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Anne Morrill
Portland State University

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An Anthropological Examination of Mandated Ultrasounds as an
Element of State Policy on Abortion

Policy Paper in Fulfillment of the M.A. in Anthropology
(Policy Track)

Anne Morrill
M.A. Candidate
Anthropology
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Abstract:

Prenatal ultrasounds have become commonplace and widespread throughout the United States, Canada and Europe. Ethnographic studies have illustrated that ultrasounds can have a positive impact on a woman's pregnancy, one that establishes a relationship between the mother and the unborn fetus as a person. This relationship comes into question when examining the state's regulation of abortion. Several states, including Florida, Mississippi, Alabama, Texas, South Dakota, South Carolina and Ohio have considered legislation that would mandate the use of ultrasounds prior to terminating a pregnancy. The specifics of these policies vary from mandating ultrasounds as simply an option for pregnant women seeking an abortion to forcing a woman to obtain an ultrasound before the procedure would be provided. In order to understand the social and emotional outcomes of such policies at the state level it is useful to examine the role ultrasounds play in women's lives that plan to carry their pregnancy to term. Since its widespread use beginning in the 1980s, ultrasounds have emerged as normal part of pregnancy. Ultrasounds give pregnant women the opportunity to view their pregnancy on screen allowing for the attribution of physical and possible social characteristics of the fetus prior to birth. This paper examines the effect of an ultrasound on women through an anthropological lens. By examining the cultural meaning of ultrasounds and how they affect women's reproductive experiences cross-culturally, I will place ultrasound technology in social and cultural context that illuminates the potential impact of mandatory ultrasound policies.

Internship: Oregon Health Forum

In fulfillment of the internship component of the policy track, I have worked at Oregon Health Forum since May of 2007. Oregon Health Forum seeks to be a facilitator and provider of insight in the field of health policy in the state. Medical and applied anthropologists have a growing interest in health advocacy and health policy, and my work with Oregon Health Forum has afforded me invaluable experience in a variety of policy settings. While my initial responsibilities included fact checking stories for the *Oregon Health News*, and facilitating in the editorial process, my role has since expanded within the organization. Having a background in medical anthropology and an interest in health policy, I have been able to utilize my skills as an editorial assistant and fact checker for this organization. Calling upon my training in medical

anthropology I can discuss various contemporary health issues related to gender, age, race and ethnicity and economic status with my co-workers in order to broaden the research interests of the team. My research interests have also allowed me to write weblogs, which are posted on the organization's website as part of its outreach to the public (Oregon Health Forum 2008: www.healthforum.org).

Furthermore, the *Oregon Health News* seeks to be a leading source in health policy information by creating a newsletter that is unbiased and by having staff members who are not affiliated with any special interest groups or lobbies. In order to avoid opinion-based segments and biased reports in the newsletter I carefully edit examine language use. My responsibilities include examining stories before they go to press, fact checking, and examining the language used in the newsletter to see if the stories are one-sided or if they represent a more diverse perspective that would reach a wide range of health consumers. Additionally, as I have continued working for this organization I have become more heavily involved in the research aspects of the *Oregon Health News*. I have contributed significantly to researching and collecting data for our Annual Hospital Report with my editor-in-chief. This project included researching financial, compensation and tax information for all of the hospitals in Oregon and two in Washington State. Last February I researched a white paper project that examined elementary school aged children's access to vision screening and testing throughout the state of Oregon. In response to the research that I carried out during this time, I testified on behalf of Oregon Health Forum and presented the results from the study to Oregon Representatives. I feel that my contribution to the hospital report, white paper projects and to other short stories that are published in each monthly publication demonstrate how this internship has provided me with the opportunity to expand upon my expertise in health policy and will allow me to further expand upon my research

interests in women's access to health care and health services in the future. My interests in women's health issues have overlapped with my supervisor's interests in women's health and women's roles in politics. She has exposed me to organizations and introduced me to women leaders whom both research and advocate for women's access to health care and health services. It is through her encouragement and support of my interest in women's access to safe and legal abortions that I came to research this policy paper.

Introduction: Mandated Ultrasounds

Ultrasounds have become commonplace and their use has been widespread throughout the United States, Canada and Europe. In addition to its use as a diagnostic tool in the medical field, ultrasound imaging has become embedded in western popular culture and has been utilized as a successful political strategy for anti-abortion activists. Ultrasound imaging has emerged as a cultural text in contemporary western society, one that demonstrates an array of meaning. "As a result of routine antenatal ultrasonography, the fetal image is now fully incorporated into popular culture and is no longer simply a medical projection but a cultural symbol which has become part of public imagination...The fetus has gone solo, achieving an autonomy and independence that can be manipulated in social, cultural and political ways" (Drapper 2002: 778). In popular culture, ultrasound imaging has been used as a marketing tool for companies such as Volvo and Valvoline. In a 2000 Valvoline commercial an ultrasound image appears on screen. The fetus shown revs up the engine by turning the keys to an imaginary ignition then slams its foot on the gas and is seen steering the car. A caption reads "Garth Tander one month before birth", then "you can tell who uses valvoline" (Valvoline 2000). Valvoline's use of ultrasound imaging as a marketing strategy speaks to the impact of this technology on everyday life. The commercial assumes that the viewer will see the fetus on screen as having characteristics of a person, Garth

Tander, prior to being born. The commercial's intent to invoke a humorous emotional response from its audience implies a shared knowledge of fetal characteristics and personification during an ultrasound. This personification during an ultrasound scan will be explored further when examining the use of ultrasound imaging in political strategy amongst state legislatures and political activists.

Research suggests that in most cases ultrasounds are associated with a positive experience, one that establishes a relationship between the mother and the unborn fetus: "In a recent study by the American Academy of Family Physicians, 98% of women in a controlled study indicated that they wanted a perinatal ultrasound and 37% were willing to pay out of pocket...As these numbers indicate, ultrasound is perceived by most women as generally 'positive, reassuring and significant event'" (Sullivan 2002: 213). This relationship between the mother and the unborn fetus comes into question when examining proposed policies that would require women to obtain an ultrasound before terminating or 'aborting' a pregnancy. In order to understand the social and emotional outcomes of such policy it is useful to examine the role ultrasounds play in the lives of women who plan to carry their pregnancy to term. Once this role is further understood, I will then examine the impact an ultrasound might have on women who wish to terminate their pregnancy. This paper will examine the medical, social and political attitudes and language concerning ultrasound technology through an anthropological lens. Cross-cultural examples from the United States, Greece, Canada, Ecuador, Vietnam and Australia illustrate how the experience of ultrasounds is shaped by social, economic and political forces. I will examine U.S state policies that utilize ultrasound technology as part of abortion provision.

State Policies Concerning Abortion and Ultrasounds

Policies concerning ultrasound technology with respect to abortion are hotly debated and

are ever changing. The Guttmacher Institute is a nonprofit organization that focuses on sexual and reproductive health research including abortion policy analysis and public health education. “[The Guttmacher Institute] advances sexual and reproductive health through an interrelated program of social science research, policy analysis and public education designed to generate new ideas, encourage enlightened public debate, promote sound policy and program development and, ultimately, inform individual decision making” (Guttmacher Institute 2008). The Institute has conducted research on state policies concerning abortion (Guttmacher Institute 2007). Their published work will be used as a resource for current information about abortion state policy on abortion with respect to ultrasound practices.

State policies concerning ultrasounds and abortion vary state to state for different reasons. Anthropological theory must be applied to this policy issue to further understand its current and future impact. Additionally, I will call upon current research conducted by the Guttmacher Institute and examine various state policies to understand the role of the state’s involvement on reproductive choice on the subject of abortion.

Over the past decade, several states have moved to make ultrasound part of abortion service provision. Some laws and policies require that a woman seeking an abortion receive information on accessing ultrasound services, while others require that a woman undergo an ultrasound before an abortion. Since routine ultrasound is not considered medically necessary as a component of first-trimester abortion, the requirements appear to be a veiled attempt to personify the fetus and dissuade a woman from obtaining an abortion. Moreover, an ultrasound can add significantly to the cost of the procedure (Guttmacher Institute: assessed 2008).

According to the Guttmacher Institute, the following 6 states, Georgia, Indiana, Michigan, Oklahoma, Utah, and Wisconsin require that verbal counseling or written materials concerning abortion must include information on how to access an ultrasound scan. Additionally, the following 9 states: Alabama, Louisiana, Mississippi, Arizona, Florida, Arkansas, Georgia, Idaho and Michigan, regulate the provision of ultrasound by abortion providers.

ULTRASOUND REQUIREMENTS				
STATE	INFORMATION ON ACCESSING ULTRASOUND SERVICES	PROVISION OF ULTRASOUND		
		Required for Each Abortion; The Provider Must Offer the Woman the Opportunity to View the Image	Required After the First Trimester; The Provider Must Offer the Woman the Opportunity to View the Image	If Performed as Part of Preparation for the Abortion, the Provider Must Offer the Woman the Opportunity to View the Image
Alabama		X		
Arizona			X	
Arkansas				X
Florida			X	
Georgia	Verbal*			X
Idaho				X
Indiana	Verbal			
Louisiana		X		
Michigan	Written†			X
Mississippi		X		
Oklahoma	Verbal and written			
Utah	Verbal			
Wisconsin	Verbal and written			
TOTAL	6	3	2	4

* The law was enacted in 2007 and also requires the information to be included in the written materials; however, the materials have not yet been updated.

† Included in written counseling materials although not specifically mandated by state law.

Source:

http://www.guttmacher.org/statecenter/spibs/spib_RFU.pdf

While the regulation of abortion provision in relation to ultrasound screening varies state to state, many laws and proposed laws employ ultrasound technology as part of “informed consent.” The use of informed consent must be defined and understood within a very specific context.

Under English common law, medical treatment without first having obtained the patient’s consent was considered a form of battery. Beginning in the 1950s, courts in the United States have articulated and developed a requirement that health care providers must not only obtain patients’ consent, but also take steps, through a process of disclosure and dialogue, to ensure that the consent they obtain is ‘informed’ (Gold & Nash 2007: 6).

The use of ultrasound technology to ensure informed consent to those women seeking abortion raises the question of whether a pregnant woman is ‘informed’ of her body and experience with pregnancy without such technology? It is useful to examine state legislatures’ use of informed consent in the abortion debate. According to a recent review of state laws, “Currently, 33 states have some law or policy specifically related to informed consent for abortion. In 10 of these states, the abortion-specific law mandates the same types of information generally involved in the informed consent process, such as a description of the procedure to be performed and information on the gestational age of the fetus” (Gold and Nash 2007: 7). The first half of the

following table shows these 33 states and describes how each state defines informed consent through the distribution of information and materials. Some examples of informed consent materials are: provision of written materials, description of abortion procedure, information about fetal development, information about how to access an ultrasound, and the opportunity for women to view the image offered by provider.

STATE POLICY ON INFORMED CONSENT FOR ABORTION

	State-Developed Written Materials Given or Offered (1)	Women Informed That Consent Cannot Be Coerced (2)	Description of Procedures		Fetal Development		Ultrasound	
			Information about specific procedure (3)	Descriptions of all common procedures (4)	Information on gestational age of fetus (5)	Descriptions of fetal development throughout pregnancy (6)	Information about how to access ultrasound services (7)	Required, and provider must offer woman opportunity to view image (8)
States with Detailed Abortion-Specific Informed Consent Requirements (23 states)								
Alabama	G	V,W	V	W	V	W	-	X
Alaska	0	-	V	W	V	W	-	-
Arkansas	0	V,W	V	W	V	W	-	†
Georgia	0	-	V	W	V	W	V**	†
Idaho	G	-	V	W	-	W	-	†
Kansas	G	W	V	W	V	W	-	-
Kentucky	0	-	V	-	V	W	-	-
Louisiana	G	W	V	W	V	W	-	X
Michigan	G	-	V,W	-	V,W	-	W†	†
Minnesota	0	-	V	W	V	W	-	-
Mississippi	0	-	V	-	V	W	-	X
Nebraska	0	-	V	W	V	W	-	-
North Dakota	0	-	V	-	V	W	-	-
Ohio	G	-	V	-	V	W	-	-
Oklahoma	0	-	V	W	V	W	V,W	-
Pennsylvania	0	W	V	W	V	W	-	-
South Carolina	0	-	V	W	V	W	-	-
South Dakota	0	-	V	W†	V	W	-	-
Texas	0	-	V	W†	V	W	-	-
Utah	G	W	V	W	V	W	V	-
Virginia	0	-	V	W	V	W	-	-
West Virginia	0	W†	V	W	V	W	-	-
Wisconsin	0	W	V	W	V	W	V,W	-
States with Customary Informed Consent Provisions (10 states)								
California	-	-	V	-	-	-	-	-
Connecticut	-	-	V	-	V	-	-	-
Delaware	-	-	V	-	V	-	-	-
Florida	-	-	V	-	V	-	-	-
Indiana	-	-	V	-	V	-	V	-
Maine	-	-	V	-	V	-	-	-
Missouri	-	-	V	-	-	-	-	-
Nevada	-	-	V	-	V	-	-	-
Rhode Island	-	-	V	-	V	-	-	-
Tennessee	-	-	-	-	V	-	-	-
U.S. TOTAL	23	8	32	18	30	22	6	3*

G= given; 0= offered; V= verbal; W= written. *Three states without informed consent policies but with other relevant laws are not included in this table. Arizona and Florida laws require ultrasounds whenever an abortion is performed after the first trimester. Illinois law requires that a woman obtaining an abortion after viability be given the option of providing anesthesia to the fetus. †Included absent a specific requirement in the statute. ‡If an ultrasound is provided as part of the preparation for the abortion, then the physician must offer the woman the opportunity to view it.

Source:

Gold RB and Nash E, [State abortion counseling policies and the fundamental principles of informed consent](#), *Guttmacher Policy Review*, 2007, 10(4):6-13.

The second half of this table describes additional information that is provided to women as part of ‘informed consent’ these include, inaccurate portrayal of risk of future fertility, heightened risk of breast cancer, mental health risks, ability of the fetus to feel pain, and lastly contact information for pregnancy crisis centers.

STATE POLICY ON INFORMED CONSENT FOR ABORTION (CONT.)

Future Fertility		Breast Cancer		Health Risks of Abortion Mental Health		Information on Ability of Fetus to Feel Pain (15)	Additional Resources		
Accurately portrays risk (9)	Inaccurately portrays risk (10)	Correctly reports no link (11)	Inaccu- rately asserts possible link (12)	Correctly reports range of emotional responses (13)	Describes only negative emotional responses (14)		Information on services for pregnant & parenting women (16)	Contact information for crisis pregnancy centers (17)	
-	-	-	-	WT	-	-	W	WT	Alabama
WT	-	-	WT	W	-	W	WT	WT	Alaska
WT	-	-	-	W	-	V,W	V,W	WT	Arkansas
WT	-	-	-	W	-	V,W	V,W	WT	Georgia
V	-	-	-	WT	-	-	W	WT	Idaho
WT	-	-	WT	WT	-	-	V,W	WT	Kansas
-	-	-	-	-	-	-	V,W	WT	Kentucky
WT	-	-	-	WT	-	V**	V,W	WT	Louisiana
-	-	-	-	-	W	-	-	-	Michigan
V,WT	-	V,WT	-	W	-	V,W	V,W	WT	Minnesota
V,WT	-	V	WT	-	-	-	V,W	WT	Mississippi
V,WT	-	-	-	-	W	-	V,W	WT	Nebraska
V	-	-	-	-	-	-	V,W	WT	North Dakota
-	-	-	-	-	-	-	V,W	WT	Ohio
WT	-	-	WT	W	-	V,W	V,W	WT	Oklahoma
WT	-	-	-	W	-	-	V,W	WT	Pennsylvania
WT	-	-	-	-	WT	-	V,W	WT	South Carolina
V	WT	-	-	-	WT	WT	V,W	WT	South Dakota
V	W	V	W	-	WT	WT	V,W	W	Texas
-	-	-	-	-	W	-	V,W	WT	Utah
-	-	-	-	W	-	-	V,W	WT	Virginia
V	-	-	WT	-	W	-	V,W	WT	West Virginia
V,W	-	-	-	V,W	-	-	V,W	WT	Wisconsin
-	-	-	-	-	-	-	V	-	California
-	-	-	-	-	-	-	-	-	Connecticut
-	-	-	-	-	-	-	V	-	Delaware
-	-	-	-	-	-	-	-	-	Florida
-	-	-	-	-	-	-	-	-	Indiana
-	-	-	-	-	-	-	-	-	Maine
-	-	-	-	-	-	-	-	-	Missouri
-	-	-	-	TT	-	-	-	-	Nevada
-	-	-	-	-	-	-	-	-	Rhode Island
-	-	-	-	-	-	-	V	-	Tennessee
17	2	3	6	12	7	8*	25	22	U.S. TOTAL

Information given only to women who are at least 20 weeks' gestation. **The law was enacted in 2007 and also requires the information to be included in the written materials; however, the materials have not yet been updated. TT Law requires discussion of emotional impact of abortion. Note: The chart reflects laws and policies that are in effect as of October 1, 2007.

Source:

Gold RB and Nash E, [State abortion counseling policies and the fundamental principles of informed consent](#). *Guttmacher Policy Review*, 2007, 10(4):6–13.

Legislative Debates on the Subject of Informed Consent

Kansas

In the fall of 2007, Sam Brownback, a U.S senator from Kansas introduced the “Ultrasound Informed Consent Act.” This legislation would require that a doctor perform an ultrasound and then share the results with the woman and allow her to view the images before performing an abortion. According to Brownback, “It is necessary and right to provide a woman seeking an abortion with all the available information so that she may make the most informed decision possible...I am hopeful that this bill will inform women and will cause a deeper reflection on the humanity of unborn children. It is important to promote a culture that values life in all stages” (Brownback Press Release: Thursday September 20, 2007). Lawmakers in Texas, South Carolina and Georgia have proposed similar legislation. Brownback’s proposed bill, as well as proposed legislation from other states, use the language of ‘informed consent’ in their legislations concerning ultrasound mandates prior to obtaining abortions. This bill and other state legislatures argue for similar legislation with the political agenda and intent of reducing the number of abortions in their state.

Florida

Republican Sen. Dan Webster, the Senate majority leader, added his sponsorship for “Webster’s” bill. This bill would require women to obtain an ultrasound and would also require doctors to offer women the chance to see the ultrasound results. Doctors would not be required to offer the ultrasound scan results to women who are victims of rape, incest or human trafficking. If a woman did not want to see the results of her ultrasound image she would sign a form declining her wish to view the image. A similar State House measure was offered in Tampa by Republican Representative Trey Traviessa. Traviessa’s House bill would also require ultrasounds

but would include a clause that would make women wait 24 hours to obtain her abortion. Traviessa claimed, “It’s important legislation, because we want fewer abortions...everyone agrees there needs to be fewer of them” (Liberto St. Petersburg Times February 29, 2008: 1). Traviessa’s testimony implies that this legislation would lead to a result that ‘everyone’ agrees upon, meaning fewer abortions. Critics of state involvement on the issue of reproductive choice have also participated in this debate. “This is legislating medicine, which isn’t the job of legislators,” said Adrienne Kimmel, executive director of Florida Association of Planned Parenthood Affiliates. It creates barriers and ties the hands of doctors to do what they think is in the best medical interests of patients” (Liberto, February 29, 2008: 1). This statement illustrates an important aspect of this debate; whether state legislatures should be involved in medical scenarios normally left up to the physician and the patient.

South Dakota

In South Dakota, House Bill 1193 was sent to the House floor by the State Affairs Committee saying that it would provide that women have more information when making decisions on abortion. (Kafka-Pierre Jan 2007). A statement from Representative Roger Hunt refers to an existing law that regulates abortions in South Dakota which defines abortion as a procedure that ends the life of a whole, separate, unique, living human being. “A woman who is facing abortion should be fully informed, that’s what this process is all about, and according to our definition under law, that unborn child is a human, living being” (Kafka 2007). In this case, the notion of informed consent is that a woman fully ‘knows’ the impact of her decisions by showing the fetus as victim. By examining contrasting opinions concerning the proposed policies we can further understand how ultrasound technology is utilized as a political tool for a specific outcome. Keeping these state policies in mind, it is now necessary to examine women’s

experiences with ultrasounds in recent history as documented and illustrated through anthropological research and ethnography.

Women's Experience with Ultrasounds: Anthropological Perspectives

History

Despite the contemporary use of ultrasound technology around the globe, this form of reproductive technology has only recently become commonplace and its widespread use is part of a recent shift in ideology concerning such technology. Since its 'birth' in the late 1950s and early 1960s the growing role of ultrasounds in pregnancy is a product of technological advancement, but is also a result of shifting attitudes towards the use of such technology. The development of ultrasound technology originated as a part of warfare and defense technology and became part of gynecology and antenatal technology when it was discovered that echoes could be obtained from the head of a fetus (Harris et al. 2004). At this time it was known that x-ray technology was not safe to use on pregnant women and ultrasound technology was presented as a promising alternative as an antenatal diagnostic tool. In the 1980s ultrasound technology became widespread and in the 1990s a number of studies were carried out to identify the safety and efficacy of this innovative technology (Harris et al. 2004). Despite these studies, there has been no conclusive research showing that ultrasound technology used in pregnancy is safe, nor harmful.

Oakley argues that claims to safety are based on the mistaken logic that because serious bio-effects have not been demonstrated, ultrasound is safe...It is further assumed that the level of 'certainty' about safety increases directly with the length of time the technology has been in use, rather than through scrutiny to which the technology has been subjected (Harris et al. 2004: 26, 27).

This quote illustrates a cultural faith in scientific technology that has not yet been proven completely safe. If this is true, then what is the motivation to utilize such technology for both the

provider and consumer of ultrasound imaging? These attitudes towards the widespread use of ultrasound technology must be examined within a culture specific context. First I will examine early attitudes towards pregnancy in the U.S. and Britain prior to ultrasound technology.

Prior to the use of ultrasound technology within the medical field, a pregnancy was visually hidden, private and something that was defined as internal. In the 1940s, hormonal pregnancy tests were used as a way of detecting an existing fetus, and stethoscopes were used to hear fetal heartbeats. These two methods were often used in conjunction with women's accounts and testimonies about their bodies and personal experience during pregnancy. In this setting, pregnant women acted as intermediaries between the doctor's external examination of pregnancy and what little internal information could be gathered during the exam. At this time, women knew more about their experience of pregnancy than their physicians due to their insufficient and the limited antenatal technology. Anne Oakley argues that there was an 'antenatal revolution' during the 1960s-1980, which represented a new era in reproductive technology, pregnancy experience and interventions relating to antenatal, or prior to birth, care. (1984). Oakley points out that due to these revolutionary changes, women's control over their pregnancy and knowledge of their experience was no longer central to the understanding of pregnancy in the field of medicine. For the first time, ultrasound use gave physicians direct access to the fetus, giving them detailed knowledge of its physiology, beyond sex, and the speculation of and implied personality prior to birth (1984). This notion of 'direct access' is culturally defined in the context of the United States where the visual imagery of ultrasounds constitutes direct access to the fetus. According to feminist anthropology scholars, women's embodied knowledge was now contested by science and the use of this technology. This is similar to Robbie Davis-Floyd's (1992) 'Technocratic model of birth,' that focuses on the 'superevaluation' of technology and the

where there is a power dynamic between the health practitioner and the patient. The consequences of ultrasound technology can be seen as a mode of surveillance that has widened the gap between women's knowledge of their own bodies and the internal view and scientific knowledge now obtained by physicians.

Surveillance Medicine

As mentioned earlier, ultrasound technology has provided the physician and women with more direct access to the fetus. This access has redefined the experience of pregnancy for women, as their experience can now be contested, validated or refuted based upon what is viewed and interpreted on the screen. While this technology has provided more diagnostic information about the pregnancy, it alters a power dynamic between a woman and her physician. Women are no longer called upon to be the providers of knowledge of their pregnancy experience. Women are told what is happening inside their bodies through a window of technology, which places their experience on screen and display. Ultrasounds in this context can be seen or defined as a form of surveillance. Jan Draper (2002) reflects on what Foucault called "surveillance of the body" and the emerging power struggle resulting from the use of medical surveillance technology by the provider and the consumer. "The power of medical surveillance originates, I suggest, from at least two sources: first medicine's ability to set the visual agenda and establish priority 'looking' areas, thereby determining what is in need of visual exploration. Second their privileged medical gaze secures their monopoly of interpreting and treating the visual image" (Draper 2002: 777).

Draper's discussion of the medical gaze is applicable to the use of ultrasound technology. In the clinical setting, the woman receiving an ultrasound is officially unable able to read, or interpret the results of the scan. The woman may interpret the results of her scan however, her

interpretation or perception of the results is not clinically defined, and therefore the provider has authoritative knowledge over the woman's experience of pregnancy. The relationship between seeing and knowing is altered by this technology. The visual display on screen is defined and experienced differently by the provider, the woman and or parents. The contrasting experience between provider and consumer is demonstrated by the classification of ultrasound scans existing as both a medical and social event. Additionally, examining ultrasound scans as a form of surveillance also identifies how the fetus, not the mother, becomes the focal point, a public rather than a private entity. While defining ultrasounds as being a form of surveillance is often construed as a negative aspect of ultrasounds, the use of this technology as a 'window to the womb' also provides women with the opportunity to experience their pregnancy through a visual and audible display. The Window to the Womb Theme will be revisited, when examining the use of language in state policies on ultrasounds.

Personification: Meet Your Baby

In addition to the scenario of 'seeing' a fetus or 'baby' for the first time, sonograms may provide other 'undiagnostic' knowledge concerning the sex, and implied personality of the unborn fetus. "Now, however, sonography bypasses women's multifaceted embodiment and consciousness, providing independent knowledge of the fetus. Moreover, the technological framework reduces the range of relevant clues for whose interpretation women act as gatekeepers" (Rapp 1997: 39). This statement illustrates a widening gap between the mother and medical authority. Medical professionals have specialized training and additionally often 'know' more information about the unborn baby than the mother. The ultrasound technology acts as a divide between a mother's intuition about her own pregnancy and the medical knowledge that is gained through imaging. Placing the fetus 'center stage' on a television monitor acts as a way to

focus on the fetus as a separate entity from the mother, or ‘patient’ (Rapp 1997). Moreover, ultrasounds help to personify the fetus even though it has not yet been born. This process of personification through the use of technology can make a fetus more ‘baby-like.’ The experience of ultrasound itself can be viewed as a rite of passage that illustrates and marks the journey of the fetus to be defined and seen as a baby, or person.

One interesting aspect of discourse concerning pregnancy during ultrasounds is known as ‘code-switching’ (Rapp 1997). This refers to the changing of language or discourse when your audience shifts. “Among medical peers, sonograms are described in the neutral language of science. But when speaking to pregnant women, sonographers attribute motifs to fetal activity and presence: a fetus that is hard to visualize is ‘hidden’ or ‘shy’; an active fetus is described as ‘swimming,’ ‘playing,’ or even ‘partying’” (Rapp 1997: 40, See Mitchell 1993b). These personified attributes will be revisited in the discussion section of this paper.

Another widely recognized process of personification during an ultrasound scan is the ‘sexing’ of the fetus. The ‘sexing’ of the fetus can be a complex issue for the expecting mother. There are various reasons why women choose to know, or not know the sex of their expected baby; social, cosmological, emotional and practical to name a few. ‘Knowing’ the sex of the fetus also plays a part in a knowledge game. In Rayna Rapp’s study in 1997, she conducted various interviews with pregnant women on the topic of ‘sexing’ of the fetus. One woman told Rapp, “As long as it’s known, I feel the parents should know, you know. I mean, we shouldn’t be the last to know, it’s that kind of a feeling” (Rapp 1997: 40). This statement illustrates the desire to be part of the discussion about one’s own child. This woman did not want to be ‘the last to know’ the sex because that would imply that the practitioner had authoritative knowledge over the mother. Other women expressed desire to know the sex of the fetus based on issues of

practicality. “I figured at this point, financially, instead of buying all those different kinds of clothes, you just buy one specific set” (Rapp 1997: 41). This quote points to an economic issue, the sexing of the child allows for preparation that will in the long run be financially sound.

While the notion of personifying the fetus during an ultrasound is common, these narratives illustrate the experience of North American women planning to carry their pregnancy to term. It is important to examine the ultrasound experience for women living outside of the United States, as well as women who may be contemplating abortion. Once a woman ‘sees’ her fetus on the screen medical terminology often changes from ‘fetus’ to ‘baby’. In fact, in Mitchell and Georges’s 1997 study, they included a narrative from an expecting father that used fetus and was rebuffed by the clinician. “During a scan of one of the authors (LMM) observed, a man looked at the ultrasound photograph handed to him by the technician. ‘Great!’ he said, ‘Now I can put this on my desk and say, ‘This is my fetus.’ The technician replied: ‘Your *fetus*? Ugh! Don’t say that! It’s your *baby*’” (Mitchell and Georges 377). While it should be noted that parents do not usually use the term fetus, the important message from this narrative is that parents, once the parents have ‘seen’ their fetus, they are expected to recognize it and call it a baby. In addition to meeting your baby through visual display, the ultrasound provides women with a heightened awareness of the fetus that is developing inside of her. Behavior is affected or modified if it is to harm the baby. According to a study conducted by Reading et al., (1982), the more widespread visualization of pregnancy by women has had a positive affect on the health of the fetus. Additionally, seeing the fetus encourages women to decrease smoke and alcohol intake during pregnancy. In this sense, this technology educates women about their pregnancy to make them better mothers. “Doctors and technicians scanning mothers have a great opportunity to enable mothers to form an early affectionate bond to their child to the mother. This should help

mothers behave concernedly towards the fetus” (Dewsbury, 1980, p. 481).

In Janelle S. Taylor’ 1998 “Image of Contradiction: Obstetrical Ultrasound” she notes that from a medical standpoint, the cultural meaning of an ultrasound image for pregnant women and their partners is of ‘secondary significance.’ However, through informal conversation and in medical literature obstetricians and ultrasonographers reference the ultrasound as producing ‘psychological benefits.’ Her definition of ultrasound meaning is based upon three psychological benefits: behavior, bonding and reassurance (1998). Taylor argues that these psychological benefits have affected medical practice of ultrasounds and have come to shape women’s expectations by invoking an emotional response likely to shape behavior. To understand this concept of psychological benefits it is useful to call upon Taylor’s description of the responses to ultrasounds. The first she describes is “seeing is behaving”. This idea will be revisited when I reflect on women’s testimonies of ultrasound with respect to contemplated or planned abortion.

Bonding

Taylor notes that it is thought that ultrasounds increase a woman’s awareness of her pregnancy by seeing and hearing her fetus. If ultrasounds bring ‘awareness’ that help pregnant women shape their behavior, then it is thought to help the overall health of the fetus. The awareness that Taylor refers to here is significant because it relates to maternal reassurance and bonding. These two responses to ultrasounds are explored further by Taylor. She notes that they are often described in relation to each other, but in order to fully understand the psychological benefits of ultrasounds each should be examined separately. Taylor defines reassurance as providing women with a sense of security, that seeing their fetus on screen without any complications present reinforces thoughts of health and drives out misconceptions, fears and

anxiety that women might have concerning their pregnancy. The notion of reassurance implies that the ultrasound will show the woman whether or not her pregnancy is normal. This outcome of reassurance can be dangerous as ultrasound examinations can only tell the physician, provider and woman so much about the pregnancy, and it should be noted that ultrasounds are not synonymous with a guarantee of health of the unborn fetus. Taylor argues that “the ‘reassurance’ that ultrasounds may provide exists only in relation to its repressed opposite, which is dread—of the loss of a pregnancy, of fetal abnormality or death, of agonizing dilemmas, of abortion.” (Taylor 1998: 20). So, in this case reassurance is a psychological benefit when it is paired with the assumption of good news and a healthy pregnancy.

The term ‘bonding’ also deals with notions of the unknown. Prior to ultrasound scanning technology maternal bonding was seen as something that was internal and hidden until a woman gave birth. Maternal bonding became heightened at the moment of birth, meeting her baby for the first time. This time of bonding is not rooted completely in emotions and psychology is also affected by women’s hormonal levels. “Klaus and Kennel attributed these dramatic effects to the ‘bonding’ that takes place between a mother and infant during a sensitive period following birth, when women are hormonally primed to accept or reject their offspring” (Taylor 1998: 22). The theories of Kennel and Klaus focused on the period immediately following a birth, the ultrasound takes place before birth giving the women the opportunity to meet and bond with her baby before it is even born. While the maternal bonding post birth is still strong and emotional for many women, it can be viewed as a follow up or second meeting for women who have had one or more ultrasounds during their pregnancy. Prior to obtaining an ultrasound, women may feel connected to their pregnancy however, in the medical field their awareness is not clinically defined as it is during and after the ultrasound scan. It is argued that a woman’s connection to the fetus is

emotionally and psychologically heightened by being introduced to their baby via ultrasound. By examining the role of ultrasound technology during pregnancy in North America, two main themes emerge, personification and bonding with the fetus. I will now examine the role of ultrasound technology for women living outside of North America.

Cross Cultural Comparison of Women's Experiences with Ultrasounds

Over recent decades, anthropologists have examined how reproductive technologies have been utilized and realized cross-culturally. Faye Ginsberg and Rayna Rapp discuss how the use of technology in relation to reproductive choice and autonomy cannot be understood unless sociopolitical and economic factors are taken into consideration.

The unprecedented development and uneven global spread of biomedical technologies aimed at the control of reproduction have become a central analytical concern because such technologies have deeply unsettled received notions of what is 'natural' for people everywhere...When we analyze how knowledge of reproduction is distributed and controlled, both large-scale and local forces are always in play...Additionally, choice in reproductive technologies cannot be considered apart from international political and economic forces (Ginsberg and Rapp 1995).

This illustrates the importance of examining women's experiences with ultrasound technology within a specific cultural context. Within this context, the construction of fetal personhood will be examined Lynn Morgan's work in 1997 examines fetal personhood through the stories of women living in highland Ecuador. Morgan's work (1997) maps the social practices both women and men use to delay and obscure fetal personhood. An important distinction that Morgan makes about the obscuring of fetal personhood by men and women in the Ecuadoran highlands is that it is not a direct result of the lack of access to science nor technology and that it is also from what she calls a "constellation of embedded social practices that render the contents of the womb as ambiguous and uncertain" (1997: 324). Morgan illustrates the experience of ultrasound for highland women as differing greatly from women in the U.S., highlighting that the women she

spoke with did not ‘personify’ the fetus as women from the United States often do. Morgan argues that the way the United States examines the fetal subject is in many ways ‘unique’ both culturally and historically (1997). It is important to look at the contrasting sociopolitical differences of how women living in the highlands imagine the unborn. “In the rural highlands of northern Ecuador, the unborn are imagined as liminal, unripe, and unfinished creatures” (Morgan 1997: 329). This theory of personhood contrasts to the way personhood is defined in the United States. Fetal personhood is defined in the U.S often with the help of ultrasound technology that allows for visual access to the fetus, helping to define it as an individual.

In Ecuador, individual names, personalities are not assigned right away to the unborn or to the newly born. Keeping in mind the social ambiguity of the unborn, there are no social consequences for determining fetal death, naming, baptizing, and burial. While abortion is illegal and condemned by both church and state, induced abortion is defined differently than in the West. In Ecuador abortion is self-mutilation, not murder against the fetus or personhood. Morgan’s work clearly illustrates, that Ecuadoran women do not personify an unborn baby as European and North American women would. It is useful to compare other women’s experiences with pregnancy and conception of the fetus. Next we will reflect upon ethnographic work with Australian women and their experience with pregnancy and ultrasounds.

An ethnographic study conducted by Harris et al in 2004 examined women’s comments regarding their health practitioner’s advice when it came to the risks and benefits of ultrasound scans during pregnancy. A typical response from practitioners was “you need to have this scan done to see whether the baby’s doing what it should be doing and if it’s positioned properly” (Harris et al. 2004: 32). In addition to pressure from their practitioners, the Australian women in this study felt the ultrasound scan gave them a sense of knowledge; “Like I knew I was pregnant,

but it didn't really hit me until I saw something live and physically happening inside me. And from then I've been able to accept much more about the changes and I've noticed weekly, you know, I've just felt weekly that, yes, I can feel my stomach changing" (Harris et al. 2004: 38). This testimony illustrates how this woman's ultrasound scan made her pregnancy feel more real, both mentally and physically. It is important to note that in addition to scans providing women with a sense of reality in terms of their pregnancy that many women who received scans felt excited to have the scan done even when they were anxious about possible negative outcomes or results. "And it was really fun to see this little baby on the screen and see it moving around, and that was really good. So, despite my initial anxieties it was good, it was a good experience, and I'd actually say to others it was a really nice thing to have done" (Harris et al. 2004: 39). This work illustrates that ultrasound experience for women in her study helped them to 'know' their pregnancy, making it more real and a positive experience when they were told their pregnancy was normal. I will now look at women's experiences with this technology in Greece and Canada where the desire to be 'reassured' of a normal pregnancy is also a common experience.

Greece & Canada

In Mitchell and Georges's study in 1997, they discuss a cross-cultural comparison of Greek and Canadian women's discourse concerning ultrasounds. The authors found that there were cases of personifying the fetus in Canada using code-switching that I have earlier discussed, but this was not the case in Greece (1997). In Greece, the ultrasound experience is to determine the sex of the baby, but more importantly to determine whether the baby is healthy. "Obviously, except for fetal sex, the physician's terse announcements during the ultrasound procedures do not go beyond the most basic diagnostic information" (Mitchell & Georges 1997: 387). While the medical language used by physicians differed in each setting, the experience and

language of the women were similar. “It is striking that the great majority of the Greek women, like so many of the Canadian women, asserted that fetal imaging had given them a sense, often their first sense, of the ‘reality’ of their pregnancies” (Mitchell & Georges 1997: 388). In addition to the similarities found between Greek and Canadian women, the author’s findings also discussed women’s dependence on ultrasound technology to calm their anxiety during their pregnancy. Anxiety and stress, as part of the prenatal process will now be discussed in more detail through women’s experiences in Hanoi Vietnam.

Vietnam

Tine Gammeltoft’s 2007 article is a timely and purposeful examination of the consumption of reproductive technologies. Importantly, Gammeltoft notes that while new reproductive technologies have been widely researched that there is a gap in empirical investigation of the consumption of ultrasound technology in developing countries. Gammeltoft argues that anthropologies need to move beyond the social experience and dilemmas European and North American women face and examine these issues cross culturally. This push points to a movement away from liberalism and affluent attitudes about technology and towards an examination of this technology in a setting of lower socioeconomic status. Gammeltoft addresses this issue in her focus on Vietnamese women’s experiences with ultrasound technology and its meaning and purpose for these women.

Gammeltoft’s 2007 work is an ethnography of what she labels, “local moral worlds where pregnancies are lived and children born” (135). Throughout this work Gammeltoft outlines the material anxieties, attitudes towards technology and uncertainties that women face in Hanoi, Vietnam. Ultrasound technology is widely accessible in contemporary Hanoi. Ultrasound scans are provided by public hospitals and by many private clinics around the capital. In addition

to the plethora of providers, many clinics operate in the evening during the week, and all day during the weekends giving working women the opportunity to get a scan done on their way home from work (Gammeltoft 2007). Despite national recommendations of ultrasound scanning; among the 400 women that Gammeltoft interviewed in Hanoi had received on average 6.6 scans during her pregnancy, the lowest ranging from 1-2 scans to the highest ranging between 21-30 scans. “Hanoian women generally perceive pregnancy as a time of heightened risk and vulnerability when external influences of various kinds, from toxic substances to emotionally upsetting events, may easily harm maternal health or disrupt fetal development” (Gammeltoft 2007: 139).

This illustrates the anxiety women living in Hanoi experience during pregnancy. The notion of risk and vulnerability lends itself to the use of ultrasound technology that will provide some, albeit temporary, reassurance that their fetus is ‘normal.’ Gammeltoft notes that while women seek out numerous ultrasound scans during their pregnancy, these women do not fully trust the scans as being scientific truth, nor do they trust that they are completely safe. Despite these feelings, women of Hanoi associated ultrasound technology with modernity. “Now Vietnam is like other countries. We have followed the medical progress of other countries...” (Gammeltoft 2007: 141) Gammeltoft notes that women of Europe and North America see ultrasounds scans as a ‘pleasurable’ experience to which one meets their baby for the first time. However, women of Hanoi generally see the scans and rescans as showing the fetus during different phases marking the contingency of the fetus, rather than seeing unborn ‘baby’ with a personality and a scanned guarantee of health and prosperity (Gammeltoft 2007). The ambiguous nature of the unborn fetus is culturally defined Both Gammeltoft’s work in Hanoi (2007) and Morgan’s work (1997) illustrates differing opinions about fetal personhood cross-culturally. The

discussion of fetal personhood in the United States is vital to understand of the proposed policy concerning ultrasound and abortion

In other Asian countries ultrasound technology has been utilized to help select the gender of one's baby. In Barbara D. Miller's 2001 ethnography, she discusses the role of ultrasound technology on female-selective abortions and this is shaped by the cultural preference of having sons. "Socially, one finds kinship systems that emphasize male kin and separation of female kin from each other through exogamy, and dowry systems that require heavy expenditures for the marriage of a daughter but not for a son" (Miller 2001: 1087). This statement illustrates one aspect of a son preference likely to affect a woman's choice to abort a female fetus if detected during an ultrasound. The use of such technology for the purpose of reducing the number of female births will be further examined when I discuss the role of the state mandated ultrasound in the United States.

Discussion

When examining proposed policy concerning mandated ultrasounds prior to abortions, we must keep in mind these cross cultural perspectives as well as perspectives from women living in the United States. Anthropologists have shown that the ultrasound technology has been essential in the construction of fetal personhood. The fetus in this context is viewed as an autonomous being with individual rights. The fetus is often personified during an ultrasound scan in Northern America but in other cultures, the fetus is not conceptualized as having full personhood. Whether a fetus is a person/individual is at the center of the abortion debate and the contesting views of when personhood begins is often discussed when examining abortion policy. Lynn Morgan's work (1997) illustrates the use of ultrasound technology as a generator of 'scientific knowledge' by right wing groups on this subject.

They rely on popular interpretation and widespread utilization of ultrasonography, intrauterine electron microscopy, and new reproductive technologies, for example, to support their contention that ‘life begins at conception’ and that ‘the fetus’ is a gradually emerging person endowed with genetic uniqueness and biological facticity. To phrase the social relationships between the born and the unborn in biological terms, is ‘in effect an ideological mechanism to turn social facts into natural and therefore immutable facts (Morgan 1997: 324-325).

It is important to keep this in mind as well as other ethnographic examples while I reexamine the state policies on ultrasound mandates prior to abortion.

Patricia Sullivan, an ultrasound technician, describes how ultrasound technology and imaging are utilized by both sides of the abortion debate. Sullivan argues that ultrasounds are both medical-diagnostic and political and non-diagnostic tools.

On one hand, the ultrasound is used to help a woman identify with her fetus, thus preventing her from terminating the pregnancy; a mistake that they believe would lead to deep emotional trauma and guilt at a later date. On the other hand, ultrasound is used to ensure there will be no complications from the abortion procedure because of incorrect dates (Sullivan 2002: 214).

It is important to recognize this aspect of the debate of abortion policy because both sides are seeking to shield or protect the woman from making the ‘wrong’ decision. This brings up the question of who has the authority to assert what is best for the ‘patient’ and what defines ‘informed consent,’ a political tool utilized by various state legislatures, and pregnancy crisis centers on the subject of ultrasound mandates prior to obtaining abortion.

It is useful to examine the role of ultrasound technology in pregnancy crisis centers and in relation to the issue of abortion. A public interest law firm, National Institute of Family and Life Advocates (NILFA) has developed “The Life Choice Project” which is designed to help pregnancy centers convert to medical clinics. What defines a pregnancy center as a medical clinic, or pregnancy help medical clinic (PHMC), is the addition of medical services that will be provided by the facility under the supervision and direction of a licensed physician, most notably

of these services is ultrasound scanning. A NILFA press release from Thomas A. Glessner, J.D. President of NILFA, titled “Now is the Time to ‘Go Medical’”.

Across the nation hundreds of pregnancy help centers are discovering the benefits of converting their operations to medical clinics and are adding needed medical services to their menus. Centers that have done so are finding a renewed determination to reach abortion-minded clients in greater numbers. Pregnancy medical centers are able to use ultrasound to confirm pregnancy and, in doing so, introduce the abortion-minded client to her unborn child (Glessner, 2001).

When examining ‘The Life Choice Project’ we must remember that the idea of ‘going medical’, does not imply strict medical diagnostic testing, but instead using medical equipment in order to achieve political strategy and reduce the number of abortions. This strategy is backed by the results of pregnancy crisis centers going medical, published by Glessner (2001). Glessner claims that centers that have changed to medical facilities have gained two main results: 1) an increase in the number of truly abortion-minded clients coming to the centers and seeking pregnancy diagnosis to determine if they are, indeed, pregnant; and 2) an increase in the percentage of these abortion-minded women who change their minds and choose life after seeing their unborn child on the ultrasound screen (Glessner 2001).

Through ultrasound technology, women’s knowledge of their bodies and pregnancies are altered and supplemented by scientific knowledge and surveillance of biomedicine. Still, most studies of western medicine suggest that it is a positive experience for many women. The impact of these three themes of personification, bonding, and surveillance during ultrasound is likely to have negative consequences for women contemplating abortion. It is useful now to examine the impact of these three themes on a woman contemplating an abortion. I have examined the use of code-switching during an ultrasound of women who wish to carry their pregnancy to term. This code-switching remains part of the ultrasound experience even when the mother does not anticipate that she will want to keep the pregnancy. In Rapp’s (1997) study we encounter a

narrative from a woman who did not want to keep her pregnancy but who had an ultrasound.

So I went off to have the sonogram, and I had these two guys, lab technicians, I mean, we're all in a dark room, semidarkness, and they begin to refer to the fetus as he, its like there's a real baby-...I mean, they were joking, but I was traumatized. It became a real baby. I didn't realize what a sonogram really was, what they show you up on that screen. All of a sudden the baby, the fetus turned its face towards me...and I thought for a moment, 'He's looking right at me.' He looked like that image from *2001*, I mean there was a person there, inside my body, looking out at me. It was too strange. And too traumatic to have an abortion after that. That's what the sonogram did. (Rapp 1997: 46).

This narrative reinforces the powerful connection that many women experience during a sonogram or ultrasound. More notably, her experience exemplified the personification of the fetus; once this was established she felt that an abortion would be 'traumatizing.' Another woman described the impact of her ultrasound:

To tell you the truth, I had a sonogram with my first one at eight weeks, and it changed my ideas about abortion. We all say it isn't a human being, but that's no longer true. This pregnancy, I waited for the sonogram until the amnio. At sixteen weeks, when you see it, everything is there...It's your decision, it's your body, and you must do whatever is right because you must raise whoever you have. But it's a human being. You can't have this test without thinking about it like this (Rapp 1997: 46).

This statement illustrates one woman's experience with an ultrasound that actually altered her views on abortion. She felt that the 'reality' of seeing the life inside of her made her realize that she could never terminate the pregnancy despite knowing that she had the 'choice' to do so. In examining these testimonies the three themes of personification, bonding and surveillance emerge as a coercive outcome impacting women's thoughts on abortion.

The experience with ultrasounds prior to abortion in North America differ greatly with those in Asia as illustrated through Miller's work (2001). In Asia cultures where there is a strong preference for sons, ultrasound technology is used to detect, rather than personify a female fetus. While there are existing bans on female-selective abortions, they are often not enforced by Asian

states. The lack of enforcement speaks to the value of having sons over daughters. In this setting, personification during ultrasounds is not likely because female fetuses are not defined as a real baby or person due to the patriarchal cultural systems described by Miller (2001). It appears in both Asian states and the U.S ultrasounds construct and limit reproductive choice with regards to abortion. This issue of choice is complex, as women's choice to have a female or son in Asian countries cannot be defined without examining existing social and political pressure to have sons. Similarly, women's choice to terminate or keep a pregnancy in the U.S is also affected by social and political pressure to keep a pregnancy after viewing an ultrasound.

Pregnancy crisis centers and legislatures are aware of the strong emotional and psychological effect of ultrasound imaging on pregnancy women. Through extensive anthropological literature and ethnographic works we have seen the impact of such technology on women cross-culturally (see Mitchell & Georges 1997; Rapp 1997, Morgan 1997, & Gammeltoft 2007), it is clear that during an ultrasound in North America, and personification of the fetus is common. Personification occurs verbally and audibly through what Rapp (1997) called 'code switching', and through other attributes, such as physical appearance, sex, and implied personality. What would be the experience of women who have planned to terminate a pregnancy if the state mandated them to view an ultrasound, one that could personify the fetus?

Using this technology as a means of political coercion and specific social outcome of reducing the number of abortions is problematic because ultrasounds are a form of surveillance medicine, (see Draper 2000), one that can reduce a woman's autonomy and freedom to make reproductive choices for herself. It is this outcome that appears to be right wing politicians, and anti-abortionist activist's goal in proposing ultrasound mandates. According to a November *Los Angeles Times* article, Richard Duncan, a law professor of Nebraska who advises anti-abortion

groups says “It gives women a window into the womb... saying: here’s the fetus you’re thinking of aborting. Make up your mind based upon this” (Simon, November 9, 2006: 1). This ‘window to the womb’ places the focus not on the woman, but the fetus, which has emerged as an individual patient with rights above the mother.

In a newspaper interview, Representative Larry Rhoden, R-Union Center in South Dakota, implies that after speaking with women who had terminated their pregnancies he felt that mandated ultrasounds were essential to informed consent. “I have talked to numerous women that have dealt with the results of the decisions they made without understanding the extreme implications. They’ve dealt with the results of that uninformed decision for the rest of their lives” (Kafka, January 26, 2008:1). This illustrates how mandating an ultrasound prior to obtaining an abortion has been proposed as an extension of informed consent. However, this mandate implies the woman has not fully thought through her decision and therefore should be offered an ultrasound. A testimony from Caitlin Collier, a lobbyist for the South Dakota Advocacy Network for Women, took a stand on this particular issue of women’s reproductive autonomy in relation to ‘informed consent laws.’

I do not believe that the women of South Dakota of childbearing age...are stupid. It is suggested that they are too stupid to have figured out what it is that they are doing when they go to request an abortion...it is insulting to women to suggest that they are incapable of making their own medical decisions without state government intervening (Cooper 2008: 9).

Through these testimonies it is clear that the wording and or use of informed consent laws are problematic due to interpretation from both sides of the abortion debate. The state’s use of these mandates interferes with the physicians and providers of the ultrasound scans, by proposing legislation that would require doctors to offer ultrasounds to women contemplating abortion. Additionally, doctors would be required to keep an annual log of how many women choose to

view the image. Anthropological research on medical technology should prompt us to question the extension of state power into women's reproductive choices that interferes with the doctor patient relationship and the surveillance of women's bodies disguised as informed consent in a cultural setting where ultrasounds help construct fetal personhood. If ultrasounds were mandated in other countries such as Ecuador and Vietnam, the outcomes would likely be different on account of the ambiguous nature of the fetus. It would seem that the outcome of mandated ultrasounds would depend upon the definition of fetal personhood and should be examined in a wider cultural context.

Recommendations

Anthropologists can and should have an active role in policy by using ethnographic research we can critique existing policies and advocate for policy change. As an anthropologist, I have critiqued the state's role in women's reproductive choices by examining proposed state policies of mandated ultrasounds. "There is a long anthropological tradition of treating historical materials as a valuable source of ethnographic data. The same approach can be taken in analysing policy documents as 'cultural texts.' They can be treated as classificatory devices and discursive formations that function to empower some and silence others" (Shore & Wright 1997: 15). By examining a proposed ultrasound mandate as 'cultural text' anthropologists can examine and critique the implied impact on women who are contemplating abortion living in the United States. Extensive ethnographic research on women's experience during an ultrasound has illustrated the strong emotional and psychological impact ultrasounds can have on women's experience during pregnancy. However; more research must be conducted to further understand the impact of these proposed mandates on women contemplating abortion.

Tine Gammeltoft's work in Vietnam (2007) reflects on the role of anthropology in the discussion

of reproductive technologies. Gammeltoft points out that past research has often focused on North America and Europe and additionally, middle-to upper class women. I agree with Gammeltoft in that research on the use of reproductive technologies must expand to a larger demographic. In response the state mandates of ultrasounds, research should be conducted in the U.S focusing on more women, a wider age demographic as well as women of diverse socioeconomic status. Miller's work (2001) illustrates a different outcome of ultrasound technology with respect to abortion. In this setting ultrasounds are being utilized by women in to control the outcome of their pregnancy, meaning sex selection. Control and choice with regards to abortion should be further examined.

Additionally anthropologists must conduct more ethnographic research that will illustrate abortion-minded women's experience when they have viewed an ultrasound thereby giving voice to women who are contemplating abortion and the outcomes of their experience.

Anthropologists recognize that the mandating of ultrasounds prior to obtaining abortion is only one piece of the puzzle in this issue. These mandates as part of 'informed consent' place restrictions on women's reproductive choice and autonomy with regards to abortion. The notion of reproductive choice is a cultural construction that may vary in a variety of cultural settings.

We as anthropologists should be critical of such policies and continue to foster a dialogue that will place these policies within a cultural context.

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