and her ability to control when interventions happen are weighted against statistical average times for labor stages. When time constraints are used as justification for intervention, they threaten autonomy by prioritizing perceived fetal oxygenation needs. For example, at certain points in labor, women will be prevented from laboring in a tub or out of bed. Continuous EFM use also restricts mobility and water access for birthing women¹⁰. Instead of seeing time as a variable within which the mother is acting, time is a constraint against which she must compete (Simonds 2002). At some point if labor events are not occurring within specific time windows, interventions including cesarean birth will be strongly pushed. If a woman’s labor is expected to conform to rigid time standards, her autonomy is restricted by removal of choice. As mentioned previously, it may

⁹ Particularly concerning to birth professionals is the length of time that has elapsed since a woman’s bag of waters has broken. Once the membranes have ruptured, delivery is recommended within 24 hours in order to reduce the likelihood of maternal and fetal infection. Interestingly, cervical checks by doctors during labor are a major source of introducing contaminants into the maternal/fetal environment. <http://www.parents.com/pregnancy/giving-birth/labor-and-delivery/cervical-exams-during-labor/>

¹⁰ Several mothers I spoke with told me they requested new wireless continuous electronic fetal monitors. These monitors are waterproof and allow a greater range of maternal mobility. The problem is that the demand for these newer machines outweighs supply.

be easier to convince her of the danger of continuing to labor against time constraints. Furthermore, these time constraints are focused on protecting fetal well-being and reinforce the assumption that labor is dangerous for the fetus (Simonds 2002).

Instead of providing evidence to condemn a practitioner who did not intervene (with cesarean birth) in a situation where time standards for labor were exceeded, as explained previously, EFM records could be used to defend non-intervention if the record shows a “reassuring” or non-distressed pattern (Bassett 1996). Indeed, studies have shown that EFM data can most accurately demonstrate a lack of fetal distress. According to AWOHNN (2011): “Over several decades it has become evident that the strength in electronic fetal heart rate monitoring is in the identification of the ‘non-compromised’ or ‘well-oxygenated’ fetus during pregnancy and in the labor and birth setting.” Instead of being a precursor to cesarean birth, internal monitoring with fetal spiral electrode (FSE) intrauterine pressure catheter (IUPC) could be used to establish the fact that the fetus is tolerating labor and further intervention is not warranted at a given time.

Evidence-based practice, however, suggests intermittent auscultation of the fetal heart rate with stethoscope or hand-held Doppler is as effective at monitoring as continuous EFM and less likely to be associated with increased surgical intervention (Kripke 1999, AWHONN 2008). Duden’s (1993) explanation of the proliferation of ultrasound as a broad-based pregnancy surveillance technique may also partially explain reliance on EFM. From Duden:

Feminist critics have called attention to one more consequence of mass screening by sonar...They argue that a technique developed for the benefit of women at risk is now being advocated as a test for every pregnant woman to certify the absence of pathology. Means and ends are turned topsy-

turvy, while the diagnosis of untreatable cases has increased sharply. From a historical perspective, it is remarkable how fast the new device has atrophied the skill of palpation among physicians, a skill they took over from midwives barely two hundred years ago (1993: 76).

The cultural construction of the fetus as a patient whose needs for oxygenation must be prioritized leads to the conclusion that all fetuses must be monitored in order to be protected (Duden 1993, Casper 1998). The implication then becomes that labor is inherently risky for the fetus. This broad application of monitoring may lead to a high incidence of false positives for fetal distress identified via EFM display, as some studies have suggested, and this, in turn, may contribute to the increasing cesarean rate. In addition to the use of EFM as a defensive medical practice in service of the fetus, Duden (1993) has argued that when new technologies become standard operating procedure, older methods of assessment become obsolete not because they are no longer useful but because younger providers are no longer trained in them. Younger OB nurses are less often trained in auscultation (Kripke 1999) and staffing ratios required (1:1) to monitor a laboring woman with intermittent auscultation may prohibit the availability of this method of fetal heart rate monitoring. Although AWHONN (2011) also recommends a 1:1 nurse-patient ratio when monitoring by EFM for the second stage of labor, as Simonds (2002, p.567) points out “...electric fetal monitors may be read at a nurses’ station yards - and rooms - away from a woman’s bed.” As mentioned previously, however, EFM data must be responded to quickly in order to improve fetal oxygenation. One mother I interviewed described how monitors enabled nursing staff to monitor labor from outside of the room (she was one of a few women who was monitored with the new wireless units): “...well it’s wired from you to the telemetry unit but then it’s wireless from the telemetry unit to the big monitors on the wall...they’re still getting the data they need to keep an eye on you.”

Maternal Autonomy and Changing Practice Patterns

The human resource limitations that affect the proliferation of continuous EFM use have parallels in other areas of obstetrics practice that may contribute to the increasing cesarean rate. For example, in 1999 ACOG released new policy recommendations that effectively limited access to VBAC for many women. Because hospitals could not guarantee an on-call anesthesiologist and surgical team for every woman who wanted to attempt a VBAC, they often disallowed VBAC all together. This policy recommendation had the effect of driving up the overall cesarean rate because women who had previously had a cesarean had to have a repeat cesarean with subsequent births (Roberts 2007, MacDorman 2008). Similarly, previous methods for managing birth complications, for example, external cephalic version for a fetus in breech position¹¹, are being abandoned in favor of scheduled cesarean deliveries, due in part to lack of opportunity for residents to practice (Block 2007). During an attempted version, women are monitored using EFM and are counseled that the attempt could result in an emergency cesarean if distress is indicated on the monitor. Furthermore, even if a laboring woman wanted to attempt a vaginal breech birth she would have difficulty finding a hospital that would allow such an attempt. A birthing woman who is carrying a breech baby is faced with the difficult decision to attempt a somewhat painful procedure that may not work and carries a small amount of risk, or the option of scheduling a cesarean. Cesarean is not without risk. Although the surgery has become much safer over the last 30 years, risks to the mother include: bladder injury, abdominal pain, intrauterine infection, uterine rupture, blood transfusion, risk of subsequent pregnancy ending in stillbirth, and death (Baxter 2007). This example illustrates the difficulty in improving childbirth for women by attempting to increase agency. Even with more explicit information about risk and the option to attempt a vaginal breech while being monitored with EFM, mothers may still choose a cesarean because birth in a context in which women are socialized to prioritize another's health (Sherwin 1998). Martin's (1987) and Davis-Floyd's (1992) interview data point to the cultural dominance of the technocratic model of birth. According to these authors, women buy into the legitimacy of medicalized birth and the authority of obstetricians. They value science and technology and

¹¹ External cephalic version is a procedure in which the doctor or midwife attempts to manipulate a breech or transverse fetus into a head-down position prior to delivery.

believe they provide the safest options for birth. The women Davis-Floyd (1992) interviewed felt that EFM use was reassuring.

Obsolescence of other methods of fetal assessment affects maternal agency by limiting the options available to women during labor. Separation of maternal and fetal patient, however, threatens autonomy because it limits the maternal role in labor and birth. Instead of working with the mother and enabling her to affect change during labor - either in terms of fetal oxygenation or to help labor progress - by switching position or employing a breathing technique, for example, her uterine function is “managed” with interventions such as Pitocin. Pitocin use often produces strong contractions and is frequently given along with an epidural. The use of these interventions implicates continuous EFM. Both Pitocin and epidural affect fetal heart rate and their use is associated with a greater likelihood of instrumental or cesarean delivery (Buckley 2005)¹². Continued reliance on technology (EFM), in this instance, not only may implicate other technological dominance (cesarean), but exponentially undermine a woman’s ability to be an authority about what is happening in her own body (Duden 1993). Instead of labor support professionals working with mothers to labor and ultimately birth, labor becomes something that is managed with reference to technical information about uterine function and fetal heart rate.

Bryant et al.’s (2007) work shows how women express concern over their infants’ health when making decisions about birth method and how discourses about cesarean contribute to the belief that it is a safer option for the fetus. From Bryant et al. (2007: 1198): “...cesareans were seen to be the best choice for women who wanted to protect their babies-and who were, by consequence ‘good’ mothers.”

Furthermore, Martin’s (2003) interviews with women who had recently given birth reveal that women’s

¹² The use of Pitocin and Epidural may be caused by an unknown factor that also indicates a cesarean delivery is safer. In other words the use of these technologies is correlated with cesarean delivery but it is not known whether their use causes cesarean.

concerns about their behavior during labor and birth are related to their socialization as interactional peacekeepers. Women expressed concern over managing the effects of their behavior on others' feelings (such as their partner or medical support personnel) while in labor (Martin 2003). Martin's (2003) work suggests how the socialization of gender roles for heterosexual middle class women is visible during birth for women who are concerned with displaying polite behavior and demonstrating selflessness or feel the need to apologize when they do not do so. Perhaps women fear the loss of control of their behavior during labor and birth and subsequent sanctioning and choose CDMR as a way to conform to internalized gender role expectations. Women want personal choice, but sometimes that means choosing pain medication, EFM, and cesarean sections over more "natural" alternatives. Women may be constrained by their socialization which makes challenging existing power structures and prevailing norms difficult. As Martin (2003, p. 69) puts it these women were "...subjected to the tyranny of nice and kind."

Basset (1996) contrasts two clinical stories - one in which fetal heart rate is monitored with intermittent auscultation and the other in which it is monitored using EFM. The clinician interviewed described how when he entered one room (Basset 1996: 286): "The father and nurse were occupied with the EFM, staring at its screen and listening to loud metallic sounds as the EFM's ultrasound sensors lost contact with the fetal heart." Obtaining an accurate reading of fetal heart rate via EFM in this case was difficult as the woman's position changes affected the functioning of the machine. The EFM was the focus as the source of information about how labor was progressing. In contrast, the doctor was able to assess the second woman's (who was not hooked up to the EFM) labor by observing changes in her walking behavior keeping the focus on the mother's behavior as a gauge for labor progress (Basset 1996).

While the loss of alternate methods of labor management may be a contributor to continued reliance on EFM, birth professionals are also subject to institutional constraints including individual practice,

hospital, and professional organizational policies. Birth professionals are also influenced by cultural norms as well as disciplinary practices (standards of care) that imbue the fetus with the status of patient (Basset et al 2000, Casper 1998). Just as the use of ultrasound images outside of the medical context contribute to the construction of the fetus as a vulnerable person with a life that must be protected (Taylor 2008), the use of EFM data as a part of malpractice cases affects EFM's proliferation. When medical professionals use EFM they may do so because this is part of their disciplinary training or because patients expect it as a part of the doctor or midwife's duty to ensure positive fetal outcomes. In this case, increasing maternal autonomy would mean redefining the goal of childbirth to include values of maternal empowerment. I further explore including maternal empowerment as a goal of pregnancy and birth in Chapter 3. Cultural pressure to rationalize disappointment in cesarean birth as what was necessary to ensure fetal safety abounds (Bryant et al 2007).

How EFM Use Could Enable Maternal Agency

There is an explanation for continued use of EFM. If EFM is most effective at establishing fetal *tolerance* of labor versus fetal *distress*, use of EFM has the potential to allow women a trial of vaginal birth who may not otherwise have this option. In a presentation advocating a return to vaginal breech birth as the norm for low-risk pregnancies, Dr. Andrew Kotaska explained how EFM is used to establish adequate fetal oxygenation during a breech birth thereby avoiding a cesarean (Kotaska 2011b). By carefully watching fetal heart rate as an indicator of adequate fetal oxygenation in a non-intrauterine growth restricted fetus and working with a mother with the goal of a vaginal breech birth, Dr. Kotaska (2011b) follows a model for vaginal breech proven successful in many European contexts. A bolus of Pitocin may be given after part of the fetus (feet or buttocks) has been birthed in order to expedite emergence of the rest of the fetal body. This is done because the breech position of the fetus can cause uterine pressure changes midway through birth that stall labor. With the fetal head still inside the uterus

stalled labor during breech birth can be dangerous because of the potential lack of oxygen to the fetus depending on the degree of cord compression and placental position (Kotaska 2011b). Thus, strategic use of technological interventions can make breech birth safer for the fetus. Although cesarean for breech is an important and potentially life-saving tool in certain high-risk situations (such as a footling breech or premature fetus), avoiding a cesarean makes birth safer for women in low-risk categories (full term, frank or complete breech) who are not carrying growth-restricted fetuses. Focusing on how larger institutions use technological data illuminates the sociocultural practices that influence the meaning given to the data, which, in turn, influence the course of action taken. The problem is not use of the technology (EFM) per se that increases cesarean rate, it is what the record is taken to be indicative of coupled with the belief that by performing a cesarean in the case of fetal distress a doctor has employed every tool in her repertoire in caring for the fetal patient.

For women who want to try for a VBAC, continuous monitoring during labor is required. Continuous monitoring is considered important during an attempted VBAC because changes in fetal heart rate are often the first indicator of a uterine rupture. Although small, the risk of uterine rupture is potentially devastating for both fetal and maternal health unless the rupture is responded to quickly. Two women I interviewed wanted to attempt a VBAC but were concerned about the EFM limiting their options for movement and non-medical pain relief during labor. Both women specifically chose to birth at hospitals who promised to reserve their newer wireless monitors for VBAC clients. These newer wireless monitors enable mothers to move during labor and even enter the birthing tub.

One mother I interviewed chose to pursue certification as a birth and post-partum doula after her first child was born via emergency cesarean. EFM played an important role in affecting the course of all three of her birth experiences. She explained how when the EFM showed decelerations she was rushed in for

an emergency cesarean with little explanation. She was so upset at being told she would need a cesarean that she remembers being given fentanyl to calm her down without her consent. Based on the EFM readings during labor, the hospital had prepared to admit her baby to the neonatal intensive care unit. All were shocked when he was fine after delivery and needed no additional intervention. For her second birth, this mother chose to attempt a VBAC. Hooked up to the EFM throughout labor, this mother felt frustrated by her inability to manage her pain through movement and chose to have an epidural. Her daughter was born vaginally with vacuum assistance after 26 hours of labor. This mother specifically switched to a midwifery practice associated with a hospital for her third birth because she wanted to labor in the tub and possibly have a water birth. She felt the wireless monitoring offered at this birth center would enable her to manage labor pain without an epidural. During this labor she was made to get out of the tub, however, when the wireless monitor stopped working. She described the OBGYN attending her as far more concerned with the EFM than the midwife. Ultimately she did achieve her goal of an unmedicated vaginal birth. Interestingly, another mother I interviewed who attempted a VBAC did suffer a uterine rupture after she was given Pitocin to induce labor. Although the EFM is used during VBAC to quickly identify a uterine rupture, in this case, *the mother* first identified the rupture. She said she heard a small “pop” and told her provider “I think I just had a rupture.” Her daughter was delivered via emergency cesarean and both mother and baby suffered no long-term injuries.

Isolating the Fetal Patient

Part of the continued reliance on data obtained from continuous EFM during labor and birth stems from the construction of the fetus as a separate and distinct patient from the birthing woman (Basset 1996, Casper 1996, Duden 1993, Martin 1987). From Bassett (1996: 282) “...EFM use, in many ways, is best explained as a mechanism through which a social group works to pacify itself by displaying concern for the fetus and its future.” By assuming labor is difficult for the fetus due to the effect of contractions on the

fetal oxygenation pathway, doctors may be unconsciously constructing the mother and fetus as individuals in competition with one another (Basset 1996). Separating mother and fetus during labor and birth as distinct patients inhibits maternal autonomy by assuming a woman can affect labor only in so far as she can affect the function of her uterus. Indeed an introductory course in EFM for nurses describes the maternal-placental-fetal system as a “closed circuit” in order to illustrate that various changes may affect fetal oxygenation (AWHONN course 2011). The name of the monitor itself, which measures both uterine contractions and fetal heart rate, is evidence of the focus on the fetus despite the fact that it could accurately be called a “maternal-fetal monitor (Bassett et al. 2000, p. 530).”

Professional publications and instructional training courses in the use of EFM speak of supporting the birthing woman throughout labor and birth. Mothers, however, are often described as adversely affecting the fetus due to the relationship between fetal oxygenation and uterine contractions. “Pain management interventions such as analgesia, deep breathing exercises, and continuous labor support are some of the tools used to reduce maternal anxiety. These actions can help maximize blood flow to the placenta and the uterus (AWHONN course 2011).” The mother’s role is often described as though she were reduced to a disembodied uterus that is either functional or dysfunctional and therefore requiring pain and anxiety-managing interventions in order to facilitate optimal fetal oxygen supply. If women are not counseled in the evidence-based risks and benefits of EFM use they cannot make informed decisions about EFM and their agency is restricted. While some studies suggest that attending physicians are subject to pressure from the mother and her family members based on their interpretation of how labor is going (Basset et al 2000), less attention seems to be paid to how women themselves understand the meaning of this data that externalizes an intimate bodily experience. Does the experience of being connected to this machine make mothers feel more or less reassured about the health of their fetus during labor? Which takes priority: the health of their fetus, or any of a number of other concerns including how they are feeling during labor?

Educating women about the ambiguity of EFM data may help them advocate for greater agency with respect to choosing whether and when EFM is used. Understanding how women make decisions may additionally give clues as to improving the relational autonomy of decision making about the use of childbirth technologies. For example, with this understanding we may see how gender role socialization constrains women by leading them to prioritize fetal safety over personal risk, such as the increased risk of maternal morbidity and mortality associated with cesarean.

In an Australian study, Bryant et al (2007) suggested that based on qualitative interviews with women who had recently given birth, women ultimately felt responsible to make decisions about childbirth that minimize risk for the fetus. This was considered being a “good mother (Bryant et al. 2007).” Women did not always report feeling as though they had freedom of choice with respect to birth method, but they still felt responsible for making the decision. In this context, when presented as a technological intervention necessary to monitor the safety of the fetus, women may be more likely to accept EFM or even opt for CDMR if they believe it represents a smaller risk to the fetus than vaginal birth. Excerpts from this study and the “Listening to Mothers II Study” (Declercq et al 2006) demonstrate women doing a great deal of cognitive work about decisions that may affect their health or the health of their fetus.

Indeed, much of the move to the physician-attended birth and hospital birth in the earlier part of the century was influenced by feminist women who believed in the ability of technology to liberate them from their biology. The move to hospital birth was also affected by changing demographic patterns that reduced the availability of familial support for birthing women (Borst 1995). Bottle-feeding, anesthetized labor, and hospital stays were seen by some as freeing them from what had been defined as biological necessity of their sex (Davis-Floyd 1992). When women lack support during and after labor, they may

turn to the medicalized model including technological interventions such as epidural assuming recovery from the difficulties of labor will be easier (Fox and Worts 1999). As mentioned previously, epidural use often affects fetal heart rate patterns. Changes in fetal heart rate related to anesthesia typically resolve quickly, but those that do not may necessitate an emergency cesarean (Buckley 2005). In this case, reliance on medical management of labor and birth may be a rational reaction to an isolated postpartum situation in which the mother alone will bear primary responsibility for infant care (Fox and Worts 1999). Improving childbirth for women then would entail more than increasing the ability to act as an agent. As McLeod and Sherwin (2000, p. 260) state: "...a relational view of autonomy encourages us to understand that the best way of responding to oppression's restrictive influence on an individual's ability to act autonomously is to change the oppressive conditions of her life, not to try to make her better adapt to (or simply manage to 'overcome') those conditions privately."

Revisiting this history of childbirth moving from home to hospital shows how expecting women are enabled and constrained by their socialization in a larger cultural context within which the medical technical model of childbirth dominates (see also Introduction pg.18). When responding as consumers with rights, women have been able to affect change within the medical context. In the 1970s an uptake in home births threatened the hospital monopoly on birth location (Mathews and Zadak 1991). Women were most effective at changing hospital policy when arguing from the point of capitalist consumers who had a right to refuse to consume the product without significant change. As a result, women were fairly successful in gaining access to rooming in, partner-attended birth, and reduction in rates of routine enema and shaving of pubic hair in hospital birth (Mathews and Zadak 1991). These changes may have increased maternal agency while doing little to challenge broader beliefs, such as the belief that birth can be made safer by using technology.

EFM Use and Birth Professional-Mother Interaction

If communication between health care professionals is problematic, then, communication between health care professionals and the mother appears to be dramatically under-studied. The introductory AWHONN training course related to electronic fetal monitoring use stresses communication between health care professionals (doctors and nurses) but says disturbingly little about nurse/doctor-patient communication with mothers about EFM data. Furthermore, as Basset's (1996) study suggested, pregnancy, labor and birth do not proceed with health professionals, laboring women, and their family members operating in hermetically-sealed theaters. All of the previously listed parties have varied stakes in any given labor and birth. If interactions between these parties affects how obstetricians interpret and choose to act based on EFM and clinical data, then two under-studied areas need to be illuminated. Firstly, we need to unpack how women sometimes in concert with their family members understand the relationship between EFM data and potential risk to their fetus, as well as when and why they do or do not accept EFM and other interventions. Secondly, we need to understand how interactions between mother-fetus-birth professionals *throughout* pregnancy, labor and birth may affect birth outcomes. The meaning of EFM data is made and (re)interpreted through interaction between birth professionals. Communication of this information to the laboring woman and her subsequent interpretation of it may causally affect childbirth outcomes.

Interviews with mothers could help answer some of these questions. For example, is mother who understands her fetus to be at risk based on how information from the EFM about fetal heart rate patterns is communicated more likely to agree to end a potentially dangerous labor with a cesarean birth? Also important for future research is investigating whether the ambiguity with which medical professionals typically attempt to convey information that is less than certain induces a fear response that affects the course of labor.

Gamble et al (2007) argued that insufficient attention has been paid in the literature on cesarean section to how health professionals provide information to women. Additionally, in a survey of 277 women who had delivered via cesarean in the UK, Baxter (2007) found that only 71% of the time was the reason for the cesarean given by the woman and the doctor the same, which Baxter argued meant that communication between mothers and providers about the reasons for cesarean was ineffective. Furthermore, Baxter (2007) found significant differences in level of satisfaction between women who experienced a planned (more satisfied) versus unplanned or emergency cesarean birth (less satisfied) indicating that communication with birth professionals about the need for the cesarean affected the meaning of the surgery for these women. Given that EFM data may be one piece of evidence used in the decision to perform an emergency cesarean, understanding how this information is communicated may yield insights into improving patient satisfaction as well as how to challenge values and norms that restrict autonomy. Providers, however, must also examine both the content of their underlying assumptions and how these assumptions affect interactions with patients. As Sherwin (1998, p. 20) explains: “Most common is the tendency of health care providers to assume that by virtue of their technical expertise they are better able to judge what is in the patient’s best interest than is the patient.”

In *Communication in Medical Care*, Heritage and Maynard (2006: 1) state: “We begin from the standpoint that physician and patient - with various levels of mutual understanding, conflict, cooperation, authority and subordination jointly construct the medical visit as a real-time interactional product.”

Viewing doctor-patient interactions as a co-construction in the context of an understanding that sees EFM as a social as well as technological product may help to understand how women make their decisions and may provide hints as to how to improve their autonomy. By improving patients’ understanding about why certain interventions are recommended based on certain available data and the limitations of that data, patient satisfaction and childbirth outcomes could potentially be improved. Also, health care professionals may learn more effective ways to communicate complex, technical information and risk

associated with interventions to patients. Kotaska 2011b has argued that women must be better informed and better able to refuse interventions and still receive quality care that includes options such as VBAC and vaginal breech birth in order to improve autonomy and that providers must respect women's values and situated social histories in the context of labor and birth. We can also study the influence of larger social structures such as gender and class as well as more localized norms by studying birth professional-patient communication during labor and birth. Others have argued that norms and values governing doctor-patient roles as well as broader structures are (re) produced during these interactions (Gamble et al 2007, Heritage and Maynard 2006). Such a study could help to evaluate whether reliance on EFM to assess risk to the fetus simultaneously privileges the power of technology and technological providers over the women it is used on and whether such reliance reinforces the view of labor as inherently risky for the fetus.

Conclusion

EFM is a complex practice that illustrates the privileging of fetal health and status, the construction of birth as dangerous for the fetus, and the belief that the use of technology is necessary to monitor and simultaneously discipline laboring women (Simonds 2002). Decisions about birth method involve complex meaning-making constructions and interactions between mothers, health care professionals, and the knowledge base and technologies employed by obstetrics workers. The shift to continuous fetal monitoring during labor in the context of increasing reliance on cesarean birth as a risk management tool has serious implications for the agency and autonomy of laboring women. For low-risk women, ubiquitous EFM use inhibits agency by restricting maternal movement during labor. Because EFM use increases the likelihood of false positives for fetal distress and thereby raises the risk of cesarean agency is constrained. In high-risk situations, EFM use may enable maternal agency by allowing women who would have been advised they needed a cesarean the option of a vaginal birth. In a broader sense,

however, EFM use constrains maternal autonomy because its proliferation reinforces cultural norms about the riskiness of birth and cultural values about the priority of fetal health. As Basset et al (2000) suggested these norms and values may affect the interactions between patients and providers in ways that shape the ability of mothers to achieve more control over the meaning and events of childbirth.

Sherwin (1998) argues for an understanding of autonomy that accounts for oppression in the construction of available choices. Autonomy "...requires removal of the barriers of oppression that often structure options in ways that perpetuate existing patterns of oppression (Sherwin 1998: 13)." In order for consent to be given, an individual must first be autonomous^{iv}. Autonomy, then, also implies a capacity to act in one's own interest. This capacity is developed through interaction with others in which the individual is able to practice and learn skills for acting autonomously (Sherwin 1998). If we focus exclusively on improving maternal agency through informed consent we miss the reasons why women may continue to accept an increasing cesarean rate and interventions such as continuous EFM during labor. As Sherwin (1998: 20) explains "even when their health is not immediately threatened, patients may find themselves compelled to comply with the demands of health care providers in order to obtain access to needed services from health professionals who are, frequently, the only ones licensed to provide those services."

Continuous EFM use for low-risk women threatens their autonomy in several interdependent ways: by privileging the status of the fetus as a separate and prioritized patient; by constructing EFM data as objective science despite evidence to the contrary; and by leading to a greater likelihood of a false positive indication of fetal distress, thereby leading to a greater likelihood of cesarean birth limiting maternal choice and control over birth method. EFM dependency may also render obsolete other forms of fetal heart rate monitoring such as auscultation. In making decisions about the type of childbirth

experience they will have, women are constrained and enabled by a variety of factors including, but not limited to: hospital policy, health insurance coverage, pre-existing medical issues, pregnancy-related medical issues, personal preferences, recommendations from professional organizations (such as ACOG), interactions with their birth professionals, and understanding of risk assessment with respect to childbirth.

Previous research on childbirth has paid insufficient attention to the decision-making processes of individual laboring women (exceptions include Davis-Floyd 1992, Gamble et al. 2007, *Listening to Mothers II* 2006) and especially their interactions with providers. These interactions may influence labor and birth outcomes and therefore provide a key locus for examining whether autonomy could be improved. We could examine, for example, whether and how broader social structures shape the interactional context. Also understudied is how doctors/midwives are constrained and enabled by the use of childbirth technologies such as electronic fetal monitoring (EFM) during labor. EFM use has become standard of care despite the lack of support for its near universal use in terms of the “evidence-based obstetrics” paradigm (Wendland 2007) Given the association between EFM use in low-risk laboring women and increased rate of cesarean birth, the subsequent chapters of this dissertation, which focus on women in low-risk birth categories, examine how decision making interactions with providers constrain or enable expecting mothers.

Chapter 2:

Choosing Cesarean: How Assumptions about Bodily Failure Affect Mothers' Decisions about Vaginal Birth After Cesarean

Abstract: By 2010 cesarean delivery in the U.S. had peaked at 32.8%. Consequences of this high rate of cesarean include increases in the risk of maternal mortality and morbidity as well as higher healthcare costs associated with surgical delivery and hospital readmission for mothers in order to treat complications. Recent NIH Consensus Panel Guidelines have attempted to reduce the overall rate of cesarean section and increase the national rate of Vaginal Birth After Cesarean (VBAC). In this paper, I examine the factors that play into decision-making processes of women who chose to attempt a VBAC and those who scheduled a repeat cesarean, to show under which conditions these attempts work or do not work to increase the likelihood a woman will attempt a VBAC.

Introduction

“It would be nice if the doctors said C-section has this risk and VBAC has this risk and then let you decide. That would be nice, but doctors talk about the risk of uterine rupture with VBAC but not the risks of C-section.” - expecting mother planning a VBAC for her second birth

“I made a joke once with my husband. I said ‘you don’t have a baby and not get something messed up.’ Something - you’re not coming out scot-free.” - expecting mother planning a scheduled cesarean for her second birth

As the rate of primary cesarean section has increased over the past 15 years, more women are facing the choice between scheduling a repeat cesarean and attempting a vaginal birth after cesarean (hereafter referred to as VBAC). In 2010 The American Congress of Obstetricians and Gynecologists (ACOG) recommended that providers discuss VBAC as an option with all women who meet the criteria of having a low risk of uterine rupture. The new policy guideline also specifies contradictions for VBAC such as the use of certain induction methods (<http://guideline.gov/content.aspx?id=23853> accessed 11-14-12). The option of VBAC, however, is also constrained by whether or not a woman has access to care at a hospital that will allow it (See also Introduction page 12, Roberts et al 2007). The advantages of VBAC include lower risk of maternal mortality and morbidity and faster recovery time compared with cesarean. Statistically, however, VBAC carries a greater risk of fetal mortality and morbidity than scheduled repeat cesarean. Mothers with a previous cesarean face a difficult choice between minimizing risk to the fetus and maximizing risk to themselves by scheduling a cesarean or vice versa by attempting a VBAC. In order to explore whether mothers understand this risk benefit ratio with respect to birth method and how it affects their decision making, I interviewed expecting mothers with a previous cesarean. I wanted to

understand how women chose between attempting a VBAC and scheduling a repeat cesarean and what factors most influenced their choice.

My research has found that education about the risks and benefits of VBAC, existing role obligations, family planning, social pressures to minimize risk to the fetus, and cultural beliefs about “bodily failure,” all play into women’s decision-making processes in ways that may inhibit recently instituted national policy goals to increase the VBAC rate. By compromising on some of their preferences for the labor and birth experience, women attempting VBAC or scheduling a repeat cesarean achieved a greater feeling of empowerment. These results also suggest, however, that in order for VBAC to be seen as a desirable birth option women need to be better informed about the risks and benefits of a VBAC and have their choices supported by the medical community. Also important to address in order to improve maternal autonomy, however, are women’s assumptions about bodily failure. Interactions between patients and providers provide a context wherein providers can help to question these assumptions and potentially improve maternal autonomy through improved education about risks and benefits. I further explore the potential for these interactions to enable or constrain maternal autonomy in Chapter 3 (page 111).

Surprisingly few contemporary studies of childbirth focus on how mothers understand risks and make decisions about birth¹³. To the extent that childbirth has become a medicalized event in the U.S., the typical source of childbirth education, especially education about risks and benefits of birth types, for mothers is their prenatal care provider. In Jordan’s (1997) terminology, OBGYNs have established themselves as the leading source of authoritative knowledge on childbirth. The interviews analyzed here are part of a broader research project titled *Exploring Childbirth Outcomes* for which I interviewed

¹³ Notable exceptions in recent years include Bryant et al 2007 and the Listening to Mothers II and III Studies by Childbirth Connections (2006 and 2013). Older studies that examine women’s choices include Davis Floyd’s (1992) *Birth as an American Rite of Passage* and Lazarus’s (1997) article “What do Women Want?” in *Childbirth and Authoritative Knowledge*.

individual mothers both before and after the birth of their child about their experiences. I also interviewed several providers including two family practice residents, one M.D. with over 30 years of family practice experience, and two birth doulas. In some cases, I was able to observe prenatal visits to directly witness the interactions and negotiations between patients and providers.

One broad goal of this research is to partially explain whether and how social interactions between patients and providers affect women's decision making about cesarean birth. While conducting research, I realized that in order to understand what factors affected decision-making about attempting a VBAC, I needed to speak with mothers with a previous cesarean. Through snowball sampling, I was able to interview six mothers eligible for a VBAC. By examining the way women discussed their decisions to attempt VBAC (or not), I discovered that women assumed that their original cesareans were due to some failure of their bodies and that subsequent patient-provider interactions reinforced those assumptions of bodily failure in ways that lead women to choose cesarean over VBAC.

VBAC Rates 1970 - Present

Childbirth experts first started raising alarms about the rising rate of cesarean section in the 1970s when the U.S. rate climbed from 5.5% of all births in 1970 to 15.2% in 1978 (Placek and Taffel 1980 <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1422801/> accessed 11-8-12). In 1981 and 1982, respectively, The National Institutes of Health and the American Congress of Obstetricians and Gynecologists¹⁴ (hereafter "ACOG") challenged the OB/GYN's disciplinary belief and growing practice of "once a cesarean, always a cesarean" by recommending that certain patients be allowed a trial of labor after cesarean (hereafter "TOLAC") in hopes of achieving a VBAC (Scott 2010). Insurance companies viewed VBAC as a potential method of cost savings. Unfortunately, many women were not carefully

¹⁴ ACOG, or the American Congress of Obstetricians and Gynecologists, was formerly known as the American College of Obstetricians and Gynecologists.

screened for VBAC candidacy and suffered uterine ruptures. Doctors also did not understand the association between using labor-inducing drugs including Pitocin and the increased risk of uterine rupture. By 1999, ACOG revised its guidelines on VBAC partially in response to malpractice suits brought on behalf of families who argued that uterine rupture caused by VBAC had dire consequences for their newborns (Scott 2010). Language in the 1999 ACOG guideline specified an option for surgical delivery be “immediately available,” and implied that in order for a woman to attempt a VBAC, surgeons and anesthesiologists had to be on call on site. Consequently, because they could not meet the criteria of having emergency staff readily available, many hospitals that had previously provided VBAC as an option changed their policies to effectively restrict access to VBAC (Roberts et al 2007).

A rise in the rate of VBAC corresponded with an overall reduced rate of cesarean section in the 1990s. However, VBAC rates peaked in 1996 at 28.3% of births for women with a previous cesarean (Roberts et al 2007, <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5402a5.htm> accessed 11-8-12), and beginning about 2002, the cesarean rate began an historic and rapid increase. Even at the height of VBAC rates, however, approximately 71% of women with a previous cesarean had a repeat cesarean. By 2009 one in three children in the United States (32.9%) were born through cesarean. The implication of this increase (and the increase in the primary cesarean rate) meant that in 2008 one in eight births in the U.S. were to women who had had a previous cesarean (MacDorman et al 2012). The cesarean rate will continue to climb as women with a prior cesarean birth their subsequent children via cesarean unless access to VBAC is increased (MacDorman et al 2012). Although MacDorman et al (2012) found an increase in home VBACs as the access to hospital VBACs diminished, the percentage of total VBAC eligible births this represents is still very small.

Cesarean has become much safer as it has grown to become the most commonly performed surgical procedure in the U.S. (Guise et al 2010). However, it still carries increased risk of maternal morbidity

and mortality and is associated with much higher healthcare costs. The typical hospital stay for women post-cesarean is nearly twice as long as post-vaginal birth (Guise et al 2010). Women who birth via cesarean are also 2.3 times more likely to be re-hospitalized in the 30 days following the birth with complications (Declercq et al 2007).

In the spring of 2010 the NIH convened a three day conference of experts in order to discuss the safety of VBAC. Concerns over the rising rate of cesarean section birth from 2000 to 2009 led the American Congress of Obstetricians and Gynecologists¹⁵ to modify its 1999 VBAC policy based on the current NIH Consensus Panel's recommendations. The NIH's Consensus development panel concluded that for women with a low transverse scar from one prior cesarean and no other serious risk factors, trial of labor and attempted VBAC is appropriate (Cunningham et al 2010). The revised guideline influenced ACOG to update its 1999 statement on VBAC in order to encourage more doctors to discuss TOLAC and VBAC with their patients. The revised ACOG guideline recommends that providers discuss VBAC with women who meet the criteria for low risk of uterine rupture and also specifies contraindications for use of certain induction methods associated with an increased risk of uterine rupture (<http://guideline.gov/content.aspx?id=23853> accessed 11-14-12). The updated guideline still contains language recommending that emergency services including the option of immediate cesarean delivery, neonatal ICU (NICU) admission, and blood bank and transfusion services be available for women attempting TOLAC despite the NIH consensus panel's questioning the evidence base for this recommendation (<http://www.vbac.com/acogs-revised-vbac-guidelines/> accessed 11-14-12). By leaving the language that emergency services be "immediately available" in the guideline, some hospitals are unable to offer VBAC as an option. Furthermore, as speakers at the NIH conference on VBAC pointed

out, there are no comparable ACOG statements on other obstetric emergency situations that recommend that these services be immediately available (Scott 2010).

ACOG's policy recommendations may not be the only factor to potentially limit rates of VBAC, however. Despite increased access to VBAC after a modification of ACOG's 1999 policy statement, women may still choose scheduled repeat cesarean. While many factors including insurance coverage and future fertility plans may affect birthing women's decision making, the NIH panel's data indicates that the risk of neonatal mortality (death in the first 28 days of life) is more than double for TOLAC versus scheduled repeat cesarean (Cunningham et al 2010: 1286). Although both risks are very small, doctors may not explain these risks in the context of risks associated with childbirth more broadly. The guideline on VBAC developed for the Department of Health and Human Services after the 2010 NIH conference recommends that women be informed of the risks and benefits of VBAC by her provider (from <http://www.guideline.gov/content.aspx?id=23853>):

After counseling, the ultimate decision to undergo TOLAC or a repeat cesarean delivery should be made by the patient in consultation with her health care provider. The potential risks and benefits of both TOLAC and elective repeat cesarean delivery should be discussed. Documentation of counseling and the management plan should be included in the medical record.

In other words, argue Cunningham et al (2010), in order to make an informed decision, mothers should be given specific numbers on neonatal mortality risk associated with uncomplicated vaginal birth, scheduled repeat cesarean, and attempted VBAC. Putting this risk information in context is important. As Rapp (2000) points out in her work on amniocentesis, just because women are given the risk information does not mean they will understand it. Perhaps future research on patient understanding of risk will help providers understand how to make this information more meaningful and accessible. For the women that I spoke with, however, this information was both important to them and not provided in a specific way by

their doctors. Providers may also need access to better information about the associated risks, but the publication of guidelines like the one quoted above that also contains information on the level of evidence behind each recommendation would seem to be a step in the right direction. Cunningham et al (2010: 1290) identified the challenging situation facing women who will choose between a repeat scheduled cesarean and attempting a VBAC:

“This poses an ethical dilemma for the woman as well as her caregivers, because benefit for the woman may come at the price of increased risk for the fetus and vice versa. This conundrum is worsened by the general paucity of high-level evidence about both medical and nonmedical factors, which prevents the precise quantification of risks and benefits that might help to make an informed decision about trial of labor compared with elective repeat cesarean delivery.”

VBAC: Contextualizing the Risk of Uterine Rupture

Scott (2010) argued that the main risk to manage with VBAC is the risk of uterine rupture. Uterine rupture is dangerous for both mother and fetus, although Scott (2010) cited one study that found that if the fetus was delivered within 18 minutes of the rupture long term damage was prevented. In their consensus panel report to the NIH, Cunningham et al (2010) identified the problem with generating accurate, comparable data about maternal and fetal risks associated with birth method. Once this information is available, he argued, providers' ability to communicate risk information to patients and the medical community's support of patients' birth choices may lead to an increase in VBAC. In a systematic review of data on VBAC-related outcomes, Guise et al (2010) found the risk of maternal death to be higher for repeat cesarean (0.013%) than for trial of labor, or attempted VBAC (0.004%). Uterine rupture, however, was a greater risk for attempted VBAC at 0.47% versus a planned repeat cesarean at 0.026% (Guise et al 2010).

For the fetus, attempted VBAC was associated with a higher risk for mortality in the first seven days of

life versus planned repeat cesarean with the rates being 0.13% and 0.05%, respectively. The risk of fetal death within the first 28 days of life was also higher for VBAC (0.11%) versus repeat cesareans (0.06%) (Guise et al 2010). Despite these risk differences and some problems in making meaningful comparisons between VBAC studies, Guise et al (2010: 1276) state: “One of the major findings of this report is that the best evidence suggests that VBAC is a reasonable and safe choice for the majority of women with a prior cesarean.” Based in part on Guise et al’s (2010) research, the NIH panel recommended that low-risk pregnant women who had experienced one prior cesarean section and had only one low transverse scar should be encouraged to consider VBAC (Cunningham et al 2010). The NIH Consensus Panel’s (2010) report also concluded that much of the data on risks related to VBAC versus repeat cesarean was confounded by studies that included women who attempted a TOLAC but ended up having a cesarean. Some studies categorize VBAC as only those cases where women with a prior cesarean had a successful vaginal birth. Other studies label all cases where a woman with a prior cesarean attempted a VBAC but may have had a repeat cesarean after a trial of labor as VBACs. Better information about comparable risks comes from studies that differentiate between cases where women attempted a TOLAC but had a cesarean and women who attempted a TOLAC had a VBAC. Because of this failure to differentiate between birth outcomes, the risks reported likely differ by three categories that include: achieved VBAC, attempted VBAC but had cesarean (TOLAC ending in cesarean), and planned repeat cesarean. Women who attempted a TOLAC and ended up with an emergency cesarean may have had underlying complications that caused both uterine rupture and elevated the chance of fetal mortality.

A recent study of VBAC at an Amish Birthing Center suggested that cultural preferences for low or no intervention vaginal birth coupled with continuous support during labor are partially responsible for a lower overall rate of cesarean at the birth center (Deline et al 2012). Compared to the population of the national U.S., (cesarean rate of 32.8%) the Amish women in the study had an overall cesarean rate of 4% and a VBAC rate of 95% with no cases of uterine rupture (Deline et al 2012). Rates of neonatal death

were similar to rates nationally (5.4 of 1000 U.S. versus 4.5 of 1000 Amish). The Amish women utilized external cephalic version (a procedure to manually turn the fetus into vertex position before labor begins) at a higher rate than women with breech presentations in the U.S. population of expecting mothers. Their preference for vaginal birth was also supported at this birth center in cases of twin and breech delivery (Deline et al 2012). Women were very infrequently induced and seldom used medical pain relief. Deline et al (2012) also suggested that the low likelihood that Amish women will sue for malpractice and the lack of financial incentive for cesarean (the birth center charges a flat fee of \$925 per birth) play a role in keeping cesarean rates low. The authors acknowledge that self-selection to the birthing center may have resulted in a sampling bias in this case. Amish women who planned an elective cesarean may have gone directly to the hospital (Deline et al 2012). Highlighting their dramatically different rate of VBAC, though, the authors suggest that how risk is communicated by providers plays an important role in whether women choose TOLAC/VBAC. Deline et al (2012: 536) conclude that the birthing center “...offer(s) a model of care sensitive to cultural norms that highly value the health of the childbearing woman.”

Communicating Risk

“If you said your chances [of] hitting the lottery are 98% I would buy that ticket tomorrow, but if you say the chances of like, you know, something rupturing and you die because you bleed out and the baby dies...everybody dies, you know, then to me that’s too big a risk.”

- participant scheduling a repeat cesarean

Out of the 27 women I interviewed pre and post birth, six participants had had a previous cesarean and were choosing between a scheduled repeat cesarean and attempting a VBAC for their second or third

births.¹⁶ Although I had hoped to interview at least one woman planning a cesarean without a medical indication, I did not find any women planning a cesarean without having had a prior cesarean or a medical reason (twins). I was specifically interested in interviewing women choosing cesarean because of the notion that the overall cesarean rate is increasing in part because of the increase in *maternal demand* for cesarean¹⁷. Like some kind of urban legend, many women I spoke with claimed to know someone who knew someone who had experienced cesarean delivery by maternal request (CDMR, also known as non-medically necessary cesarean). I did not successfully recruit any of these individuals. Instead, I felt that exploring women's explanations of choosing cesarean or VBAC in their own words would shed light on what factors were most salient in their decision making. Through purposive sampling, I identified the six participants whose interviews became the focus of this chapter. The women I interviewed cited fetal risk aversion as a reason for choosing scheduled repeat cesarean over VBAC. Like the other 21 women in my sample, I interviewed each of these mothers twice – before and after their birth. How women understood the risks and benefits of VBAC, as communicated by their prenatal care providers, was one of the most important factors in their decision making.

Three of these women planned a VBAC and three planned a scheduled repeat cesarean. Of the three women planning a VBAC only one had a successful VBAC after a TOLAC. This participant was expecting her third child. Her first child was born via cesarean and her second was a successful VBAC; having had a previous vaginal birth significantly increases the odds of achieving VBAC. The remaining two planned VBAC candidates birthed via cesarean after TOLAC: one had failure to progress due to cephalopelvic disproportion and the other suffered a uterine rupture after Pitocin induction which

¹⁶ For a summary of delivery outcomes for participants please see the Introduction page 29-31. Overall, 23 of 27 women (85% of sample) planned a vaginal birth while four (15% of sample) planned a cesarean. Three of these four were repeat cesareans after a previous cesarean and one was a planned cesarean for twins. Outcomes were more inline with national level trends in cesarean with 19 of 27 women (about 70% of sample) having a vaginal birth and 8 of 27 (approximately 30%) birthing via cesarean.

¹⁷ Gossman et al 2006 review changes the rate of cesarean delivery by maternal request (CDMR) between 1991 and 2004. According to their analysis the percentage of women birthing via cesarean for no medical indication is approximately 0.20% of all live births and 1.34% of all women who have a cesarean. The authors identify the difficulty with categorizing what is truly a cesarean “for no medical information” based on birth records.

necessitated an emergency cesarean (mom and baby were both fine). Of the three women planning repeat scheduled cesareans, two had planned cesareans and one had an unplanned VBAC after going into labor two months before her due date.

For participants choosing between VBAC and cesarean, information about risks to mother and fetus associated with VBAC was important in their decision making. Although all six women understood that the overall risk of uterine rupture during TOLAC was small, none reported being given numerical estimates by their primary care providers. Why providers fail to share information about the specific risks and benefits of birth types is unclear. As Cunningham et al (2010) pointed out when summarizing risk information for the NIH Consensus Panel, often providers themselves do not have access to quality data comparing the risks. One provider I interviewed for this study, however, estimated the risk of uterine rupture during a first time vaginal birth to be less than 1% and the risk of uterine rupture with VBAC to be somewhere between 1-3%. This doctor also explained that he always used numerical estimates with patients instead of less/more language when discussing risks. Although he did not know the exact risk of uterine rupture for VBAC at the time of the interview, he stated that he looked at the latest ACOG estimates before consulting with patients who had experienced a prior cesarean.

When not given specific risk numbers by their providers, some women I spoke with did their own research on risks associated with birth method. The participant quoted at the beginning of this section understood the risk of uterine rupture during TOLAC to be between 1-2%. As she explained, this number was too high for her to feel comfortable with and she chose to schedule a repeat cesarean. Interestingly, she discovered this 1-2% estimate through her own internet research, not from her provider who described the risk of uterine rupture as very small but potentially catastrophic if it happened. This woman wanted more information, as her personal research indicates, but was either unable to ask her doctor or was uncomfortable with asking for specifics. Her doctor elaborated that the potential for complications

arising from a larger second baby could be problematic. She went on to further explain her decision and implicated existing role obligations in choosing cesarean: “You know what, it’s a small risk, but I have a daughter, I have a husband. I don’t want to - I don’t need to leave early {laughs} because...it’s not the most important thing for me to deliver vaginally.”

The way this participant explained her understanding of the risk of uterine rupture suggests that, in her mind, uterine rupture is synonymous with maternal or fetal mortality. While uterine rupture is a dangerous complication with potentially long-term adverse outcomes for both mother and fetus, most fetuses born to mothers who suffer a rupture *survive*. A prospective cohort study comparing birth outcomes of over 33,000 American women who had had a previous cesarean found that out of 124 cases of uterine rupture, 7 had devastating effects for the fetus including two fetal deaths and five cases of fetal hypoxic ischemic encephalopathy (brain damage resulting from oxygen deprivation). The overall rate of fetal mortality and morbidity in the case of all uterine ruptures was 6%. There were also five cases of hypoxic ischemic encephalopathy in women who labored and did not suffer a uterine rupture (Kotaska 2012). Furthermore, by separating the rate of uterine rupture into spontaneous versus induced labor categories, this study provided an even more nuanced risk profile. Uterine rupture was still rare among women whose labors were induced (1%), but it was more than double the rate of uterine rupture among women who experienced a spontaneous onset of labor (0.4%) (Kotaska 2012). Having access to this more nuanced understanding of the risks associated with TOLAC may not effect change in women’s choices. But not having access to this information inhibits the potential for informed consent and thereby the potential for autonomous decision making (see also Chapter 1 pg. 42).

Providers’ explanations of maternal and fetal risk by birth type also influenced the other two mothers who chose repeat cesarean. These participants felt that choosing planned cesarean was a way to lower risk to their fetus by controlling the potential for uterine rupture. Although surgical birth is riskier for mothers

than vaginal birth, they were willing to accept the shift of risk more toward them if it meant lowering the risk to their babies. Specifically when mothers understood attempting VBAC as riskier to their baby they chose repeat cesarean. One mother was also told by her doctor that recovery would be easier with a scheduled cesarean than if she attempted and failed at labor and had a cesarean anyway. This mother's first labor was complicated and ended with an emergency cesarean. In retrospect she felt the doctors should have suggested a cesarean earlier in the labor and had put her and her child at risk by waiting. By using the threat of an emergency cesarean and linking it to recovery, the provider conflated the issues of safety and ease of recovery. Recovery from a vaginal birth is much less likely to involve complications than recovery from a cesarean whether it is planned or unplanned. In fact, ease and speed of recovery is one major advantage of VBAC over cesarean (Guise et al 2010). Also less well understood by patients is that the overall risk of maternal and infant mortality is similar no matter the mother's previous delivery type. In other words, as Guise et al (2010: 7) concluded based on their review of over 200 studies comparing the risks of VBAC with repeat cesarean: "The occurrence of maternal and infant mortality for women with prior cesarean is not significantly elevated when compared with national rates overall of mortality in childbirth."

Research on risk related to birth type indicates that planned cesarean is safer than emergency cesarean for mothers (Hannah 2004). But this is likely true for any surgical procedure that is planned versus unplanned or emergency. Emergency cesareans are riskier because they more often require general anesthesia and sometimes necessitate a more invasive and hurried surgical incision. There will also be sample differences between groups of mothers having emergency cesareans versus those who are prescreened into a planned cesarean category. By preempting labor with a planned cesarean, the potential risks due to labor-related complications are eliminated. Women with preexisting or pregnancy-related health complications are advised prior to the onset of labor to plan a cesarean if providers believe the alternative is a vaginal birth that increases risk to the fetus. Failure to consider the reason for an

emergency cesarean obfuscates a potential underlying common cause resulting in both higher risk to fetus and mother and the necessity of an emergency surgical delivery.

The way risk becomes personalized in the mind of an individual affects decision making more than increasing the accessibility of risk information. For one mother who planned a repeat cesarean, fear of the baby getting stuck during an attempted VBAC kept her from considering this choice. When I asked her more directly about what she was afraid of, she mentioned she didn't think she had a "birthing body," and that attempts at vaginal birth would result in an emergency cesarean. Given that emergency cesareans are riskier than planned cesareans, her underlying belief about her body's inability to birth vaginally became the filter through which she made risk assessments.

Women who believed in their ability to achieve vaginal birth did not interpret the risks associated with birth method through the filter of inevitable bodily failure. Women who chose to attempt a VBAC had similar previous birth experiences with complications leading to cesarean as the women who chose repeat cesarean. Unlike the repeat cesarean group, however, these women did not localize the source of risk within their own bodies. For example, one mother explained how her son's large head made it difficult for him to descend through the birth canal necessitating a cesarean after internal monitoring showed rapid decelerations in his heart rate. "He had a 95th percentile head...I just wonder if he just was having trouble making his way down the birth canal." Instead of attributing the cephalopelvic disproportion to her anatomy, however, this mother assumed it was due to her baby's unique anatomy. Because of this, she did not assume that future pregnancies would result in the same labor complication: different fetus, different head size.

In addition to their beliefs in the fundamental safety and benefits of vaginal birth, women in the VBAC group were strategic about seeking out providers who would be similarly committed to the goal of VBAC

and had similar understandings of the associated risks. Women in the VBAC group had all pursued natural childbirth education and had worked with a doula, or labor support person, and consequently they understood risks associated with VBAC differently. They were aware of the risks of uterine rupture but also valued being an active participant during labor and birth and were less likely to understand their bodies and minds as being diametrically opposed. After receiving an unsatisfactory answer about her likelihood of success with VBAC from one doctor, one mother in this group changed providers until she found someone with a more positive outlook. This mother also chose her birth location based on her desire to be mobile during labor as a way to control pain. She chose the option her insurance would cover that offered wireless fetal monitoring. Continuous monitoring is routine during TOLAC as fetal heart rate fluctuations are considered by obstetricians to be the first indicator of uterine rupture. When her second labor stalled and vacuum extraction was unsuccessful, she consented to a cesarean. Overall she felt satisfied with her birth experience though, because she felt her goal of VBAC was well supported by the doctors, midwives, and doulas who attended her. In her words: “These ladies were awesome (two doctors and a midwife attending her)...they tried everything to try to get [the baby] out.” She was also very proud of herself for making it to full dilation without using drugs for pain management. Laboring without medical pain management became the redefined goal of her birth experience that enabled her to feel empowered despite failing to achieve VBAC.

VBAC and Beliefs about Bodily Failure

“I just don’t...in my gut of guts feel like I have a birthing body.” – another participant planning a repeat scheduled cesarean

Women chose VBAC or repeat cesarean based on how they interpreted their previous birth experiences. Analysis of women’s explanations revealed how describing events as evidence of “bodily failure” influenced their decision making about subsequent birth plans. All of the women who planned repeat

cesareans had originally planned vaginal births with their first pregnancies. When complications arose during labor two women had emergency cesareans. The third woman scheduled a cesarean due to breech position of the fetus after trying various methods to turn the fetus into a vertex position. To the extent that these women interpreted what happened during their pregnancies and labors as evidence of their bodies failing, they opted for a repeat cesarean as a way to exert control over their uncooperative and unruly bodies.

My results indicate that women who fail to give birth vaginally conceptualize the failure as due to their bodies having independent will or intentionality. Martin (1992) noted a body-self separation when comparing women's descriptions of their experiences of menstruation, birth, and menopause with descriptions given by medical textbooks and practitioners. Martin argued that her respondents' language identified a need to exert control over the unruliness of their bodies. Davis-Floyd (1994) also described how cultural notions about mind-body separation affected how women she interviewed thought about birth. In Davis-Floyd's (1994) analysis, this Cartesian separation of mind and body led some women to rely on medical technology (epidural, cesarean) to control their problematic bodies during birth.

Similarly, I found that the women I interviewed often described their bodies as having wills that worked in opposition to the will of their minds. Instead of viewing labor events as unlikely to reoccur, some women's language localized the problem as present in their own bodies. Unlike Davis-Floyd's (1994) work, however, I also found that women's assumptions about bodily failure were sometimes reinforced or co-constructed through their interactions with providers (Fujimura 1996, Heritage and Maynard 2006).

Some women also attributed their failure to give birth vaginally to a problem in their bodies. Some women contrasted their bodies to an ideal "birthing body" that would experience an uncomplicated labor and birth. Phrases like "I never progressed," "supposed to happen," "your body hates being pregnant," "there is something about the shape of my uterus," "I just don't have a birthing body," "I have narrow

hips,” and “slow labor is just my labor,” reflected this simultaneous separation along with a perceived failure on the part of the body to behave as it is supposed to. Their bodies fail the women’s intention to have a spontaneous vaginal birth that is not augmented by labor-inducing drugs or interventions. Bodies can also fail by making pregnant women suffer terrible sickness. Thus, their notions of bodily failure are partially defined as bodies not acting as assumed. Assumptions are that childbirth is natural, meaning that babies are born vaginally after an identifiable labor pattern starts. The body fails when labor is “erratic” and does not “find a nice rhythm.” Perhaps women’s separation of their bodies from their wills is a way to make clear that they think that vaginal birth is best and they want to do that, but their wills are thwarted by their bodies. However, their minds too are also not separate from the wills and norms of others.

My concept of bodily failure also takes into account women’s ideas of what is considered best in society. Women’s conclusions about body inappropriateness were reinforced by the reasons medical providers gave to explain why cesarean birth was necessary. Bodies can fail by either the unique characteristics they possess or lack thereof. For example, a woman who was told that the shape of her uterus likely affected the breech position of her baby assumed that her future pregnancies would also be breech, that her body’s shape would always create a breech birth. Knowledge about the “problematic” shape of her uterus was not something the participant would have been privy to prior to medical monitoring. Furthermore, understanding the shape of her uterus as contributing to bodily failure is only possible if medical professionals do not view vaginal breech birth as a norm. The categorization of her uterus as problematic is only possible through the construction of an authoritative knowledge system that simultaneously renders uterine shape visible and defines vaginal breech as prohibitively risky (Jordan 1997). And because so few providers now offer vaginal breech in the hospital, breech presentation will nearly always indicate a cesarean. Jordan (1997: 61) argued that through the process of (re) constructing authoritative knowledge, women become complicit in devaluing their own ways of knowing about their bodies. Assumptions about bodily failure internally constrain women’s decision making at the same time these

assumptions reinforce the legitimacy claims of medical knowledge.

Scheduling a cesarean can be a way for women to assert control over their bodies, but again within a particular understanding of risk. Women who assumed their bodies would fail were unwilling to attempt TOLAC if they believed cesarean birth was inevitable. They felt the stress of labor followed by an emergency cesarean would be too much to handle physically and emotionally. Women interpreted the risk of emergency cesarean through the lens of bodily failure. For one mother I spoke with, scheduling cesarean was a means of controlling who would be present during birth. This woman had also been told by a medical professional that if she attempted TOLAC and an emergency cesarean was necessary, her husband would not be allowed in the delivery room. Scheduling a repeat cesarean, then, for her was a way to exert control over who was with her during birth and her uncooperative body. A mother who was expecting twins explained how she opted for a scheduled cesarean by referencing statistics on the likelihood of a trial of labor ending in a cesarean. Again, in this case, the expecting mother took it upon herself to access risk information instead of querying her provider. According to her information, an attempt at a spontaneous vaginal twin delivery had a 50% chance of ending in one twin being born vaginally and then labor stalling and the second twin needing cesarean delivery. For her, this was too great a likelihood of cesarean to warrant attempting a vaginal twin delivery. Scheduled cesarean delivery, in this case, became a means by which this woman could attempt to control the birth and, in her mind, minimize the physical and psychological costs of experiencing both a vaginal and surgical birth.

Jordan (1997) argued that one way authoritative knowledge is achieved is through suppression of other kinds of knowledge. Authoritative knowledge is also legitimated through the process of distinguishing normal from pathological types of pregnancy, labor, and birth (Canguilhem 1989). Childbirth providers claim scientific legitimacy when constructing some kinds of birth as too risky (vaginal breech). In so doing, they decide whose evidence “counts” (Jordan 1997: 58) in defining normal and pathological types

of birth. The way this process of authoritative knowledge production happens also constructs bodies as normal and pathological and locates the cause of the problem (for some women) in their anatomy. Interactions between patients and providers in which authoritative knowledge is (re)produced become the bridge between internal and external sources of constraint for individuals. Mothers are internally constrained in their decision-making by the shaping and reinforcement of assumptions about bodily failure and externally constrained by institutional restrictions on birth that rely on normal/pathological categorization. When hospital policy disallows vaginal breech or VBAC one consequence is this dichotomous categorization of types of birth. This categorization relies on seemingly objective evidence that demonstrates a clear risk profile for each type of birth. Mothers who accept this categorization of births do so in part because viewing risk through the lens of bodily failure *makes sense to them*. The reason it makes sense is because the medical community has succeeded in defining its knowledge as authoritative.

According to Jordan (1997: 57), another way knowledge becomes authoritative is by appearing to be the product of consensus. For the women I spoke with, knowledge about the riskiness of VBAC was based on the acceptance of evidence-based risk assessments. By making the decision to VBAC or schedule a repeat cesarean completely the responsibility of mothers, however, providers enable symbolic agency while restricting maternal autonomy. In other words, decisions mothers make about VBAC have the illusion of choice while leaving unquestioned the authoritative knowledge base (that defines some types of birth as too risky) for making those decisions. Presenting VBAC or repeat cesarean as a choice makes mothers complicit in legitimizing authoritative knowledge and delegitimizing other forms of knowing. Instead of recommending VBAC or cesarean for mothers, providers create the potential for the so-called cesarean by maternal request phenomenon. Providers present this as an unconstrained choice for women without fully educating and advising them. Women's assumptions about their "bodily failure" remain unchallenged. Furthermore, because mothers feel obligated to protect their children they come to

understand choosing cesarean as a way to lower risk to the fetus as the more responsible choice.

Thus, women's expectations about bodily failure and functioning reflect underlying sociocultural or medical assumptions about normality. These assumptions are magnified through obstetrics' own lenses that differentiate the normal from the pathological. My data demonstrates that an individual woman's pregnancy must be understood as a "lived reality" (Mol 1998: 275) that is equally defined by her embodied physical experience and broader social norms (Shibutani 1986). With respect to expecting mothers, the fact that they have had a prior cesarean does not automatically indicate their candidacy for VBAC. Instead, as explained previously, women consult with medical professionals and must meet a set of clinically-diagnosed standards in order to be screened for TOLAC/VBAC attempts. Leaving aside for the moment that such screening reflects and reinforces assumptions normal/abnormal bodily function and risk appropriateness, this screening process also implicates broader non-medical issues in the decision-making process such as future fertility planning and social norms governing the ideal number of children a family should have and the appropriateness of future pregnancies for the "older" mother. One mother I spoke with in her mid-30s who was expecting her third child and planning a VBAC, told me that she faced a new barrage of random comments while expecting her third child. She speculated that perhaps because she already had a healthy boy and girl, people she didn't know well felt entitled to question her decision to have a third baby.

In another interview conducted as a part of my dissertation project, a participant related that her doctor referred her to a specialist after she was diagnosed with gestational diabetes (based on lab results). The specialist attempted to manage her diabetes based on standards of care that did not apply to this woman's lived reality. On an individual level, her body responded in unique ways to attempts to control blood sugar levels with medication, diet, and exercise. Instead of listening to how she was managing her diabetes through strict attention to how diet and exercise affected her blood sugar levels, the specialist

insisted that the participant would need insulin shots. The participant returned to her primary care physician who read her records of her blood sugar levels responses to diet and exercise and supported her efforts to actively manage the gestational diabetes for the remainder of her pregnancy.

By assuming there are normal and ideal types of pregnancies, labors, and births, we risk defining experiences that do not conform to these standards as pathological (Canguilhem 1989). Some women internalized definitions of normal pregnancies and births and understood personal deviations as evidence of bodily failure. For these women, choosing a repeat cesarean was a logical conclusion because they assumed something would go wrong during a VBAC attempt. The three women I spoke with who planned to attempt a VBAC did not frame their previous cesarean in the language of bodily failure. In contrast to the women who planned a repeat cesarean, the VBAC mothers seemed less likely to internalize the cause of their cesarean as an inherent problem with their anatomy. For these mothers, the cause of their cesarean was more likely to be understood as a conflux of unique events that may or may not recur in a future birth. Or they attributed the cesarean to the failure of their health care professionals to adequately support their goal of a vaginal birth. For two of these mothers, the sizes of their babies' heads were described by medical professionals as inhibiting their descent down the birth canal (cephalopelvic disproportion or CPD). The third mother's fetus was breech and unlike one of the repeat cesarean moms, she did not assume her subsequent fetus would also be breech. For one of the mothers who attempted a VBAC and ended up with a second cesarean birth, however, the language of bodily failure permeated her explanation of what went wrong: "So um...then they were saying something like that I had a prominent sacrum I think is what they said. So it was curved a lot more than normal or curved one way when it should've been curved the other way."

Breastfeeding Difficulties as Evidence of Bodily Failure

I present here a comparative case of breastfeeding to help develop the concept of "bodily failure."

Beyond the birth itself, women described breastfeeding difficulties in the language of bodily failure. Three participants who planned a repeat cesarean for their second births all described difficulties with breastfeeding as more traumatic than birthing by cesarean. Two of these mothers struggled to breastfeed for months, sought help from lactation consultants, and pumped their milk and fed breast milk via bottle before switching to formula. The third mother was struggling to increase production and was ready to switch to formula. But, upon the advice of a lactation consultant, she instead put the baby to breast every time she cried for 48 hours. This effectively re-trained the baby to accept the slower delivery of milk via breast versus bottle and they successfully nursed for several more months.

Comparing their experiences reveals how ideas about bodily failure are employed to make sense of breastfeeding issues. The mothers who ended up feeding with formula were told there were inherent problems with their breasts that would inhibit breastfeeding success. One mother was told prenatally by a nurse that she was likely to have difficulty breastfeeding because her breasts did not have sufficient milk glands. This message of bodily inadequacy was reinforced postpartum in the hospital by a lactation consultant and again at a home visit by a third nurse. After trying for months to breastfeed and supplementing with formula, this mother was convinced to switch to all formula in part by the lactation consultant framing her continuing desire to breastfeed as to “the detriment of your child” because he was not gaining weight. Perhaps this mother truly did lack the glands necessary to produce a sufficient amount of milk. But the reinforcement by medical professionals of bodily failure with respect to breastfeeding is still important in her case. This mother ended up having a cesarean and was one of the three mothers who choose a repeat cesarean as opposed to a VBAC for her second birth. For this mother, trouble with breastfeeding was “more traumatic than the cesarean” and set off a period of postpartum depression. This mother, like others, assumed prior to her first birth that breastfeeding would happen naturally and automatically. Upon trying so hard and being unable to breastfeed, this mother framed it as “my breasts are completely detached from the pregnancy.”

The other mother who had trouble breastfeeding was told her nipples were too large and that baby was burning more calories trying to feed than she was taking in. After feeding or pumping every two hours for four months, this mother described her goal of breastfeeding as interfering with her recovery post-cesarean. She continued to pump and feed breast milk via bottle for an additional four months but said she would not repeat this because of how exhausting it was for her. Interestingly, after her second baby was born prematurely (and vaginally) she was able to breastfeed successfully. She credits the care support she received from the neonatal nurses while her daughter was in the NICU as making the difference.

Mothers report breastfeeding issues as more difficult than birth perhaps because the mother role is more defined than the role of birthing woman. One of the ways in which motherhood can be understood as a social role are the cultural associations between mothers and feeding (Cook 2012b). As new mothers, women expect themselves to meet what they see as the minimum obligation of feeding their child.

Accepting a cesarean birth because it was assumed to be in the best interest of the baby is consistent with cultural pressures to prioritize the needs of the fetus (Bryant et al 2007). Women feel, however, that they should have more immediate control over and are more directly responsible for bodily failure in the form of breastfeeding issues. For the women I spoke with, breastfeeding was unambiguously thought to be better than bottle feeding for the baby. In contrast, cesarean birth may be perceived to be in the best interest of baby and sometimes mother in unique situations where vaginal birth is understood to pose a health risk. While they seem to accept that childbirth is an event during which any number of things can vary necessitating a surgical delivery, women assume breastfeeding should be a less complicated process.

How Competing Role Obligations Influence Mothers' Decision-Making

“And even-even because um it makes it easier to find a sitter...and get my dogs into boarding.” - participant, explaining her decision to schedule a repeat cesarean

Women I spoke with contextualized their childbirth plans within efforts to balance the demands of existing, sometimes competing, social roles. When describing making decisions about VBAC, mothers who felt VBAC was too risky described prioritizing fetal safety by scheduling a repeat cesarean. Women who planned a repeat cesarean also framed this decision as being a better fit for their lifestyles. They mentioned the convenience of knowing when the baby would come and being able to prepare their homes and families, such as arranging childcare for older children or pet sitters for dogs and cats. Women also mentioned obligations they associated with scheduling help for their return home after birth. Certain friends and relatives were deemed to be more “help” than others who had to be managed and entertained. Despite needing to heal and having a newborn to care for, women still felt obligated to meet minimum expectations as hostess to out-of-town helpers by making sure they knew how to get to the hospital and knew how to help. As one participant explained, she also felt that she had to consider how best to arrange the timing and order of visits. In contrast, the three women who chose to attempt VBAC all had either a mother or mother in law living within a half hour’s drive of their home that could help after the birth. These helpers could come and leave without occupying “guest” status and the hostess role obligations that implies. In this way, perhaps ideas about bodily failure are a means by which birthing women personalize structural limitations, such as not having help to manage role obligations.

In addition to balancing the role demands of wife, daughter, mother, pet owner, etc., there are competing demands for women within the mother role itself. If she has older children, time spent mothering and caring for them is in direct competition with time spent mothering and caring for the newborn and of course time that could be spent on self care. Interestingly, the mothers I spoke with who were planning a second cesarean mentioned attempting to preempt undesirable states such as an overly long recovery, struggles with breastfeeding, or postpartum depression for the sake of their older children. Although cesareans typically require longer recovery periods than vaginal births, these mothers were comparing the

imagined recovery times of planned versus emergency cesareans. They felt that attempting a VBAC and then having a cesarean would require a longer recovery period than just having a planned cesarean without labor. For these mothers, there was *little to no chance* they would succeed with a VBAC, so going through labor did not seem worth it. Not being in control of their bodies or mental states was seen as a luxury they could not afford because of their mother role obligations. Instead of expecting others to accommodate their needs, they adjusted their needs and desires. As one woman expressed about her inability to breastfeed, “He’s healthy, he’s fine. I’m gonna have to just suck it up.”

Other values also affect women’s decisions about whether to birth via repeat cesarean or attempt a VBAC. Older maternal age and family planning play into decision making. As one physician I interviewed explained, non-clinical issues influence the advice providers give about VBAC versus repeat cesarean. This doctor said that one of his first questions for the expecting mother considering a VBAC (assuming she meets the clinical criteria for TOLAC) is how many more children she is intending to have. If she is planning this as her final pregnancy, the doctor said he is more comfortable with the choice of a scheduled cesarean. Of the three women who planned repeat cesareans, all were intending this as their final pregnancy and birth. One of the mothers also explained that during her discussion with her provider about VBAC, the issue of family planning was raised. Her doctor explained that if she were planning future pregnancies he would advise her more strongly to consider VBAC over repeat cesarean. Here the participant relates the conversation with her provider: “If you were planning on having more children I would [the doctor]...I would probably discuss it further with you the benefits of a VBAC, but if this is your last child then I definitely think a second cesarean is the way to go. It was just kind of a short, concise...conversation. Not a lot of detail.” The risk of pregnancy complications including placenta previa (placenta covering the cervix) and placenta accreta (placenta growing into the uterine muscle), increases with each cesarean delivery. These complications are linked to greater likelihood of hysterectomy (Cunningham et al 2010). For providers, family planning seemed to drive recommendations. This was

not the primary issue driving *mothers'* decisions, however. All of the mothers who chose repeat cesarean were very committed to the goal of vaginal birth before their first cesarean. Additionally, two of the three mothers who chose to attempt VBAC *were also* planning this as their final pregnancy and birth. For the VBAC mothers, this being their last opportunity to have the birth experience they wanted was influential in their decision making.

Conclusion

Women's assumptions about the likelihood of "bodily failure" played an important role in their decisions about whether to attempt a VBAC or schedule a repeat cesarean. Bodily failure comes from an analytical separation of mind versus body (Davis-Floyd 1994, Martin 1992). Problematic bodies are viewed as sabotaging the will of the individual to have a spontaneous vaginal birth or to breastfeed. Ideas about bodily failure are co-produced by mothers and providers during prenatal visit and labor interactions. Unlike the women in Davis-Floyd's (1994) sample, the women I spoke with did not necessarily make a priori assumptions about mind-body separation/integration and bodily failure. Instead, their lived experiences of pregnancy and birth complications and interactions with providers affected their assumptions about the likelihood of bodily failure in subsequent births.

When women assumed that the cause of their first cesarean was related to an inherent problem with their anatomy they opted to schedule a cesarean. In making this choice, women sought to control their unruly and unpredictable bodies while making birth safer for the fetus. On the other hand, women who understood the cause of their first cesarean as a result of events unique to that labor or pregnancy chose to attempt a VBAC. VBAC mothers prioritized the importance of vaginal birth without viewing it as unacceptably risky for the fetus. Also important for women's decision-making were cultural expectations of prioritizing fetal safety, provider communication about the risks of uterine rupture, and future pregnancy plans.

As the rate of cesarean section childbirth has risen over the past 15 years; more women have faced the choice between scheduling a repeat cesarean and attempting a TOLAC/VBAC for their subsequent births. Despite recent changes to ACOG's 1999 policy statement and new guidelines by the NIH's Consensus Panel (2010) that were meant to increase the option of VBAC, national level change in the rate of VBAC is unlikely unless we focus on how mothers make decisions about VBAC. Cunningham et al (2010) described the difficulty in compiling accurate and comparable data on the clinical risks and benefits to both mother and fetus of VBAC versus repeat cesarean. The Amish Birth Center study conducted by Deline et al (2012), however, suggests several factors that may contribute to an increased rate of VBAC.

Women's explanations of their decision making also indicate that they are weighing the associated risks to themselves versus their fetus in the context of deciding how either experience will enable or constrain their ability to meet existing role obligations. When low risk mothers who have had a prior cesarean are faced with the choice between attempting a VBAC and scheduling another cesarean, the risks of either birth method should be presented in the context of what the risks are for a standard low-risk vaginal birth or standard primary planned cesarean. Not only must a myriad of risk information be explained, but it must be contextualized in order for it to be meaningful. Understanding risk information and being fully informed is important in order to achieve informed consent and improve maternal outcomes.

Chapter 3: Checklist versus Coaching Session:

Prenatal Visit Interaction Patterns and Maternal Autonomy

Abstract: In this chapter, I explore the ways in which interactions between mothers and providers at prenatal visits may affect childbirth outcomes including the proportion of children born via cesarean. Based on observations of prenatal visits, I examine the potential for patient-provider interaction to constrain or enable maternal autonomy. Visit interactions fall along a spectrum from enabling to constraining of the potential for developing relational autonomy. Checklist pattern prenatal visit interactions constrain maternal autonomy through strict agenda setting and curtailing of lifeworld concerns. Coaching session visits, on the other hand, are more enabling of maternal autonomy in that they allow mothers more space to set the agenda and actively participate in the pregnancies. Analyzing how interactions affect maternal autonomy is important for the following reasons: 1) we can understand how women may continue to make choices that are not in their best interest (e.g. repeat cesarean) even when they have options like VBAC, 2) we can understand how women challenge authoritative knowledge and established social role-based power differences through opportunities for maternal resistance and 3) we can see how understanding autonomy as a skill in a relational context implies a potential for improving opportunities for women to develop those skills.

Introduction

The rate of cesarean in the US has been increasing over the past 40 years, but a more rapid increase in the overall rate since the late 1990s has childbirth activists and health policy analysts concerned. Why are nearly one third of babies in the US born via surgery? When used in high risk situations, cesarean deliveries save lives. Of particular concern for health policy analysts and health care activists, however, is the dramatic increase in *cesarean delivery for low risk pregnancies* over the past 15 years.

Approximately 85-90% of expecting mothers fall into the low risk category making the 32.8% cesarean rate disproportionate to the number of high risk pregnancies (Rochman 2013). Health policy scholars have debunked demographic changes such as increasing maternal age, high rates of maternal obesity, higher percentages of twins and multiples, and an increasing trend of so-called Cesarean Delivery by Maternal Request (CDMR) as sufficient explanations for the cesarean rate increase (MacDorman et al 2008). Other analyses focus on the relationship between cesarean delivery and malpractice law suits. Doctors are more likely to be sued if they fail to perform a cesarean and a pattern of fetal distress can be established with data from Electronic Fetal Monitors (EFMs) (Block 2007). Recent studies, however, have challenged the litigious climate explanation with data that show far fewer families sue than experience negative obstetrics outcomes (Sakala et al 2013).

The fact that most mothers and babies survive cesarean is insufficient to warrant its overuse. The World Health Organization recommends a much lower rate of cesarean at 15% versus the 32.8% average in the U.S. As Wendland (2007) pointed out, the fact that the surgical incision necessary to perform a cesarean is not in and of itself considered injurious to the mother indicates underlying cultural biases that keep the conversation about improving childbirth restricted to so-called objective health outcomes. Sampling on the dependent variable by defining a “good” birth as one in which mother and baby were not dramatically harmed renders mute a mother’s preferences for the quality of the experience itself.

Childbearing women in the U.S. appear to have more agency in making decisions about prenatal care, labor and birth than in previous generations. In reality, however, women's agency, defined as choice of prenatal care/birth provider and birthing location, is constrained by a myriad of variables including (but not limited to) insurance type and status, age, pregnancy risk categorization, geographic location, financial capacity, and medical history. The rate of home birth has increased 29% from 2004 to 2009 and midwife attended births accounted for 8.1% of births in the U.S. in 2009 compared with 3.2% in 1989¹⁸. Looking only at women who birthed vaginally, midwives attended 1 in 8 women. More U.S. births are attended MDs than in other industrialized nations, however. In 2010, for example, MDs attended 86.3% of births in the U.S. (Martin et al 2012). By comparison, in the UK, midwives attend approximately 70% of births¹⁹. Approximately 60-70% of birthing women in the U.S. receive medical pain relief through epidural anesthesia. One in five women experience labor induction through intravenous administration of Pitocin, misoprostol placed on the cervix, or through stripping of membranes. Variations in provider practices and hospital policies based on these variables greatly affect women's experiences of giving birth. Despite a purported concern with making care more patient-centered, maternity care in the U.S. tends toward more reliance on interventions to manage labor and prioritization of the fetal patient (Bassett 2010, Casper 1998, Davis-Floyd 1992).²⁰ In other words, birth in the U.S. is overwhelmingly a medicalized event.

In this chapter, I explore the ways in which interactions between mothers and providers at prenatal visits may affect childbirth outcomes including the proportion of children born via cesarean. Based on observations of prenatal visits, I examine the potential for patient-provider interaction to constrain or enable maternal autonomy. Analyzing how interactions affect maternal autonomy is important for the

¹⁸ <http://www.cdc.gov/nchs/data/databriefs/db84.htm> accessed 3-19-13; <http://www.midwife.org/JMWH-Midwife-Attended-Births> accessed 3-19-13

¹⁹ <http://voices.yahoo.com/models-maternity-care-us-uk-canada-australia-5437453.html?cat=16> accessed 6-12-13

²⁰ 61% in 2008 based on 27 states reporting (<http://www.webmd.com/baby/guide/inducing-labor> accessed 3-19-13); http://www.cdc.gov/nchs/data/nvsr/nvsr59/nvsr59_05.pdf accessed 3-19-13;

following reasons: 1) we can understand how women may continue to make choices that are not in their best interest (e.g. repeat cesarean) even when they have options like VBAC, 2) we can understand how women challenge medicine's disciplinary authoritative knowledge and established social role-based power differences through opportunities for maternal resistance and 3) we can see how understanding autonomy as a skill in a relational context implies a potential for improving opportunities for women to develop those skills. Development of these skills may lead toward moving informed consent from symbolic product to real interactional achievement (Heritage and Maynard 2006: 20) .

Data and Methods

Between October 2011 and July of 2012 I observed four prenatal visits for three mothers who chose to participate in my dissertation research project. Interactions between patients and providers at these four visits are the main unit of analysis for this chapter. In addition to observing prenatal visits, I interviewed 27 mothers before and after the birth of their babies and separately interviewed five birth professionals. Originally, I had planned to observe multiple prenatal visit interactions for all of the participants throughout their pregnancies in order to witness how patient-provider relationships evolved over time. In practice, gaining access to prenatal visits was very difficult. Because pregnant women are a protected subject and I would potentially be privy to private medical information, I was referred to the Health Sciences IRB. I had to follow the same protocol as a researcher testing a new cancer drug. I received approval to observe visits at limited clinic locations. Unfortunately, my overall recruitment of expecting mothers at those approved clinics was mostly unsuccessful. By separating the interview component from the prenatal visit observation component of my intended research design I was able to revise my protocol and recruit expecting mothers outside of the clinic setting. After the change of protocol, I was able to improve recruitment and meet my sample size goal and was able to sample theoretically by intended birth type. I wanted to speak with mothers planning the following types of births: scheduled cesarean, VBAC, home birth, and vaginal hospital birth. Through snowball sampling, I was able to find participants in each

category. I was unable, however, to collect the volume of visit observations I'd hoped to. Approximately eighteen months elapsed between my initial IRB application and completing recruitment.

I observed the prenatal visits of one woman in her third trimester and one woman in her second. I observed two visits for the third mother - one near the beginning of her second trimester and one in her third trimester. I also interviewed these, and 24 other mothers, both before and two to sixteen weeks after the births of their babies. I recorded, transcribed, and analyzed interviews in Nvivo and using Grounded Theory coding techniques. At prenatal visits, I recorded handwritten field notes and wrote observation summaries. After transcribing and analyzing the prenatal interviews for these mothers, I open coded field notes and worked iteratively in order to draft a theoretical memo. Although the bulk of this chapter focuses on analysis of the prenatal visit observations, I developed my theoretical frames using both the pre and postnatal interviews conducted with all participants and also by provider interviews.

I also interviewed five providers of three different categories of birth professionals. I interviewed two family practice residents in their second and third years of residency. One resident I spoke with was a provider for one of the interviewees whose prenatal visit I observed. Additionally, I interviewed a family practice physician with 30 years of experience in the OBGYN field who also teaches maternal safety courses in developing countries. I also interviewed two birth doulas (one in training and one with four years of experience) who share a practice.

I met expecting mothers at the clinic or location where the prenatal visit was scheduled. When the mothers were called back, I sat in the exam room with the expecting mother and in some cases her husband or other children. I recorded notes from the time the provider entered until the time of a physical exam. At this point, I left the exam room and waited in the lobby. I spoke with mothers briefly after the visits to learn about any additional developments. Visits ranged from approximately 15 minutes to 60

plus minutes in length. I received approval from the individual providers and the clinics before attending the visits. The providers I observed were a family practice doctor at a large teaching clinic, a midwife at a free-standing birth center, and a home birth midwife. Length of visit time was largely determined by provider type. The visits with the family practice doctor and birth center midwife were shorter, and the home birth midwife visit was more than an hour long.

Mothers

All of the mothers whose visits I observed were slightly older (33-37 years) than mothers in my sample (average age 32.7 years) and than the average birthing women in the U.S. (25.4 years in 2010) and had achieved higher levels of education. All of these women's pregnancies could be categorized as low risk - singleton, vertex-position fetuses (and the pregnancies went to full term) and these mothers had not had previous cesareans. All of these women also worked or volunteered at least part-time throughout their pregnancies.

Ruby had a master's degree and was working as a server at two restaurants while expecting her first child.

At the time of our prenatal interview, late in her third trimester, Ruby did not have any specific risk factors for birth but had experienced two previous miscarriages. Ruby received prenatal care at a large clinic in a Midwestern city associated with a university-sponsored residency program. Although I separately interviewed Ruby's primary care provider, a second-year resident, this doctor was attending another birth the day of the prenatal visit observation.

Sarah, a 37-year old mother of two, was expecting her third child in the summer of 2012. Sarah worked for pay approximately 30 hours per week from home as a grant writer for a not-for-profit NGO. Having sought out midwifery care for her previous pregnancies, Sarah decided to switch to a midwifery program associated with a free-standing birth center. She hoped to reduce the likelihood of interventions she

experienced in previous births through hospital-based midwifery programs. The lower cost of a birth center delivery also attracted Sarah. She explained that her insurance deductible was \$5000. Given that a typical vaginal hospital birth costs approximately \$9600 for insurance companies and Medicaid (<http://www.webmd.com/baby/features/cost-of-having-a-baby?page=2> accessed 6-10-13), \$4500 for prenatal care and birth is a more affordable option with high deductible insurance. Interestingly, another participant who had a similar high-deductible for birth with her insurance policy chose a repeat cesarean despite the cost difference between vaginal and cesarean birth. I explore her decision making in Chapter 2 (pg. 71).

After two successful home births, Emily planned another home birth with the same provider for her third child. A former PhD student, Emily placed a high value on scientific expertise. After initially interviewing an OB for her first pregnancy she opted for home birth as a safe, lower cost option. Total expenses for Emily's care with a home birth midwife were about \$3,000. The OB she interviewed reassured her that home birth was a safe option for low risk births and carried a much lower likelihood of cesarean than birthing in a hospital setting. Emily also queried her husband's father, a pediatrician, about the potential risks of a home birth. Deciding the risk was minimal given that they lived five minutes from a local hospital in a mid-sized Western college town, Emily found a midwife with a background in science which made her more comfortable pursuing home birth as an option.

Decision Making: Choosing a Childbirth Provider

The degree to which a woman's childbirth experience is more or less medicalized is often a function of her choice in provider and, by extension, birthing location. Typically, the use of technological interventions as standard practice during labor differs by disciplinary orientation with OBGYNs using the most technological interventions and home birth midwives the fewest. Hospital births are most often attended by OBGYNs or family practice doctors and nearly always imply at least some technological

intervention in the form of electronic fetal monitoring and the start of an IV line. Studies have shown that the use of interventions during labor are associated with more interventions, so that the likelihood of cesarean increases with each subsequent intervention, especially with induction (Roberts, Tracy and Peat 2000). This tendency for interventions to lead to more interventions is sometimes called the “cascade effect” in birth literature. Midwives, on the other hand, are statistically less likely to rely on technological interventions during labor including epidural anesthesia and labor inducing medications (such as Pitocin) (Rochman 2012). Studies have shown that low risk women who have continuous support during labor are up to 50% less likely to have a cesarean birth (McGrath and Kennell 2008). Midwives typically spend more time during labor with mothers as compared with OBGYNs and family practice doctors.

Variation in cesarean rates among U.S. hospitals suggests that the degree of medicalization women experience when birthing is not uniform, however. In a recent *Health Affairs* article, Kozhimannil, Law and Virnig (2013) found dramatic variation among U.S. hospitals in the rate of cesarean birth for pregnancies categorized as low risk. The authors expected to see less variation in cesarean rates for low risk births defined as singleton, term, vertex position pregnancies in women who had not experienced a previous cesarean. Instead, however, the authors found a rate variation of 2.4% to 36.4% within this restricted category (Kozhimannil, Law and Virnig 2013: 529). According to the authors this data shows that increases in clinical indications for cesarean, demographic pattern variation by geographic location (such as more older moms or heavier moms in some areas), and that a purported rise in so-called cesarean delivery by maternal request (CDMR) are insufficient to explain the variation observed in hospital-to-hospital comparisons. Instead, the authors point to differences in the way providers at different hospitals manage labor as (2013: 531): “...a likely driver of variations in delivery mode and ought to be the focus of policy interventions to slow or revise the rise in cesarean delivery rates overall and to decrease variation across hospitals.” Championing the cause of women-centered care, Kozhimannil, Law, and Virnig (2013) propose increasing access to birth centers and midwives as primary care providers for

expecting mothers. Because midwives use fewer interventions during labor and have lower rates of cesarean, the belief is that by improving access to midwives the overall rate of cesarean will decrease, especially for women in low risk categories.

Public health scholars have advocated improving access to midwifery care for U.S. women as one way to untether childbirth from the increasing use of technological interventions and reduce the rate of cesarean birth. However, improving the range of providers to choose from does not automatically translate into improved health outcomes (by way of lowered cesarean rates) (Cook 2012a; Chapter 2, pg. 71).

Midwifery care has the reputation of being more woman-centered and less medicalized (Daviss 2001).

In practice, however, midwifery care is varied and may express itself in a highly medicalized form. Of the births attended by certified nurse midwives in 2010, 95.7% occurred in a hospital (Perez 2013).

Location is one variable that may affect the degree of medicalization for any childbirth practice. At some hospitals, labor interventions such as starting an IV are considered routine care and recommended for all women in labor. Some hospitals require that all laboring mothers have a baseline EFM reading for laboring women upon admission (Block 2007). As Sherwin (1998: 12) argued: “We recognize that women often demonstrate agency by making choices regarding their health care, but we reject the view that actively choosing in itself constitutes autonomy.” This distinction between agency and autonomy is crucial for understanding how mothers are enabled or constrained in their decision making. I further explain this distinction below.

State policies relating to midwifery licensure dictate what kinds of births are permitted at various locations. In some states, direct-entry or lay midwives are prohibited from obtaining licensure. Certified nurse midwives typically have a bachelor's degree in nursing and a postgraduate two year degree in midwifery. Certified nurse midwives (CNMs) are more likely to practice out of a hospital or birth center and direct entry or lay midwives who have less formal training are more likely to be a home birth

attendant. Although birth centers are typically less interventionist than hospital labor and delivery units, midwives who practice out of birth centers may be prohibited by state law from accepting vaginal birth after cesarean patients (VBAC) or twin/multiples deliveries. Furthermore, although midwives spend longer on average with the individual patient during labor, continuity of care is not guaranteed. Through my interviews with expecting mothers, I found that many midwives operate with an on-call system similar to OBGYN or family practice clinics. Even if they have seen one provider for the majority of their prenatal care, mothers may be attended by a different, unknown midwife for labor and birth.

Increasing medicalization of birth, does not, in and of itself, explain, a rapid increase in the rate of intervention and cesarean, however. In her development of the concept of authoritative knowledge, Jordan (1997: 61) argued that one way obstetrics maintains authority in constructing whose knowledge matters is by controlling the technologies used to produce data. By claiming an exclusive expertise over interpreting machine-based knowledge, such as EFM displays, obstetricians both maintain their authority over determining what happens during labor and legitimize machine-based knowledge as the authoritative source of that information. Given that individual providers may or may not be available to attend a woman's birth, another important function of authoritative knowledge is maintaining role differentiation as a way to set expectations for labor and delivery. Because providers have authoritative knowledge about pregnancy and birth, they remain in the expert role and as such can control decision making. Mothers, on the other hand, as non-expert patients cannot make the same authoritative knowledge claims to support their wishes (Jordan 1997). This role differentiation, then, functions to systematize birth. One provider, with the same credentials, is easily substituted for another and the management of labor maintains maximum efficiency.

Defining Relational Autonomy

Analyses of childbirth often fail to distinguish between the twin issues of maternal agency and maternal autonomy (Cook 2012). Simply improving access to “options” such as alternate types of providers and birth locations may not result in the ability of women to make those choices. Drawing on Foucault’s work on discipline, Sherwin (1998: 28) also stated: “...there are good reasons to be wary of the ways in which the appearance of choice is used to mask the normalizing powers of medicine and other health-related institutions...in modern societies the illusion of choice can be a part of the mechanism for controlling behavior.” Agency, defined as the right to choose, does not imply autonomy or the ability to act as an agent. Women are constrained in their decision-making both structurally and culturally (Sherwin 1998). For example, for women to make informed choices, they have to know about or have skills to seek out other care options. Expecting women to choose and not adequately informing them of risks and benefits may make informed consent a symbolic achievement instead of reality (Heritage and Maynard 2006). Even for those with skill, some women facing the choice between a VBAC and a repeat cesarean may not choose to fight for a VBAC because they may believe their bodies had failed them and might do so again. This notion of “bodily failure” and the responsibility to maximize fetal safety heavily constrain their decision-making (Chapter 2, pg. 86). If women are able to develop “relational autonomy” through prenatal visit interactions, they will be more empowered to make informed choices about childbirth. To redefine autonomy as relational is to situate an individual’s action within “...material and social conditions (Sherwin (1998: 34).” Autonomy is also relational in the sense that it implies a skill or capacity for action (Mackenzie and Stoljar 2000).

In order to act autonomously, women must be able to make informed decisions about birth and have those decisions supported by the medical community (Kotaska 2011). Through interactions women may develop “relational autonomy” – the awareness of how social selves are constructed through interaction and how that construction of self is conditioned by broader social structures (Mackenzie and Stoljar 2000). Borrowing from Mackenzie and Stoljar (2000: 4)’s reconceptualization of autonomy as

“relational,” my analysis centers around determining whether or not interactions at a prenatal visit are more or less enabling of maternal autonomy. For relational autonomy to be possible women must 1) understand how their choices are related to broader contexts and 2) women must also have skill to question providers, evaluate the information they receive, and have their voices heard. Following Sherwin (1998), I argue that informed consent and agential choice are impossible without individual autonomy. We need an understanding of how women’s childbirth choices are conditioned and constrained despite attempts to inform women of risks and benefits of interventions such as cesarean and attempts to increase access to alternative types of providers. In order to understand how mothers’ relational autonomy could be constructed and improved, I present a detailed analysis of prenatal visit interactions. Improving relational autonomy has the potential to improve childbirth for women through redefinition of social roles played in the encounter.

Based on my observations of prenatal visits, I document patient-provider interaction patterns that run from more or less constraining of maternal autonomy. Prenatal visit interactions fell along a spectrum of more to less enabling of mother’s relational autonomy. All visits seemed to have elements of both visit types I characterize here. On one end of the spectrum, “checklist” prenatal visits restrict maternal autonomy by setting the agenda for the visit and strictly defining the boundaries of patient and provider roles. By using the term “checklist” I am drawing on Boyd and Heritage’s (2006) analysis of routine history taking during clinic visits. In Boyd and Heritage’s (2006: 169) terminology checklist questions “...may arise from record-keeping protocols, or from the routine experience of the doctor, or from explicit guidelines taught during residency” and are constructed to seek “no problem” or status quo answers. I extend Boyd and Heritage’s (2006) characterization of a checklist pattern of clinical history taking to describe a prenatal visit model wherein navigating the checklist seems to become the object of the visit – The Checklist Model. The difference between the encounter Boyd and Heritage present and the interactions I describe as following a checklist model seemed to come in the area of “recipient design”

(2006: 168) wherein doctors contextualized routine questions to demonstrate were listening to the patient. Unlike the checklist model, the “coaching session” model of prenatal visit allows mothers to set the agenda and sets maternal education as a major goal of the interaction. Based on these observations, I argue that viewing patient provider interaction as a real-time social production leads to understanding how restructuring mother-provider interaction could be a mechanism for improving childbirth both in terms of qualitative and quantitative outcomes.

Disclaimers:

The goal of this analysis is not to use data in order to make value claims about types of birth. I do not assume home birth is more empowering or more feminist than hospital birth or represents an unconstrained choice. Nor do I assume home birth as a choice is inherently more dangerous or indicates a broader rejection of modern medicine. Instead, this chapter frames different kinds of interaction patterns – checklist and coaching session – as being closer to either end of the spectrum of the observed interactions. There were also elements of checklist patterns in predominantly coaching session visits and vice versa. In all of my cases, I also observed maternal resistance. Nevertheless, my data suggests that some interaction patterns enable maternal autonomy more than others. One explicit goal of this research project was to understand mothers’ decision making in ways that highlight the complexity of the factors affecting their choices. By looking in-depth at visit interactions, I aim to show different dimensions of interactions that may aid or discourage relational autonomy.

Constraining Maternal Autonomy through Checklist Prenatal Visits

Sarah's Story

Sarah chose a free standing birth center for the birth of her third child. For her first and second births she received care from two different midwifery practices associated with local hospitals. Although those births were relatively uncomplicated vaginal births, Sarah switched to the birth center for two main

reasons. Firstly, Sarah had a negative interaction with one of her midwives when first pregnant with her second child. The midwife told her it was an ectopic pregnancy and that the pregnancy would end in miscarriage or termination. Sarah was later told that interpretation was incorrect and the pregnancy was normal but in the interim she experienced a great deal of anxiety. Secondly, Sarah told me that she liked that all common labor restrictions were “optional” at the birth center. For example, the birth center allowed expecting mothers to eat and drink during labor. At the hospital-based midwifery practices, in contrast, Sarah was not allowed to eat or drink during labor. Sarah also wished to avoid using drugs to manage her labor pain. She had an epidural with her first birth and a narcotic shot with her second, but she wanted to experience drug free birth this time. Sarah's choice of birth location was a strategy to avoid using drugs as these were not available at the birth center.

Birth Center Details

The birth center Sarah chose has an outstanding reputation for mother-centered births in the local community. It is located in an office building about half a block from a major hospital in order to facilitate ease of transfer in the case of an emergency. All of the midwives listed on the birth center's website are certified nurse midwives and all of the supporting nurses are registered nurses. Water birth is encouraged at the birth center. The center's website explains that the first prenatal visit is an hour long and each subsequent visit lasts approximately 30 minutes. At prenatal visits, mothers are “encouraged” to meditate on the “spiritual and cultural significance” of birth. The labor suite is described as a setting in which mothers are not restricted during labor by electronic fetal monitoring (EFM) or IV medication. The first thing I noticed upon entering the center was an aroma more akin to a spa than a doctor's office. The very small waiting room was furnished with upholstered leather chairs and contained several toys to entertain small children. A wooden cart stacked with vitamins, supplements, essential oils, and birth center t-shirts flanked one wall. Patients waiting to be seen could watch a large TV screen that displayed a slide show loop of recent birth photos. Across from the small waiting area was the reception desk. A

narrow hallway led from the reception area to the exam rooms. I met Sarah in the waiting room and also noticed a large poster diagramming the physiological benefits of squatting as a labor/birth position across from the reception desk.

Agenda Setting

For both Ruby and Sarah, prenatal visit interactions more closely resembled a checklist model. Strict adherence by providers to predetermined agendas functioned to keep visit length optimal for funneling patients through a busy clinic system (Boyd and Heritage 2006: 163). Because they know and recognize how busy providers are, patients limit themselves to a narrowly defined focus of what they can or cannot seek advice on. Providers control agendas by non-verbal actions that signal their busy-ness. Standing versus sitting, looking at a clipboard or computer screen versus looking at the patient are two examples. Providers also control agendas by redirecting what they consider to be a “non-relevant” line of questioning opened by the patient. While observing one of Sarah’s prenatal visits with her provider, I noticed this pattern of agenda control. The following excerpt is from the first visit I observed with Sarah and the questions were asked by a student midwife. When Sarah brought up lifeworld issues that affected her physical experience of her pregnancy the student midwife failed to acknowledge Sarah’s contextualization and redirected to the agenda for the visit by changing topics with a subsequent question. The student midwife, perhaps due to her inexperience, moves on to questions about the degree of edema or swelling that Sarah is experiencing.

Note: All quotes are close paraphrases of actual dialog based on field notes.

Student Midwife: “How are you feeling?”

Sarah: “Okay. I’m more tired in the afternoons with this one [pregnancy] maybe because I already have two children. It gets harder as the day goes on.”

Student Midwife: “Do you have swelling in your eyes, hands, or feet?”

When initially reviewing this data I thought perhaps the student midwife's tendency to stick to specific questions and making sure she asked those questions was a function of her relative inexperience with patient interactions. After the regular midwife took over the questioning during the interaction, however, I noticed the same pattern of asking questions about physical pregnancy symptoms. Of course, it is the birth center midwife (hereafter BCMW)'s job to assess Sarah's physical condition and respond to possible problems. By failing to respond to the issues Sarah raises the BCMW's interaction pattern seems to treat the pregnancy as a condition to be managed versus an experience unfolding in Sarah's body and life.

Note: This excerpt is from the end of Sarah's second trimester visit with the student midwife and BCMW. The BCMW has glanced at Sarah's chart and noticed that her blood iron levels were a bit low.

Sarah: "Last time (pregnancy) I took a drinkable (iron) supplement that tasted like prune juice."

BCMW: "We can give you a sample. Do you have other questions?"

Sarah: "I may have more questions next time because we'll see the ultrasound tomorrow. I'm going on faith that this is a normal child. I was told they can see more on the anatomy scan tomorrow."

At this point, the BCMW indicated it was time for the physical exam and listening for the baby's heart rate and I left the room. I do not know if the BCMW reassured Sarah about her baby's development at that point, but I did notice that when Sarah said "I'm going on faith," she was expressing worry and anxiety about her baby's development. After Sarah said this, neither the student midwife nor the regular BCMW reassured or acknowledged Sarah's comments. This lack of acknowledgement became more pronounced when I compared my notes from Sarah's visit with my notes from Emily's visit with her home birth midwife. I thought perhaps because Sarah's BCMW was supervising a student midwife the day that I observed she was less likely to go off topic. However, in the second of Sarah's visits that I observed with the same BCMW, I noticed the same pattern of sticking to medical questions.

Notes: This excerpt comes from a visit in Sarah's third trimester of pregnancy. Sarah has a small frame and did not appear to be overweight. The number she listed for her weight did not seem to be overly large. The local weather was exceptionally hot that summer with a record number of days over 90 degrees.

BCMw: "Did you weigh yourself today?"

Sarah: "Yes, I'm at (names weight in pounds)."

BCMw: "And you have some swelling in your hands?"

Sarah: "Yes, I stopped wearing my wedding ring a couple of weeks ago because the swelling was getting worse in the afternoons."

BCMw: "What has been your average overall weight gain for prior pregnancies?"

Sarah: "About 40-41 pounds with each but I started a bit heavier with this one. I'm a little disturbed when I get on the scale because I still have 8 weeks left of pregnancy."

BCMw: "How would you describe your diet and exercise habits?"

Sarah: "Not much exercise because I work six hours per day at my computer and after family and kid duties I don't have that much time left. My appetite has gone down in the last week maybe due to the heat, but hopefully that will help slow down the weight gain."

BCMw: "Try to get out for a 20-30 minute walk two or three times per week because the goal we set for this pregnancy was a total weight gain of 25-30 pounds. You are close to the 40 pound mark even with eight weeks left and a little extra exercise may help you to stay within that goal. It's easier if you don't gain it now then you don't have to lose it later."

Sarah: "Sure, I can try to do that."

BCMw: "I know it's hard but try to fit it in. Have you finished the forms?"

Mishler (1984: 10) framed this type of agenda setting by providers in the following way: "...laboratory tests and the results of physical examinations take priority over what can be learned from talking with patients." By following Sarah's hypothesis about her third pregnancy being more difficult because of her existing role obligations as a mother with a question seeking a physical assessment, the BCMW implies that Sarah's lifeworld is irrelevant for the physical experience of this pregnancy. In Boyd and Heritage's (2006: 166) framing, the midwife fails to customize checklist questions according to "recipient design." The midwife does not attempt to account for Sarah's unique experiences by modifying routine questions. This dismissal of lifeworld constraints accomplishes two things for the provider. Firstly, it functions to limit the agenda of the visit interaction to the immediate physical experience and sensations of this pregnancy. Secondly, it maintains the power of provider as expert through construction of authoritative knowledge. Elaborating her concept of authoritative knowledge Jordan (1997: 56) argued that: "A consequence of the legitimation of one kind of knowing as authoritative is the devaluation, often the dismissal, of all other kinds of knowing." One way the BCMW maintained her claim to be the holder of authoritative knowledge was by ignoring Sarah's attempts to make lifeworld constraints relevant. Jordan (1997: 58) argues that establishing what kinds and whose knowledge "counts" through interactions functions to both bolster the dominance of one kind of knowing as authoritative and shift the balance of power in favor of those who possess it.

Monitoring as Authoritative Power Play

In the example where they discuss weight gain, the BCMW used her authoritative knowledge to negatively sanction Sarah's behavior. Monitoring Sarah's behavior became a way for the BCMW to express mild disapproval and setting the agenda delegitimized Sarah's attempts to rationalize her behavior with lifeworld-based explanations. The BCMW attempted to influence Sarah's behavior by suggesting exercise as a means to control weight gain. What is not visible in the quote above is the tone of voice and body language the BCMW used when saying this to Sarah. The BCMW conducted herself in a

professional and polite manner but her dialog with Sarah seemed perfunctory. The BCMW asked one question after another about pregnancy symptoms but did not engage in small talk. There was little expression of empathy in the BCMW's spoken and non-spoken language.

Based on my interviews with Sarah and observation of this and other visits, her concern with her rate of weight gain was more aesthetic than for health reasons. The BCMW seemed to pick up on this with her advice giving about exercise as a way to control weight so that Sarah didn't need to diet after giving birth. The Institute of Medicine (IOM) recommends that underweight women gain between 28-40 during pregnancy. The recommended range for average weight women is 25-35 pounds²¹. In the post birth interview, Sarah and I discussed the BCMW's focus on weight gain. I had not observed this type of focus in other providers and I asked Sarah if that was typical of her other prenatal experiences. Sarah related that she thought the BCMW's focus was extreme but that past providers had expressed concern about the rate of Sarah's weight gain in the third trimester. Sarah was not concerned for the health of her baby as she had experienced this previously and had birthed two healthy babies. Sarah's experiential knowledge was discounted by the BCMW's strict adherence to pre-established standards for weight gain. I thought perhaps the BCMW's strict interpretation of weight gain standards reflected her relative inexperience in interacting with patients. However, although the BCMW appeared to be fairly young, she had enough clinical experience to be training a student midwife. In the past, doctors were criticized for scolding women who gained over the then recommended 15-20 pounds. After the total weight gain target was raised, doctors stopped discussing weight gain with their pregnant patients and have since been critiqued for not focusing enough on weight gain during pregnancy as a future determinant of maternal health (Braunstein 2012). The point here is not to criticize the BCMW for her concern about Sarah's weight

²¹<http://www.acog.org/Resources%20And%20Publications/Committee%20Opinions/Committee%20on%20Obstetric%20Practice/Weight%20Gain%20During%20Pregnancy.aspx> accessed 6-24-13

gain. Instead the way the BCMW discusses weight gain fails to account for Sarah's experience as a mother and indicates a one-size-fits all approach to pregnancy.

Ostensibly the BCMW's concern with Sarah's weight gain was to control risk to the fetus. Again in this example, the BCMW relied on her position of expert possessing authoritative knowledge to mildly sanction Sarah's lack of exercise in an attempt to influence her behavior. The BCMW ignored Sarah's lifeworld constraints of her role as a worker and a mother affecting her available time for exercise.

Earlier in the interaction, Sarah explained that they did not have air conditioning at home and that she thought the heat was affecting her ability to stay hydrated. Instead of acknowledging the reality of this constraint, the BCMW reiterated standard advice to drink X amount of water per day. The BCMW expressed this hydration goal in liters. Relating the water goal in liters displays authoritative knowledge gained through disciplinary training and fails to enable behavioral change by translating the goal into a measure more accessible to laypeople.

Despite her attempts to repeatedly contextualize her physical experience of pregnancy, Sarah symbolically acquiesced toward the end of the weight gain discussion. By saying "Sure I can try," she realized that the BCMW was not hearing her, so to speak, and gave up on gaining useful advice. Perhaps also though, Sarah's use of the word "try" indicates continued resistance. She does not promise to follow the advice, only to try. Sarah continued to ask questions throughout the remainder of the visit but her answers to the BCMW's questions became shorter and less explanatory. The only acknowledgement the BCMW gave to Sarah's attempt to bring in lifeworld explanations was "I know it's hard, but." Sarah trusted both her experiential knowledge of past pregnancies and her self-education about birth, but the BCMW effectively undercut the validity of Sarah's knowledge by constraining topics to her set agenda and by focusing on navigating monitoring scripts. "Navigating Monitoring Scripts" is a code that came out of analyzing Sarah and Ruby's prenatal visit notes. It reflects the action of the provider in the

encounter. In Ruby's case, this navigation was even more literal as the provider sat at a computer screen while asking Ruby questions. The provider clicked through or navigated question screens through a terminal and looked more at the screen than at Ruby and her husband for the initial part of the visit. In Sarah's case, the BCMW seemed to follow a similar pattern of navigating the predetermined questions but she did this verbally and with hand-written notes instead of via computer. By failing to acknowledge the individuality of Sarah's third pregnancy, the BCMW retained her role as expert who possesses ultimate authority for decision making based on disciplinary knowledge. The BCMW also sharply differentiated her role from Sarah's. As expert provider, the BCMW distanced herself from Sarah's lifeworld problems. The BCMW saw her role as providing expert advice and monitoring as a way to ensure the physical health of mother and baby. Sarah's existing role obligations as wife, mother, and worker and her daily experience (living without AC) are not the BCMW's responsibility and therefore off of the agenda.

This pattern of interaction – the provider playing the role of a sort of Quality Control Inspector and the dialog of the visit following a checklist format – inhibits maternal autonomy. Mothers may be less able to develop the skills necessary to improve relational autonomy in such a restricted space. By the time the BCMW, adhering to a pre-set schedule and time limit, asks Sarah “Do you have any questions before we listen to your baby?”, Sarah implicitly understood any questions she may have would be deemed irrelevant or off-topic. In this way, despite seeking midwifery care, the type of care Sarah received remained highly steeped in disciplinary claims to authoritative knowledge. Although Sarah experienced a spontaneous vaginal birth with few interventions, the checklist interaction pattern limited Sarah's ability to act autonomously and have her concerns acknowledged.

Ruby's Story

Clinic Setting Details

Ruby saw a third-year resident at a large family practice clinic for the majority of her prenatal care. The clinic was not limited to gynecology or obstetrics patients. The lobby was quite large with a waiting area separated from a line up area that funneled patients toward the front check-in desk. The check-in/reception desk was part of a large square of cubicles that wrapped around one corner of the lobby. To the side of the check-in counter were several counters including a billing and scheduling counter. Chairs were clustered in groups of fours and threes around the waiting room, arranged for optimal viewing of several large fish aquariums and sculptures. Patients were called back to exam rooms through a door on the far side of the waiting room. Because I also interviewed providers at this location I became familiar with “backstage” areas including doctor offices and break rooms on one end of the building and the second floor conference room. These rooms were not visible from the main lobby/waiting area.

Ruby's prenatal visit interaction was similar to Sarah's in that the provider worked off of a question checklist. Ruby did not know this provider and if she had it may have altered the interaction pattern. Ruby's provider expressed more emotion than Sarah's and seemed to engage in more “recipient design” or customization of the questions to Ruby and her husband (Boyd and Heritage 2006: 164). She seemed happy for Ruby and her husband (saying congratulations and using a high voice to express delight/excitement) and briefly asked about non-relevant things such as baby names. This lifeworld inclusivity indicates some elements of a coaching session visit were present in this visit that tended to fall more toward the checklist end of the spectrum. The provider also took time to explain that the tingling Ruby was feeling in her right index finger was likely due to pseudo carpal tunnel syndrome a common pregnancy symptom. The doctor asked questions in such a rapid succession, however, Ruby and her husband had limited time to respond.

When I spoke with Ruby after the birth of her baby, she admitted being “really disappointed” because she'd had a cesarean. Ruby's water broke before the onset of labor contractions. Similar to some other

mothers' stories, Ruby was not certain her water had broken at the time. Prior to or during labor the bag of amniotic fluid can develop a slow leak versus an obvious all-at-once break. This is concerning to providers because the bag of amniotic fluid provides a barrier for the fetus against infection. Ruby noticed some extra leaking on her due date and called the hospital for instructions. She was told to keep an eye on things but not told to take additional action unless she noticed contractions. When she arrived for her regular clinic appointment two days later her doctor was upset at the instructions Ruby was given. Ruby's doctor promptly sent her to the hospital where a test determined that Ruby did have amniotic fluid leaking. At this point, Ruby still hadn't had noticeable labor contractions. Ruby expressed frustration with the advice she received from her doctor and prenatal classes claimed that she would "know when she was in labor." Other mothers I spoke with echoed this frustration. Typically, providers recommend delivery within 24 hours of water breaking because the risk of infection increases after the bag of waters has broken. Her doctor recommended inducing labor first with misoprostol, a medication administered on the cervix to begin dilation. After receiving this medication, Ruby began to feel labor contractions but the contractions did not establish a predictable pattern. Ruby reported being asked multiple times by labor and delivery nurses if she wanted pain medication despite having earlier expressed her desire not to be asked. Ruby wanted to experience unmedicated, spontaneous vaginal birth. After laboring all day, Ruby acquiesced to a shot of Numorphan (oxymorphone) – a synthetic morphine drug sometimes used during labor to manage pain. Ruby was told by her doctors that she should accept this medication because her body was stressed and her uterus couldn't relax enough to help labor progress. After another dose of this medication (the hospital limits this medication to three doses during labor) and several hours Ruby was told she was fully dilated and could begin pushing. Ruby pushed for two hours, which is on the high end for a first birth but not unusual, and was told the baby was not descending through the birth canal. Ruby was given the labor-inducing drug Pitocin intravenously to attempt to help delivery. The baby's heart rate initially decelerated after Ruby received Pitocin causing concern but then recovered back to a reassuring pattern quickly. Ruby continued pushing but the baby did not move down the birth canal. Ruby told me

the OB on call suggested that her baby's head was too large to fit through the birth canal (cephalopelvic disproportion) and recommended a cesarean. After nearly 23 hours of labor, Ruby was exhausted and consented to the cesarean. Ruby gave birth to a healthy baby boy via cesarean four days after her estimated due date.

When Ruby expressed her disappointment about having a cesarean she remained uncritical of the doctors and nurses who attended her. Her dissatisfaction was expressed more as a difference between what she expected and what happened with the birth. In her words the birth “was not how it was supposed to turn out.” Ruby was later told that it wasn't that her 7 pound 8 ounce son's head was too big to fit down the birth canal, but that his head was not lined up with the opening of her cervix. In future births, Ruby assumed she'd have the option to try for a VBAC because the indication for cesarean (misalignment) would not necessarily happen again. I asked Ruby why she thought her labor ended in a cesarean and if she felt the providers could have done anything differently to change the outcome. Ruby praised the nurses who attended her during labor despite the fact that she felt pressured into accepting pain medication. She thought a more experienced OB or midwife might have known how to direct her to position her body so that her son's head could come into alignment. Ultimately, however, she blamed the cesarean on the misoprostol administered to start labor. Ruby theorized that using the misoprostol meant that her cervix hadn't dilated appropriately to allow her son to pass into the birth canal.

Despite wanting a low-intervention vaginal birth, Ruby was unable or unwilling to challenge the recommendations of her providers. I cannot claim that the checklist pattern of visit interaction caused Ruby's cesarean. Had Ruby felt more enabled, however, perhaps she would have questioned or resisted some of the interventions. Instead, it seems that running through a checklist at a prenatal visit predisposed Ruby to being more accepting of the checklist approach to labor. I am not questioning the doctor's judgment with respect to Ruby's labor. I'm suggesting that Ruby could have been conditioned

through the interaction pattern to expect her labor, like her pregnancy, to be a series of items or experiences that follow a predictable pattern. Although she questioned whether her provider's relative inexperience may have contributed to her cesarean, ultimately she accepted her provider's authority, so much so that she held the technology (misoprostol) more responsible than her doctor's decision to use it.

The Coaching Session Model: Enabling Maternal Autonomy

Emily's Story

Like Sarah, Emily was expecting her third child. Her older children were also both under five years of age. Emily related her preference for home birth to her general dislike of hospitals. She mentioned that she associated hospitals with visiting dying relatives. She also had several physicians in her family who all chose to die at home out of the hospital setting. Emily also wished to avoid a cesarean and felt that her choice of birth provider and location would help control her chances of cesarean birth. With her first pregnancy, Emily interviewed an OBGYN and she asked him directly if birth center births and home births were safe. He confirmed their safety and mentioned that the local hospital had a 30% cesarean rate. Based on this information and the fact that her home was located within 5 minutes of a hospital, Emily felt comfortable with planning a home birth. She explicitly chose a midwife with a science background and chose to pay out of pocket for ultrasounds with all three pregnancies.

Home Birth Midwife Office Details

The home birth midwife's (hereafter HBMW) "office" was a two-story converted garage located near the back of the property a short distance from the HBMW's personal residence. I met Emily outside and we entered the property through a white picket fence. We walked through a landscaped garden with a water feature to get to the converted office/garage. After greeting the HBMW and introducing me, Emily entered a small bathroom near the front door of the garage. Her urine sample was collected in a china tea cup and with a matching saucer. The HBMW tested the urine in the sink just outside of the bathroom. I

waited on the lower level in a room decorated with bamboo flooring, exposed concrete walls, and low cushions for seating. The exam took place on the upper level of this building in a carpeted large loft area furnished with sofas, overstuffed armchairs, and a rocking chair. This space also housed a lending library of pregnancy, birth, and infant-care related books.

Emily's interactions with her home birth midwife provider represent the alternative pattern of prenatal visit – that of a coaching session. Similar to how some sport and lifestyle coaches seek to positively motivate their mentees, the HBMW oriented her interactions toward the goal of helping Emily have the most positive pregnancy, labor, and birth experience possible. Emily's prenatal visit lasted over an hour thereby allowing much more time for her midwife to mentor her. Emily also had a long relationship that had evolved over time with this provider. The HBMW had attended Emily's other births. Their relationship spanned three pregnancies and five years. Certainly this history affected the HBMW's behavior. The HBMW seemed to know Emily as an individual causing her to treat Emily as a person instead of as a pregnant person. More specifically, Emily was not treated solely as a patient with a condition in need of management. Although Emily and the HBMW's preexisting relationship may have contributed to achieving this coaching session model, it was not the only variable in play. Other important differences in interaction patterns differentiated this model from the checklist model.

Agenda Setting: Lifeworld Inclusivity

One stark contrast between the coaching/mentoring model visit and the checklist model visit was the difference in how the caregiver handled the agenda. Emily's HBMW allowed her to bring lifeworld concerns and issues into the interaction space in ways the BCMW's interaction circumscribed. Although the HBMW had a pattern and flow to her visit plan that included many of the same physiological monitoring goals as the BCMW, she repeatedly allowed Emily to bring up issues and took the time to acknowledge and respond to them. One example is present in the following interaction:

HBMW (while giving Emily a foot massage with scented oil): “Is the baby active and moving?”

Emily: “When I’m quiet and relaxing, yes.”

HBMW shows Emily a large 11”x14” anatomical illustration of what the fetus looks like and gives information about what’s going on with the fetus developmentally at 24 weeks gestation.

Emily: “I have a friend who recently lost her baby at 19 weeks and I have fears about this.”

HBMW: “I’m sorry to hear this. Second trimester loss is very, very rare. I’m sorry that happened to your friend. Did you have to explain to [Emily’s daughter, age 5] about it?”

Emily: “No, she wasn’t showing much so not too many people knew [she was pregnant].”

HBMW: “I’m so sorry. We live in an age where because of technology we think every baby makes it, but nature is involved and not every baby makes it. That will always be that way, no matter how much we do to prevent it.

Emily: “Tomorrow we close on our new home we just purchased. We’re still trying to sell our old house.”

HBMW: “Are you doing okay with the stress of that (still rubbing Emily’s feet)?”

Emily: “It is stressful. [Husband] is confident it will sell. I’ve only cried a couple of times.”

At Sarah’s visit the nurse who checked her vitals asked “Are you feeling baby move?” as a way to check fetal activity. Framing the question this way implied that the baby was assumed to be moving but that Sarah might not be aware of them. This might be a reasonable assumption for a first time mom, but this was Sarah’s third pregnancy and therefore she was more likely to be accurately identifying fetal movement. But the nurse’s question does not acknowledge Sarah’s experience. In contrast, Emily’s HBMW’s phrasing “Is the baby active?” bolstered Emily’s position as an expert on her own embodied experience of pregnancy. By asking the question this way, the HBMW validated Emily’s assessment of how active her baby was.

After her midwife explained what was happening with the fetus at this gestational age, Emily raised concerns about second trimester miscarriage based on her friend's experience. The HBMW responded by reassuring her and contextualized Emily's fears with reference to her lifeworld (her daughter). She then expressed sympathy for Emily's friend's loss and contextualized the risk of miscarriage as an ever-present reality despite attempts to minimize or control risk. Sarah also expressed anxiety about fetal loss at several points during her second trimester prenatal visit. Sarah told the BCMW that she felt the baby's movement reassuring and that it helped her feel less anxious. Sarah stated that she was "taking it on faith" that her fetus's development was on track and "normal" because she did not have an ultrasound as proof of this. In response, the BCMW continued down the agenda checklist of routine questions and proceeded to the physical examination without acknowledging or responding to Sarah's concerns. By leaving unquestioned Sarah's assumption that she needed the ultrasound as reassurance of fetal development, the BCMW reconfirmed the status of ultrasound as authoritative knowledge over and above Sarah's embodied experience of fetal movement.

Emily continued to set the prenatal visit agenda when she brought up her family's recent purchase of a new house. Although the stress of purchasing a new home and an upcoming move would seem to be off topic, the HBMW immediately acknowledged the connection for Emily between lifeworld events and her physical experience of pregnancy. Her first concern was Emily's well-being expressed by the question: "Are you doing okay with the stress of that?" This question simultaneously allowed Emily to admit this was difficult for her ("I've only cried twice") and supported Emily's position as someone who is able to decide what topics are relevant to the visit. After Emily's comments about moving, the HBMW reminded her to observe heavy lifting restrictions for a woman in her third trimester. Instead of a negatively sanctioning tone, the phrase "And you'll remember about lifting?" reiterated Emily's responsibility to safeguard her pregnancy while allowing for lifeworld challenges. The use of the phrase "you'll

remember” also shows “recipient design” in that the HBMW is assuming that Emily knows about late pregnancy restrictions on lifting (Boyd and Heritage 2006). The HBMW also confirmed her role as coach or mentor with this response. In this way, Emily’s pregnancy is *hers*, individualized; and her midwife, like a good coach alters her management techniques accordingly.

Mother-Family Education

Mother-family education is a goal of the coaching session prenatal visit. Emily’s midwife spent a significant amount of time on educating her and her family about the pregnancy as a precursor to birth. Although she did not bring her children or husband to the visit I observed, Emily told me that the HBMW had a basket of stuffed animals with each one representing the size of the fetus at a different gestational age. Also, the HBMW described the changes occurring in Emily’s body and in the fetus while referencing the large illustration of the fetus and massaging Emily’s feet. Emily told me that patients were free to borrow books from the HBMW’s personal library as a part of their prenatal care.

This focus on educating not only mothers but also their family members is present in the checklist interactions but to a lesser degree. In the coaching model, mothers and family members are educated in order to enable mothers to birth to the best of their ability. In contrast, when I interviewed a third year resident at a family practice clinic, he said that the bulk of prenatal education came at the first visit. This first “educational” visit, run by a nurse, is the main attempt to educate expecting mothers. Of course, practitioners at other clinics are constrained by the sheer volume of patients and limited time they have to accomplish a prenatal visit interaction.

Pregnancy as Avoidance versus Activity

The difference in focus on education runs deeper than just time constraints between visits that more closely resemble the checklist versus coaching type however. The motivation to educate mothers in the

checklist model is to improve compliance with behavioral mandates. Education focuses on reasons to eliminate or reduce maternal behaviors that increase risk to the fetus. Mothers are taught about the dangers of alcohol, tobacco, and illicit drug use for their babies but they are not taught how to be pregnant. Most prenatal advice is framed in terms of what to avoid or what to limit consumption of. Women are told to monitor their weight, fetal movement, and other variables such as sleep and vitamin intake. Emily's HBMW seems to represent a different approach when she tells her to increase the amount of cardio exercise. This is a subtle but important difference. Instead of treating pregnancy as a tenuous condition that must be monitored and guarded from risk at all times, the coaching model assumes women can actively participate in their pregnancy.

When it comes to birthing, most education in a checklist model revolves around filling out the proper paperwork and pre-registering at the hospital. Care providers in clinics do encourage the type of education Emily's HBMW provides about pregnancy and childbirth and they direct women/families to available providers. For example, Ruby and her husband took hospital-based childbirth classes, and Sarah was required by the birth center to take a night course about birthing in a birth center. But by integrating the educational component of prenatal care into the visit itself, the coaching model reinforces the goal of mother as an active participant in her pregnancy and birth. Most women I spoke with had taken prenatal education and birth classes with their first pregnancy but not with subsequent pregnancies. Integrating education with care in the coaching model ensures women will receive this information with each pregnancy. Although this difference appears subtle its effects are profound. In the checklist model the subtext is that the maternal body is something to be managed as a fetal environment. In the coaching model mothers are treated as agents of pregnancy and birth. Furthermore, by including the education of family members, the coaching model integrates the mother's lifeworld and recognizes the importance of her myriad social roles.

Role Construction and Power Distribution: Enabling Relational Autonomy

Both models of prenatal visits represent an interactional space where patients and providers construct and solidify role performances. Mishler (1984: 11) argued that “The illness discovered through the interview is constructed, not found.” Based on my observations, participants also *co-construct patient and provider roles through interaction* in these visits (Fujimura 1996, Heritage and Maynard 2006). Constructing these roles at repeated visit interactions shapes pregnancy, labor, and birth experiences for mothers. The visit model – coaching or checklist – may enable or constrain mothers' ability to resist medical advice and/or make informed choices about their care.

Emily's HBMW constructed her role as a coach or support person throughout the prenatal visit as opposed to the decider. Emily's HBMW allowed her to set the agenda and acknowledged the importance of Emily's lifeworld and how it affected her prenatal experience. Throughout the visit the HBMW offered acknowledgment and support to Emily. From the 25 minute foot massage while she ate a snack to the soft decor to the urine sample collected in a china tea cup – the overall focus is on the quality of Emily's experience. Instead of giving directives the HBMW framed advice as “giving reminders.” For example: “I'll give you some reminders to keep up your cardio now because we want your red blood cell growth to keep up with the plasma expansion happening at this point in your pregnancy.” In this excerpt, the HBMW tied her interests to Emily's by using “we” to indicate their cooperative, interdependent relationship. This is in contrast to the sometimes paternalistic “we” used by medical doctors or the “we” used to represent the voice of the clinic/doctors. After all, good coaches are commended for their star athlete's performances.

The HBMW's reminder is informative in that it conveyed what was happening physiologically to Emily in scientific language, but it also gave Emily the opportunity to further this development – to “do” pregnancy by performing cardio exercise. Women are generally instructed to do certain things during

pregnancy such as eat healthy foods, take prenatal vitamins, and continue moderate exercise. These recommendations are not usually made in the context of the visit after the initial visit, however. Mothers are expected to educate themselves about these things with suggested reading in the form of books and pamphlets or through attending prenatal childbirth education classes. Education at these classes more often takes the form of what to limit or avoid during pregnancy. Framing things this way implicated Emily as an agent in her pregnancy and birth. Emily and her baby are physiologically connected, but she is more than a body housing a fetus. Her role is constructed as a co-participant who brings valid questions and knowledge that contributes to the overall goal of birth. By including consideration for Emily's family and her existing role obligations, the HBMW treated Emily as a total person (Mishler 1984). When she recommended a post-partum doula, for example, the HBMW framed this individual as potentially "a good match for your family."

Role Construction and Hierarchical Power: Constraining Maternal Autonomy

Sarah's BCMW, in contrast, maintained strict separation between her role and Sarah's throughout the visit interactions. It is standard practice at the birth center and other clinics to see a variety of providers at prenatal visits. It was somewhat unusual that I observed two prenatal visit interactions between Sarah and the same midwife. This midwife did not attend Sarah's birth. The fact that Sarah knew she had a fairly small chance of having this specific midwife at her birth may have led her to acquiesce to the midwife's strict agenda setting during the prenatal visit. Because it was no more likely that she would see this midwife versus another at her next visit and birth, Sarah may have accepted the generic advice the midwife gave about exercise just to give the appearance of acquiescence. As Gill and Maynard (2006) argued the structure of talk between patients and providers may reflect conversational conventions more than conflicts between the agendas of each party. Sarah may have said she would try to exercise simply to move the conversation forward and proceed to the exam portion of the visit and because she felt like accepting the advice was expected of her while she was acting as patient.

Strict differentiation between patient and provider roles in the checklist model of visit interaction lends itself to the interchangeability of individuals in these roles. Based on my interviews and observations, a scripted checklist model of visit enables clinic efficiency. When they follow a generalized protocol for prenatal visits, providers are able to accomplish the medical encounter in ten minutes in contrast with the 60+ minutes it took the home birth midwife. Home birth midwives typically care for a limited number of patients at one time. This lower volume of patients compared with the average OBGYN practicing out of a clinic supports the coaching model. In the checklist model, the provider qua expert speaks from her expertise and sharply curtails conversation outside of the area where she claims authority. When Sarah attempted to introduce lifeworld concerns during the visit, the BCMW moved the conversation along to the next question on her agenda. Under the checklist model, as Mishler (1984: 137) predicted, the provider : "...tended to repair these disruptions rapidly to regain control of the interview." This exertion of control over topics is a mechanism through which providers maintain power in the interaction. The ability of providers to exert this control and thereby power relies on unarticulated assumptions both parties have about the roles – and the constraints, boundaries, and responsibilities of each role – that affect interaction patterns (Miller and Shriver 2012).

Providers are able to control agendas because they rely upon the assumption/expectation of busyness that patients have. Patients are aware that providers have a limited time set aside for clinic visits and have been socialized to not take too much of the doctor's time. Furthermore, several mothers I spoke with were cautious about being seen as "too demanding" or "a difficult patient." They accepted the underlying assumption that an individual doing a provider role was a gatekeeper of sorts to medical technologies and care. In her research on childbirth practices in Italy, Tanassi (2004) argued that the choice women made to acquiesce to providers or constrain their behaviors in order to prevent being labeled as a problem patient is itself a form of limited agency. Tanassi (2004) claimed that for most expecting mothers the

only opportunity for gaining agency was to agree to allow their providers to make decisions for them in order to enter and receive services from the total institution that is obstetric care. For the women Tanassi (2004) interviewed and observed, choice of provider and the provider's institution became the only point of maternal agency. Women assumed that the doctors they selected would make decisions in their best interest and they trusted the system so to speak. Tanassi (2004) labeled this as a more passive form of agency wherein women made one decision that they assumed would affect the trajectory of their pregnancies in a predictable way.

Tanassi's (2004) point about maternal strategizing through provider choice is useful in distinguishing how what seems to be acquiescence can be strategic. However, by failing to distinguish agency from autonomy her analysis falls into the same trap of the either/or theorizing about agency she purports to challenge. In contrast, I argue that women can make an agential choice and *still* experience constrained autonomy. For example, Sarah was well informed in her decision making about birth and prenatal care based on both her personal experience with childbirth and her job as a graphic designer/technical writer. Sarah was more informed about midwifery than the average expecting mother because the not-for-profit company she worked for promoted the development of midwifery practices in developing countries. She was able to choose care (an agential act) with a birth center that is not a realistic option for many expecting mothers. Although many women would choose care through a birth center, there are only 248 currently operating in the U. S.²² Birth centers are also sometimes restricted by state laws about what kinds of births they can accommodate. For example, Colorado state law prohibits birth centers from accepting patients with a plethora of preexisting health conditions including the use of SSRI antidepressant medications, HIV positive status, a pre-pregnancy body mass index (BMI) greater than 35,

²²<http://rhrealitycheck.org/article/2013/02/20/new-study-shows-birth-centers-are-a-quality-option-for-low-risk-births/> accessed 6-26-13.

breech position babies, and VBAC patients - to name a few. Some birth centers cannot accept Medicaid as payment and have complicated relationships with private insurance carriers.

Sarah assumed she would receive high quality, personalized care by choosing the birth center. Sarah did achieve the low intervention vaginal birth she had planned, but her ability to balance the power between herself and her provider was restricted by the checklist model of visit interaction. Sarah may have made an informed choice in choosing her provider and birth location, but in practice, the interaction with her midwife was constraining. Sarah was unsuccessful in her attempts to have the midwife understand her pregnancy in the context of her life. When the BCMW failed to acknowledge Sarah's proposed explanations/contextualization and reiterated standard advice she curtailed the opportunity for Sarah to practice autonomy as an interactional skill (Mackenzie and Stoljar 2000). Despite being a highly educated patient, Sarah felt compelled to accept this model of interaction to receive care. Although Sarah made an informed choice, she had little opportunity, in the interactions I observed, to resist the treatment of her pregnancy as a condition that should be managed by her provider. In summary, the freedom to choose even alternative birthing centers does not guarantee control over one's experience.

Maternal Resistance

In both types of visits, mothers expressed resistance to the agenda setting and authority claims of their providers. For Sarah, we saw how she repeatedly attempted to introduce lifeworld information in an attempt to revise the BCMW's visit agenda. By explaining her fatigue as a result of "already having two children," Sarah implied that, at least on some level, she could claim authority over this pregnancy by virtue of her maternal experience. When I spoke with her at the follow up interview, Sarah told me she assumed the BCMW did not have children of her own. Sarah attempted to counter the BCMW's advice to increase her level of exercise by noting the constraints in her life. At our follow up interview, Sarah explained that she felt this aspect of her care – the concern with her rate of weight gain – was the same

between the birth center and the more medicalized care she'd received in prior pregnancies. Having been through two other pregnancies and experienced the same amount of weight gain, Sarah regarded herself as more of an expert on her own physical experience of weight gain and swelling. But, in the end, the BCMW maintained her authority as a gatekeeper to prenatal care at the birth center. Sarah acquiesced when she realized her repeated attempts to contextualize her pregnancy were not being heard.

In the following interaction, the BCMW expressed concern over Sarah's description of her rate of Braxton Hicks (non-labor) contractions.

Sarah: "I'm having more Braxton Hicks contractions with this pregnancy or maybe I'm noticing them more than with my second child. They seem more frequent and things are setting them off like my other kids jumping on me."

BCMW: "Do you have more than five in an hour?"

Sarah: "Maybe. I'm not sure, but I haven't been worried about it."

BCMW: "If you have more than five in an hour with cramping, lie down and drink at least a liter of water and they should subside."

Sarah challenged the BCMW's concern about the frequency of her Braxton Hicks contractions. She wanted to mention that she was experiencing more non labor contractions but was careful to qualify her perception. The BCMW, however, stuck to her prenatal visit script. Instead of reassuring Sarah that perhaps her perception was skewed or indeed the heat and interaction with children could affect the frequency of Braxton Hicks contractions, she reiterated behavioral monitoring guidelines. As Gill and Maynard (2006) found, when patients describe a symptom they are often looking for a medical professional to confirm or refute their hypotheses about why they are experiencing said symptom. For example, Sarah brings up her busy lifestyle as an explanation. Like the majority of patients Gill and Maynard (2006) studied, Sarah does not get an immediate response to her explanation from the midwife.

But had the midwife acknowledged Sarah's hypothesis she would have challenged the pattern that inhibits autonomy. The goals of the prenatal visit are slightly different than a clinic visit oriented around seeking attention for atypical symptoms. Like a well child visit or yearly physical exam, the prenatal visit has a routine agenda. The BCMW's advice to Sarah to drink water and rest is based on the positive association between Braxton Hicks contractions and dehydration. The BCMW does not lead with that explanation, however. For the BCMW, her focus remained on controlling and monitoring Sarah's behavior as way to safeguard the fetus. Sarah challenged the BCMW's concern suggesting that she knew the difference between labor contractions which would have been concerning at this gestational age and the harmless Braxton Hicks contractions.

At our follow up interview, Sarah shared the story of her experience birthing at the birth center. Overall she described her experience as positive and said she would seek care there again if she had another child. However, Sarah did express some frustration with how the birth center midwives and nurses responded to her during labor. She called during early labor when she felt some strong cramping after having some bloody show (a sign of early labor) because she was instructed to do so. When she called, though, she felt the midwife on call dismissed her assessment of labor. In Sarah's words, "They acted like why did you call? They didn't believe I was in labor." Sarah went to bed and woke up with more regular contractions that were only five minutes apart. After waiting for grandparents to arrive to stay with their other children, Sarah and her husband went to the birth center. At this point, her contractions slowed in frequency but she was about 6 centimeters dilated. Sarah labored for four hours moving and walking through the contractions. There was a first time mom laboring in the room across from her and Sarah and her husband were left alone for most of this time while the midwife and nurse attended the other mother. Finally, the midwife checked her again and she was nearly fully dilated and ready to begin pushing. Sarah did not believe the midwife's assessment because her contractions were not as painful as with her previous labors. Sarah entered the birthing tub and after one to two minutes of pushing her son was born.

Sarah's birth story is a very positive one in many ways. Interestingly, however, Sarah and her caregivers seemed to be second-guessing one another throughout her labor.

Emily and her HBMW had a much more communicative relationship that had been established over *years of interactions*. I observed that Emily's provider knew and understood her as a person and that affected the quality of care Emily received. In another interview, another expecting mother, Karlie, explained how knowing her provider for seven years prior to her first pregnancy affected her ability to communicate with her doctor. She planned to drive an additional 40 minutes out of her way to her doctor's hospital in order to have him attend her birth. Karlie was able to solicit medical information from her doctor in a way that customized his advice to her as an individual; as a patient, she helped co-construct the recipient design optimization of the conversation (Boyd and Heritage 2006). She felt more comfortable with her doctor's advice when she asked him: "What would you tell your wife, or your daughter?" Although I did not observe Karlie's prenatal visit interactions, her descriptions sounded like they would fall more in line with the coaching model. Perhaps, then, a relationship established over time is a necessary but not sufficient condition for a more coaching session style of interaction.

I witnessed Emily challenge her provider without hesitation, with a quality of familiarity similar to Karlie's. In the following excerpt, the HBMW is offering Emily a new test, not yet "Standard of Care" that can identify fetal blood type. This was important in Emily's case because her blood type and that of her other children's were different. Because Emily has an Rh negative blood type and her husband has an Rh positive type, her body may produce antibodies against an Rh positive fetus. If left untreated, these antibodies can destroy fetal red blood cells leading to anemia, fetal heart failure, pregnancy loss, and even stillbirth. The effects of the antibodies on the fetus become more profound in second and third pregnancies. Mothers who have this condition are typically treated with an injection of anti-Rh antibodies at 28 weeks and sometimes again at 34 weeks. Emily received this injection in her previous pregnancies.

Although the effects of Rh disease can be devastating, it may not occur if fetal and maternal blood do not mix during pregnancy and birth. If the blood does not mix, the mother's body will not produce antibodies to Rh positive blood. Some new testing methods may be able to identify fetal blood type or determine if fetal blood is present in maternal blood. If this can be determined early in pregnancy, mothers may not need the injections at 28 weeks.

HBMW: "There is a lab doing testing - it's not Standard of Care yet, but I wanted to offer it to you...this new test shows 98% accuracy that we can determine the baby's blood type by using the mother's blood."

Emily: "Has anyone in your care done it?"

HBMW: "Yes."

Emily: "Was it accurate?"

HBMW: "Yes, but that's not enough to go on I realize."

Emily: "Where is the lab?"

HBMW: "In New York. The idea in offering is not exposing you to the drugs if you don't need it and we have had issues in the past with shortages of this drug."

Emily: "My concern is that both of my other children were not my blood type."

HBMW: "I will send you an email with details. We send the blood to the lab in New York. The risk, of course, is that you pay for the test and then you still need the drugs. They test antibodies and look for prediction factors for fetal blood type, but you've never had a reaction to the drug so I'm confident that routine care is also a fine choice for you...I'm still learning about what the science is behind the test."

Emily: "I will ask a friend of ours who's an oncologist for his opinion on the test."

Emily was not only comfortable enough to ask questions she also sought a broader understanding of how the test worked and what the complete process was. Emily even told her HBMW that she would actively seek out a second "expert" opinion. The HBMW for her part was accepting of Emily's questioning and

offered additional information to help Emily decide in the form of a follow up email. By saying that she will solicit the opinion of a friend who's also an oncologist, Emily indicated that she felt comfortable rejecting the HBMW's suggestion. For Emily, the risk of the test being inaccurate was higher than the risk of using the medication she had previously relied on, even if that medication later proved to be unnecessary.

During both of our interviews, Emily sought to explicitly differentiate herself as a woman planning a home birth from what she understood as a more typical "home birther." Emily did not choose home birth as a complete rejection of the medicalized context of childbirth. She deliberately chose a midwife who had an undergraduate degree in a scientific discipline and who had a midwifery degree. Emily repeatedly described herself as not "a hippy." For Emily, this generalized, typical home birther was someone whose primary motive for planning a home birth is a rejection of all things science and medicine. Emily described a childbirth education class in which she and her husband participated wherein they were instructed to draw or paint an image of their perfect birth. Emily related how she stared at the blank paper and could not think of how to complete the assignment as the directions were too abstract. The instructor later passed Emily and seeing her blank paper commented: "I love it. It's so open." Emily told me about this encounter as a funny anecdote but its purpose was to control my perception of her. Emily preemptively resisted being labeled a typical home birther and the stereotyped assumptions that went with it. Home birth was a safe, attractive alternative to hospital birth for Emily. She educated herself and trusted her own ability to birth her children and the professional ability of her provider. She was reassured, however, by opinions she sought out from OBGYNs and her father-in-law pediatrician about the risks of birthing at home. Her father-in-law did not understand why Emily would want a home birth, but reassured her that should anything go wrong they were close enough to a hospital that the time it took to transfer would not make a significant difference in terms of increasing risk.

Conclusion

In order to improve childbirth for women in the U.S., we need to understand how mothers and providers interact in ways that work against women's abilities to choose among birthing options. Increasing the range of choice with respect to types of providers or offering VBAC as an alternative to repeat cesarean may not affect women's choices, if birth providers attempt to influence or guide women towards their own choices, which are more likely to be cesarean (see Chapter 2, page 86). Differentiating between maternal agency (having choices) and maternal autonomy (having the ability to make that choice) is key to understanding why women continue to accept providers' choices of cesarean delivery when they are more dangerous for both fetus and mother. Borrowing from Sherwin's (1998) concept of relational autonomy, I analyzed the possibility within each interaction for the development of maternal autonomy. Relational autonomy implies at least two ways that individual action is contextualized. First, autonomy is relational in the sense that broader social institutions and contexts shape individual wants and beliefs and therefore choices. Second, autonomy is relational in that it can be seen as a capacity or skill one develops (or fails to develop) through social interaction (Mackenzie and Stoljar 2000). By focusing on maternal autonomy as relational we see how women's agency as decision makers is constrained and enabled.

Based on observations of prenatal visits I presented two types of interactions between women and their birth providers that fall along opposite ends of a spectrum of more or less enabling of the potential for relational autonomy. I observed interactional situations that showed women as more able or less able to contribute to and control their birth choices, which I call "maternal autonomy." I name situations where women have a greater ability to control a "coaching interaction model" and where women have a lesser ability to control a "checklist interaction model." Under a checklist model, providers sharply curtail attempts by patients to bring up lifeworld concerns or alternate explanations. In this type of interaction, providers function as a sort of quality control inspector minimizing time, maximizing efficiency in order to provide service to a large volume of patients. Through ignoring patient's lifeworld-based explanations

(agenda control), sticking to standard medical advice (maintaining authoritative knowledge claims), and asking one diagnostic question after another (navigation of monitoring scripts), busy providers limit visit length. The goal of a checklist visit is to ascertain and assess maternal and fetal biological health in as efficient manner as possible.

At the other end of the theoretical spectrum, in coaching session models, the provider performs the role of expert coach or personal trainer. The main goal of the interaction is to educate the mother to make informed decisions about how she wants to birth her child. Coaching sessions are more enabling of maternal autonomy because they are interactions characterized by negotiation around agenda setting and are inclusive of lifeworld concerns. Mothers practice and hone their relational autonomy skills by having time and space to ask questions and express concerns. The goal of the visit is to ensure the health of mother and baby but also to empower mothers to use their own knowledge of their bodies and their lifeworlds (non-medical factors that affect an individual's lived experience, including socioeconomic considerations) to manage their pregnancies and their birthing choices.

Relationships constructed during prenatal visits between expecting mothers and their providers affect childbirth outcomes in sometimes subtle ways. While an hour long prenatal visit that includes a 25 minute foot massage is not a reality most providers can achieve, small changes in interaction patterns and recognition of the validity of lifeworld concerns may help shift patient-provider interactions toward the coaching session model. This model appears to best provide the most informed and supported decision-making which in turn may provide for better birthing outcomes. Future analyses comparing prenatal visit interaction style with type of birth outcome would help us to understand just how salient an effect interaction has on rates of cesarean and vaginal birth.

Chapter 4: Exploring Mothers' Relational Autonomy as a Childbirth "Outcome"

Redefining Outcomes

One goal of this research was to better understand how the relationships between mothers and providers affected maternal decision-making about labor and birth. By exploring an often neglected “outcome,” maternal autonomy, this work unpacks the complexity of maternal decision-making and demonstrates how myriad lifeworld variables affect maternal action. From needing to make arrangements for pet care during labor to beliefs about bodily failure, women's existing role obligations and assumptions color their interpretive assessments of risk information. Further distinguishing pregnancy and birth as objects of investigation are the creation of a new patient (the infant) and the establishment of a new social status for women (motherhood) (Casper 1998, Davis-Floyd 1992). Previous studies of childbirth have paid insufficient attention to how mothers make choices based on the meaning of risk as established through interactions with birth professionals (Blumer 1969). Few childbirth studies have followed women throughout pregnancy. By interviewing women before and after the birth of their child, I learned how mothers altered, adapted, and changed their views and choices about labor and birth throughout pregnancy. If I had only interviewed women post-birth, the responses may have been subject to retrospective spinning. In other words, women may have had a tendency to rationalize interventions as necessary for the difficult birth and sound more accepting of them. Instead, by interviewing women before birth, I was able to more accurately understand what they valued and wanted during birth. In particular, one mother I interviewed went from being an outspoken proponent of low-intervention spontaneous vaginal delivery to saying that she would probably schedule a cesarean with her subsequent birth regardless of medical indication. Had I not spoken to her pre-birth and understood how difficult and perspective-changing her birth was, I may have assumed she had always had this predisposition for CDMR (cesarean delivery by maternal request).

Studies that have interviewed women at multiple points during pregnancy and post-partum are typically survey-based (Listening to Mothers II and III) and more focused on measuring quantitative outcomes or quantifying qualitative outcomes into measurable Likert-scale type variables. While this research is useful for broadly characterizing women's experiences, it tends to resort to "victim blaming" and put the onus of improving childbirth back onto maternal decision-making. It seems to assume all we need to do to improve childbirth is improve opportunities for maternal agency (choice) while largely ignoring the issue of autonomy (capacity/skill). In the following excerpt taken from an Op-ed post on [cnn.com](http://www.cnn.com/2013/07/09/opinion/declercq-childbirth-costs), public health scholar and childbirth advocate, Eugene Declercq, draws a surprising conclusion about the rising cost of childbirth based on data from the Listening to Mothers III study (<http://www.cnn.com/2013/07/09/opinion/declercq-childbirth-costs>).

So who's to blame for these high costs?

Partly, mothers themselves. Americans are obsessed with the notions that "newer is better" and "more technology is always a plus." When it comes to medical technology, the U.S. public becomes Oliver Twist, continually asking, "Please, sir, I want some more."

I was part of a team that recently conducted a pair of national surveys of mothers. Among the many questions, we asked if mothers agreed with the statement, "Newer maternity tests and treatments are generally improvements over older ones." An overwhelming majority of mothers (74%) agreed while only 10% disagreed.

Setting aside the rookie methodological mistake of presenting respondents with a double-barreled question (maternity tests AND treatments), Declercq ignores the social construction of the desirability of technological interventions such as repeat cesarean or continuous EFM (Fujimura 1996). In contrast, my research helps unpack how the meaning of those technologies and mothers' use of it is influenced by

interactions with their providers. By looking at how interactions establish meaning, we can better understand the choice of repeat cesarean, for example, as both a constrained, yet strategic choice by mothers.

Studying patient-provider interactions over the trajectory of pregnancy offers a unique contribution to the field of medical sociology. First, pregnant women are not ill but their condition does follow a mostly predictable pattern over time from conception to birth. Second, the schedule of routine prenatal visits provides a special opportunity to observe how clinic relationships are established over time through multiple interactions. Both of these factors differentiate pregnancy and birth as “co-constructions” achieved at the loci of medical encounters (Fujimura 1996, Heritage and Maynard 2006) Unlike routine physicals, prenatal visits have defined goals that include the monitoring of more than one “patient.” The prenatal visit schedule also establishes a patient-provider-clinic relationship with a high-volume of encounters in a relatively short time.

Overview of Empirical Chapters

Analysis of three types of interactions structured the substantive chapters: interactions between mothers, birth professionals and EFM, decision-making interactions about VBAC between patients and providers, and communication between patients and providers during prenatal visits. The three substantive chapters roughly overlap with Blumer's (1969) three premises that distinguish symbolic interactionism, although all three premises are explored in all of the chapters to a greater or lesser degree. The first chapter focused on EFM and explores the meaning lodged “in the thing” (Blumer 1969: 5). In the second chapter on VBAC, the meaning making activities of the individual “psyche” (Blumer 1969: 6) were explored through the conceptual discovery of bodily failure. Finally, the third chapter analyzed how meaning is the

product of an interaction between patients and providers, or in Blumer's (1969: 6) phrase the meaning in "social action."

In the first chapter, *Hooked Up: How Electronic Fetal Monitoring Affects Maternal Agency and Autonomy*, I explored the relationship between routine use of EFM and the potential for informed decision-making. Data from this chapter came from a unique combination of the literature on EFM, interviews with expecting mothers, participation in an online training course for nurses, and analysis of documents for those seeking official EFM certification. Based on Sherwin (1998) and Mackenzie and Stoljar's (2000) efforts to re-theorize autonomy in a feminist form, I differentiated between agency defined as choice and autonomy understood as a capacity to choose. Despite a lack of evidence that shows routine EFM use leads to a lower incidence of fetal hypoxia or cerebral palsy, EFM is routinely used during labor for low-risk mothers. In low-risk contexts, EFM constrains maternal agency and autonomy because of the association between its use and the increased likelihood of cesarean delivery. EFM use also constrains women physically during labor and reliance on EFM sometimes leads to obsolescence of alternate methods of fetal heart rate monitoring (auscultation). Many mothers I spoke with mentioned wanting to avoid continuous fetal monitoring during labor. The title of this chapter "Hooked Up" is based on a code I identified in several transcripts wherein women described not wanting to be constrained during labor both physically and by potential misidentification of fetal distress. EFM may enable maternal agency in birth situations defined as high-risk such as VBAC or breech vaginal delivery. In these situations, EFM may help to allow a woman a trial of labor whose only other option may have been a scheduled cesarean. Maternal autonomy is still problematic for high-risk births, however, if reliance on EFM and fear of malpractice continue to lead to misdiagnosed fetal distress.

The reduction in access to vaginal birth after cesarean since the late 1990s has been associated with the rising cesarean rate. Even when they have the option of attempting a VBAC, however, many mothers are still choosing scheduled cesareans for their second or subsequent births. In the second chapter "*Choosing Cesarean: How Assumptions about Bodily Failure Affect Mothers' Decisions about Vaginal Birth After Cesarean,*" I analyzed data from interviews with mothers who have had a previous cesarean. Lack of accurate, comprehensive information about the relative risks of VBAC versus repeat cesarean limited the opportunity for women to make an informed decision. Also important, however, were women's assumptions about a concept I've labeled "bodily failure." Women who had experienced a previous cesarean were more likely to choose repeat cesarean if they assumed their bodies would fail them in an attempt at vaginal birth. These assumptions about unruly bodies and the opposition of mind and body (Davis-Floyd 1994) were sometimes reinforced by providers who linked things like the shape of a woman's uterus with a propensity for breech fetal position in current and subsequent pregnancies. When providers offered the choice of VBAC or repeat scheduled cesarean without adequately explaining the risks and benefits of each, informed choice became largely symbolic. Providers gave the appearance of agential choice for women, but not the reality. One participant described her provider saying that the choice between VBAC and repeat cesarean was "completely up to her," but did the doctor did NOT discuss the negative side effects of repeat cesarean. The identification of assumptions about bodily failure is an important contribution of this study. Through detailed data analysis I found that when women interpret labor complications as evidence of bodily failure, scheduling cesarean can seem like an agential choice to women who assume a trial of labor will end in an emergency cesarean. Unless providers can help challenge these assumptions through better education about the risk of uterine rupture and the long term effects of cesarean, women may continue to choose cesarean.

The third chapter *Checklist Versus Coaching Session: Prenatal Visit Interaction Patterns and Maternal Autonomy*, presented a detailed analysis of prenatal visit interactions between mothers and providers. These observations highlighted patient interactions with family practice doctors and midwives, and showed how despite making an informed choice of choosing a birth center for her care, one mother's autonomy was constrained by her midwife's "checklist" interaction pattern. In this chapter, I brought together themes explored in chapters one and two – a reconceptualization of maternal autonomy a capacity that is contextualized in a social interaction, and the importance of engaging mothers as active participants in pregnancy, labor and birth. The checklist model constrains maternal autonomy through a strict adherence to achieving the medical monitoring goals of the visit. Busy providers use agenda setting, reliance on standard medical advice as authoritative knowledge, and asking one diagnostic question after another to minimize time and maximize visit efficiency. A coaching session model, in contrast, highlights maternal education as an integrated component of pregnancy and interactions are oriented toward encouraging active maternal participation in pregnancy, labor and birth. In a checklist model, a woman's pregnancy is *managed*. In a coaching session model, however, a woman *does* pregnancy.

Linking the interactional visit context to outcomes (defined as vaginal or cesarean birth) proved difficult given the limited number of prenatal visits I was able to observe. By observing multiple prenatal visit interactions between the same mother and provider we would better understand how relational autonomy as a skill is fostered (or not) over the course of the pregnancy through coaching session pattern visits. After analyzing one participant's (Ruby's) prenatal visit and comparing it with her labor story, I wondered if the checklist model of interaction had predisposed this participant to accept a checklist model of labor management. Future research comparing more prenatal visits with labor stories would be an interesting method for exploring the effects of enabling (or constraining) maternal autonomy on birth outcomes.

Childbirth and Symbolic Interactionism

Although I did not set out to explore the concept of autonomy when I began this dissertation research, as I analyzed data, I became convinced that differentiating between agency (choice) and autonomy (capacity) is vital for improving childbirth experiences for women. We can talk about improving childbirth with choices until we're blue in the face but that will not effect change for women. We need to understand how the meaning of EFM, cesarean, and VBAC, for example, are shaped through interaction between people and also in the mind of the individual. In other words, we need to bring a symbolic interactionist perspective to bear on sociological studies of childbirth (Blumer 1969, Shibutani 1986). This study has taken a step in that direction.

Studies that attempt to link population changes such as advancing maternal age and increased obesity cannot definitively establish a causal link between these changes and an increase in cesarean (Declercq et al 2008). What they have done, however, is show that maternally-requested cesarean is a mostly a myth (Listening to Mothers II, III). Even if increases in CDMR were associated with the overall rise in cesarean, it would be a disservice to mothers not to question it. The fact that CDMR has been so often cited as the reason behind the rise in cesarean delivery says something about how we as a society view motherhood and birth. We put a great deal of responsibility on expecting mothers to make the “right” choice for their baby, but we do little to enable them to choose that option or to understand what that choice is *for them*. In studying childbirth, we need to understand how mothers' decision making is constrained and enabled lest we throw mothers as agents out with the proverbial bathwater.

In closing, I'd like to share a quote from a participant who describes what her goals were for labor and birth. Her story summarizes in an integrated way the themes of the three substantive chapters: the use of technological interventions to manage labor (EFM and Pitocin), choosing to attempt VBAC, and interactions with providers. Unfortunately, despite her best efforts to educate herself and make an informed choice about her provider, she ended up having an emergency cesarean. She may have made agential choices, but her autonomy was highly constrained by a model of care that put strict limits on allowing patients to go past due dates. Because she was past her due date, this participant was induced with Pitocin. When used in a TOLAC context, Pitocin increases the risk of uterine rupture. This participant did suffer a uterine rupture and interestingly, was the first to identify it despite continuous monitoring via EFM. In the following excerpt from her prenatal interview, she describes the challenges of finding the kind of care she wanted which, in my mind, describe the challenges of making autonomous decisions in a constrained context.

I would like to be an active part of decisions about how I labor: if I'm allowed to eat or not allowed to eat, if I'm allowed to - if I end up being strapped to an IV or continuous fetal monitoring or if I'm allowed to get up and move. If I'm 'allowed' [participant used air quotes gesture when said word 'allowed'] to birth in whatever position feels right for my body in whatever moment. And I think the midwifery group that we're working with has a reputation for really honoring women being active participants in their birth, but the hospital that they're connected to does not as much have that reputation. And so I get the sense that there's sometimes some conflict that they have about how much they can permit...I sense for liability reasons...you're not allowed to eat in labor, you have to have continuous fetal monitoring, so those kinds of things that are presented as non-negotiables and if you - well first I don't really want to be arguing with people while I'm trying to birth but um I-I also - I just I guess I want - it feels hard enough for me to listen to what's right for my body and it feels like I don't want that complicated by people."

References

- Association of Women's Health, Obstetric, and Neonatal Nurses (AWHONN). 2008. "Fetal Heart Monitoring." Position Statement:
http://www.awhonn.org/awhonn/content.do?name=05_HealthPolicyLegislation/5H_PositionStatements.htm
- Association of Women's Health, Obstetric, and Neonatal Nurses (AWHONN). 2011. "Introduction to Fetal Heart Monitoring." Online course.
- Basset, K. 1996. "Anthropology, Clinical Pathology, and The Electronic Fetal Monitor: Lessons from the Heart." *Social Science and Medicine*, 42 (2): 281-292.
- Basset, K., Iyer N., and Kazanjian A. 2000. "Defensive Medicine During Hospital Obstetrical Care: A By-Product of the Technological Age." *Social Science and Medicine*, 51: 523-537.
- Baxter, J. 2007. "Do Women Understand the Reasons Given for their Caesarian Sections?" *British Journal of Midwifery*, 17 (9): 536-538.
- Becker, Howard, Blanche Geer, Everett Hughes, and Anselm L. Strauss. 1961. *Boys in White: Student Culture in Medical School*. Chicago: University of Chicago Press.
- Bergeron, V. 2007. "The Ethics of Cesarean Section on Maternal Request: A Feminist Critique of the American College of Obstetricians and Gynecologists' Position on Patient-Choice Surgery." *Bioethics*, 21 (9): 478-487.
- Bessett, Danielle. 2010. "Negotiating Normalization: The Perils of Producing Pregnancy Symptoms in Prenatal Care." *Social Science and Medicine* 71: 370-377.

- Bland, M. 1998. "The Effect of Birth Experience on Post Partum Depression." Missouri Western State University. <http://clearinghouse.missouriwestern.edu/manuscripts/59.php>
- Block, J. 2007. *Pushed: The Painful Truth about Childbirth and Modern Maternity Care*. Cambridge, MA: Da Capo Press.
- Blumer, Herbert. 1969. *Symbolic Interactionism: Perspective and Method*. Englewood Cliffs, NJ: Prentice-Hall.
- Borst, C. 1995. *Catching Babies: The Professionalization of Childbirth, 1870 – 1920*. Cambridge: Harvard University Press.
- Boyd, Elizabeth and John Heritage. 2006. "Taking the History: Question Taking During Comprehensive History-Taking," pgs. 150-184 in *Communication in Medical Care: Interaction Between Primary Care Physicians and Patients*. John Heritage and Douglas Maynard, editors. New York, NY: Cambridge University Press.
- Braunstein, Glenn. 2012. "The Realistic Skinny on Moms, Pregnancy, and Weight Gain." 11-5-12. Huffington Post Blog.
- Brody, J. 2009. "Updating a Standard: Fetal Monitoring." *New York Times*: July 7, 2009.
- Bryant, J., Porter, M., Tracy, S., .and Sullivan, E. 2007. "Caesarean birth: Consumption, safety, order, and good mothering." *Social Science and Medicine*, 34 (4): 1192-1201.
- Buckley, S. 2005. "Epidurals: Risks and Concerns for Mother and Baby."

<http://www.sarahbuckley.com/epidurals-risks-and-concerns-for-mother-and-baby/>

Canguilhem, George. 1989. *The Normal and The Pathological*. New York, NY: Zone Books.

Casper, M. 1998. *The Making of the Unborn Patient: A Social Anatomy of Fetal Surgery*. New Brunswick: Rutgers University Press.

Charmaz, Kathy. 2006. *Constructing Grounded Theory: A Practical Guide Through Qualitative Analysis*. Thousand Oaks, CA: Sage.

Cherniak, D. and Fisher, J. 2008. "Explaining Obstetric Interventionism: Technical Skills, Common Conceptualisations, or Collective Countertransference." *Women's Studies International Forum* 31: 270-277.

Cook, Tanya. 2012a. "Hooked Up: How Electronic Fetal Monitoring Affects Maternal Agency and Maternal Autonomy." *Techne*, 16(1): 45-61.

2012b. "'You Have Never Treated Harry as a Son:': The Politics of Motherhood in Harry Potter," pg. 79-90 in *The Sociology of Harry Potter* J. Sims Editor. Hamden, CT: Zossima Press.

Cunningham, Gary F., Shrikant Bangdiwala, Sarah S. Brown, Thomas Michael Dean, Marilyn Frederiksen, Carol J. Rowland Hogue, Tekoa King, Emily Spencer Lukacz, Laurence B. McCullough, Wanda Nicholson, Nancy Frances Petit, Jeffrey Lynn Probstfield, Adele C. Viguera, Cynthia A. Wong,

Sheila Cohen Zimmet - The NIH Consensus Development Panel. 2010. "National Institutes of Health Consensus Development Conference Statement. Vaginal Birth After Cesarean: New Insights March 8-10, 2010." *Obstetrics and Gynecology* 115 (6): 1279-95.

Davis-Floyd, R. 1992. *Birth as an American Rite of Passage*. Berkeley: University of California Press.

1994. "The Technocratic Body: American Childbirth as Cultural Expression." *Social Science and Medicine* 38 (8): 1125-1140.

1997. with Carolyn Sargent, co-editor. *Childbirth and Authoritative Knowledge: Cross-Cultural Perspectives*. Berkeley, CA: University of California Press.

Daviss, Betty Anne. 2001. "Reforming and (re))making midwifery in North America," in *Birth By Design*, eds. DeVries, R., Teijlingen, E., Wrede, S. and Benoit, C. New York: Routledge.

Declercq, E., Sakala, C., Corry, M. and Applebaum, S. 2006a. Listening to Mothers II: Report of the Second National U.S. Survey of Women's Childbearing Experiences. Childbirth Connections: <http://www.childbirthconnection.org/article.asp?ck=10396>

Declercq, E., Menaker, F, and MacDorman, M. 2006b. "Maternal Risk and the Primary Cesarean Rate in the United States, 1991-2002." *American Journal of Public Health* 96 (5): 867 – 872.

Declercq, E., Barger, M., Cabral, H., Evans S., Kotelchuck, M., Simon, C., Weiss, J., and Heffner, L. 2007. "Maternal Outcomes Associated with Planned Primary Cesarean Births Compared With Planned Vaginal Births." *Obstetrics & Gynecology*, 109 (3): 669-677.

- Deline, James, Lisa Vernes-Epstein, Lee T. Dresang, Mark Gideonsen, Laura Lynch and John J. Frey III. 2012. "Low Primary Cesarean Rate and High VBAC Rate With Good Outcomes in an Amish Birthing Center." *Annals of Family Medicine* 10 (6): 530-537.
- Duden, B. 1993. *Disembodying Women: Perspectives on Pregnancy and the Unborn*, Cambridge: Harvard University Press.
- Fox, B. and Worts, D. 1999. "Revisiting the Critique of Medicalized Childbirth: A Contribution to the Sociology of Birth." *Gender & Society* 13: 326-46.
- Fujimura, Joan. 1996. *Crafting Science: A Sociohistory of the Quest for the Genetics of Cancer*. Cambridge, Mass: Harvard University Press.
- Gamble, J., Creedy, D. K., McCourt, C., Weaver, J. and Beake, S. 2007. "A Critique of the Literature on Women's Request for Cesarean Section." *Birth* 34 (4): 331-340.
- Garfinkel, Harold. 1967. *Studies in Ethnomethodology*. Englewood Cliffs, NJ: Prentice-Hall.
- Gill, Virginia Teas and Douglas W. Maynard. 2006 "Explaining Illness: Patients' Proposals and Physicians' Responses," pg. 115-150 in *Communication in Medical Care: Interaction Between primary Care Physicians and Patients*. John Heritage and Douglas W. Maynard, editors. New York: Cambridge University Press.
- Gossman, Ginger, Jutta Joesch, and Koray Tanfer. 2006. "Trends in Maternal Request Cesarean Delivery 1991-2004." *Obstetrics and Gynecology* 108 (6): 1506-1516.
- Grivell, R. and Dodd, J. 2011. "Short- and Long-Term Outcomes after Cesarean Section." *Expert Review of Obstetrics and Gynecology* 6 (2): 205-215.

- Guise J-M, Eden K, Emeis C, Denman MA, Marshall N, Fu R, Janik R, Nygren P, Walker M, McDonagh M. 2010. "Vaginal Birth After Cesarean: New Insights on Maternal and Neonatal Outcomes." *Obstetrics and Gynecology* 116 (6): 1267-1278.
- Hampton, T. 2008. "Researchers Probe Effects of Pregnancy, Birth on Childhood Asthma and Allergy." *Journal of the American Medical Association*, 300 (1): 29.
- Heberlein, Thomas A. 1974. "The Three Fixes: Technological, Cognitive and Structural." Pp. 279-296 in *Water and Community Development: Social and Economic Perspectives*, edited by D. Field, J.C. Barren and B.F. Long. Ann Arbor, MI: Science Publishers, Inc.
- Heritage, J. and Maynard, D. ed. 2006. *Communication in Medical Care: Interaction Between Primary Care Physicians and Patients*. New York: Cambridge University Press.
- Jordan, Brigitte. 1997. "Authoritative Knowledge and Its Construction," pg. 55-79 in *Childbirth and Authoritative Knowledge: Cross-Cultural Perspectives*. Robbie Davis-Floyd and Carolyn Sargent, editors. Berkeley, CA: The University of California Press.
- Kotaska, A. 2011a. "Commentary: Routine Cesarean Section for Breech: The Unmeasured Cost." *Birth* 38 (2): 162-164.
- Kotaska, A. 2011b. "Heads-Up: Defining Safe Breech Birth." Conference Presentation at the 8th Annual Women's Health Research Conference. University of Minnesota: 9-19-11.
- Kotaska, Andrew. 2012. "Quantifying VBAC Risk: Muddying the Waters." *Birth* 39(4): 333-337.

Kozhimannil, Katy Backes, Michael Law, and Beth Virnig. 2013. "Cesarean Delivery Rates Vary Tenfold Among US Hospitals; Reducing Variation May Address Quality and Cost Issues." *Health Affairs* 32 (3): 527-535.

Kripke, C. 1999. "Why are We Using Electronic Fetal Monitoring?" *American Family Physician*, 59 (9): 2416 – 2420.

Kulka, R., Kuppermann, M., Little, M., Drapkin Lyerly, A., Mitchell, L., Armstrong, E., and Harris L. 2009. "Finding Autonomy in Birth." *Bioethics* 23 (1): 1-8.

Leeman, L., and Plante, L. 2006. "Patient-Choice Vaginal Delivery?" *Annals of Family Medicine* 4 (3): 265-268.

Lothian, J. 2008. "Choice, Autonomy, and Childbirth Education." *Journal of Perinatal Education* 17 (1): 35-38.

MacDorman, M., Menacker F., and Declercq, E. 2008. "Cesarean Birth in the United States: Epidemiology, Trends, and Outcomes." *Clinics in Perinatology* 35: 293 - 307.

MacDorman MF, Declercq E, Menacker F, Malloy MH. 2008b. "Neonatal mortality for primary cesarean and vaginal births to low-risk women: application of an "intention-to-treat" model." *Birth*.35(1): 3-8.

MacDorman, Marian F., Eugene Declercq, T.J. Matthews, and Naomi Stotland. 2012. "Trends and Characteristics of Home Vaginal Birth After Cesarean Delivery in the United States in Selected States." *Obstetrics and Gynecology* 119 (4): 737-744.

- Mackenzie, C. and N. Stoljar. 2000. "Introduction: Autonomy Refigured," in *Relational Autonomy: Feminist Perspectives on Autonomy, Agency, and the Social Self*. C. Mackenzie and N. Stoljar, eds. New York: Oxford University Press, 3-31.
- Martin, Emily. 1987. *The Woman in the Body: A Cultural Analysis of Reproduction*, Boston: Beacon Press.
- Martin Joyce, Brady Hamilton, Stephanie Ventura, Michelle Osterman, Elizabeth Wilson, and T.J. Matthews. 2012. "Births: Final data for 2010." *National Vital Statistics Reports* 61 (1) Hyattsville, MD: National Center for Health Statistics.
- Martin, Karen. 2003. "Giving Birth Like a Girl." *Gender and Society* 17 (10): 54-72.
- Mathews, Joan and Kathleen Zadak. 1991. "The Alternative Birth Movement in the United States: History and Current Status." *Women and Health* 17 (1): 39-56.
- Maynard, Douglas W. 2003. *Bad News, Good News: Conversational Order in Everyday Talk and Clinical Settings*. Chicago: University of Chicago Press.
- McGrath, SK and JH Kennell. 2008. "A Randomized Controlled Trial of Continuous Labor support For Middle-Class Couples: Effect on Cesarean Delivery Rates." *Birth* 35 (2): 92-97.
- McLeod, C. and S. Sherwin. 2000. "Relational Autonomy, Self-Trust, and Health Care for Patients Who are Oppressed," in *Feminist Perspectives on Autonomy, Agency, and the Social Self*. C.

- Mackenzie and N. Stoljar, eds. New York: Oxford University Press, 259-279.
- Mead, George Herbert. 1967. *Mind, Self, and Society*. Chicago: University of Chicago Press.
- Miller, Amy Chasteen and Thomas Shriver. 2012. "Women's Childbirth Preferences and Practices in the United States." *Social Science and Medicine* 75: 709-716.
- Mishler, Elliot. 1984. *The Discourse of Medicine: Dialectics of Medical Interviews*. Norwood, NJ: Ablex.
- Mol, Annemarie. 1998. "Lived Reality and the Multiplicity of Norms: A Critical Tribute to George Canguilhem." *Economy and Society* 27 (2-3): 274-284.
- Naftalin, J. and Paterson-Brown, S. 2008. "A Pilot Study Exploring the Impact of Maternal Age and Raised Body Mass Index on Caesarean Section Rates." *Journal of Obstetrics and Gynaecology*, 28 (4): 394-397.
- National Vital Statistics Reports (NVSR) 2010. "Births: Preliminary Data for 2009." 59 (3): http://www.cdc.gov/nchs/data/nvsr/nvsr59/nvsr59_03.pdf
- National Institutes of Health: Office of Human Subjects Research. 2012. "Regulations and Ethical Guidelines: The Belmont Report, Ethical Principles and Guidelines for the Protection of Human Subjects of Research." OHSR hsr.od.nih.gov/guidelines/Belmont.html#goc1 accessed 1/2012.
- Pateman, K., Khalil, A. and O'Brien, P. 2008. "Electronic fetal heart rate monitoring: help or hindrance?" *British Journal of Midwifery*, 16 (7): 454-457.

- Pérez-Escamilla, R. I Maulén-Radovan, and K G Dewey. 1996. "The association between cesarean delivery and breast-feeding outcomes among Mexican women." *American Journal of Public Health*. 86 (6) 832-836.
- Perez, Miriam. 2013. "New Study Shows Birth Centers are a Quality Option for Low Risk Births." Posted 2-20-13 at <http://rhrefactycheck.org/article/2013/02/20/new-study-shows-birth-centers-are-a-quality-option-for-low-risk-births/>
- Placek, P.J. and S. M. Taffel. 1980. "Trends in cesarean section rates for the United States, 1970--78." *Public Health Reports* 95(6): 540--548.
- Rapp, Rayna. 2000. *Testing Women, Testing the Fetus: The Social Impact of Amniocentesis in America.* New York, NY: Routlage.
- Roberts, Richard G., Mark Deutchman, Valerie J. King, George E. Fryer, and Thomas J. Miyoshi. 2007. "Changing Policies on Vaginal Birth After Cesarean: Impact on Access." *Birth* 34 (4): 316-322.
- Roberts, CL, S Tracy, and B. Peat. 2000. "Rates for Obstetric Intervention Among Private and Public Patients in Australia: Population Based Descriptive Study." *BMJ* 321: 137-141.
- Rochman, Bonnie. June 25, 2012. "Midwife Mania? More US Babies than Ever Are Delivered by Midwives." For Time Healthland online <http://healthland.time.com/2012/06/25/midwife-mania-more-u-s-babies-than-ever-are-delivered-by-midwives/>.
- Sakala C, Yang YT, Corry MP. 2013. "Maternity care and liability: Pressing problems, substantive solutions." *Womens Health Issues* 23 (1): 7-13.
- Sartwelle, Thomas. 2012a. "Electronic Fetal Monitoring: A Defense Lawyer's View." *Reviews in Obstetrics and Gynecology*. 5 (3-4) e121-e125.

- 2012b. "Electronic Fetal Monitoring: A Bridge Too Far." *The Journal of Legal Medicine* 33: 313-379.
- Scott, James R. 2010. "Solving the Vaginal Birth After Cesarean Dilemma." *Obstetrics and Gynecology* 115 (6): 1112-1113.
- Sherwin, Susan. 1998. "The Politics of Women's Health: Exploring Agency and Autonomy." *The Feminist Health Care Research Network*. Philadelphia: Temple University Press.
- Shibutani, Tamotsu. 1961. *Society and Personality*. Englewood Cliffs, NJ: Prentice-Hall.
- Shibutani, Tamotsu. 1986. *Social Processes: An Introduction to Sociology*. Berkeley and Los Angeles, CA: University of California Press.
- Simonds, W. "Watching the Clock: Keeping Time During Pregnancy, Birth, and Postpartum Experiences." *Social Science and Medicine*, 55: 559 – 570.
- Strauss, Anselm. 1978. *Negotiations: Varieties, Processes, Contexts, and Social Order*. San Francisco, CA: Jossey-Bass.
- Strauss, Anselm. 1987. *Qualitative Analysis for Social Scientists*. New York, NY: Cambridge University Press.
- Swedha, A., Hacker, T., and Nuovo, J. 1999. "Interpretation of the Electronic Fetal Heart Rate During Labor." *American Family Physician*, 59 (9): 2487–2506.
- Tanassi, Lucia. 2004. "Compliance As Strategy: The Importance of Personalized Relations in Obstetric Practice." *Social Science and Medicine* 59: 2053-2069.
- Tucker, S., Miller, L., and Miller, D. 2009. *Mosby's Pocket Guide to Fetal Monitoring: A Multidisciplinary Approach*, St. Louis: Mosby.

Wendland, C. 2007. "The Vanishing Mother: Cesarean Section and 'Evidence-Based Obstetrics.'"

Medical Anthropology Quarterly, 21 (2): 218-233.

Zhang, J., Troendle, J., Reddy, U., Laughon, S. K., Branch, D.W., Burkman, R., Landy, H., Hibbard, J.,

Haberman, S., Ramirez, M., Bailit, J., Hoffman, M., Gregory, K., Gonzalez-Quintero, V.,

Kominiarek, M., Learman, L., Hatjis, C., and van Veldhuisen, P. 2010. "Contemporary Cesarean

Delivery Practice in the United States." *American Journal of Obstetrics and Gynecology*, 203 (4):

326.e1-326.e10

Endnotes

ⁱ This research was supported by a generous travel grant from the Robert F. and Jean E. Holtz Center for Science and Technology Studies.

ⁱⁱ The terms "maternal autonomy" and "maternal agency" are used in this paper in an inclusive sense to speak about all birthing women whether or not they intend to directly care for the child they birth and about women's agency and autonomy more broadly. Women who act as surrogates as well as lesbian birthing partners who will let the other partner take on the role of mother are included in these perspectives.

ⁱⁱⁱ OHSR hsr.od.nih.gov/guidelines/Belmont.html#goc1 accessed 1/2012

^{iv} Thank you to the reviewers for all of their helpful suggestions including this point.