(II)legitimate Sex: Intersex and the Textual Regulation of Human Sexes, Genders, and Sexualities in Biomedicine

by

Rodney James Hunt
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ABSTRACT

In this inquiry, I investigate the biomedical construction of human sex dimorphism by critically examining the standard medical practice of early sex assignment surgeries for intersexed newborns. This research draws on the methodology of institutional ethnography to explicate the social organization of biomedical knowledge about human sex, gender, and sexuality, and is developed from the standpoint of intersexed people who experience erasure in medical practice. A textual analysis of the American Academy of Pediatrics (AAP 2000) official policy for managing human intersex forms the foundation of this research. I propose that the application of biomedical normalizations of human bodies in intersex medical management raises important questions about the meanings attributed to sex, gender, and sexuality in Western society; and claim that the AAP’s policy can be viewed as an ideological strategy for legitimizing the social privilege granted to male bodies and masculinity. I argue that the AAP guidelines function as a regulatory mechanism for upholding cultural assumptions about human sex dimorphism that perpetuate gender hierarchy and limit the diversity of sexes, genders, and sexualities.
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I could not accept my image of a hermaphroditic body any more than I could accept the butchered one the surgeons left me with. Thoughts of myself as a Frankenstein’s monster patchwork alternated with longings for escape by death, only to be followed by outrage, anger, and a determination to survive. I could not accept that it was just or right or good to treat any person as I had been treated — my sex changed, my genitals cut up, my experience silenced and rendered invisible (Chase 1998: 193).

Introduction

I begin this thesis with a quote from Cheryl Chase because I believe that we need to listen to what intersexed people are telling us about their experiences. Although Chase speaks about her own encounter with biomedicine, her words articulate the complex emotions of shame and anger that are felt by many intersexed people upon learning that their natural bodies have been surgically altered and their intersexed identities erased (Preves 2003; Chase 1998; Holmes 1994). Thus, this thesis begins from the experiences of Cheryl Chase and the many people like her who find themselves silenced and invisible at the margins of North American society and its ideological system of a rigidly upheld and morally policed two sex equals two gender schema, where only heterosexual feminine females and heterosexual masculine males find true legitimacy. Intersexed people are telling us about an injustice that is routinely marked on the bodies of intersexed newborns: the clinical erasure of their unique identities and with it, the suppression of the natural diversity of human sexes, genders, and sexualities that exist beyond the narrow categorizations of that which is considered “normal”.

Chapter One

INTRODUCTION

Human Intersex
What is Human Intersex?

For most people, the birth of a child brings with it the expectation that the newborn will be a little female or a little male with a body that conforms to an accepted set of sex-appropriate characteristics. Conformity is usually confirmed by a visual inspection of the genitals, and a proclamation of sex typically establishes the way that a child will be gender socialized as a “normal” girl or boy. In Western society, the sexing and gender socialization of newborns as either female/feminine or male/masculine follows from the well-established ontological claim that human sexes are fundamentally dimorphic.

The assumption that human sexes are neatly categorized as either female or male is being challenged, however. Many researchers have recently offered compelling evidence to suggest that the real world is much more naturally diverse and complex than can be understood using the ideological framework that biomedicine has established using the simple binaries of a dimorphic model of human sexes (Blackless, et al.; 2000; Devor 1996; Feinberg 1996; Herdt 1994). Melanie Blackless and some of her colleagues from the Department of Molecular and Cell Biology and Biochemistry at Brown University, for instance, conducted a survey of medical literature in the United States from 1955 to 2000 in order to discover the frequency of sex deviation from the biomedical criteria for what counts as female and male. In their investigation, they found that human sexes are considerably more variable than many of us realize. Blackless et al. (2000), reported that it is possible that as many as 1.7 percent of all newborns may not be easily categorized as definitively female or male. Medical science refers to these children as “intersexed” or “hermaphrodites,” and they are usually considered to be sex anomalies.
— deviations from what biomedicine has established as normal and natural (Dreger 1998a: 25).

In light of their startling findings, which suggest that there may be as many intersexed newborns in North America as there are newborns with cystic fibrosis, or Down syndrome (Preves 2003: 3; Dreger 1998: 43), Blackless and the other researchers have been accused of too broadly defining the criteria for what counted as intersex in their study. Because of their comprehensiveness, some medical specialists have criticized Blackless, et al. of falsely inflating the frequency of intersexed conditions. Leonard Sax of the Montgomery Centre for Research in Child and Adolescent Development in Maryland, for example, has argued that intersex is actually more narrowly defined in clinical practice as only “those conditions in which chromosomal sex is inconsistent with phenotypic sex, or in which the phenotype is not classifiable as either male or female” (2002:177). Thus, Sax asserts that Blackless, and the other researchers, including Anne Fausto-Sterling, have included conditions that are not typically considered intersex by clinical standards.

Although the boundaries for what counts as intersex can be easily redefined because of the complexity and diversity of chromosomal, gonadal, and genital deviation from established norms, I disagree with Sax’s argument. The conditions he refers to might not be considered intersex in some clinical settings (LOCAH, Klinefelter and Turner syndromes, and vaginal agenesis, and other non-XX and non-XY aneuploidies), but they are routinely pathologized and medically defined as deviations from biomedically normal female and male sexes. Sax’s assertion has the effect of reducing the perceived frequency of medically ambiguous sex, and therefore of providing evidence
supporting a dimorphic model of human sex differentiation. However, it fails to be more inclusive of those people who remain outside the margins of what is considered biomedically normal in Western society.

In biomedical terminology, the term “intersex” is commonly used to label a wide variety of chromosomal, gonadal, and genital characteristics that are deemed “anomalous” according to the narrowly defined scientific and medical norms of female and male sexes.¹ Most intersexed newborns have genitals that do not conform to the characteristics many of us have come to understand as typical for females and males. Although the majority of these children are healthy, the rationales offered for their medical treatment routinely suggest that the ambiguity of their sex poses a social emergency (American Academy of Pediatrics 2000). Subsequent to an intersex diagnosis, therefore, medical specialists typically initiate a course of “corrective” genital surgeries and, at puberty, a therapy of gender-appropriate hormones designed to fashion their bodies into what is considered appropriately female or male, depending on an assignment of sex decided by attending medical specialists.

Because of biomedicine’s overarching authority to define sex, gender, and sexuality in Western society, much of our knowledge about human intersex remains at the margins of authoritative discourses that perpetuate normalizing assumptions about the natural dimorphism of females and males and the associated dichotomies of femininity and masculinity, and heterosexuality and homosexuality. Specialist’s decisions to

¹ It should be noted that not all intersexed conditions result in medically ambiguous genitals. Some conditions, such as complete androgen insensitivity syndrome (cAIS), Turner and Klinefelter syndromes, and mild to moderate forms of hypospadias, can result in genital configurations that, while still considered medically problematic when detected, are nonetheless identifiable as either female or male (Fausto-Sterling 2000; Zucker 1999).
undertake the complex and expensive process of infant sex assignment surgeries reveals that the maintenance of a fundamentally dimorphic model of human sex differentiation is linked to cultural expectations about gender. Indeed, according to standard medical rationales, the medical management of human intersex is considered necessary because of the widely held belief that definitively sexed bodies are essential foundations for successful gender socialization (Dreger 1998a: 27).

The Organization of this Thesis

In this thesis, I explore the construction of human sex dimorphism and the biomedical organization of human sexes, genders, and sexualities by critically examining the dominant procedural protocols for medically managing human intersex. These protocols are currently being disputed between many in the medical community and an increasing number of vocal intersexed people and their allies who are challenging the standard medical practice of early sex assignment surgeries. A critical analysis of the social issues raised in this debate forms the foundation of this research. I examine both the individual and societal significance of a strictly dualistic understanding of human sex, gender, and sexuality— an understanding that informs biomedical discourse and that provides the ideological justification for current intersex medical treatment protocols.

A critique of cultural expectations about biomedical normal bodies in intersex medical treatment protocols raises important questions about the meanings attributed to sex, gender, and sexuality, and challenges the connection many in Western society seem to make between the sex of a body and what is expected of its gendered and sexual expressions. I argue that the biomedical enforcement of binary classifications of sex,
gender, and sexuality, which reflects broader cultural constructions, establishes and perpetuates social inequalities based on sex, gender, and sexuality. Thus, I ask whether ideas about what constitutes legitimate female or male sex in intersex medical management can be understood to function as regulatory mechanisms for upholding many of our society's cultural assumptions about sex dimorphism — ideas that perpetuate gender hierarchy and limit the diversity of sexes, genders, and sexualities.

This research is guided by the recognition that the practice of inflicting painful genital surgeries on children who cannot give their informed consent raises serious ethical issues. For the most part, these surgeries are cosmetic. The surgically altered genitals of intersexed children do not function in the same way as the typically "ideal" genitals of females and males. Furthermore, proponents of standard treatment protocols usually justify early sex-assignments and genital surgeries with an in-the-best-interest-of-the-child rationale. They claim that to leave an intersexed child's body in a state of sex ambiguity would inevitably lead to psychological harm and sexual maladjustment. However, no follow-up studies have been completed to substantiate this claim. Indeed, much of the available information from intersexed people themselves seems to suggest that the best interests of intersexed children and adults are not being protected. Many grow into adulthood feeling stigmatized and traumatized, and are left in both physiological and psychological pain by their years of medical treatment (Chase 1998:197).²

In this chapter, I begin with an introduction to the topic of my inquiry, and I set

² According to Preves, much of the follow-up research on how well intersexed adults have adapted to their childhood sex assignments is "biomedical, focusing on physiological rather than socio-psychological adjustment to medical interventions" (2003: 59). What we know about intersexed people's long-term experiences and quality of life comes more from personal disclosures than research.
out the organization of this thesis. I also briefly review some of the work of other academics that have been critical of the medical management of human intersex. In doing this, my purpose is to situate this inquiry within the larger sphere of similar scholarly research on this topic. I conclude this chapter with a brief clarification of a few of the terms that I will be using throughout this thesis.

In Chapter Two, I review some of the recent literature on human sex differentiation and gender throughout history, and examine the historically significant scientific and medical ideas that have contributed to the current formulation of the biomedical discourse on human sex, gender, and sexuality. An established line of historical enquiry guides this review. This line of inquiry has been expressed by many feminist scholars interested in sex, gender, and sexuality in medicine (Fausto-Sterling 2000; Dreger 1998b; Shildrick 1997; Van Den Wijngaard 1997; Laqueur 1990). Much of their work focuses on how biomedical knowledge and practice are highly gendered by ideologies that construct and legitimize a patriarchal hierarchy that can be understood as an attempt to regulate the superiority of males over females (Findlay 1995).

I conclude Chapter Two with a brief look at the formation of the Intersex Society of North America (ISNA) and the creation of an intersex social movement in the West — a movement that has provided a valuable forum for many intersexed people to speak about their early childhood experiences with Western Biomedicine. Developed from the experiential knowledge of an increasing number of vocal intersex people who are coming together to tell their stories, I then identify a disjunction that arises between the generalized relations of biomedical discourse and intersexed people’s experience of
clinical erasure.\textsuperscript{3} It is in the context of this disjuncture that I establish the research
questions that guide this inquiry.

In Chapter Three, I introduce the method of sociological investigation known as
institutional ethnography, which was developed as a feminist research strategy by the
Canadian sociologist, Dorothy E. Smith (1987). In choosing institutional ethnography as
a method of inquiry, I am proposing to shift the focus of investigation away from intersex
as it has been defined and managed as an “abnormality” of sex differentiation. Instead, I
direct my sociological gaze towards the institution of biomedicine, and the authoritative
knowledge that is produced from the biomedical position. Thus, I depart from
established objectivist methods, which have traditionally relied on conceptual and
methodological procedures that generalize people’s everyday experiences. In doing so, I
take up the issue of intersexed people’s erasure in medical practice as an entry point from
which to begin exploring how the biomedical position on sexes, genders, and sexualities
is ideologically organized.

This research is a textual analysis of documentary evidence. Such an analysis can
provide insight into the social relations through which the diversity of human life is
organized in institutional texts and given meaning in the standardized terms of
institutional discourse. These are the objectified relations through which human sexes,

\textsuperscript{3} Throughout this thesis, I have chosen to use “erasure” as a term to suggest intersexed people’s
clinical experience. I feel this term comes closest to conveying how medical management
decisions are based first on diagnosing intersex as a definitive condition, and then on attempting
to remove any physiological and social indicators of that condition. Although, many intersexed
people carry the social stigma of their diagnosis throughout their lives, biomedical treatment
routinely attempts to \textit{erase} any physiological (and social) cues that would identify them as
intersexed when their bodies are surgically and hormonally shaped and changed to resemble the
ideal standards expected of female or male sexes.
genders, and sexualities have come to be viewed as either legitimate or illegitimate. My goal is to reveal how human sexes, genders, and sexualities are normalized and regulated in the authoritative and specialized work practices of physicians who medically manage human intersex (Smith 1990a: 78).

In Chapter Four, I describe the data that I believe show how this medical work is organized as, what Smith has called “relations of ruling” (1987). My primary source is the management protocols recommended by the American Academy of Pediatrics (AAP 2000). These protocols were published in the July 2000 issue of Pediatrics in an article entitled, “Evaluation of the Newborn with Developmental Anomalies of the External Genitalia”. Data from the AAP guidelines represents the current institutional recommended course of action. By contrast, I also explore the reformist views that are expressed in the guidelines written by Milton Diamond and Keith Sigmundson entitled, “Management of Intersexuality: Guidelines for Dealing with Persons with Ambiguous Genitalia” (1997a). My analysis situates these texts as counterpoints in the current debate about intersex medical management. The arguments on either side of this debate represent different ideological opinions about the ontology of human psychosexual differentiation and the development of sexuality. Together these texts reveal the coordination of how what medical specialists do when an intersexed infant is born works to organize human sexes, genders, and sexualities.

An analytical mapping and discussion of these texts is the primary focus of Chapter Five. In Chapter Five, I complete a textual analysis of the AAP and the Diamond and Sigmundson texts, and attempt to answer the research questions that have guided this inquiry. To do this, I work to make sense of how the erasure of intersexed people is
socially accomplished in medical practice and to establish the ideological organization of the AAP’s intersex medical management protocols. I then contrast this ideology with that which has been presented by Diamond and Sigmundson. My purpose is to locate for intersexed people and their allies, some of the actual ideological determinants of intersexed people’s erasure in medical practice.

I conclude with a brief reiteration of the ways in which the authoritative knowledge of biomedicine standardizes human sexes, genders, and sexualities generally. My discussion follows closely from what has been revealed about how the erasure of intersexed people is socially accomplished, and it goes on to examine the ways in which the biomedical concepts of sex, gender, and sexuality can be read as an ideological strategy for coordinating and regulating human social relationships. I consider some of what this knowledge tells us about how the normative propositions of the dominant gender schema work as a governing ideology to structure Western ontological beliefs about human sexes, genders, and sexualities.

Other Scholarly Research

Until the mid-to-late 1990s, much of the literature on human intersex was either scientific, intended for highly specialized medically trained readers, or it was comprised of descriptive and popular accounts intended for a more general audience. As Suzanne Kessler has pointed out in her book, Lessons from the Intersexed (1998), much of this early written material did not challenge routine medical practices. Nor did it critically analyze the rationales for sex assignment surgeries, or address the individual and societal
significance of medical management protocols.\textsuperscript{4}

Recently, however, human intersex has been the focus of increasing academic analysis (Preves 2003; Fausto-Sterling 2000; Holmes 2000; Chase 1998; Dreger 1998b; Kessler 1998; Diamond and Sigmundson 1997a).\textsuperscript{5} This scholarship has been critical of dominant biomedical management rationales for early sex assignment surgeries. Collectively, this work forms part of what I will call the reformist standpoint — that side of the debate about intersex medical management that, together with the Intersex Society of North America (ISNA), calls for radical changes in the biomedical response to human intersex. Although collectively, this work is critical of the current medical management of human intersex, the roots of the reformist standpoint are comprised of two distinct arguments about gender.

One argument is articulated in the work of Milton Diamond and Keith Sigmundson. Diamond's scholarship (1965; 1982; 1996; 1997), and his more recent work with Sigmundson (1997a), is derived from a biological perspective that views the hormonal environment in which a human fetus matures as the primary factor in gender development. Milton Diamond and Keith Sigmundson argue that infant sex assignment surgeries should be suspended because current rationales do not take into account the evidence that prenatal hormones play a significant role in predisposing the feminine or

\textsuperscript{4} Milton Diamond's work is one notable exception. Although Diamond has been writing from a biomedical perspective, his work has been an analytical challenge to dominant treatment protocols for over thirty years. His work is a central focus of this inquiry. Kessler notes other exceptions, such as Julia Epstein (1990), Deborah Findlay (1995), and material written by intersexed people themselves (Kessler 1998: 134 n.12).

\textsuperscript{5} There are other academics writing critically about the medical management of human intersex. For a more complete bibliography of this work, refer to the Intersex Society of North America's website at www.isna.org/.
masculine psychosexual development of human newborns. In other words, hormones influence a person’s gender development in either a predominantly feminine or masculine direction. To a large extent, therefore, Diamond and Sigmundson’s work stays within the dominant two sexes equals two genders schema that is maintained in medical practice. Their criticism of intersex medical management is focused on concerns about how intersexed children’s gender is predisposed to develop from infancy through to adulthood.⁶

A second argument about gender that comprises the reformist standpoint is articulated in the work of academics and scholars such as Sharon Preves, Anne Fausto-Sterling, Morgan Holmes, Cheryl Chase, Alice Dreger, and Suzanne Kessler. These academics all write from a social constructionist point of view, arguing in more or less the same way that intersexed infants should not undergo sex assignment surgeries, and that intersex should not be medicalized because the very concepts of what constitutes "normal" human gender cannot be fully understood and evaluated without reference to the cultural system that defines it (Preves 2003: 89). Preves, Fausto-Sterling, Holmes, Chase, Dreger, and Kessler argue for an analysis of the systemic biases about gender and social hierarchy that are part of the dominant gender schema. While their work is concerned with the psychosexual health of intersexed children and with ethical issues arising from intersex medical management, it is also critical of Western society’s patriarchal gender schema. It explores the societal significance of the medicalization of human intersex and what this tells us about the cultural construction of gender.

⁶ Milton Diamond’s ideas about gender development in children are considered in more detail in chapter four.
My Place in This Inquiry

I support the validity of both arguments, but would situate this inquiry more closely with the body of feminist social justice scholarship that calls for an end to genital surgeries on intersexed children, and offers a critique of Western society's patriarchal gender schema. Some feminist scholars have raised important questions about whether a socialized man can properly call himself a feminist researcher (Reinharz 1992). While I have named my work as "feminist" in the past, and I will do so again in the future, I tend to agree that the privilege of my maleness does act to preclude my ability to fully grasp the significance of women's and other marginalized or erased people's experiences in a patriarchal society. However, my socialization does not prevent me from supporting others in their struggle against systemic inequalities. Indeed, I believe that it compels me to do so. Furthermore, although I write from the privileged standpoint of a white, able-bodied, and educated Western male with what would pass medical scrutiny as a congruent gender identity and sexed body, I am also a gay man living in a society in which homosexuality continues to be discriminated against. Because of my experience of this prejudice, I am committed to the political task of speaking out against normative ideas about human sexes, genders, and sexualities — ideas that are routinely marked on the bodies of intersexed people without their consent, and ideas that perpetuate social inequalities that silence and marginalize the natural diversity of sexed bodies and their gendered and sexual expressions.

My commitment to feminist social justice research is founded in a desire to see positive social change in the sphere of gender equity and human rights. I believe this kind of work begins in the everyday world of marginalized and erased people's
experiences, including my own. Thus, I have conducted this inquiry from my experience of marginalization as a gay man, and as an ally of many intersexed people’s struggle against the injustices of patriarchy, discrimination, and homophobia. The knowledge that is gained from it is explicitly for intersexed people.

Clarification of Terms

Before I continue, it is important that I clarify some of the terms that I will be using in this thesis. These terms, for the most part, are in common usage. However, the specific ways that I will make use of them here may be different from what many people expect or take for granted. My interest in human sexes, genders, and sexualities has been inspired by the work of Aaron H. Devor (then writing as Holly Devor), and it is Devor’s definitions that I will be using throughout this inquiry. When defining human sexes, genders, and sexualities, Devor separates the biological and social meanings attributed to these categories, and acknowledges the social hierarchies that are established and perpetuated in Western society’s patriarchal gender schema. Thus, Devor’s definitions provide language to legitimize the natural diversity of lived experiences, as they exist in the complex world of human social life.

Even before a child is born, society has prescribed a set of cultural definitions that will be used to define the fetus and its future life experiences in the terms of long-established social codes. For the most part, these definitions are established and maintained under the authoritative jurisdiction of biomedicine, and thus, they are typically applied to people as though they were natural and intrinsic qualities of human bodies. One of the first of these cultural definitions that is routinely applied to the fetal
body is its chromosomal make up. Since the development of the chromosome theory of inheritance, first established at the turn of the twentieth-century, human sexes have been defined as either XY or XX from the moment of conception. Following from Devor, however, when I use the term sex, I do not simply mean sex chromosomes. Rather, as Devor has done, I define sex as “a social status usually based on genital appearance” (1996). Such a definition removes any essentialist connotations, and maintains the position that sex has socially constructed meanings. Human sex statuses are usually assigned at birth by attending medical specialists based on a visual inspection of the genitals. In Western biomedicine, an assignment of female or male sex typically establishes the biological foundation for gender.

When I use the term “gender”, I am using Devor’s broad definition, which refers to “a social status usually based on the convincing performance of femininity or masculinity” (1996). Although according to the dominant gender schema in Western society, a person’s gender should, if it is to be considered biomedically normal and legitimate, follow from an individual’s sex, Devor’s definition allows gender to be defined as the performative aspect of femininity or masculinity, rather than as something that is fixed to the body. Thus, in this inquiry, the terms sex and gender are not conceptually linked in the same way that many people might expect. While both work together as social codes for defining persons’ social statuses, each remains a distinct and useful definition on its own.

“Sexuality” is another common term used throughout this inquiry. When I use the

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7 Prior to the medicalization of human bodies, social definitions were established and maintained by judicial authority.
term sexuality, I am again referring to Devor. Devor defines sexuality as “the patterns of sexual fantasies, desires, and practices of persons” (1997: xxv Italics in original). Thus, in this inquiry, sexuality refers to patterns of sexual expression. In certain places, I have also used the terms “sexes”, “genders”, and “sexualities”. In contrast to biomedical definitions of these terms, which are rigidly categorized according to a binary understanding of human life, my use of these terms acknowledges the diversity of human bodies and their gendered and sexual expressions, most of which do not find legitimacy outside the heteronormative biases of the biomedical position on female and male sex, feminine and masculine gender, and (hetero) sexuality.

In the next chapter, I briefly discuss the historical development of the biomedical position on human sex differentiation, and the development of a dimorphic model of human sex, gender, and sexuality as a system of administration and regulation. In doing so, I explore how the concepts of human sex, gender, and sexuality have come to be defined by biomedical authorities from the Ancients to the present day.
Chapter Two

HISTORICAL CONTEXT
Sex Differentiation and Gender in Biomedical Discourse

Introduction

In this chapter, I examine some historically significant scientific and medical ideas that have informed present biomedical knowledge about human sexes. My goal is to provide a brief historical overview of sexed bodies as they have been organized in Western biomedical discourse as cultural representations of a patriarchal social order, and as they have been managed in medical practice as legitimate or illegitimate. I will trace threads of influential ideas from the Ancients to present day, and reveal parts of the historical conversation that have contributed to the current formulation of a biomedical discourse on human sex differentiation and gender. I conclude this chapter with a brief look at the formation of the Intersex Society of North America and the creation of the intersex social movement in the West, and I discuss the disjuncture that arises between the generalized relations of biomedical discourse and intersexed people’s experience of clinical erasure. In the context of this disjuncture — from the everyday life of intersexed people who experience erasure in medical practice — I will situate the research questions that will guide the direction of this inquiry.

Sex Differentiation in Ancient Secular Thought

One of the first early thinkers to generate empirical knowledge about human bodies was Hippocrates of Cos. Hippocrates was a physician who practiced and taught medicine during the late fifth- and early fourth- centuries BCE. With Hippocrates, and the Hippocratic writers who drew extensively on his work, the faith healing of earlier
Greek temple medicine gradually gave way to the view that empirical observation could provide knowledge of the general scientific principles governing human bodies (Watson & Evans 1991: 40). During this time, “a new and more naturalistic and rationally based medicine...began to emerge” (Watson & Evans 1991: 41).

Although it is assumed that Hippocrates wrote little, those whom he influenced have left his legacy to us in a large collection of writings known as the *Hippocratic Corpus*. From the *Corpus*, a specific body of medical writings known as the *Aphorisms* gives a useful account of the Hippocratic idea of balance, which, according to historian Joan Cadden, followed from an earlier Greek belief in the health benefits of moderation (1993: 17). Many ancients believed that to live a healthy life one needed to be moderate in all respects, including sexual relations. What is interesting about the Hippocratic idea of balance is that although it situates the notion of a middle between the extremes of female and male sexes in reproduction, it does not associate a hierarchical value to either end (Cadden 1993: 17). In other words, Hippocratic writers did not imply a social order in general notions about the sexes that explicitly devalued the generative function of the female body. In reproduction, both the female and male body were required to offer a part of themselves toward the generative end of producing offspring in the process of pangenesis (Cadden 1993: 18; Laqueur 1990: 39). Conception was understood to be the result of a kind of battle between the “seeds” of the mother and father; with the outcome being a mixture in various proportions and strength (Laqueur 1990: 39). It was the proportion and strength of strong and weak seeds from both parents that determined the sex of a child.
In contrast to Hippocratic writers, the Classical Greek philosopher Aristotle was among the first of the Ancients to hierarchically separate the generative functions of female and male sexes on biological grounds (Nederman and True 1996: 501). His interest in reproduction was teleological, which meant that he believed that the sexes had specific generative purposes and functioned to realize the goal of those purposes. According to Aristotelian ontology, the male’s purpose was essential (the efficient cause), contributing the primary form of future offspring. In contrast, the female’s purpose was understood as only necessary, (the material cause) contributing the matter in which the form could be realized (Cadden 1993: 23; Flew 1984: 59). It was the efficient cause — the primary form — that produced the child from the matter. Cadden writes, “all natural objects, according to Aristotle, are defined and shaped by their form which is an essence and a principle of actualization: it makes a thing what it is” (1993: 22).

For Aristotle, the form of the fetus was communicated to the female uterus by semen, and semen was the result of a refinement of blood cleansed by the heat of the body. Although both females and males had enough heat to allow the conversion of their digested food into blood, males were considered to have more heat than females, which is why they could refine some of their blood into semen, and “produce the moving force of reproduction,” (Cadden 1993: 22). An Aristotelian metaphor, retold by Laqueur, tells us that Aristotle understood the male’s sperma to act like an artisan’s idea, delivering the germinal magic of generation into the uterus of the female (Laqueur 1990: 42).

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1 Aristotle was born in Northern Greece in 384 BCE (Cahn 1995: 233).
2 The efficient and material cause are two of the four causes Aristotle believed determined everything. The other two causes are the formal cause, which gives a thing its definition, and the final cause, which is the end toward which a thing develops (Flew 1984: 58; Watson and Evans 1991: 76).
Corresponding to his beliefs that females and males were differentiated by their level of heat, and that they had specific purposes in reproduction, was Aristotle’s commitment to the idea that female and male sexes had, by nature, dimorphic genital morphologies. In Aristotelian ontology, the world consisted of only two “true” sexes (Nederman and True 1996: 501). Hermaphrodites, whose bodies resembled a fusion of female and male, were understood to be the result of an excess of uterine matter; the mother contributing more than enough matter to create one fetus, but not enough to create two. A child born of this fusion was female or male, depending on which observable feature of the genitals was more identifiable. According to Aristotle, any extra matter would be transformed into extra genitalia, which was contrary to nature, and therefore redundant (Nederman and True 1996: 501; Fausto-Sterling 2000: 33). In De generatione animalium, quoted in Nederman and True (1996), Aristotle wrote:

Some creatures develop in such a way that they have two generative organs, one male, the other female. Always, when this redundancy happens, one of the two is operative and the other inoperative, since the latter, being contrary to nature, always gets stunted so far as nourishment is concerned; however, it is attached, just as growths (or tumors) are.4

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3 Thomas Laqueur (1990) offers an interesting argument that suggests Aristotle may not have been committed to the idea that genital morphology necessarily defined the sexes as distinct opposites. Laqueur speculates that, because in the social order of the Classical Greek world, women were considered to be cooler, less perfect versions of men, there was no need to develop an extensive vocabulary about genital differences between the sexes. “It followed from...a priori truth that the material cause [was] inferior to the efficient cause (Laqueur 1990: 151). Females, as the material cause in generation, were understood as naturally inferior to the efficient cause of males. Laqueur posits a conclusion stating that Aristotle may have supported the notion that there was only one sex, differentiated by degree of perfection, depending on the body’s level of vital heat (Laqueur 1990: 34-35).

Almost 500 years after Aristotle, Galen was born in the Greek town of Pergamum in Asia Minor. He became an authoritative physician and medical teacher in Rome, where he lived as a Greek subject during a time commonly referred to as the Golden Age of the Roman Empire. Much of Galen’s work drew extensively on the earlier writings of both Hippocrates and Aristotle. His synthesis of their work, together with knowledge from his own experimental discoveries, inspired him to develop an interest in anatomy and human reproduction. Although he did not write extensively on gynecology or obstetrics, his work on human anatomy was among the most influential of his time, and continued to be an almost undisputed authoritative influence on medical epistemology well into the later Middle Ages (Cadden 1993: 31; Levey and Greenhall 1987: 315).

Galen agreed with the Hippocratic notion of balance, and the belief that females produce generative seed just as males do. Although he disagreed with Aristotelian ideas that emphasized a teleological separation between the sexes, which rendered the female almost entirely passive in reproduction, Galen agreed with Aristotle’s position that heat differentiated female and male physiology (Cadden 1993: 33). He believed that it was in fact, “nature’s primary instrument” — vital heat — that created a difference between the sexes (Laqueur 1990: 28). For Galen, the reproductive organs of females and males were anatomically equivalent. The only difference being that female genitals, lacking sufficient vital heat, remained inside the body, whereas male genitals, made more perfect because of a male’s higher level of heat, extended outside the body. In other words, Galen perceived the uterus as an inverted scrotum, and the vagina as an inverted penis (Laqueur 1990: 25). If females had the same level of vital heat that males had, their

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5 Galen lived between 130 and 200CE.
genitals would naturally descend from their bodies to become male genitals.

Although his theory remained hierarchical, Galen differed from Aristotle in his belief that the uterus played an active role in the process of generation, attributing to it the function of differentiating sexes (Cadden 1993: 35). Where Aristotle had postulated that the uterus was no more than a passive receptacle, Galen held that the uterine environment was sufficiently important in reproduction to have an effect on the sex of the fetus. Influenced by the Hippocratic idea of balance, Galen theorized that sex differentiation depended on where in the uterus semen was deposited. He believed that the left side of both the testes and the uterus were cooler than the right side because they received less purified blood (Cadden 1993: 34). Strong semen from the cooler left side of the father had the potential to create a female, whereas strong semen from the warmer right side had the potential to create a male.6 Once in the uterus however, the fetus was either strengthened by its position in the warmer right side, or weakened by its position in the cooler left side. Hence, strong semen from the right side of the testes could be enervated in utero by insufficient heat, resulting in the birth of a female, or strong semen from the left side of the testes could be made more virulent in utero by the greater heat of the right side of the uterus, resulting in the birth of a male (Cadden 1993: 35).

Sex Differentiation in Later Medieval and Renaissance Thought

Even before Galen established his authority in medical science during the second century CE, Greek scientific philosophy had begun to decline as Christianity’s

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6 Galen believed that females produced generative semen that worked “according to the same principles” as male semen. Although produced from less heat, female semen was understood to be required in generation (Cadden 1993: 34).
centralizing influence emerged to dominate intellectual thought. Although the church was not solely responsible for diverting attention away from science, it did little to encourage scientific thinking (Watson and Evans 1991: 108). For the next thousand years, Christianity would demand that any intellectual inquiry be informed by a belief in one God who, “through the voices of Christ and his Apostles,” was the ultimate source of all truth (Watson and Evans 1991: 108).

Although the official dogma of Christian scripture sanctified two distinct sexes, Joan Cadden suggests that there was some agreement among medieval church scholars that the process of generation could involve more variation than a simple binary of female and male (1993: 202). John Boswell offers an example in *Christianity, Social Tolerance, and Homosexuality* (1980), with his account of the Medieval theologian Peter the Chanter, who sometime in the middle of the twelfth century offered a permissive interpretation of Genesis 1:27. In his text, *De vitio sodomitico*, Peter the Chanter is clear that Christian scripture did not state that hermaphroditism was heretical, but rather that the sin of sodomy should be condemned. With certain stipulations, he wrote, “the church allows a hermaphrodite” (Boswell 1980: 376 n26).

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7 Watson and Evans also attribute the “attitude of the Romans and the later invasions of the barbarians...to the fall of science” (1991: 108). According to their account, the church was responsible insofar as it resisted the encouragement of scientific thinking, which helped advance an already changing ideology focus toward theological reasoning.

8 Intellectual thought during the beginning of the Christian era and in the Middle Ages was characterized by scholasticism, or the dominance of faith over reason. Scholasticism involved “the use of [philosophical] reason to deepen the understanding of what is believed on [Christian] faith.” (Watson and Evans 1991: 124; Levey and Greenhall 1987: 755). Any lapse in faith, however scholarly, was considered heretical.

9 Besides prohibiting same-sex sexual relations, the sin of sodomy also encompassed any sexual act between heterosexual people that involved departing from what we would describe today as the “missionary position.” (Bullough and Brundage 1996: 40).
If [a hermaphrodite] is more active, (s)he may wed as a man, but if (s)he is more passive, (s)he may marry as a woman. If, however, (s)he should fail with one organ, the use of the other can never be permitted, but (s)he must be perpetually celibate to avoid any similarity to the role inversion of sodomy, which is detested by God.\textsuperscript{10}

Despite Peter the Chanter’s claim it is likely that a hermaphroditic person would represent at least a partial threat to divine order. However, what is of particular interest in his interpretation of Genesis 1:27 is that he considers the potential for a hermaphroditic body with the same kind of naturalness he allows of typically sexed females or males.

According to Nederman and True, the theory that hermaphrodites were regarded as a distinct third sex in Europe during the twelfth century is supported by a pseudo-Galenic text entitled \textit{De spermate} (1996: 503). Jacquart and Thomasset suggest that it was translated into Latin by Constantine the African sometime in the eleventh-century CE (1988: 22). For many natural philosophers and theologians from the twelfth-century to the Renaissance, \textit{De spermate} was an authoritative medical text. It reiterated Galen’s belief that the uterus played an active part in sex differentiation, and the Hippocratic idea that the process of generation involved a mixing of the seeds of both females and males.

One of the central tenets of Galen’s theory of reproduction supported in \textit{De spermate}, is his belief that body heat was arrayed from left to right, or from cooler to warmer. Generative seed from both parents deposited into the uterus would attach itself

\textsuperscript{10} Peter the Chanter, \textit{De vitio sodomitico}, from Boswell (1980: 376). The parenthetical “(s)he” is from Boswell.
somewhere along a continuum of degrees of heat (Nederman and True 1996: 503). The mixture of seed from both the mother and the father, together with the temperature of that part of the uterus into which the mixture was deposited, came to be widely regarded as the basis for sex differentiation during the Middle Ages. It also came to form the foundation of a twelfth century elaboration on the process of generation that has been attributed to the School of Salerno (Nederman and True 1996: 504).\(^\text{11}\)

According to Nederman and True, the Salernitan elaboration of Galen's ideas proposed a tri-sex model of sex differentiation, positing that the uterus was divided into seven compartments, or cells, and that a fetus's sex was determined by the particular cell into which the mixture of seed was deposited. Following Galen's idea that the body's heat was arrayed from left to right, it was understood that a womanly female would develop from the far left cells, whereas a manly male would develop from the far right cells. Similarly, a manly female was thought to develop from seed deposited into the middle left cell, and a womanly male from seed deposited into the middle right cell; a hermaphrodite, "subject to the impression of both parts," was understood to develop from seed deposited into the middle cell (Nederman and True 1996: 504).

**Renaissance Gender**

Although the twelfth-century Salernitan medical theory of the seven-celled womb helped to formulate an understanding of the potential for three distinct sexes that was accepted into the Renaissance, Jones and Stallybrass warn against placing too much

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\(^{11}\) According to Cadden, Salerno came to be associated with an educational genre typical of many Medieval medical texts: Salernitan dialogue, which involved the presentation of a question or series of questions, asked by students, and answered by medical practitioners (1993: 44).
emphasis on "biological discourse in the construction of Renaissance genders" (Jones and Stallybrass 1991: 88). They write:

By beginning with such discourse, we have ourselves repeated the priorities of post-Enlightenment thinking, in which it is "obvious" that to determine gender is to appeal to biology...For all the prestige of Aristotle and Galen, biology and medicine could claim no theoretical priority or consistency in defining and producing gender.

Although influential biomedical theories did exist during the Renaissance, Jones and Stallybrass suggest that they were often contradictory and unstable (1991: 81). Given that dominant ideas about the process of generation handed down from the Middle Ages seemed to include the potential for more than a simple biological binary of female and male, gender could not be fixed to the body's sex in the same way we think of it today. Instead, Jones and Stallybrass propose that sex differentiation, independent of gender, in Medieval and Renaissance medical theories, might be viewed as a very precarious process (1991: 83). If, as in Galen's theory, sex differentiation was the result of both the strength and proportion of seed from the mother and father, and from degree of heat in the uterus, sex could only be understood as determined somewhere along the continuum from female to male. Furthermore, if heat was all that separated the female body from the male body, a change in body heat could cause the transformation of a female into a male at any time. Similarly, if sex was to be determined by the uterine cell into which reproductive seed fell, as Salernitan theory suggested, the natural potential for a hermaphroditic body threatened to definitively undermine any consideration that the sexes were in fact distinct,
and that their differences were somehow fixed in the biology of the body (Jones and Stallybrass 1991: 82).

Thomas Laqueur also argues for resisting any temptation to fix gender to sex when trying to understand Renaissance ideas about the differences between females and males (1990). In contrast to the Salernitan tri-sex model of sex differentiation, Laqueur asserts that many Renaissance medical doctors believed that there was only one biological sex (1990: 134). This is an idea supported by Galen’s theoretical postulate that degree of heat was all that distinguished female from male bodies.

Laqueur suggests that during the Renaissance there were what he calls “two social sexes with radically different rights and obligations” (Laqueur 1990: 134). Social sex, or social status, was primarily established by how the heat of a body affected its genital configuration. To reiterate Galen’s long-held postulate, bodies with enough heat to push the genitals outside the body where considered men. Men’s warmer bodies were accorded more social status than women’s cooler bodies, whose lack of heat caused their genitals to remain inside the body. Laqueur (1990: 134) writes:

A penis was thus a status symbol rather than a sign of some deeply rooted ontological essence: real sex. It could be construed as a certificate of sorts, like the diploma of a doctor or lawyer today, which entitled the bearer to certain right and privileges.

Hence, the social status granted to women and men based on Renaissance genders was determined a priori by degree of body heat, which was variable across the continuum of one sex. According to Laqueur, social differences during the Renaissance were not
understood to be fixed to the body (Laqueur 1990: 134). Although considered “natural,” social gender displays held priority over biology; Renaissance medical authority did not regulate sex (and gender) differentiation, as medical authority does today.12

Eighteenth and Nineteenth Century Thought

Throughout the eighteenth-century, Enlightenment thought continued the trend in social and intellectual progress fostered by the epistemological changes made during the Renaissance. Scientific advances began to provide the foundation for new ideas about the nature of human life, and empirical knowledge claims offered an increasingly educated European society the language with which to articulate newly informed opinions about the world around them. During this time, age-old attitudes toward a number of subjects, including human sex, were significantly shaped and changed. As science began to articulate an increasingly authoritative discourse about biological differences between women and men, the human body came to represent a kind of political battleground. Renaissance ideas, which viewed social relationships as culturally mediated, began to seem less tenable, and new social dynamics between the sexes were established with the empirical support of “factual” distinctions in anatomy (Laqueur 1990: 152).13

Some theorists of the history of sex and sexuality, such as Michel Foucault and

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12 During the Middle Ages and Renaissance, clothing was an important cultural indicator of a person’s gender status.

13 Before the eighteenth-century medicalization of bodies, anatomical differences between females and males were not used to justify the claim that men were superior to women. Anatomical characteristics were known, but differences in social status were not supported by “factual” distinctions in anatomy. According to Laqueur, "the specific nature of the ovaries or the womb, which had been [known as] a sort of negative phallus, became the uterus — an organ whose fibers, nerves, and vasculature provided a naturalistic explanation and justification for the social status of women" (1990: 152).
Thomas Laqueur, have suggested that the complex interrelationship of political and
epistemological changes taking place in Europe during the eighteenth-century was
responsible for changes in ideas about the human body (Laqueur 1990: 151). As the
populations of European cities began to flourish, increasing urbanization facilitated new
methods of social organization as well as the formation of specialized communities of
people sharing common interests. The establishment of nation-states, increased
exploration beyond Europe, and the ensuing development of capitalist methods of
commerce all contributed to changes in the way European populations were administered,
and the way that struggles for power at both the state and individual level were perceived
and acted upon (Foucault 1978: 116; Laqueur 1990: 152). During the eighteenth-century,
the administration of sex became “central to the life and death of nation states dependent
on the regulation and maintenance of healthy populations” (Dean 1994: 278).  

Related to the political changes taking place during that time were newly
developing ideas about the “nature and derivation of knowledge” (Flew 1979: 109).
Philosophical concepts from the Renaissance had already profoundly contributed to the
ways modern Europeans viewed the world around them. Important Early Modern
scientists and social theorists such as René Descartes and Thomas Hobbes had left
significant epistemological legacies to the scientific revolution of the seventeenth- and
eighteenth-centuries. Following in their footsteps, new “experts” in the fields of
medicine, psychiatry, and education, began using empirical methods of investigation,

14 According to Michel Foucault, the administration of sex first developed as a bourgeois project
intended to affirm the class hierarchy of the time. Sexual perversions were seen to deplete the
purity of one’s line of descent. Thus, the administration of healthy populations demanded that
sex and fertility be organized by the state (1990: 118).
grounded in the doctrine of materialism, to define the “normal” female and male body (Laqueur 1990: 152; Weeks 1986: 33).

In the past, scientific and medical theorists had viewed female bodies as imperfect versions of male bodies. Any difference between the two existed in degrees of spiritual heat rather than in essential physical distinctions (Devor 1997: 17). By the early nineteenth-century, however, the philosophical doctrine and scientific method of positivism had been firmly established as the final arbiter of “absolute truths about humankind and the universe” (Moscucci 1991: 174). The authority of a positivistic science was seen to provide new rational tools for reorganizing political life and advancing social progress. Out of this philosophical movement grew an increasing emphasis on classifying and administering the diversity of the natural world through the development of taxonomic orders. Categories defining the differences between types of living things, including people, were established. Racial classifications based on skin colour and speech were created. Psychological measures were applied to test differences in levels of mental acuity, and comparative anatomists differentiated female and male bodies by labeling the “key anatomical and physiological properties” defining two true sexes (Moscucci 1991: 175). A shift from a priori knowledge about sex differences based on degrees of vital heat, to knowledge of the “real” based in empirical fact, had created new feminine and masculine gender identities, grounded in the biology of anatomical sex. Consequently, two normative sexes and genders were clearly defined, and the new language of nineteenth-century science provided definitive boundaries within
which sex, sexuality, and gender could be appropriately administered.\footnote{In \textit{Sexual Visions}, Ludmilla Jordanova illustrates how eighteenth- and nineteenth-century ideas about gender difference were often linked to the natural world through scientific metaphor. In one example, Jordanova writes that in eighteenth-century medical texts the human nervous system was usually feminized, whereas the human musculature was usually masculinized (Jordanova 1989: 58). Metaphors such as these suggested that woman were to be understood as more emotional than men, who were expected to be more rational. Similarly, a masculinized musculature suggested that men were to be understood as stronger than women are. Scientific metaphors that suggest hierarchical imagery are still utilized in medical textbooks today. See for example, Emily Martin. "The Egg and the Sperm: How Science Has Constructed a Romance Based on Stereotypical Male-Female Roles." \textit{Signs} 16 (1991): 485-501.}

Many social theorists have suggested that the most significant epistemological contribution of nineteenth-century thought was Charles Darwin’s evolutionary theory of natural selection (Watson and Evans 1991: 317). Darwin’s theory proposed that all living things are equipped with inheritable characteristics that in a naturalistic process, and by natural selection, either survive and evolve over time in a struggle for existence, or do not. Such inheritable characteristics are seen as generative mechanisms for providing the fittest of living things with the best possible chances of surviving and continuing their species.

According to Jeffrey Weeks, appeals to Darwinism were often used during the nineteenth-century to foster support for the “individualizing of sex” (Weeks 1986: 66). For Darwin, the process of natural selection acted independently of the process of sexual selection. Thus, the ontological assumptions of many nineteenth-century scientific and medical specialists were grounded in the Darwinian belief that the survival of the species depended on the union of appropriate reproductive partners. Success in reproduction lay in the “dynamics of sexual selection” (Weeks 1986: 67). Associated with this idea was the biological legitimization of natural female and male sex roles and the normalization
of procreative heterosexual sex between anatomically fit males and anatomically fit females. For some, Darwinism offered proof that the social order between the sexes was naturally dichotomous and, consistent with that dichotomy, female and male genitals were expected to be necessarily dimorphic.

For many medical specialists concerned with maintaining the boundaries of a "natural" social order that linked dichotomous gender status and sexuality to anatomical dimorphism between females and males, hermaphroditic people posed a significant threat. Indeed, as historian Alice Dreger has written (1998b: 28):

What was one to do with a person who seemed to be neither or both male and female? What was one to do with the Woman Question, which concerned the proper roles and rights of women, if one could not exactly say what a woman was? How was one to distinguish 'normal' (heterosexual) from 'perverse' or 'inverted' (homosexual) relations if one could not clearly divide all parties into males and females?

One of the ways that nineteenth-century medical specialists were able to respond to the threat of hermaphroditic bodies and maintain the boundaries between two sexes was to assert the fundamental incommensurability of the biological sex categories of female and male (Laqueur 1990: 154). When eighteenth- and nineteenth-century medical specialists encountered a hermaphroditic person, they set out to decipher "nature's disguise" and establish the hidden true sex of the individual. Consequently, hermaphrodites — whose bodies jeopardized the categorical separateness of females and males — were erased. In their place, medical specialists established and labeled
hermaphroditic people as “pseudohermaphrodites,” whose “true” sex was to be understood as inherently female or male.

Informed by the assumption that there are only two biological sexes and genders, and confident that human biology would dictate the truth about the differences between female and male sex, nineteenth-century scientists and medical specialists who were influenced by trends in histology, embryology, and evolutionary theories, settled on the gonad as the best (and only) indicator of a person’s true sex (Dreger 1998b: 29). According to Dreger, “in a doubtful situation medical men unanimously agreed that if one could find conclusive evidence of ovaries or testicles in a patient, the question of true sex [would be] solved” (1998b: 84). A pseudohermaphrodite with ovaries would qualify as a female, whereas a pseudohermaphrodite with testicles would qualify as a male, and accordingly, the official tenet of two incommensurable sexes would be upheld.

Despite their confidence in the gonadal differences between females and males, and their insistence that the two sexes are fundamentally dimorphic, many nineteenth-century scientists and medical specialists continued to support opinions about the developmental superiority of male genitals. Indeed, reminiscent of Aristotle and Galen’s hierarchical assumptions about sex, “the dominant motif of [nineteenth-century] scientific discourse regarding human males and females” continued to suggest that the external male genital form was developmentally superior to the external female genital form (Dreger 1998b: 68). According to the English gynecological surgeon Lawson Tait, who had a reputation for being a leading authority on hermaphroditism during the late nineteenth-century, it seemed logical to assume that hermaphroditism resulted in either a lack or an excess of phallic development (Lawson Tait 1879, from Dreger 1998b:81).
Nineteenth-century scientific “explanations [of hermaphroditic bodies, as well as other types of irregularities] almost always asserted arrests of development in males or excesses of development in females” (Dreger 1998b: 69). This kind of explanation was based on the belief that the female body was a lesser form of the male body. For Tait, male pseudohermaphrodites were gonadal males with underdeveloped, “feminized” genitals, whereas female pseudohermaphrodites were gonadal females with overdeveloped, “masculinized” genitals.

During the nineteenth-century, some medical specialists also developed clear ideas about the distinction between internal and external sex organs. Although the external configuration of male genitals may have been considered “more elaborate” than the external configuration of female genitals, it was generally understood that the internal gonads of females and males derived from homologous “proto-gonads” developing along divergent pathways (Dreger 1998b: 69). Dreger explains:

In the female fetus, the two proto-gonads took one path to become ovaries, while in the male fetus, they followed another and became testes...while ultimately-male and ultimately-female fetuses both began with Mullerian and Wolffian systems of proto-organs, in the female, the Wolffian system atrophied and the Mullerian system evolved to form ‘female’ internal organs, whereas in the male the Mullerian system atrophied and the Wolffian system evolved to form ‘male’ internal organs.

This explanation continues to be recognized as one of the stages of prenatal sex differentiation. However, contemporary medical science no longer relies on the gonads
as the sole determinant of a person's "true" sex. Instead, scientists and medical
specialists have established a chromosomal basis for sex difference that is an essential
part of our genetic makeup. Today, the chromosome theory of inheritance informs
biomedical science about the "true" origin of female and male sexes, stating that sex is
determined at the moment of conception (Campbell 1993: 288).

Current Biomedical Thought

According to the chromosome theory of inheritance, first established at the turn of
the twentieth-century, mammalian sex is the result of a chance combination of two types
of sex chromosomes (Campbell 1993: 280). We know these as the X and Y-
chromosomes, and they are commonly understood to be the bearers of the genetic
information needed to determine sex. When a zygote is created at conception by the
joining of an ovum and a sperm, the resulting embryo usually inherits one of two
combinations of X and Y-chromosomes. An embryo with two X chromosomes (one from
the mother and one from the father), usually develops into a female, while the
combination of an X chromosome (from the mother) and Y chromosome (from the
father), usually results in the development of a male.

Although it is commonly believed that sex is determined at the moment of
conception, embryonic gonads do not begin to differentiate into ovaries or testes until
about the tenth week of gestation (Campbell 1993: 288; Katchadourian 1989: 42-44).
Until then, the undifferentiated proto-gonads known as the Mullerian and the Wolffian
ducts have the potential to develop along either a female or male pathway, regardless of
sex chromosomes (Katchadourian 1989: 43). The differentiation of these proto-gonads
depends primarily on the hormonal environment in which the embryo develops. Embryos with an XX chromosomal inheritance usually differentiate along the female pathway because the maternal secretion of hormones is enough to stimulate the growth of the Mullerian duct, which becomes the fallopian tubes, uterus, and the vagina. Growth of the Wolffian duct, on the other hand, requires a higher concentration of testosterone than is ordinarily available from the mother’s endocrine system. In embryos that have inherited XY chromosomes, a single gene on the short arm of the Y chromosome named Sry is understood to initiate the process that leads to the development of testes and the secretion of testosterone (Campbell 1993: 289). Once testes have developed, testosterone and Mullerian regression hormone are produced and excreted by the fetus, which allows the Wolffian duct to develop into the epididymus, vas deferens, and seminal vesicle. Without the influence of the Sry gene, and the production of testicular hormones, an XY embryo develops as female.

During the growth of the fetus, differentiation of sex continues to rely on sex hormones for the development of the external genitalia (Campbell 1993: 940). Like the internal gonads, the external genitals develop from undifferentiated structures, and become homologues in females and males. Under the influence of sex hormones, the external structures of the embryo known as the genital tubercle, the urogenital folds, and the labioscrotal swellings, usually become the clitoris, the labia minora, and the labia majora in females, or the glans penis, the body of the penis and urethra, and the scrotal sac in males (Katchadourian 1989: 44).

From the beginning, human sex develops from the same primordial structures along similar pathways. Although current biomedical knowledge states that sex is
determined by our genetic inheritance, and that the “normal” development of internal and external genitalia follows dimorphic pathways towards complete differentiation, sex can also be understood as morphological variation, unfolding from the same primordial beginnings along a continuum from germ cell to newborn. While most human bodies do differentiate into typical females or males, genitals have the potential to develop into a variety of shapes and sizes (Blackless, et al. 2000).

Like eye color, or the shape of our ear lobes, therefore, genitals exist in many different forms. While we may tolerate different eye color, or even variations in the shapes and sizes of ear lobes, however, differences in the appearances of genitals — especially those that confound a distinction between female and male — are seen as serious developmental errors that must be fixed. Today, the routine medical management practice of “correcting” intersexed conditions is one of many biomedical strategies for treating a wide range of medically defined irregularities in human development. Such a strategy for clinically erasing human intersex exists as part of what has developed as a strongly interventionist and normalizing culture of twentieth-century biomedicine. In the next section, I briefly explain some of the theoretical justification for medical intervention when an intersexed child is born, and describe current medical protocols for normalizing medically ambiguous genitals in North America.

The Medical Management of Human Intersex

Current medical procedures for managing human intersex have been developed by advances in endocrinology, embryology, surgical techniques, and with the significant influence of new ideas about the development of gender identity in children. According
to Cheryl Chase, founder of the Intersex Society of North America, these advances have meant “twentieth-century medicine [has] moved from merely labeling intersexed bodies to the far more invasive practice of ‘fixing’ them” (Chase 1998b: 190). Today, the medical management of human intersex usually involves surgical and hormonal intervention that is consistent with assumptions made about “normal” sex differentiation, and feminine and masculine gender identity. Few intersexed children grow into adulthood without some genital surgery, and many carry the stigma of being labeled sex anomalies throughout their lives.

Most of the theoretical foundation that justifies the current medical treatment of intersexed people has been based on the work of John Money, professor of medical psychology and pediatrics, emeritus, at Johns Hopkins University in Baltimore (Chase 1998b: 191; Kessler 1998: 136n10). According to Kessler, John Money’s theories about gender identity development inform much of the published literature about intersex case management. Even those “publications that are produced independently of Money reference him and reiterate his management philosophy” (Kessler 1998: 136n10).

According to Money’s psychosocial theory of gender identity formation, first presented in 1955 and later developed with Anke Ehrhardt in 1972, gender identity is malleable in children up to about eighteen months of age. In other words, gender is primarily socialized in the early years of a child’s development, and is not something inherent in the biology of the body (Dreger 1998a: 27). Because of the early malleability

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16 Anke Ehrhardt did not co-author with John Money when his theories were first presented in 1955. Rather, Ehrhardt’s involvement with Money began in the early 1970’s when Money’s “psychosocial” theory of gender identity formation was further developed. For a list of some of their publications, see Kessler (1998: 136n10).
of gender, Money recommends that medical assessments for the correction of intersexed infants consider a set of conditions designed to ensure the proper gender development of healthy girls who will become women, and boys who will become men. Suzanne Kessler (1998: 14-15) has paraphrased Money and Ehrhardt’s recommendations, which include the following:

The experts must insure that the parents have no doubt about whether their child is male or female; the genitals must be made to match the assigned gender as soon as possible; gender-appropriate hormones must be administered at puberty; and intersexed children must be kept informed about their situation with age-appropriate explanations.\(^\text{17}\)

Explicit in their recommendations, is Money and Ehrhardt’s belief in the importance of normative gender-specific roles for females and males, and their assertion that culturally significant distinctions between women and men begin with the fetal differentiation of female and male sex. For Money and Ehrhardt, “normal” fetal differentiation produces genitals that are representative of what is considered a person’s “true” female or male sex, which indicates how a person is expected to be socialized to express their gender and sexuality (1972: 1-23).

These are normative propositions about human sex dimorphism, and they are commonly held beliefs. Indeed, they are fundamentally rooted in Western Society’s ontological assumptions about sex and gender. They form part of what Devor has called the “Dominant Gender Schema” (1997: 71). Devor writes, “the main propositions of

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\(^{17}\) See Money and Ehrhardt (1972: 152).
what I call the dominant gender schema in North American society are social constructs. Not everyone agrees that they are true, least of all me, but they generally carry the full weight and moral authority of descriptions of ‘reality’” (1997: 71-72). They inform us of the following:

1. Sex is an intrinsic biological characteristic. Normally, there are two and only two sexes: male and female. Sexes are usually determined from visual inspection of genitalia. Sometimes sexes are determined on the basis of genetics.

2. Normally, all persons are either one sex or the other. No person can be neither. Normally, no person can be both. No person can change sex without major medical intervention.

3. Genders are social manifestations of sexes. Normally, there are two and only two genders: men (boys) and women (girls). All males are first boys and then men. All females are first girls and then women.

4. All persons are either one gender or the other. No person can be neither. No person can be both. No person can change gender without changing sex.

5. Gender styles are culturally defined expressions of gender and sex. There are two main gender styles: masculinity and femininity. Males are naturally inclined to display masculinity. Females are naturally inclined to display femininity. Most males are masculine men. Most females are feminine women.

6. Many persons do not exactly fit their expected gender styles. This is due to imperfect socialization or to pathological conditions.

7. Those persons who are males, boys, men, or masculine deserve greater social status, authority, and power than those who are females, girls, women, or feminine.¹⁸

Intersexed newborns challenge the assumptions made in the dominant gender schema. As a signifier of appropriate socialization and behavior, unambiguous genitals

¹⁸ See Devor (1997: 71)
are considered fundamental to a person's sex and gender identity. To qualify as a woman or man, or girl or boy, one must possess, or be assumed to possess, the appropriate reproductive organs. When a child is born with medically ambiguous sex, present ways of thinking about gender do not allow for their designation in the social world without medical intervention. In the words of Sharon Preves, "clarity of sex grants an individual 'personhood'; an ability to be considered human rather than monster or sub-human" (1998: 41).

Following current medical practice, soon after birth, an intersexed newborn with medically ambiguous genitals is assessed by a team of specialists who try to determine its "true sex" according to scientific knowledge about what constitutes "normal" femaleness or maleness. Often, the investigation and diagnosis are resolved with a sex assignment based on the extent of genital conformity to established norms, a battery of tests including chromosomal and hormonal evaluations, and the feelings of the child's parents (AAP 2000; Kessler 1998: 15). Following a diagnosis, medical treatment typically starts an intersexed child on a course of "corrective" genital surgeries and, at puberty, a therapy of gender-appropriate hormones designed to fashion them into what is deemed appropriately female or male. For those intersexed people who have articulated their experiences, memories of childhood and early adolescence have included the recollection of invasive clinical examinations, endless rounds of surgeries, long periods of painful convalescence, and the haunting shame of growing up feeling fundamentally flawed.19

19 See, for example, many of the articles included in Chrysalis: The Journal of Transgressive Gender Identities. 2, no. 5 (fall 1997/winter 1998).
The Intersex Society of North America

In the summer of 1993, Cheryl Chase founded the Intersex Society of North America (ISNA), and began dedicating herself to the struggle of claiming a voice for intersexed people. In establishing the ISNA, Chase’s purpose was to challenge and destabilize heteronormative assumptions about human sexes, genders, and sexualities (Chase 1998: 199). To this end, the ISNA has been developed as a political forum committed to the ideological struggle of moving intersexuality closer to the center of public perceptions and away from the shadowy margins of biomedical pathology. Its appearance in North America represented the first time that a political group had fought for the advancement of a policy of radical change opposed to the dominant idea that medically ambiguous genitals were pathological, and that the surgical and hormonal “correction” of intersexed bodies were necessary for the maintenance of a rigid two sex equals two gender system.20 Thus, the ISNA’s ideological focus has been to bring about a change in medical policy about intersexed people, to expose the frequency of intersex conditions and the erasure of intersex identities in medical management, and to make people more aware of the natural diversity of human sexes, genders, and sexualities.

Upon establishing the ISNA, Chase’s immediate goal was to organize a supportive network of intersexuals who had experienced sex assignment surgeries as children, and who shared many of the same feelings of grief, stigma, and shame about their surgically changed genitals (Chase 1998: 197). The ISNA now connects hundreds of intersexed people, and allies, from around the world via its Internet website, and it is

20 Before the ISNA’s presence, the Turners Syndrome Society was the oldest established support group for people with medically defined ambiguities of sex. It was established in 1987.
still growing to provide an expanding list of intersex-related information, stories, and links to similar organizations. Besides offering intersexed people the emotional support of their peers, the ISNA also provides useful information about the many practical issues of living as an intersexed person, such as how to obtain old medical records, or how to locate sympathetic counselors and medical specialists (Chase 1998:197).  

Once established, the ISNA further developed its political agenda, and defined its long-term goal to challenge the way that intersex medical specialists routinely perform genital surgeries on intersexed children. Today, the ISNA states that it “is devoted to systemic change to end shame, secrecy, and unwanted genital surgeries for people born with an anatomy that someone decided is not standard for male or female” (ISNA 2003).  

Unless there is a compelling medical reason, instead of altering the bodies of intersexed newborns, the ISNA seeks changes in social attitudes about sexes, genders, and sexualities, and is pressing for a complete reform of current intersex medical treatment protocols.  

Despite its radical agenda, the ISNA does recognize that there is a well-established two sexes equals two genders schema of human sex differentiation. Thus, the ISNA advocates what could be described as a “best-fit for the child” policy of gender assignment, stating that an intersexed child should be raised as a girl or boy according to whichever designation will be in the long-term best interest of the child. However, the ISNA also states that the medical establishment should not attempt to surgically change the body in the service of the assigned gender, and that medical policy should be  

21 The ISNA’s web site can be found at http://www.isna.org/.  
22 From the ISNA’s web site, 1 September 2003.
reformed so that the routine practice of performing invasive genital surgeries on children is immediately suspended. For Chase, “the key point is that intersex subjects should not be violated for the comfort and convenience of others” (1998:198). The medical establishment should instead be providing alternative “conceptual tools and emotional support” for intersexed people and their families (Chase 1998:198).

In the few years since the ISNA was founded, Cheryl Chase and other vocal intersexuals and allies have won significant support from members of the academic and medical communities, and have been successful in politicizing a growing number of intersex organizations and intersexed people. Changes in attitudes toward infant sex assignment surgeries are beginning to be articulated in law and in proposals for new medical management guidelines. Today, many medical specialists are beginning to recognize that the ISNA is a legitimate voice for change. Its mission to stop intersex genital surgeries and to improve medical care of intersexed people is “acknowledged by an important minority of doctors” (ISNA 2003).

Recently, the ISNA (2003) announced the formation of a Medical Advisory Board comprising medical doctors and academics who will work together in support of the ISNA’s goals. The Medical Advisory Board will offer doctors and other medical specialists the education and guidance that may be required to shift their focus on intersex medical management away from surgical intervention, “toward the quality of life of their intersex patients as the measure of their success” (ISNA 2003). The ISNA hopes that the leadership provided by the members of the Medical Advisory Board will “encourage doctors to base their treatment on principles of openness and respect that underlie other types of medical care” (ISNA 2003).
Asking Questions

One of the central tenets of Money's gender identity theory that is reflected in intersex medical management is his postulate that all social and psychosexual conditions that define the assigned gender — including genitalia — must be consistent (1972: 152). In other words, gender must necessarily be premised on sex identity, which is based on genitals that must look and function like those expected of a female or male, depending on the assignment of sex. This means that males will require an adequately functional penis and females will require an adequately functional vagina (1972: 152).

However, the term “functional” when used to describe surgically created or altered genitals is misleading. Genitals that are surgically altered do not function the same way as unaltered genitals do. More often than not surgery results in a simulacrum that looks and functions in ways that are far from what biomedicine defines as “normal.” Furthermore, procedural rationales for what counts as functional seem to reflect the social privilege of masculinity and favor the “normal” male body, which raises important questions about the social meanings of sex, gender, and sexuality in current medical protocols for managing intersex. 23

Indeed, critics of intersex medical management have pointed out that the prevalence of female sex assignments — 90% of all intersex sex assignments are to female — is indicative of an attitude in medical practice that regards female genitals to be less important than male genitals (Dreger 1998a: 29). According to Kessler, many specialists consider the proper functioning and morphology of the penis to be one of the

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23 In Lessons From the Intersexed (1998), Suzanne Kessler has included a chapter in which she evaluates genital surgery. See Kessler (1998: 52).
primary criteria for deciding the sex assignment of an intersexed infant (Kessler 1998: 54). Intersexed newborns with genitals that do not meet the higher standards for what is deemed biomedically appropriate for a “normal” male are routinely assigned female.

Such rationales for decisions about assigning a female or male sex to an intersexed newborn could be seen as an ideological strategy for regulating the social privilege granted to male bodies and masculinity in Western society. In this inquiry, I investigate the biomedical regulation of sex, gender, and sexuality as it is organized in the procedural protocols for medically managing human intersex. Using the method of inquiry known as institutional ethnography, which has been proposed and developed by Dorothy E. Smith in her work on the social organization of knowledge (1987; 1990a; 1990b; 1999), my research explores the disjuncture that arises between the ideological knowledge of sex in biomedicine and the everyday experience of living as an intersexed person.

Unlike a traditional sociological inquiry, however, this research does not begin from the objective concepts of sociological theorizing, or from the ideological beliefs of the biomedical position on sex differentiation and gender (Dorothy E. Smith 1987: 49; George Smith 1995: 21). Rather, it begins from the experiences of intersexed people who encounter this disjuncture between what they know from their everyday lives, and what they are being told — indeed, what we are all being told — by the many medical specialists who manage human intersex from the biomedical position. My aim is to explicate the ideological organization of biomedical knowledge about human sex, gender,

24 I am inspired here by the way George W. Smith has articulated the research problematic in his study of the delivery of AIDS treatments in Ontario. See George W. Smith (1995: 18-34).
and sexuality in intersex medical management. Thus, in this inquiry, I set out to discover the determinants of intersexed people's clinical erasure in medical practice. In order to do this, I propose a research problematic that asks the questions, "how does the erasure of intersexed people happen in medical practice?" and "what can an explication of how this erasure is socially accomplished tell us about the ways in which human sexes, genders, and sexualities are organized in Western society?"

Chapter Summary

The purpose of this chapter has been to outline some of the historical ideas that have contributed to the current biomedical view of human sex differentiation and gender. Although brief, my aim has been to provide a general overview of the social organization of human sexes, genders, and sexualities in Western biomedical discourse. I began with a discussion of Ancient secular beliefs about human sex differentiation, starting with the work and influence of the philosopher-physician Hippocrates, who is generally recognized as one of the first early thinkers to generate empirical knowledge about human bodies. From Hippocrates, and the Hippocratic writers who drew extensively on his work, the religion and myth-based ontologies of earlier Greek temple medicine gradually gave way to the emergent epistemological view that empirical observation could provide knowledge of the general scientific principles governing human bodies.

Early ideas about the legitimacy or illegitimacy of human sexes began to be articulated in biomedical discourse by the early Greek philosopher-scientists and physicians who were developing and teaching throughout the Ancient world. Aristotle, for example, was among the first Greek philosopher-scientists to articulate a normative
dimorphism between females and males, decisively separating the teleological purposes of two "true" sexes on biological grounds. For Aristotle, hermaphroditism was contrary to a teleological understanding of the natural world, and was therefore viewed as redundant, or illegitimate.

Like Hippocrates and Aristotle before him, the physician and medical teacher Galen of Pergamum also believed that empirical observation was essential for developing sound medical knowledge. Galen's ideas were among the most significant of the Greco-Roman period, and they had an authoritative influence on medical epistemology through to the Middle Ages. He disagreed with the Aristotelian emphasis on a teleological separation between two "true" sexes, however, and instead developed the notion that there was, essentially, only one sex. Galen believed that the differences between females and males were determined \emph{a priori} by degree of vital heat, which allowed for the natural potential of hermaphroditism to occur.

Given that Galen's influential ideas about the process of generation seemed to include the potential for more than a simple biological binary of female and male sexes, gender could not be fixed to the body in the same way as we think of it today. Gender differences between women and men may have been considered "natural," but they were not understood to be an essential aspect of their bodies. Typically, from the time of Galen, throughout the Middle Ages and into the Renaissance, if a hermaphrodite lived as either a woman or a man without deviation, she or he was relatively free to live with the same rights given to others. Social gender displays held priority over biology, and gender differentiation was maintained by judicial rather than medical authority.

Throughout the eighteenth-century, however, earlier ideas about the nature of
human sex and gender began to give way to theories that were supported using positivistic science. During this time, there was an ontological shift from a belief that degrees of vital heat created gender differences, to the view that feminine and masculine gender identities were grounded in the biology of two anatomical sexes. By the early nineteenth-century, Galen’s one-sex theory had been replaced by a belief in absolute biological dimorphism — two normative sexes and genders. Similar to Aristotle’s teleological assumptions, eighteenth-and nineteenth-century biomedical science again separated female and male sexes. Thus, hermaphroditism was regarded as illegitimate once more, and medical specialists began labeling hermaphroditic people as “pseudohermaphrodites,” whose “true” sex was to be understood as inherently female or male.

Today, the biomedical position on human sex differentiation has established a chromosomal basis for sex differences between females and males. Building on knowledge created during the eighteenth- and nineteenth-centuries, the chromosome theory of inheritance informs biomedical science that female/feminine and male/masculine sex and gender identities are the result of a naturalistic process — culturally significant distinctions between women and men are seen to be fixed to the biology of “normal” fetal sex-differentiation. These distinctions are at least partially defined by medically appropriate genitals, which indicate how a person is expected to be socialized according to the normative propositions of the dominant gender schema.

While most human bodies do differentiate into typical females or males, some children are born with medically ambiguous genitals that, according to current ways of thinking about sex, gender, and sexuality, are viewed as serious developmental errors.
Today, the legitimacy of female and male sexes, and the illegitimacy of intersex is justified on biomedical grounds. Medical management decisions initiated from the biomedical position routinely assert that intersexed newborns must undergo surgical and hormonal intervention to "correct" their bodies so that they conform to the normative assumptions of the dominant gender schema.

This research is an institutional ethnography of current management guidelines for medically managing human intersex. It explores the disjuncture that arises between the generalized relations of biomedical discourse and intersexed people's clinical erasure in current biomedical practice. In the next chapter, I discuss this method of inquiry in more detail.
Chapter Three

METHOD OF INQUIRY
Institutional Ethnography

Introduction

In this chapter, I discuss the method of inquiry known as institutional ethnography, and explain why and how I have used it as a research strategy for exploring procedural protocols for medically managing intersexed newborns. This chapter is divided into three sections. In the first section, I discuss Dorothy E. Smith’s work on the social organization of knowledge, and establish the theoretical foundation of institutional ethnography as a research strategy. In the second section, I briefly revisit the research problematic to refine the framework for this inquiry, before going on to the third section in which I discuss the methodological procedures used for investigating the organization of sex, gender, and sexuality in the American Academy of Pediatrics (AAP) and the Diamond and Sigmundson texts.

Although sociological, my inquiry departs from traditional sociology, which has a history of being dominated by modes of thought developed almost exclusively from the perspective of men (Smith 2002: 18). Sociological research from traditional ways of knowing relies on established conceptual and methodological procedures that abstract the social world, and generalize people’s everyday experiences. Such a sociology “commits the researcher, from the outset, to a determinate social relation…which is structured by the relevances of the social scientific and professional discourses that produce it” (Jung 2000: fn 21, 156). In other words, established objectivist methods in sociology conform to the concepts and categories of the discourse, which do not reflect the actuality of most
people’s experience. As Smith and other feminist social theorists and researchers have shown, this has been, and remains, especially problematic for women and the many others whose everyday lives are marginalized or made invisible. Smith writes:

Established sociology has objectified a consciousness of society and social relations that ‘knows’ them from the standpoint of their ruling and from the standpoint of men who do that ruling. To learn how to know society from sociology…is to look at it from these standpoints (1987: 2).

In contrast to a sociology that begins in the conceptual world of men’s ways of knowing — from social theories and methods that claim neutrality, but that largely exclude women’s knowledges, and the knowledges of other marginalized people from the development of its discourse — this inquiry begins from the standpoint of intersexed people.

**Beginning from the Standpoint of Intersexed People**

Beginning from the standpoint of intersexed people does not mean that this inquiry sets out to represent a particular subjective viewpoint, however. As Dorothy Smith has written, the use of “standpoint” in institutional ethnography refers instead to “a method that, at the outset of inquiry, creates the space for an absent subject, and an absent experience that is to be filled with the presence and spoken experience of actual [people]” (1987: 107). Thus, the sociology of institutional ethnography takes up the voices of usually unheard subjects and develops investigation from the “issues and problems of [their] lives…in and of the actualities of their everyday living” (Smith 2002: 18).

In this inquiry, I take up the issue of intersexed people’s erasure in medical
practice, which is based on physical differences that are considered anomalous to what is narrowly defined in biomedical discourse as “normal.” I do not treat their experience as the object of inquiry, however. My aim is not to describe the experience of having medically ambiguous genitals, or to explain intersexed people’s encounters with the specialists whose work is designed to “manage” them. Rather, I maintain the presence of intersexed people as subjects, and treat their collective experience of erasure as a place from which to begin exploring how biomedical knowledge about sexes, genders, and sexualities is organized and coordinated in the medical practice guidelines analyzed here.\(^1\)

Thus, this inquiry makes the experience of clinical erasure a problematic that can be investigated by looking closely at the social relationships that make it what it is.

Beginning from the standpoint of intersexed people, rather than from the concepts and theories of established sociology or biomedical discourse, makes this a political project. I am committed to recognizing human diversity as legitimate, and therefore, to the political task of speaking out against generalized ideas about sexes, genders, and sexualities — ideas that are routinely marked on the bodies of intersexed people without their consent. These ideas, I will argue, perpetuate social inequalities based on the sexes of our bodies, and our various gendered and sexual expressions. In this political project, I align myself with the reformists who are demanding changes to the medical management of intersex. In doing so, I explicate for those who can most benefit from knowing, how the erasure of intersexed people happens — how it is socially organized in the medical

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\(^1\) I do not wish to claim that all intersexed people share the same experience. However, like the terms “female” and “male”, the term “intersex” is a generalizing category. The label unifies a diverse group of people, with diverse experiences of what it means to be intersexed, but whose biomedical definition can be understood as a common experience.
practice guidelines for "managing" human sexes, genders, and sexualities. In the words of Dorothy Smith, my goal is to "create a sociology for rather than of [intersexed] people" (Smith 2002: 19; Italics in original).

Organizing the Direction of the Sociological Gaze

In Western society, dominant institutional ideas about sex, gender, and sexuality are given a portion of their meaning by knowledges that have been produced in the scientific disciplines that together comprise biomedicine. What we know about sex can seemingly be justified with scientifically verifiable facts about human biology. Today, the chromosome theory of inheritance, for example, informs us that there is a genetic basis for sex differentiation. It states that human sexes are biologically determined to be dimorphic. Embryos with an XX chromosomal inheritance are normally female, and embryos with an XY chromosomal inheritance are normally male.

Because the premise of a natural dimorphism between female and male sexes is so well accepted as truth, many people also expect that most females will naturally become feminine women, that most males will naturally become masculine men, and that nearly all females and males are biologically predisposed to want to have sexual relations with the other sex. Most of us tend to take these biomedically-defined and organized aspects of human social life for granted largely because biomedicine has normalized sexes, genders, and sexualities based on generalized "facts" that are understood to be completely defensible given what we know from many years of biomedical experimentation and theory-making. Although we may understand that some newborns will have medically ambiguous genitals and that some people will have unusual gender styles or be
homosexual, we generally accept, and take for granted, the authority of biomedical definitions of what is considered normal or abnormal.

In choosing institutional ethnography as a method of inquiry, I am proposing to shift the focus of investigation away from intersex as it has been defined and managed as an “abnormality” of sex differentiation. Instead, I direct the sociological gaze towards the institution of biomedicine, and the authoritative knowledge of biomedical discourse. In Western society over the last one hundred years, it has been the institution of biomedicine that has the authority to define sexes, genders, and sexualities with its objective and objectifying terminology. Today, biomedical criteria are used to classify what is considered legitimate or illegitimate, and thereby to displace the diversity of what exists in the actuality of human experience.

According to George W. Smith, the displacement of everyday experience happens when institutional generalizations, such as biomedical definitions of sex, gender, and sexuality, are assimilated “as a form of social consciousness received as an everyday feature of [people’s] lives” (1995: 20). In Western society, this is expressed as the normative propositions about human sex dimorphism that Devor has called the “Dominant Gender Schema” (1997: 71). The normative propositions of the Dominant Gender Schema are given meaning by the authority of biomedical definitions of human sex, gender, and sexuality. George W. Smith goes on to write that, “within this kind of social matrix, the conceptions (that is, the ideological practice) of a regime operate in an explanatory fashion to regulate and control events in local settings” (1995: 20). Thus, as

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2 So that references to Dorothy E. Smith and George W. Smith are not confused, in all instances where George W. Smith's work is cited, his full name will be included.
an analytic tool, institutional ethnography can offer insight into how authoritative biomedical knowledge regulates and controls sex, gender, and sexuality, so that its definitions become taken for granted. It will also show how this ideological knowledge coordinates and regulates human social life.

The Social Organization of Knowledge

The theoretical foundation of institutional ethnography is Dorothy Smith’s work on the social organization of knowledge. A central assumption of Smith’s work is the assertion that social life is actively constructed and coordinated by human activity. Smith’s ontology of the social is materialist, threads of which can be traced back to Marx’s critique of capitalism and class relations, where he offered an interpretation of history and human society that theorized social, cultural, and political existence as determined by the economic growth and change of the division of labor. Smith’s materialism, like Marx’s before her, is premised on a conception of the social world as arising in what people do (Smith 2002: 21). She writes:

The method of inquiry is grounded in [Marx’s] materialism as described in *The German Ideology* (Marx and Engels, 1976), the premises of which are not concepts or principles but the actual activities of actual individuals and the material conditions of those activities (1990b: 6).

Smith extends her ontology of the social beyond a materialist emphasis on the economy, however, and develops a sociology of knowledge that links contemporary forms of social consciousness with the ways in which our ongoing activity constructs human social life (Smith 1990b: 7). In doing so, she has developed a method that
reconciles the micro-sociological analysis of everyday relations between people, with the macro-sociological investigation of human social systems (Abercrombie, et al: 1994: 241). By “beginning in a world of purposive and planned activity, individuals can be seen...to actively bring into being the social organization of everyday life” (Jung 2000: 38), including, for example, the social organization of human sexes, genders, and sexualities.

**The Social as the Object of Inquiry**

In institutional ethnography, it is the social that is the object of sociological inquiry. For Smith, the social arises in human activity; the organization of what people are actually doing in their day-to-day lives. She writes, “the sociology I’m proposing conceives of the social, that is, sociology’s business or focus, as the ongoing concerting and coordinating of individuals’ activities” (1999: 6; Italics in original).

In this type of inquiry, the term “social relations” is used to explicate how people’s activities connect with what others are doing in different locations over time (Campbell and Gregor 2002: 27). Unlike the traditional sociological meaning of social relations, therefore, which refers to normative relationships or abstract phenomena that are removed from people’s actual activities, Smith uses the term as more of a procedural tool for discovering how the social is organized spatially and temporally (Smith 1999b: 94). Smith (1999: 7) writes that,

[the procedural tool of social relations directs] attention to, and takes up

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3 For Dorothy Smith, the concept of social relations does not refer to interpersonal relationships between people, such as relations between doctors and their patients, or parents and their children (2002: 45). Rather, it is used in institutional ethnography to discover how people organize themselves in relation to one another (George W. Smith 1995: 24).
analytically, how what people are doing and experiencing in a given local site is hooked into sequences of action implicating and coordinating multiple local sites where others are active.

Thus, it is social relations that the institutional ethnographer makes use of when setting out to discover how human social life is "coordinated and concerted, reflexively and recursively across space and time, in the practices and activities of individuals" (George W. Smith 1995: 24).

In this inquiry, I make specific use of social relations as a method for investigating the social organization, and recursive properties, of biomedical definitions of sex, gender, and sexuality. My purpose is twofold; 1) to discover how these concepts are constituted, or put together in the specialized activities of physicians whose work involves the "management" of human intersex, and, 2) how these concerted activities contribute to, and connect with, biomedicine's ruling knowledge about human sex, gender, and sexuality. Taking up the research problematic from the issue of intersexed people's erasure in biomedicine, my primary focus is to describe the extra-local determinations of intersex medical management. To borrow the words of Gary Kinsman, I aim to provide insight "into how ruling [biomedical] knowledge is produced and how it rules — bringing into view the social relations through which [sexes, genders, and sexualities are regulated, and intersexed people] are subordinated" (1996: 34).

**Institutional Knowledges and Relations of Ruling**

In contemporary industrial societies, people's activities determine, and have come to be organized by, specific dominant institutional discourses, such as, for example, the
discourses of law, education, biomedicine, and so on. According to Dorothy Smith, these discourses intersect with distinctively structured social relations, or “relations of ruling”, through which specialized forms of generalized and generalizing knowledges have developed over time (1990a: 214; 2002: 41). She writes, “the relations in which [individuals] are active and to which they contribute, are ‘institutional’... they are generalized across individual situations and experiences” (2002: 32).

Contemporary social life is thoroughly institutional. That is to say, the organizational effects of institutional relations are so ubiquitous and pervasive that many of us take them for granted. They coordinate social consciousness so completely that our general understanding of the world usually only makes sense using the established terms of ruling institutional discourses. These are the terms of our social ontology, and for Smith, they arise from the concerting and coordinating of individuals’ specialized activities in what she refers to as the, “ideological apparatuses of the society” (Smith 2002: 32). Smith explains:

The ways in which we think about ourselves and one another and about our society — our images of how we should look, our homes, our lives, even our inner worlds — are given shape and distributed by the specialized work of people in ...organizations forming the ‘ideological apparatuses’ of the society (1987: 17).

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4 The foundation of Smith’s definition of discourse is Foucault’s theoretical conception of “the order of discourse”, which provides for the analysis of how particular institutional practices establish orders of truth that construct “reality” (Foucault 1981). Smith builds on this conception, and develops an expanded definition that reflects her commitment to the embodied subject, who is “located in an actual situation of activity which the discourse coordinates with others also at work” (2002: 41). For Smith, therefore, discourse is not simply practices in the Foucauldian sense, but is also “organized social relations among people” (2002: 41).
For Smith, the term “institutional” identifies a complex of ruling relations that form part of the ideological apparatuses of society (Smith 1987: 160). These relations are organized around specialized practices, such as biomedical work, and integral to them are ideologies that have been developed to provide categories and concepts that articulate the actuality of everyday life to the institutional function (Smith 1987: 160). Ruling relations can be found in the ways in which the diversity of human sexes, genders, and sexualities are organized as the normative propositions of the dominant gender schema. The biomedical management of the dominant gender schema depends on the specialized organization of sex, gender, and sexuality, which provides distinctively generalized ways of knowing and categorizing these phenomena (Campbell and Manicom 1995: 9). Such social organization detaches “the social world from the local and particular and abstract[s] it into a conceptual mode that can be managed and governed” (Jung 2000: 45).

*Texts as Coordinators of Social Relations*

Texts are a significant aspect of our everyday lives, and they play an important role in shaping our understanding of the world. Indeed, textual communication is a fundamental and pervasive characteristic of just about every encounter we have with the institutions that structure our daily living. As Smith has shown, the knowledge that is exchanged through texts provides much of the information used to organize and coordinate contemporary social order (1987, 1990a, 1990b, 1999). It is through textual communication practices that institutions develop distinctive forms of knowledge, and enshrine certain taken-for-granted “facts”, including the “facts” of human sex differentiation.
This research depends on the analysis of texts for its data. The reading and writing of texts is an essential aspect of biomedical work, as it is with all institutional processes. Biomedical communication in textual form — the sharing of scientific and medical knowledge electronically and on paper — accomplishes the continued coordination of medical practices, such as the work of "managing" human intersex. The diagnostic and therapeutic work that medical specialists do when an intersexed infant is born is fundamentally structured by the organization of objective knowledge communicated through texts.

For pediatric medical specialists concerned with human intersex, the American Academy of Pediatrics (AAP) and the Diamond and Sigmundson guidelines articulate procedural protocols for medically "managing" sex and gender dimorphism (although, as I will illustrate in chapter five, in very different ways). In doing so, these texts act as coordinators of procedural action — action that is organized by generalized and generalizing concepts about sex, gender, and sexuality, and action that, for Smith, is a product of ideological strategies for regulating social relations (1990a: 43). It is this discursively organized and coordinated activity that sustains a complex web of social relationships at both the micro-level, between specialists, patients, and their families, and at the macro-level, as a regulator of Western ontological beliefs about female and male sexes, feminine and masculine genders, and homo- and hetero-sexualities.

An analysis of institutional texts can provide insight into the extra-local ruling relations through which people's everyday lives are organized and given meaning in the standardized terms of institutional discourse. These are the objectified relations through which human sexes, genders, and sexualities have come to be viewed as either legitimate
or illegitimate. My analysis of the AAP text is intended to discover how biomedical “facts” about normative sex and gender dimorphism and heteronormative sexuality are conceptually held together within the authoritative and specialized work practices of physicians who medically manage human intersex (Smith 1990a: 78). In contrast to dominant procedural protocols, I will also explore by means of a comparative analysis, Diamond and Sigmundson’s reformist views on the management of human sex dimorphism. In the words of Dorothy Smith, my aim is to bring into view “another piece of the complex of objectified relations and organization, mediated by texts (print and electronic) in which our daily / nightly lives are embedded and by which they are organized (2002: 40).

Disjuncture: The Research Problematic

This analysis of the AAP and the Diamond and Sigmundson texts explicates some of the ways in which the erasure of intersexed people is accomplished in biomedical discourse, and brings into view part of the complex of objectified relations that organize and regulate human sexes, genders, and sexuality in Western society. Using institutional ethnography as a method of inquiry, this research begins from the lives of intersexed people to explore the disjuncture that arises between biomedicine’s generalized and generalizing knowledge about human sexes, genders, and sexualities, and intersexed people’s experience of clinical erasure.

From the biomedical perspective, human sexes have been ideologically organized by naturalist ideas that define the boundaries of female and male sexes using definitive biological standards. These standards establish the rules for what counts as legitimate
sexes by maintaining a distinction between what is defined as normal and abnormal. The ideological knowledge of this perspective constructs human intersex as an abnormality—a developmental problem of fetal sex differentiation. Thus, the biomedical response has been one that insists on surgically and hormonally "managing", or "correcting", the bodies of intersexed newborns so that they conform, as nearly as possible, to the "rules" of human sexes, and therefore, to what has been normalized in biomedical discourse as decisively female or male.

For many of the intersexed people who have described their experiences, as well as for their families and friends, conformity to biomedical standards is imposed with unwanted consequences that can last a lifetime. From their standpoint, the biomedical management of their bodies typically involves the clinical erasure of their unique identities, accomplished through what can be years of invasive clinical examinations, endless rounds of surgeries and hormone therapies, and long periods of painful convalescence. Despite the good intentions of many medical specialists, large numbers of intersexed children grow into adulthood with lasting physical pain and discomfort, and carry with them throughout their lives, the haunting shame of feeling fundamentally flawed.\(^5\)

Contrary to the institutional organization of intersex as a developmental anomaly, and the resultant medical rationales for decisive and early surgical and hormonal intervention, several intersexed people have spoken out against standard medical

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\(^5\) See, for example, Morgan Holmes (1994), Cheryl Chase (1998), Sharon Preves (2003), and many of the articles included in Chrysalis: The Journal of Transgressive Gender Identities 2, no.5 (fall 1997/winter 1998). Refer also to the website of the Intersex Society of North America (www.isna.org) for further information.
management procedures, and have publicly mourned the harm caused to their natural newborn bodies. Many have said that they would not have wanted normalizing sex reassignment or other genital surgeries as children, and have expressed that they feel it is social attitudes towards the diversity of human sexes that must change instead (Holmes 1994; Chase 1998). The disjuncture between biomedical discourse — the ideological knowledge of “ideal” sex, gender, and sexuality in biomedicine — and the standpoint of intersexed people is currently being articulated in a professional debate between those who support the medical intervention model, and those who propose treatment reforms that respect the autonomy of intersexed people.\(^6\)

**Doing Institutional Ethnography: Procedures**

My inquiry into the medical management of human intersex takes the side of intersexed people, and endeavors to map part of the complex of social relations that organize their erasure “beyond the boundaries of the local, everyday settings of their lives” (George W. Smith 1995:28). My aim is to discover the extra-local determinants of intersexed people’s erasure in medical practice, as these relations are organized and coordinated in the AAP and the Diamond and Sigmundson guidelines. However, a single investigation of the “bigger picture” cannot uncover the whole complex of ruling relations that exist beyond the immediate grasp of local experience. Such a

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\(^6\) In early 2000, a North American Task Force on Intersex (NATFI) was formed to address a number of issues relating to the medical management of intersex. The task force, which included a number of clinical specialists and academics, came together in response to the current debate about how to best care for intersexed newborns. Although the outcomes of the Task Force have not yet been published, and its website is no longer available online, the ISNA recently announced the formation of a Medical Advisory Board comprised of medical doctors and academics who will work together in support of the ISNA’s goals.
comprehensive task is beyond the scope of a single project (Jung 2000: 64). Instead, this inquiry sets out to discover and make clear a portion of an extended puzzle, accomplishing part of a pattern. Smith compares this to the process of making a quilt:

[Each inquiry] is like the making of the piece of a quilt that remains to be attached to other pieces in the creation of a whole pattern. We begin from where we are. The ethnographic process of inquiry is one of exploring further into those social, political, and economic processes that organize and determine the actual bases of experience of those whose side we have taken (1987: 177).

This inquiry explores part of the complex of social relations that find legitimacy and authority in biomedicine, and it focuses investigation of extra-local ruling relations on the textual organization of medical protocols for managing human intersex. My aim, therefore, is to discover and map one “square” of the social relations organizing the “quilt” of intersexed people’s erasure in Western society.

**Entry into the Field of Study**

Beginning from the standpoint of intersexed people, and not from within the institutional organization of biomedicine, raises questions about how the researcher is to gain entry into the field of study (George W. Smith 1995:27). My research design originally proposed to include interviews with some of the medical professionals who do the work of medically managing human intersex in British Columbia. This would have had the benefit of incorporating the ways in which specialists describe the work they are doing — work that is coordinated by the procedural protocols I was analyzing in the
professional guidelines of the AAP and the Diamond and Sigmundson texts. However, it became clear that the task of organizing and carrying out these interviews would be difficult for a project of this limited size. Instead, given the time constraints, and the potential difficulties involved in recruiting specialists who would be willing to discuss their work for a project that was, from the beginning, crafted as a critique of established protocol, a textual analysis of documentary evidence was proposed as the best way of entering the field of intersex medical management. Therefore, unlike standard ethnographic methods, which make use of observational procedures and formal interviews for data, this project has been limited to the analysis of texts.

Textual Analysis

As Dorothy Smith (1987, 1990a, 1990b, 1999) has shown, investigation into how institutions work requires that the researcher treat institutional texts as active coordinators of social relations, “especially the extra-local forms of organization like those coordinating” the medical management of human intersex (George W. Smith 1995:30). Discovery of the coordinating properties of texts involves reading documents for how they organize people’s lives. This means analyzing how the form and language of documents, their relation to other texts, and their intended authorship and readership operate together “as a conceptual coordinator of social action” (George W. Smith 1995:30). In my analysis of the AAP and the Diamond and Sigmundson texts, I have adopted an analytic framework suggested by Atkinson and Coffey (1997). Although I have separated these aspects of the analytical framework for conceptual clarity here, it is important to note that they are interconnected in the creation of textual realities.
Form and Language

I examine the specific form and language cues that have been used to organize biomedical knowledge about human sexes, genders, and sexualities. This means looking at the distinctive styles, words, and organizational conventions associated with the institution of biomedicine. Form and language cues are part of all textual documents, and they help the reader “activate” the knowledge within the text. An analysis of the form and language of the AAP and the Diamond and Sigmundson texts provides insight into the purpose of each document, how they organize ideological knowledge, and how they coordinate social relations that accomplish specific courses of procedural action.

Relations to Other Texts

Texts exist within larger bureaucratic systems, and besides organizing and coordinating courses of action, they organize and coordinate an objectified history of social relations that have contributed to the construction of the discourse of which they are a part. I examine how the AAP and the Diamond and Sigmundson texts might be situated, legitimized, and given authority in sequential relationships with other texts, and how this intertextuality helps makes sense of, and gives an independent existence to, ideas about human sex and gender dimorphism, heteronormative sexuality, and the phenomenon of human intersex.

Intended Authorship and Readership

I explore the authorship and intended readership of the AAP and the Diamond and Sigmundson texts to develop an understanding of “the overall system of production, exchange and consumption” of the textual realities constructed in them (Atkinson and
Coffey 1997: 58). In other words, I examine the authorship to discover how the texts claim authority, and I examine the intended readership to uncover the ideological assumptions required in order to read each text, and the practical prerequisites needed to activate their knowledges in specific courses of action.

**Internal and External Validity**

Established social scientific methods have been developed to ensure that inquiry leads to valid findings that are credible and can be generalized to people and settings beyond a particular study (Dallimore 2000: 168). If research has good internal validity, it is said to accurately represent an empirical reality (Dallimore 2000: 162). The findings are trustworthy, and can be relied upon because they correctly describe some aspect of human experience that is being investigated. Similarly, if a study has good external validity, the research findings are said to be generalizable. That is to say, the results can be legitimately applied to other people and settings beyond a particular research study.

Issues of internal and external validity are important to sociologists because of the value placed on the objectivity of empirical evidence. In established sociology, objectivist methods are considered essential if the research findings are to be seen to be rigorous and of good quality. According to Dorothy Smith, however, the concept of objectivity arises as a discursive product of specialized social organization that artificially

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7 The importance of objectivity in the social sciences has been debated for some time and is one of the central issues contributing to the marginalization of feminist research methods in universities. Recent challenges by feminist scholars may have achieved some success, however. From their textbook, *Approaches to Social Research*, Singleton & Straits acknowledge that the complete detachment of the researcher is rarely possible. They write that objectivity is more recently defined as a condition by which "a group of [researchers] can agree on the results of a given observation" (1999: 31).
removes the researcher from the world that is being investigated, and transforms the research subjects into objects of inquiry (1987: 117). For Smith, such a method for doing sociology does not capture the "truth" of human experience, but instead constructs a sociological account that is independent of what is actually going on in the everyday world, thus overriding that reality (1987: 118). She writes, "the practice of objectivity in the social sciences is less concerned with such values as 'truth' and 'knowledge' than it is with the constitution of a phenomenal world and a body of statements about it" (Smith 1990a: 33). From Smith's perspective, objectivist methods in sociology take up the everyday lives of individual subjects and reinterpret them "into the alienated constructs of sociological discourse, subordinating their experienced worlds to the categories of ruling" (Smith 1987: 117).

Thus, in contrast to established sociology's emphasis on objectivity, the sociology of institutional ethnography remains committed to its materialist foundation. Inquiry is always conducted from a place in the shared world, beginning in the actualities of people's everyday lives to explore "the social relations individuals bring into being in and through their actual practices" (Smith 1987: 160). Researchers using institutional ethnography seek to understand and explicate how the social world that they are part of is actually organized in the day-to-day activities of people (Smith 1987: 160). Questions of internal and external validity, therefore, rely on the empirical discovery and explanation of how human social life is actually accomplished, and "always involve[s] reference back to [people's activities] as issues of 'does it indeed work in that way?' 'is it indeed so?'" (Smith 1987:160). Concerns about the validity of a particular inquiry are assessed by the possibility that others could return to the same sources and either confirm or deny that "it
does indeed work that way” (Jung 2000: 63). Smith writes:

If we move then to a sociology whose business is making out a world that is put together in determinate ways prior to our thinking it and that makes as its enterprise the discovery of just how it is done, then the issues are no longer at the level of “truth” but rather, in assessing the products of inquiry… (1987: 122).

*An Important Limitation of this Research*

Medical rationales, like all forms of knowledge, are in a constant state of change. Although biomedical ideals about sex, gender, and sexuality routinely construct “intersex” as varying degrees of developmental genital, gonadal, and chromosomal anomalies, some procedural changes made by a few informed specialists are beginning to reform intersex management protocols in specific and local settings. Therefore, despite offering important insights into the organizational aspects of medical work, there are limits to using only documentary sources in social research. Although I believe that much valuable knowledge can come from an analysis of the AAP and the Diamond and Sigmundson texts, it is important to recognize that these texts alone cannot provide comprehensive knowledge about the actual day-to-day operations of intersex medical management in different local settings. Instead, an analysis of these texts can offer insight into the institutional organization of an authoritative discourse that informs the medical work of intersex medical management. In the next chapter, I set out to discover the organization of intersex medical management, as it is articulated in the AAP and the Diamond and Sigmundson guidelines, and as it works to coordinate concerted courses of
procedural action (Smith 2002).

Chapter Summary

I have discussed the method of inquiry known as institutional ethnography, and explained why and how I have used it as a research strategy for investigating the social organization of sex, gender, and sexuality in the AAP and the Diamond and Sigmundson texts. Although sociological, this inquiry departs from established objectivist methods in sociology, which have traditionally relied on conceptual and methodological procedures that generalize people’s everyday experiences. As Smith and other feminist researchers have shown, such a sociology does not reflect most people’s day-to-day living, which is especially problematic for women and the many others whose life experiences are marginalized or made invisible.

In contrast to traditional sociology, therefore, this inquiry begins from the standpoint of intersexed people. It takes up the issue of their erasure in medical practice as a place from which to begin exploring how the biomedical position on sexes, genders, and sexualities is organized and coordinated in the procedural guidelines for “managing” human intersex. I have proposed a research problematic that asks the questions, “how does the erasure of intersexed people happen in medical practice?” and “what can an explication of how this erasure is socially accomplished tell us about the ways in which human sexes, genders, and sexualities are organized in Western society?” To answer these questions, I explore the disjuncture that arises between the generalized and generalizing norms of biomedical discourse, and the everyday experience of intersexed people’s clinical erasure. I set out to discover the social organization, and recursive
properties, of biomedical definitions of sex, gender, and sexuality, and explicate how biomedical “facts” about normative sex and gender dimorphism and heteronormative sexuality are conceptually held together within the specialized work practices of physicians who medically manage human intersex.

This research is a textual analysis of documentary evidence. The reading and writing of texts is an essential aspect of the organizational work that institutions do, and biomedical communication in textual form accomplishes the continued coordination of medical practices, such as the work of medically managing human intersex. An investigation into how people’s activities are organized by dominant institutional discourses requires that the researcher treat institutional texts as active coordinators of social relations. Thus, discovery of the coordinating properties of texts involves reading documents for evidence of how they organize people’s lives. In the next chapter, and in chapter five, I explore the organization of intersex medical management, as it is set out in the AAP and the Diamond and Sigmundson guidelines, and as it works ideologically to coordinate concerted courses of procedural action.
Chapter Four

DISCOVERY
The Textual Organization of Intersex Medical Management

If we set out to discover, we want our inquiry to produce a knowing that can be relied on in an ordinary and unproblematic way. We want to be able to say, “Look, this is how it works; this is what happens.”... We want to know because we also want to be able to act and in acting to rely on knowledge beyond what is available to us directly. We want to be able to have arguments about how things work that refer to an ontological ground in the world we have in common, and we want, therefore, to be able to arrive at an agreement on the basis of what is there for both of us (Smith 1990a: 34).

Introduction

In this and the next chapter, I will investigate through textual analysis of the generalized procedural guidelines for the medical management of human intersex, how the medical work of specialists who manage human intersex is conceptually held together and organized as relations of ruling. My primary inquiry is of the management protocols recommended by the AAP. These protocols were published in the July 2000 issue of Pediatrics in an article entitled, “Evaluation of the Newborn with Developmental Anomalies of the External Genitalia”. They represent the current institutional course of action. By contrast, I will also explore the reformist views that are expressed in the guidelines written by Milton Diamond and Keith Sigmundson entitled, “Management of Intersexuality: Guidelines for Dealing with Persons with Ambiguous Genitalia” (1997).

The motivations for producing these texts may be varied.¹ However, in this

¹ Professional associations, such as the American Academy of Pediatrics, are motivated to produce clinical practice guidelines for varied reasons. Some motivations may include, for example, the coordination of what physicians do with recent scientific advances, the reconciliation of more efficient uses of resources with state health care expenditures, or the facilitation of mechanisms intended to protect members from potential litigation (Johnston and Conly 2000).
inquiry I am reading the AAP and the Diamond and Sigmundson guidelines as documents intended to coordinate a management strategy for intersexed infants, and for how each assert a different ideological perspective and articulates fundamentally different courses of action. Together these texts provide insights into how the management of intersexuality in biomedicine — the coordination of what medical specialists do when an intersexed infant is born — works to organize and regulate human sexes, genders, and sexualities.

An analytical mapping and discussion of the ideological organization of intersex medical management, as it is established in these texts, will be the primary focus of Chapter Five. For the remainder of this chapter, I will first place the texts within the context in which they were written by briefly situating them in recent historical context. I will then discuss what it is that gives to or takes away from each text the power to assert an authoritative account, and how the reader activates this authority. I will then conclude this chapter by setting out the textual organization of intersex medical management as it has been articulated in these texts, and as it works to coordinate concerted courses of procedural action (Smith 2002).

Locating the Texts in Time

As with all texts, the AAP and the Diamond and Sigmundson guidelines are the products of a history of ideas and work practices. The ongoing accomplishment of institutional work — the organization and coordination of different people in different places and at different times — has contributed to their writing. Scientists, medical specialists, academics, and others are among the many individuals in local settings who
have in some way conversed with the discourse of biomedicine and contributed to the collective organization of knowledge that has found expression within these texts.

In the grandest sense, of course, the concepts in these texts are part of a long and complex history of Western scientific and biomedical knowledge that can trace a legacy far back in time. Theories expressed in many written texts handed down from ancient Greek and Roman philosophers have informed generations of scientific and medical practitioners (Caddon 1993:13). Even though the ontological foundation of biomedical knowledge has shifted significantly since the eras of philosophers and physicians such as Hippocrates, Aristotle, or Galen, their influential ideas, as well as those of countless others, have carried forward through time, been vested in texts, and have contributed to the vocabulary of present day biomedical discourse.

In more recent historical terms, however, the knowledges in the AAP and the Diamond and Sigmundson texts are more directly the product of contemporary experimentation and theory making in the inter-related biomedical disciplines of genetics, endocrinology, urology, and developmental psychiatry. This conceptual inheritance is foundational to both texts, and is most clearly illustrated in the AAP guidelines, which concludes with a list of contributing geneticists, endocrinologists, and urologists — specialists working in disciplines with their own discursive histories vested in texts.

My analysis of the AAP and Diamond and Sigmundson guidelines situates these texts as counterpoints in a debate about intersex medical management. This is an argument between those who support the current management model, and those who propose treatment reforms. In this argument, which I will refer to as the surgical fix vs. social fix models, those who believe that “corrective” genital surgeries are necessary for
the healthy psychosexual development of intersexed newborns usually follow the procedural guidelines advocated by the AAP. Rationales for "corrective" genital surgeries are based on the belief that non-typical genitals are a mistake of "normal" fetal sex differentiation, and this must be fixed. As I discussed in detail in chapter two, most of the theoretical foundation that justifies the AAP's *surgical fix model*, has been based on the work of John Money, professor of medical psychology and pediatrics, emeritus, at Johns Hopkins University in Baltimore (Chase 1998b: 191; Kessler 1998: 136n10). Because of his belief in the early malleability of gender, Money recommended that human intersex be hormonally and surgically "corrected" to ensure the appropriate gender development of healthy girls who will become women, and boys who will become men.\(^2\)

For those who are affiliated with the reformist position articulated in the Diamond and Sigmundson text, however, non-typical genitals are seen as representative of anatomical variation. Most reformists assert that intersex should not be considered abnormal, nor should intersexed children undergo cosmetic genital surgeries. They generally believe that it is Western social attitudes about sexes, genders, and sexualities that must be changed instead. To this end, advocates such as Milton Diamond and Keith Sigmundson, recommend a model of treatment that offers an alternative to early sex assignment surgeries (1997).

The AAP and the Diamond and Sigmundson texts are useful for illustrating competing ideologies about how to best manage cases of human intersex. However, the different courses of action coordinated by these texts can also be read as representative of

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\(^2\) Refer to footnote 10 for more about John Money's influence on the AAP guidelines.
differing opinions about the ontology of human psychosexual differentiation (gender identity) and the development of sexuality. For almost thirty years, Milton Diamond has disagreed with the psychologist John Money about how gender identity develops in young children. What follows is a brief discussion of Diamond’s disagreement with John Money, and the research case study that finally brought it to the attention of many more people than simply interested specialists and academics.

**Diamond and Money’s Differences**

Diamond and Money’s differences about human psychosexual differentiation and the development of sexuality have a history dating back to the mid-sixties, and are therefore, somewhat complex in their shifting nuances about meaning (Fausto-Sterling 2000; Zucker 1996). Nevertheless, the basic premises are relatively straightforward, and reflect the main suppositions of the often-argued social philosophical “nature vs. nurture” debate. The nature-nurture debate seeks to resolve the relationship between biological and environmental factors in human development. Although many people have now come to believe that both nature (biology) and nurture (socialization/culture) play important roles in human development, some continue to argue about whether gender and sexuality are predominantly biological in origin, or whether they are primarily socialized and culturally determined.

For Money and his colleagues, research with intersexed children during the fifties had provided data suggesting that within a critical period of 0-24 months, environmental influences — socialization and culture — were the primary determinants of an intersexed child’s psychosexual differentiation (1955, 1957). They believed that if assigned early
enough, and if all biological and social cues are uncompromisingly consistent, an
intersexed child’s gender identity and sexuality could be imprinted by experiences
attributed more to nurture than to nature. In 1957, Money, and his colleagues Hampson
and Hampson wrote, “sex of assignment and rearing is consistently and conspicuously a
more reliable prognosticator of a hermaphrodite’s gender role and orientation than is the
chromosomal sex, the gonadal sex, the hormonal sex, the accessory internal reproductive
morphology, or the ambiguous morphology of the external genitalia” (1957:333).

For Diamond, however, Money’s position ignored data that suggested a more
refined understanding of the importance of biological factors in defining the parameters
of psychosexual differentiation and the development of sexuality (Diamond 1996:164).
In a 1965 publication, Diamond challenged the validity of Money’s theory, which he
called a theory of psychosexual “neutrality at birth” (1965: 148). Diamond argued instead
for a theory of “psychosexual predisposition” (1965:168).³ He wrote, “owing to prenatal
genetic and hormonal influences, human beings are definitely predisposed at birth to a
male or female gender orientation. Sexual behavior of an individual, and thus gender
role, are not neutral and without initial direction at birth. Nevertheless sexual
predisposition is only a potentiality setting limits to a pattern that is greatly modifiable by
ontogenetic experiences” (1965:167). In contrast to Money, therefore, Diamond was
asserting that even within a critical period, gender and sexuality are not shaped by
environmental factors alone, but are also predisposed by genetics and by hormonal

³ Diamond has since called his theory of psychosexual differentiation a theory of “biased
interaction following birth” (1996:164).
influences in the uterus. In other words, before birth, nature sets limits on nurture.

Despite Diamond’s 1965 critique of Money and the Hampsons’ earlier theoretical suppositions about gender identity in intersexed children, by the early-seventies, Money and his colleague, Anke Ehrhardt, had further developed the idea that gender and sexuality were malleable in very young children in their book entitled, *Man and Woman, Boy and Girl* (1972). In that book, Money and Ehrhardt introduced a research study known as the John/Joan case — a study about an infant boy who was being successfully raised as a girl after his penis was ablated. The John/Joan case seemed to provide supportive evidence for Money’s gender identity theory and confirm that gender and sexuality could, given the appropriate cues, be shaped by experiences attributed to socialization and culture. It was not until many years later that Diamond would again comment on Money and his theoretical suppositions. This time, however, he set out to uncover the true story of what had really happened to the child who was John/Joan.

**David Reimer’s Experience: The John/Joan Case**

In March 1997, Milton Diamond and Keith Sigmundson published an article in the *Archives of Pediatric and Adolescent Medicine*, in which they reported on the long-term follow-up of a young man named David Reimer. Diamond and Sigmundson’s article recounted Reimer’s experiences of undergoing a sex re-assignment as a child in the mid-sixties — an experience that had been frequently documented in the sexology and

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4 For many years, John/Joan was used as a pseudonym to protect the privacy of David Reimer and his family. In the late 1990s, Reimer and his family agreed to disclose their identities and give permission for their real names to be used.

popular literature as the John/Joan case. For Diamond, the article represented the culmination of his thirty-year disagreement with the psychologist John Money about the determinants of gender identity and the development of sexuality.

David Reimer’s story began in 1966, when at the age of eight months a surgeon attempting to correct phimosis accidentally ablated his penis with a cauterization instrument. After a series of unsatisfying consultations with pediatric urologists and psychiatrists, Reimer’s parents consulted with John Money at Johns Hopkins University Hospital in Baltimore (Colapinto 2000). Money, who had recently developed his gender identity theory, and who was at that time one of the world’s foremost authorities on the psychosexual development of children born with medically ambiguous genitals, recommended that Reimer’s parents consent to the radical move of reassigning the infant David (John) to female (Joan) — a recommendation that would provide a compelling case study for his theory, and a recommendation that would have a lasting influence on the medical management of human intersex. As a result, shortly before his second birthday, under the influential direction of John Money, Reimer’s parents consented to allow their son to undergo surgery to construct a cosmetic vagina. Within a year of losing

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6 Reimer and his twin brother had both been diagnosed with a condition known as phimosis, for which they were undergoing surgical treatment when Reimer’s penis was ablated. Phimosis refers to tightness of the foreskin around the tip, or glans, of the penis. The condition can sometimes be severe enough to constrict the passage of urine, causing infection, inflammation of the glans, and extreme pain. Surgical treatment involves the removal of the foreskin (The Bantam Medical Dictionary 1990: 332).

7 According to John Colapinto, who has reported on Reimer’s experience in the popular press, and in his own book entitled, As Nature Made Him: The Boy Who Was Raised as a Girl (2000), Reimer’s parents were first presented with the option of a phalloplasty to fashion a cosmetic penis for Reimer. Even today, phalloplasties are difficult surgeries to perform, and the results are still usually quite crude. In the mid-sixties, a phalloplasty would have required multiple surgeries for uncertain results (Colapinto 2000:16).
his penis, he was being raised as a girl (Colapinto 2000).

Despite Reimer’s refusal to accept his assigned female sex identity and his decision at fourteen to return to his original male sex, the John/Joan case had been described by John Money for many years as an important success. The case was so significant that it became a precedent for other cases concerned with the psychosexual development of children with traumatized or medically ambiguous genitals. It also helped to further establish Money’s reputation as an authority in the field of sexology. Indeed, according to Suzanne Kessler (1998), because of Money’s published reports about Joan’s “successful” gender transformation, the case was often cited in medical textbooks about pediatric sex assignment as evidence that newborns were psychosexually neutral, and that gender identity was easily malleable in very young children.

For Money, as well as for many others, his earlier collaborative research about intersexed children, and his own real-life experimentation using John/Joan, seemed to provide compelling evidence to support a “neutrality at birth” theory of gender differentiation in very young children. Diamond and Sigmundson’s 1997 article disclosed, however, that Money had failed to report Reimer’s own decision to re-assign himself back to male. As a result, many supporters of intersex management reform have now largely

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8 Diamond had first disclosed Money’s failure to report Reimer’s dissatisfaction in an article entitled, “Sexual identity, Monozygotic Twins Reared in Discordant Sex Roles and BBC Follow-up” (1982). Shortly before the article was published, the British Broadcasting Corporation had produced a documentary on the John/Joan case for British television, in which they wished to interview John Money about Reimer’s refusal to accept his assigned sex. Money had declined to participate in that documentary. Diamond’s article was an attempt to inform a North American audience about the filmmaker’s findings, but it did not elicit broad attention. Refer also to Zucker (1996), and Fausto-Sterling (2000).
discredited Money’s theoretical work on psychosexual differentiation.9

As the world now knows, Money’s claims about the success of Joan’s (David’s) childhood sex assignment were not true. Nonetheless, Money’s gender identity theory remains an important point of reference in the biomedical work of those concerned with the management of human intersex (Kessler 1998:14). The assertion that any newborn can be raised as a girl or boy, provided that the appropriate gender dimorphic social and biological cues are present from an early age, continues to be influential in substantiating rationales for the surgical fix model of intersex medical management in North America.10

Although Money’s research is not explicitly cited in the AAP’s (2000) policy statement, his earlier work with intersexed children and Reimer has informed the ideological foundation and general management philosophy that is articulated in the AAP guidelines.11 This is the ideology about which Milton Diamond has expressed his concerns for many years, and the management philosophy that he and Sigmundson have proposed reforming with the publication of their management guidelines.

The Textual Organization of Intersex Medical Management

In this section, I set out the organization of intersex medical management as it is

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9 For an account of Reimer’s decision to assign himself back to male, see Colapinto (2000).
10 Gender dimorphic social and biological cues refer to patterns of feminine or masculine socialization (social cues), and sex-specific physical features of the body, such as a vagina or a penis (biological cues). For Money, social and biological cues needed to be uncompromisingly consistent in order for a child to develop a healthy gender identity.
11 John Money’s ideas about sex differentiation and the development of gender identity are not cited in the AAP’s (2000) guidelines, nor are his work referenced. This may be because of the controversy surrounding Money’s denial of Reimer’s lived experience, which has undermined his authority to inform medical rationales for the diagnosis and medical care of intersexed newborns. Money is referenced, however, in an earlier AAP policy statement on the timing of elective surgery for male children diagnosed with medically ambiguous genitalia (1996).
written in the American Academy of Pediatrics (AAP) policy statement, "Evaluation of
the Newborn With Developmental Anomalies of the External Genitalia" (2000), and in
the proposed reformist guidelines published by Milton Diamond and Keith Sigmundson
(DS) in, "Management of Intersexuality: Guidelines for Dealing With Persons With
Ambiguous Genitalia" (1997). Both texts articulate a course of action for evaluating and
medically managing the bodies of intersexed infants. However, each text has been
written from a fundamentally different ideological perspective, and each claims authority
from a different way of knowing human intersex, and indeed, sexes, genders, and
sexualities generally.

**The Authority of the Texts**

For Dorothy Smith, authority as a form of power exists as the objectified
knowledges of institutional relations of ruling, which are always the product of social
organization (1990a: 67). As discussed in chapter three, relations of ruling are organized
around specialized practices, such as biomedical work, and central to them are ideologies
that have been developed to provide categories and concepts that articulate the actuality
of everyday life to the institutional function (Smith 1987: 160). The specialized practice
of medically managing human intersex, for example, takes what is known directly, and
works it up into the objectified knowledge of biomedical discourse — the directly
experienced diversity of human sexes, genders, and sexualities is displaced to fit the
relevances determined by the ideological framework of biomedicine. In this example,
authority is derived from the factual status given to the objectified knowledge of
biomedical definitions of sex, gender, and sexuality, and "power arises in the distinctive
organization [that this objectified knowledge] imparts to social relations” (1990a: 70).

One of the interesting characteristics of objectified knowledge is that it “appears to be independent of the presence and activities of subjects” (Smith 1990a: 66). Although we can read a diverse history of biomedical ideas about human sex-differentiation, we generally take for granted biomedical “facts” without reference to their sources: the many subjective knowers in countless local settings whose work has contributed to the making of the biomedical discourse. Writing about the accomplishment of factual status as the displacement of subjectivity in science, Smith states (1990a: 66):

Achieving facticity obliterates the historical and specific source; the work, the local setting, and the authorship of particular scientists are forgotten.

Within the text, the reader finds what is presented thus as a given.

The detachment of objective knowledge from the people who have created it is especially apparent in the AAP’s policy statement. In fact, the AAP text has been published independently of subjective authorship. There is no “author” of this text per se. Instead, what is written has been compiled by a number of people working in different scientific disciplines. Although their names are cited at the end of the document, the text is shown to be authored by specialized professional groups — the AAP’s Committee on Genetics, Section on Endocrinology, and Section on Urology. Thus, the AAP text is presented as a thoroughly institutional account, appearing to the reader as objective and authoritative because it is presented independently of individual knowers, and because the knowledge that is vested in it is justified by appeals to the factual status of science. The AAP text seems, therefore, to represent an ontological truth that is independent of the
social activity that produced it.

In contrast to the authority of the AAP’s objective account, the Diamond and Sigmundson text has been written from a noticeably subjective viewpoint — Milton Diamond and Keith Sigmundson are shown to be the authors of the text. This in itself is not enough to deprive the Diamond and Sigmundson text of authority; many authoritative texts are authored by individuals. However, while Diamond and Sigmundson also seek authority for their guidelines based on appeals to the factual status of scientific knowledge — both are also medical doctors — the authority of their text is compromised because they acknowledge that it has been created by the blending of subjective experiences with scientific “facts”. They begin by stating this “caveat”:

> These recommendations are based on our experiences, the input of some trusted colleagues, the comments of intersexed persons of various origins, and the best interpretation of our reading of the literature.

(DS 1997: 1046)

Methods of constructing objective accounts tend to treat subjectivity as opinion, rather than as “truth”. Experiential knowledges are usually suppressed to the objective knowledges of institutional accounts. Indeed, in Smith’s view, “to qualify a statement with the modifier ‘I know’ is to deprive it of factual status” (1990a: 66). Despite Diamond and Sigmundson’s appeals to the factual status of scientific knowledge, therefore, given that what they write is at least partially based on subjective experience, it cannot claim the same factual status as the AAP text.
Activating the Texts

The knowledge that is vested in texts is activated by the reader and interpreted in relation to the specific work practices and courses of action in which it is read (Smith 2001: 35). For many of the pediatric medical specialists concerned with human intersex, for example, interpretation and activation of the AAP text is intended to coordinate the specific course of procedural action that is involved in the medical management of intersexed newborns. Similarly, the Diamond and Sigmundson text also intends to coordinate a course of action, but with different effect.

For Smith, one of the characteristic things about reading a text — the text-reader conversation — is that it is like having a two-sided dialogue in which one side is always unresponsive (Smith 2002: 35). The AAP and the Diamond and Sigmundson texts are the same for every reader, and thus, the knowledge in them has the potential to coordinate and regulate activity across time, as well as in the many different local settings of their reading. Smith (2002: 34) writes:

Texts as read and written in the everyday actuality of people's work coordinate what people are doing in one local setting with work done by others elsewhere and at different times. Texts bring external regulation into the immediacy of the everyday / everynight world.

That texts bring external regulation to the many different sites of their reading means that they standardize "for any reader one term of the text-reader conversation" (Smith 2001: 35). In doing so, they establish that which is to be considered relevant. As I illustrated in chapter four, the AAP and the Diamond and Sigmundson texts, like all
institutional texts, provide instructions for reading that organize the terms through which the reader is expected to take up the knowledge. These instructions establish the ideological framework for how the text is to be understood, and from within which a course of action is articulated and given regulatory authority.

To speak of texts as regulatory means to acknowledge their power to organize and coordinate human relationships. Of course, texts alone have no power. They are simply words or images unless the reader’s interpretive practices conform to those intended by the text (Smith 1990a: 211). Smith notes that the reading and understanding of “texts finds in them what [the reader knows] how to take from them” (Smith 1990a: 211). However, knowing how to take regulatory knowledge from texts is only part of what sets regulatory activity in motion. The power of a text’s knowledge remains inactive unless the reader assents to activate what is written. A text’s power to regulate exists in the reader’s compliance to enter what is written into a course of action.

The activation of the AAP and the Diamond and Sigmundson guidelines, for example, requires that the reader come to these texts with some prior biomedical knowledge of the processes of human sex-differentiation and the issues surrounding the birth of a child with medically ambiguous genitals. It also requires that the reader agree to take up the knowledge in these texts as courses of procedural action. In activating this knowledge, the assenting reader takes on the texts’ powers to organize human sexes, genders, and sexualities (Smith 1999: 150). In this way, the reader — any medical specialist who is concerned with human intersex and who uses these texts to inform their work — becomes, what Smith calls, the text’s proxy (Smith 1999: 150). It is as proxies
that medical specialists carry out the procedural work of medically managing intersexed people.

The Thematic Framework for This Analysis

I have asked two thematic questions that will be used to provide a framework for my inquiry. This is, of course, not simply a mapping of the unique procedural activity that is revealed in each of these texts. It is also an effort at discovery of the ideological strategies that produce that activity. Thus, the first question seeks to reveal how the concept of sex is organized in the work that medical specialists do when an intersexed child is born. It asks how intersex is understood in these guidelines. Defining how intersex is understood can help clarify the ways in which the concept of sex is organized as part of an ideological strategy for coordinating and regulating human relationships. Knowledge of how intersex is understood helps to make clear one of the ways in which masculinity is privileged. It also begins to illustrate the extent to which human intersex can be seen as a threat to that privilege.

The second question seeks to understand the specific criteria used when assigning a sex to an intersexed child. This question asks how medical specialists determine a sex of rearing. It seeks to reveal the biomedical definitions of sex, and thus, the ideals, or standards, for what constitutes a legitimate sex. It also seeks to uncover how dominant ideological definitions of sex, gender, and sexuality are explicitly hierarchical, and highlights the ways in which biomedicine’s position on sex, gender, and sexuality works as a regulatory system to ensure the continued privilege granted to the male body, to masculine gender, and to heterosexuality.
Defining Intersex: How is Intersex Understood?

Both texts begin with a series of statements that can be seen to serve as instructions for reading. These instructions organize the terms through which the reader is expected to take up the knowledge in the texts. These instructions also function to establish the ideological framework for what has been written. It is from within this ideological framework that a course of action is articulated and given authority. Although instructions occur throughout the length of both texts, there are important key frames of reference in the opening paragraphs of both the AAP and the Diamond and Sigmundson texts that establish how intersex is to be understood by the reader.

Official Policy: The American Academy of Pediatrics

The American Academy of Pediatrics' official policy statement on intersex management begins with the declaration that medically ambiguous genitals are to be understood as a social problem requiring urgent medical intervention.

The birth of a child with ambiguous genitalia constitutes a social emergency.

(AAP 2000: 138)

A dichotomy between female and male sexes, as well as between “normal” and “abnormal” sex development is then organized, which medicalizes the social emergency and situates intersex as anomalous to the norms of a dimorphic model of human sex in which female and male bodies are understood to be distinct. Biomedical and scientific knowledge about human sex differentiation is introduced as authoritative knowledge in
order to organize the concepts of sex and normalization. It is also used to provide a rationale for the medical course of action required to make an intersex diagnosis, to assign female or male sex, and to “correct” the appearance of the medically ambiguous genitals.\textsuperscript{12}

It is helpful to examine the child in the presence of the parents to demonstrate the precise abnormalities of genital development, emphasizing that the genitalia of both sexes develop from the same primordial fetal structures, that both incomplete development or over development of the external genitalia can occur, and that the abnormal appearance can be corrected and the child raised as a boy or a girl as appropriate.

(AAP 2000: 138)

Here, the concepts of incomplete development and over-development of the external genitalia are also introduced. This begins to organize the norms for how female and male genitals should look, and again, instructs the reader to understand intersex as a developmental anomaly.

\textsuperscript{12} It is important to note that medical rationales for clinical practice are informed by different definitions of health and wellness, and that there is a considerable corpus of literature about these concepts that I have chosen not to review for this inquiry. Although a discussion of some of the different definitions of health and wellness, as well as the limitations and difficulties of defining these concepts, may have be useful in some respects, I have been guided throughout this research by the methodological goal of institutional ethnography to begin with what is relevant to everyday life, rather than to frame inquiry from what is relevant to a specific conceptual domain, such as the theoretical literature on health and wellness.
Further into the text, emphasis is again placed on biomedical knowledge — more specifically in the fields of genetics and endocrinology — as a conceptual organizer of the biological processes responsible for the development of the genitals.

To explain to the family the cause of their newborn’s genital abnormalities, the practitioner needs to understand the genetic and hormonal influences that are responsible for normal genital development. Before about 6 weeks’ gestation, male and female embryos develop undifferentiated gonadal tissue and have primordial structures with the potential to produce either male or female genitalia.

(AAP 2000: 138)

With the biological processes of the human body established as the basis for the unfolding of dimorphic female and male sexes, intersex is then organized as a “problem” of masculinization. This instructs the reader to understand the development of male genitals as initiated by the active biological processes of male differentiation. In contrast, the development of female genitalia is understood to occur only if active male sex differentiation does not take place.

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13 The term, “masculinization” is used in the AAP text to describe the degree to which the genitals are understood to be medically under-developed or over-developed. Following Devor’s definitions of sexes, genders, and sexualities (1997), which have been discussed in chapter one, I contend that the AAP is conflating gender and sex when they use the term “masculinization” to describe a quality of a person’s body morphology. I use the term “masculinization” in this context only to maintain consistency between the AAP text and my explication of this data. Refer to chapter five of this thesis for a more analytical discussion of this issue.
The genital appearance of the newborn is largely determined by the presence or absence of genetic and hormonal influxes responsible for the active process of male differentiation. The fetus tends to develop as a female in the absence of these male influences. (AAP 2000: 138)

The AAP then states that for genetic males, intersex arises because of a problem at some point during male sex differentiation that causes incomplete masculinization of the developing embryo. Whereas, for genetic females, intersex arises because of an over-masculinization, or virilization, of the developing embryo.

Intersex conditions arise because of an abnormality along the male pathway that interferes with complete masculinization or, in the case of a genetic female, some virilizing influence that acts on the developing embryo. (AAP 2000: 138)

In summary, according to the policy of the American Academy of Pediatrics, intersex is understood as an urgent medically correctable social problem with a biomedical explanation and justification for treatment. Intersex arises because of the abnormal sex differentiation of the developing embryo. Abnormal differentiation is conceptualized based on a dimorphic model of sex in which the norms of female and male sexes are understood to be the direct result of human biological (genetic and hormonal) processes. In chromosomal males, these processes are understood to be responsible for the active development of male sex. In their absence, female sex tends to
develop. Interference during the active process of male sex differentiation is considered to cause male genitals to have some degree of under-masculinization, whereas, in chromosomal females, a virilizing influence on the developing embryo is understood to cause varying degrees of over-masculinization of female genitals. Thus, intersex is seen primarily as a problem of masculinization, resulting in the incomplete development — either under-masculinization or complete feminization — of male genitals, or the over-masculinization of female genitals.

Reform Policy: The Diamond and Sigmundson Text

In contrast to the science as authority instructions for understanding intersex in the AAP text, Diamond and Sigmundson offer a consultative approach that relies more on subjective experience than scientific knowledge for justification. Their text cannot be read as a statement of policy in the same way as the AAP text. It is instead recommendations for reforming established policy. However, like the AAP guidelines, the Diamond and Sigmundson text is also presented as instructions for accomplishing a course of action.

Below we offer our suggestions. We first, however, add this caveat: these recommendations are based on our experiences, the input of some trusted colleagues, the comments of intersexed persons of various origins, and the best interpretation of our reading of the literature.

(DS 1997: 1046)
Diamond and Sigmundson instruct the reader to understand intersex as a variation of sex.

Indeed, it is our understanding of natural diversity that a wide offering of sex types and associated origins should be anticipated. Our overall theme is to destigmatize the conditions.

(DS 1997: 1046)

Although they encourage resisting an understanding of intersex as “abnormal”, they do organize a dichotomy between female and male sexes.

Foremost, we advocate the use of the terms “typical,” “usual,” or “most frequent” where it is more common to use the term “normal.” When possible avoid expressions like “maldeveloped” or “undeveloped,” “errors of development,” “defective genitals,” “abnormal,” or “mistakes of nature.” Emphasize that all of these conditions are biologically understandable while they are statistically uncommon.

(DS 1997: 1046)

Where prediction of future outcome is in doubt, parents might consider that a name be used that is appropriate for either males or females.

(DS 1997: 1047)

Despite recommending against an understanding of intersex as “abnormal”, Diamond and Sigmundson do refer to intersex genitalia as ambiguous. As in the AAP text, this organizes the norms for how typical female and male genitals should look.
Diamond and Sigmundson also acknowledge the authority of biomedical and scientific knowledge for diagnosing intersexed conditions.

In all cases of ambiguous genitalia, to establish most probable cause, do a complete medical history and physical examination. The physical examination must include careful evaluation of the gonads and the internal and external genital structures. Genetic and endocrine evaluations are usually needed and interpretation can require the assistance of a pediatric endocrinologist, radiologist, and urologist.

(DS 1997: 1046)

Thus, Diamond and Sigmundson instruct the reader to understand intersex as a natural variation of sex. They are advocates for using terminology that resists the normalization of ideal notions of sex, gender, and sexuality. However, they do organize a dichotomy between female and male sexes, and describe intersexed genitals as ambiguous. Despite using biomedical and scientific knowledge to rationalize the evaluation of intersex conditions, Diamond and Sigmundson base their guidelines more in personal experience than on laboratory studies. Biomedical and scientific knowledge is used to provide descriptive knowledge, rather than as the basis for an ontological truth about the biological origins of sex, or as justification for surgical intervention. Nonetheless, Diamond and Sigmundson do recognize the validity of laboratory tests, and recommend biomedical assessments of genetic and hormonal sex when making a diagnosis.
Assigning Sexes: How is Sex of Rearing Determined?

According to both the AAP and the Diamond and Sigmundson texts, once an intersexed diagnosis has been confirmed, a female or male sex of rearing is determined. Sex of rearing refers to the sex to which an intersexed child will be assigned, and the concomitant gender in which she or he will be socialized. In both texts, the work of deciding which sex to assign to an intersexed infant is coordinated by knowledge organized in the fields of genetics, endocrinology, and pediatric urology. It is also structured by biomedical norms about what it means to be female or male in Western society. These norms prescribe standards for appropriately sized and functional genitals, and they define expectations for sex-congruous expressions of feminine or masculine gender.

Official Policy: The American Academy of Pediatrics

The AAP guidelines recommend that sex of rearing be decided based on a physical examination of the genitals, laboratory assessments of genotype and endocrine function, and the wishes of the parents.

Each infant requires individual consideration based on physical examination, laboratory studies, and parental feelings.

(AAP 2000: 138)

A physical examination is intended to determine the degree to which the genitals have been masculinized. Here, attention is focused primarily on male genitalia, and
recommendations suggest that attending specialists do an examination to determine the true size of the penis.

The physical examination begins with a search for any features suggestive of a malformation syndrome. The external genitalia are then inspected to determine the degree of masculinization. The size of the phallus is assessed by rolling the corporeal bodies between the fingers to appreciate their true length and girth, as both ventral curvature (chordee), which is almost always present, and an abundance of prepubic fat often mask the true size of the penis.

(AAP 2000: 139)

An intersexed child who is assigned male will require a sexually functional and appropriately sized penis. Standards for the size and function of the penis are understood to be of crucial importance when specialists are determining a male sex of rearing.

The size of the phallus and its potential to develop at puberty into a sexually functional penis are of paramount importance when one is considering male sex of rearing.

(AAP 2000: 141)

Penis size is usually determined by stretching the phallus. According to AAP standards, the penis of a full-term newborn male should be at least 2 centimeters long when stretched.
In full-term newborns the stretched penile length should measure at least 2 cm.

(AAP 2000: 139)

For newborn males with a very small phallus, AAP guidelines instruct that they be assigned female and raised as girls.

The testes should be removed soon after birth in infants with partial androgen insensitivity or testicular dysgenesis in whom a very small phallus mandates a female sex of rearing.

(AAP 2000: 141)

The same standards are not understood to be as significant for an intersexed child whose sex of rearing is female. Although AAP guidelines suggest that potential for fertility is a consideration for a child raised as a girl, the size and placement of the vagina are not seen to be as crucial as that of the penis.

All female infants virilized because of CAH or maternal androgens are potentially fertile and should therefore be raised as girls.

(AAP 2000: 141)

The presence of a capacious, low-lying vagina is advantageous if assignment as a female is being considered, but this alone is not of critical importance. A small, high-lying vagina presents more of a surgical challenge but this may be justified when such children are to be fertile.

(AAP 2000: 141)
As with the penis, however, there is a clinical standard for a medically acceptable and appropriately sized clitoris. However, it is not explicitly stated in the AAP text. Instead, the AAP guidelines simply instruct that most intersexed newborns assigned female will require cosmetic genital surgery to reduce its size.\footnote{According to Suzanne Kessler, who interviewed six medical specialists in the field of pediatric intersexuality during the spring of 1985, a medically acceptable clitoris is usually expected to be no longer than 0.9 centimeters (1998:43). Kessler notes that interviews undertaken in the mid- to late-nineties indicated that this standard had not changed (1998:135 n5). Anne Fausto-Sterling writes that, “despite published medical information showing a range of clitoral size at birth, doctors may use only their personal impressions to decide that a baby’s clitoris is ‘too big’ to belong to a girl and must be downsized, even in cases where the child is not intersexual by any definition” (2000:60).}

Infants raised as girls will usually require clitoral reduction which, with current techniques, will result not only in a normal-looking vulva but preservation of a functional clitoris

(AAP 2000: 141)

The body’s ability to produce sufficient levels of appropriate hormones is also an important factor when deciding on sex of rearing. Male children are understood to require adequate levels of masculinizing androgens so that they will grow through puberty and into adulthood as masculine men. According to the AAP, the ovaries of female pseudohermaphrodites and true hermaphrodites will likely produce enough estrogen when assignment to female is being considered. However, the testes of true hermaphrodites and intersexed children with gonadal dysgenesis will usually require the supplementation of testosterone if assigned male.
Among the intersex disorders the ovaries of virilized genetic females can be assumed to be normal. Ovaries of true hermaphrodites may also produce adequate levels of estrogen. However, the testes of true hermaphrodites and those of infants with mixed gonadal dysgenesis may initially show good function that declines during childhood, so that testosterone supplements may be necessary for the establishment of puberty or in adult life.

(AAP 2000: 141)

An appropriate level of testosterone is also considered important for the development of an intersexed child's sexuality.

In the past decade, it has become apparent that testosterone imprinting of the fetal brain may play a role in determining male sexual orientation. Clinical studies in girls with CAH have confirmed the widely held impression that such children engage in more typically male-like behavior patterns than their unaffected peers and occasionally may have difficulties with adjustment to their assigned gender. Nonetheless, it appears that the majority of such girls do not overtly demonstrate problems with sexual identity, although scientific studies are sparse. Until further data become available, caution should be exercised when a recommendation is made that the sex of rearing should differ from the chromosomal sex.

(AAP 2000: 141)
AAP guidelines recommend that, as much as possible, parents should be included in discussions regarding the assignment of sex. The feelings of the parents are considered very important for the healthy development of their relationship with their child.

As much as possible, the parents need to be included in the discussions regarding sex of rearing.

(AAP 2000: 138)

Because words spoken in the delivery room may have a lasting impact on parents and their relationship with their infant, it is important that no attempt be made to suggest a diagnosis or offer a gender assignment.

(AAP 2000: 138)

The emotional tone established by health care professionals in conveying this information can have a lasting influence on how the parents conceptualize the abnormal genital development. Therefore, a positive atmosphere is essential for parents to begin their relationship with their child.

(AAP 2000: 138)

In summary, the AAP guidelines suggest that attending medical specialists consider a number of factors when recommending a sex of rearing. These factors include a physical examination, laboratory assessments, and the feelings of the parents. A physical examination of the genitals is recommended in order to determine the degree of masculinization and the true size of the penis. The size and functional capacity of the
penis are considered of paramount importance when doctors are considering a male sex of rearing. AAP guidelines instruct that intersexed newborns assigned as male and raised as boys will require a sexually functional penis that is no shorter than two centimeters when stretched.

On the other hand, when doctors are determining a female sex of rearing, potential for fertility is a significant factor for consideration. However, fertility is not seen to be crucial for all intersexed children raised as girls, nor is the functional capacity of the vagina understood to be as paramount for female/feminine socialization as the penis is for male/masculine socialization. Nonetheless, according to AAP guidelines, most intersexed newborns assigned female and raised as girls, will require clitoral reduction surgery.

AAP guidelines recommend that laboratory assessments evaluate karotype and endocrine levels. Chromosomal sex and appropriate levels of sex-specific hormones are considered important for determining a sex of rearing because of their effects on the development of sex characteristics, and because they are theorized to have an effect on psychosexual development.

Throughout the process of assigning a female or male sex, AAP guidelines recommend that parents be included as much as possible, and that attending medical specialists take care to ensure that the parents of an intersexed newborn conceptualize the assigned sex positively so that they can begin to develop a healthy relationship with their child.
Reform Policy: The Diamond and Sigmundson Text

Like the AAP, Diamond and Sigmundson encourage the rapid diagnosis of intersexuality and the assignment of sex. However, they are also clear to advise against hasty decision-making. In order to resolve any doubt about a child's intersex diagnosis, Diamond and Sigmundson recommend that attending medical specialists perform genetic and hormonal evaluations, and a full physical examination.

Try to be rapid in this decision making but take as much time as needed. Hospitals should have established house staff operating procedures to be followed in such cases. Many consider this a medical emergency (and in cases of electrolyte imbalance, this may be immediately so); nevertheless, we believe that most doubt should be resolved before a final determination is made. We also advise that all births be accompanied by a full genital inspection.

(DS 1997: 1046)

Genetic and endocrine evaluations are usually needed and interpretation can require the assistance of a pediatric endocrinologist, radiologist, and urologist.

(DS 1997: 1046)

Unlike the AAP, however, Diamond and Sigmundson do not assign a sex of rearing based on decisions made primarily about the size and functionality of the phallus. Instead, they recommend that attending specialists consider how the child might naturally develop through puberty and into adulthood.
In the most common cases, those of hypospadias and congenital adrenal hyperplasia (CAH), diagnosis should be rapid and clear. In other situations, with a known diagnosis, declare sex based on the most likely outcome for the child involved.

(DS 1997: 1047)

Early decisions about a child’s sex of rearing should take into account the developmental possibilities of the maturing nervous system. Diamond and Sigmundson’s primary concern is not to impose a female or male sex onto an intersexed child based on social ideals about sex, gender, and sexuality, but rather to work as much as possible with the natural processes of human development.

The sex of assignment, when based on the nature of the diagnosis rather than only considering the size or functionality of the phallus, respects the idea that the nervous system involved in adult sexuality has been influenced by genetic and endocrine events that will most likely become manifest with or after puberty. In most cases, this sex of assignment will indeed be in concert with the appearance of the genitalia (e.g., in androgen insensitivity syndrome [AIS]). In certain childhood situations, however, such assignment will be counter to the genital appearance (e.g., for reductase deficiency). Our primary concern is how the patient will develop and prefer to live post puberty, when he or she becomes most sexually active.

(DS 1997: 1047)
In contrast to the surgical focus of the AAP guidelines, Diamond and Sigmundson advise that no cosmetic genital surgery or prolonged course of hormone therapy is performed on an intersexed child until she or he can give informed consent. They advocate leaving such a course of action to the discretion of the patient.

Perform no major surgery for cosmetic reasons alone; only for conditions related to physical or medical health. This will entail a great deal of explanation needed for the parents, who will want their children to "look normal". Explain to them that appearances during childhood, while not typical of other children, may be of less importance than functionality and postpubertal erotic sensitivity of the genitalia. Surgery can potentially impair sexual or erotic function. Therefore, such surgery, which includes all clitoral surgery and any sex assignment, should typically wait until puberty or after puberty, when the patient is able to give truly informed consent.

(DS 1997: 1047)

Major prolonged steroid hormone administration (other than for management of CAH) too should require informed consent.

(DS 1997: 1047)

Underlying our guidelines is the key belief that the patients themselves must be involved in any decision as to something so crucial to their lives.

(DS 1997: 1046)
In contrast to seeing medically ambiguous genitals as a problem that could prevent the parents from developing a positive relationship with their child, and therefore, as a problem that must be surgically fixed in order to ensure the child’s healthy gender socialization, Diamond and Sigmundson insist that an intersexed child’s autonomy be respected. They suggest that parents be encouraged to understand and accept intersex as a normal, though uncommon, phenomenon and to accept an assigned sex of rearing that is based on the most likely outcome for the child involved.

It helps in discussion with parents and child that they come to accept the genital condition as normal although atypical.

(DS 1997: 1046)

Declare sex based on the most likely outcome for the child involved. Encourage the parents to accept this as best; their desire as to sex of assignment is secondary. The child remains the patient.

(DS 1997: 1047)

That being said, Diamond and Sigmundson also insist that the parents are clear about the gender of their child. They acknowledge the possibility, however, that the child could choose to adopt an intersex, rather than a female or male sex identity.

In rearing, parents must be consistent in seeing their child as either a boy or girl; not neuter. In our society intersex is a designation of medical fact but not yet a commonly accepted social designation. With age and experience, however, an increasing number of hermaphroditic and
pseudohermaphroditic persons are adopting this identification. In any case, advise parents to allow their child free expression as to choices in toy selection, game preference, friend association, future aspirations, and so forth.

(DS 1997: 1047-1048)

With increasing maturity, the designation of intersex may be acceptable to some and not to others. It should be offered as an optional identity along with male and female.

(DS 1997: 1048)

Thus, for Diamond and Sigmundson, the assignment of sex to an intersex child should not be based on the size and functionality of the phallus, but on the most likely outcome for the child involved. They advise that attending medical specialists take into account the developmental possibilities of the maturing nervous system, as well as how the child might choose to live as an adult.

Diamond and Sigmundson advocate resisting the imposition of a female or male sex, and they suggest that no cosmetic surgery or course of hormone therapy be performed until the child can give her or his informed consent. Although they advise that the attending specialists be clear with the parents about their child’s gender, Diamond and Sigmundson also recommend that parents be counseled to accept the assignment of sex without surgical reconstruction of the genitals. In the end, the child remains an autonomous patient. Diamond and Sigmundson can also be read to encourage medical specialists to offer their patients the option of adopting “intersexed” as an optional
identity. Therefore, despite initially dichotomizing the concept of sex, Diamond and Sigmundson appreciate the continuum of a natural diversity of human sexes, and acknowledge the possible evolution of a three-sex system.

Chapter Summary

The purpose of this chapter has been to examine the AAP and the Diamond and Sigmundson texts for the ways in which each provides an account of the conceptual organization of the medical work of "managing" human intersex. Inquiry into the textual organization of this work highlights the ways in which these texts are used to coordinate the medical procedures that specialists set in motion when an intersexed infant is born. My primary inquiry has been of the current institutional course of action, which is recommended by the American Academy of Pediatrics in their policy statement entitled, "Evaluation of the Newborn with Developmental Anomalies of the External Genitalia" (2000). By contrast, I have also explored the reformist views expressed by Milton Diamond and Keith Sigmundson in their guidelines, "Management of Intersexuality: Guidelines for Dealing with Persons with Ambiguous Genitalia" (1997).

My analysis situates these texts as counterpoints in the current debate about intersex medical management. The arguments on either side of this debate represent different ideological opinions about the ontology of human psychosexual differentiation and the development of sexuality. The AAP guidelines articulate the surgical fix solution to human intersex. This solution is based on the influential work of John Money, who proposed as early as the 1950’s, that culture and socialization were the primary determinants of an infant’s psychosexual differentiation. Money’s rationales, which
continue to influence the dominant medical course of action, were based on the belief that an intersexed child’s gender socialization as either female/feminine or male/masculine depended on the surgical and hormonal “correction” of their anomalous sex so that it conformed to biomedicine’s “ideal” standards.

For almost thirty years, Milton Diamond has disagreed with John Money’s ideas about how gender identity develops in young children. Diamond does not believe that gender and sexuality are shaped by environmental factors alone, but are instead predisposed toward femaleness or maleness by genetics and hormonal influences in the uterus. Rather than viewing human sexes and genders as absolutely dimorphic, Diamond appreciates the continuum of a natural diversity of human sexes. Unlike proponents of the AAP guidelines, therefore, Diamond and Sigmundson do not define intersex as abnormal, nor do they suggest that intersexed children undergo cosmetic genital surgeries and hormonal therapies to conform to the dominant ideological standards for what counts as definitively female or male. Contrary to the AAP’s policy, Diamond and Sigmundson’s guidelines offer suggestions for reforming the surgical fix model of intersex medical management with a social fix solution.

I began this inquiry by developing a research problematic that asked the questions, “how does the erasure of intersexed people happen in medical practice?” and “what can an explication of how this erasure is socially accomplished tell us about the ways in which human sexes, genders, and sexualities are organized in Western society?” Central to finding answers have been two thematic questions that have provided the framework for my analysis in this and the next chapter. The first thematic question, “how is intersex understood in these guidelines?” shows how the concept of intersex is defined, and how
that definition works as part of an ideological strategy for organizing gender status. The second thematic question, how do medical specialists determine sex of rearing, seeks to reveal the biomedical definitions of “ideal” sexes, genders, and sexualities. This latter question shows how the biomedical ideals of sexes, genders, and sexualities work as part of the governing ideology that structure Western ontological beliefs about human sexes, genders, and sexualities.

In the following, and last chapter of this thesis, I end my inquiry with an analytical mapping and discussion of the ideological organization of intersex medical management. In chapter five, I will further explicate how the erasure of intersexed people happens in the AAP’s medical practice guidelines, and conclude with a discussion of what this new knowledge tells us about the ways in which human sexes, genders, and sexualities are organized in Western society generally.
Chapter Five

ANALYSIS & DISCUSSION
Mapping the Ideological Organization of Intersex Medical Management

Introduction

In the previous chapter, I set out the textual organization of intersex medical management, discovering some of the ways in which the practice of medically managing human intersex is conceptually held together and organized in the generalized procedural guidelines that are vested in the AAP and the Diamond and Sigmundson texts. Inquiry into the textual organization of this work highlights the ways in which these texts are used to coordinate the medical procedures that specialists set in motion when an intersexed infant is born.

In this final chapter, I complete a textual analysis of the AAP and the Diamond and Sigmundson texts, and provide some of the answers to the research questions that have guided this inquiry. To do this, I first make some sense of how the erasure of intersexed people is socially accomplished in medical practice by providing an analytical mapping of the ideological organization of intersex medical management protocols, and by contrasting the two different ideological perspectives of the AAP and the Diamond and Sigmundson texts. My purpose in this first section is to locate for intersexed people and their allies, some of the actual determinants of intersexed people’s erasure in medical practice.

In the second section of this chapter, I conclude with a discussion of the ways in which the authoritative knowledge of biomedicine standardizes human sexes, genders, and sexualities. My discussion follows closely from what has been revealed about how
the erasure of intersexed people is socially accomplished, and it goes on to examine the ways in which the biomedical concepts of sex, gender, and sexuality are organized as part of an extra-local ideological strategy for coordinating and regulating human social relationships. I consider what this knowledge tells us about how the normative propositions of the dominant gender schema work as a governing ideology to structure Western ontological beliefs about human sexes, genders, and sexualities generally.

What follows is an analytical mapping of the ideological strategies that produce the procedural activity of medically managing human intersex. In this analysis, I concentrate primarily on the dominant procedural protocols that are vested in the AAP text. The AAP text has the authority to uphold current medical practice and influence the determinants of intersexed people's erasure in medical practice. By contrast to AAP policy, I situate the Diamond and Sigmundson text as an ideological counterpoint in a debate about how medical specialists, families, the institution of biomedicine, and indeed, society generally should best manage the birth of a child with medically ambiguous genitals. In doing so, I set out to discover how the erasure of intersexed people is ideologically organized in medical practice. As Smith has noted, this kind of inquiry aims to describe the actual determinants of social relations as they are organized beyond the scope of what can be comprehended through local experience (Smith 1987: 177).

How the Erasure of Intersexed People is Ideologically Organized

In Western society, human sexes, genders, and sexualities are made understandable by a naturalist belief in biological dimorphism. Of course, this is not to say that the actual lived experiences of sex, gender, and sexuality necessarily correspond
with this system of belief. Indeed, as Smith has shown (1987, 1990a, 1990b, 1999), representations of everyday experience, which are vested in the objectified knowledges of institutional discourses, more often than not create disjunctures between what people know from the actualities of their lives, and what they are told to believe is an ontological “truth”. To say that human sexes, genders, and sexualities are made understandable by a naturalist belief in biological dimorphism, therefore, is to say that we have come to experience these phenomena from a perspective that is given authority by appeals to the facticity of scientific knowledge — as social relations structured by a system of beliefs (the dominant gender schema) in which female and male sexes, and feminine and masculine genders, are presumed to be the only “natural” outcome of human sex differentiation.

The dominant gender schema is an ideological standard that has been, and continues to be constructed in part by the specialized work of people in the disciplines that together comprise the discourse of biomedicine. Because of the organization of this work, and the knowledge that is generated by it, our bodies and our social relationships are organized in a seemingly natural order of discrete categories for what is considered “normal” or “abnormal”. Therefore, we understand human sexes as they are defined normatively. The dominant gender schema instructs us to view any deviation from the biomedical standards for what counts as female or male as pathological or abnormal.

The erasure of intersexed people in biomedicine happens because of their physical differences, which are considered anomalous to the narrowly defined categories for defining female and male sexes in biomedical discourse. In North American society, bodies that do not fit neatly into these categories are not considered legitimate. Thus, the
ideological organization of human sex, gender, and sexuality, directs specialists to
categorize intersexed newborns as sex anomalies, which means that diagnostic and
therapeutic medical management is focused on identifying medically-defined physical
“abnormalities” and then on surgically and hormonally correcting any differences —
ideological notions of normative sex, gender, and sexuality are literally fixed on the
bodies of intersexed children.

Defining Intersex: The Biological Foundations of Gender Status

In chapter two, I briefly discussed the normative propositions of the dominant
gender schema. In North America, the medical work of maintaining these propositions is
coordinated and organized according to a patriarchal ideology (Devor 1997: 71). Human
sexes, genders, and sexualities are defined and regulated as either legitimate or
illegitimate according to the assumption that men are suppose to be hierarchically
superior to women.

The AAP guidelines are consistent with the patriarchal propositions of the
dominant gender schema. Like the concerns expressed by many of the medical specialists
who were interested in hermaphroditism during the nineteenth-century, rationales for the
current medical management of human intersex remain committed to rigid definitions of
female and male sexes for social reasons. Today, the boundaries of a hierarchical social
order that links dichotomous gender status and sexuality to anatomical dimorphism
between females and males continues to be rigorously upheld. In fact, according to the
AAP guidelines, any threat to the boundary between female and male sexes, and thus to
human social order, is stated to be a social emergency (AAP 2000: 138).
Intersex as a Threat to Social Order

According to Hazel Glenn Beh and Milton Diamond, “clinicians have long imparted a sense of medical urgency to parents upon the birth of an intersexed child” (Beh and Diamond 2000: 13). Typically, specialists say that medical intervention is necessary to help alleviate any doubt, shame, and anxiety the child’s parents might have about the sex of their newborn.¹ Urgent intervention is usually premised on the rationalization that parents might experience a negative psychological response to their child’s medically ambiguous sex. Rossiter and Diehl (1998: 59) write:

Birth defect of the sex organs is greatly misunderstood, even in contemporary western society, causing shock, confusion, anxiety, and shame in the family...It is not surprising that a diagnosis of ambiguous genitalia is considered a psychological crisis.

Concern for the parent’s psychological well-being is, in fact, one of the prime considerations specialists make when deciding whether to recommend genital surgeries. Indeed, the degree to which the feelings of the parents are taken into account can be seen in the emphasis that is placed on specialist-parent interactions in the textual organization of the AAP guidelines. Almost the entire first paragraph is recommendations for how medical specialists and clinicians should respond to the parents of an intersexed newborn (AAP 2000: 138).

¹ Urgent medical intervention is also considered necessary for the intersexed newborn’s future social and psychological well-being. In the AAP text, however, concern for the intersexed child is not explicitly articulated.
In her interviews with medical specialists, Suzanne Kessler found that urgent intervention is usually based on the assumption that, if parents do not have a clear idea of the sex of their child from the very beginning, it may compromise their ability to develop an appropriate relationship with them (Kessler 1998: 15). Kessler notes that many of the physicians she interviewed “acknowledged that diagnosis, gender assignment, and genital reconstruction cannot be delayed...since a clear gender assignment and correctly formed genitals will determine the kind of interactions parents will have with their child” (1998: 16). In other words, the fear is that if parents have any doubt about their child’s sex, and any concern about whether they are to raise their child as a girl or boy, they might not bond. The assumption is that daughters may be rejected because their bodies appear too “masculine” or sons may be rejected because their bodies are not “masculine” enough.

Beh and Diamond assert, however, that basing rapid medical treatment of intersex on the likelihood that parent’s will experience shame and confusion severe enough to cause “parental rejection and failure to bond is premised more on medical opinion than on fact” (2000: 14). Indeed, I have found no empirical studies that support the possibility of parental rejection. Furthermore, that the AAP’s medical protocols seem to express more concern for the feelings of the parents than for intersexed children themselves raises important ethical questions (Holmes 2000).²

The idea that a child born with medically ambiguous genitalia constitutes a social emergency seems to make sense because sexes — presumed to be the biological foundations of feminine and masculine gender status — are normalized using definitive

² See Morgan Holmes (2000) for a discussion of human intersex and biomedical ethics.
standards for how bodies should look and function, and because social order depends on a clear understanding of the distinctions between women’s and men’s bodies. Thus, the AAP’s definition of human intersex as a social emergency can be understood as an ideological defense against the perception that, without swift and decisive intervention, medically ambiguous genitals threaten to undermine human social relations as they are established by the propositions of the dominant gender schema in North America.

Intersex as a Problem of Masculinization

Further exploration of the AAP’s definition of intersex reveals that medically ambiguous genitals are understood primarily as a problem of masculinity. From the AAP guidelines:

Intersex conditions arise because of an abnormality along the male pathway that interferes with complete masculinization or, in the case of a genetic female, some virilizing influence that acts on the developing embryo.

(AAP 2000: 138; Italics my own)

One of the ways that masculine privilege is directly supported in the AAP text can be read in the descriptive language used to explain the supposedly objective processes of human sex differentiation. In the AAP guidelines, the differentiation of male sex is described as an “active” process, whereas the differentiation of female sex is expressed as the absence of that process. Femaleness occurs only if the active influence of maleness does not take place.
The genital appearance of the newborn is largely determined by the active process of male differentiation. The fetus tends to develop as a female in the absence of these male influences.

(AAP 2000: 138)

The use of the adjective “active” in what is written reflects dominant cultural stereotypes of what it means to be a man in Western society. Men are usually expected to be active and assertive, whereas women are usually expected to be passive and responsive. What is more, this kind of syntactical emphasis clearly establishes a hierarchical distinction between female and male sexes in which female sex is considered unoriginal, compared to the dynamic originality of male sex. This use of language conceals the ideological notion that maleness is the standard to which femaleness is compared, and thus, that femaleness depends on maleness for its meaning.

The organization of male sex differentiation as an active process serves as the basis for the AAP’s definition of intersex as a problem of masculinization. The use of the term, “masculinization” when describing the degree to which female or male body parts meet, or fail to meet, biomedically-defined standards further reflects a male-centered bias in the AAP text. It also reveals a conflation of gender with sex that functions to fix cultural gender expectations to the biology of bodies. Conflating gender with sex in this context reveals normative assumptions about what is required in order for one to count as a feminine woman or a masculine man in Western society. From this way of thinking, genitals become the markers of genders — biomedically normal female genitals are viewed as “properly” feminine, and biomedically normal male genitals are viewed as
“properly” masculine. Thus, according to the AAP, to be a legitimately gendered feminine woman or masculine man, one must possess the “appropriate” genitals.

The notion that legitimate gender requires “appropriate” and biomedically normal sex underlies rationales for decisions about an intersexed child’s sex assignment. Indeed, as discussed in chapter two, this is the central assumption of John Money’s gender identity theory — “normal” genitals are representative of what is considered a person’s “true” female or male sex, which indicates how a person is expected to be socialized to express their feminine or masculine gender.³ Because “normal” female or male genitals are considered the essential markers of feminine and masculine genders, the surgical normalization of medically ambiguous genitals is viewed as crucial for maintaining the social differences between women and men.

Defining intersex as a problem of masculinity instructs the reader to conceptualize the issue as a concern about male sex, and consequently, about the “proper” socialization of boys who will become legitimate men. It coordinates the medical management of intersex in a way that takes male bodies and masculinity more seriously than female bodies and femininity. Such a centralizing focus on maleness pushes femaleness to the margins of biomedical rationales for managing medically ambiguous genitalia. Indeed, the AAP’s focus on male sex and masculine gender could be understood to ideologically organize the medical management of masculine privilege.

Reform Policv: Intersex as Variation

In contrast to the AAP guidelines, Diamond and Sigmundson advocate for an

understanding of intersex as a natural variation of sex (DS 1997: 1046). In doing so, however, they maintain their biological perspective on the differentiation of human sexes, arguing that prenatal hormones play a significant role in influencing a person’s gender development in either a predominantly feminine or masculine direction (1997a). Like the AAP, therefore, their policy for medically managing human intersex continues to conceptualize human genders as dichotomous, and Diamond and Sigmundson do not significantly challenge the hierarchical propositions of the dominant gender schema.

Nonetheless, Diamond and Sigmundson do state that a “wide offering of sex types and associated origins should be anticipated” (DS 1997: 1046), and they emphasize the importance of resisting the normalization of ideal notions of sex, gender, and sexuality in the same way that the AAP text does (DS 1997: 1046). In doing so, they argue that intersex should not be considered a pathology, and that medical specialists should work to destigmatize intersexed conditions. Thus, Diamond and Sigmundson develop an understanding of intersex from the standpoint of intersexed people themselves rather than from the authority of biomedical knowledge about human sex differentiation. Indeed, their recommendations are based, in part, on the “comments of intersexed persons of various origins” (DS 1997: 1046). Such a conceptualization respects the autonomy of intersexed people, and realigns medical rationales about human intersex away from the idea that medically ambiguous genitals are a threat to social expectations about gender status (specifically, biomedical norms about masculinity).

In the next section, I further explore the patriarchal ideology (relations of ruling) in what the AAP guidelines state about genital standards when assigning a female or male sex to an intersexed newborn.
Assigning Sex: The Surgical Construction of Sex Status

Shortly after birth, most intersexed children with medically ambiguous genitals undergo sex assignment surgeries so that their bodies can be made to conform to Western cultural expectations of what constitutes “normal” femaleness or maleness. As discussed in the previous section, conformity is presumed to be required so that an intersexed child can be properly socialized to take her or his place in the world as a legitimate woman or man. Decisions regarding the assignment of sex are usually based on the assumptions that male children will require an adequately sized and sexually functional penis in order to be considered properly masculine, and that female children should be fertile or have genitals that “look” properly feminine (AAP 2000: 141). Physicians typically make their decisions about infant sex assignments subsequent to conducting a physical examination, and evaluating laboratory tests of karyotype and endocrine levels, and after considering the feelings of the intersexed child’s parents (AAP 2000: 138).

The Sanctity of the Phallus

According to the AAP guidelines, a physical examination of an intersexed newborn “begins with a search for any features suggestive of a malformation syndrome” (AAP 2000: 139). In other words, an assessment is considered necessary to determine the degree to which the newborn’s genitals deviate from established norms. Following from the AAP’s emphasis on intersex as a problem of masculinity, recommendations concerning what specialists should look for in a physical examination are almost entirely focused on the male body. Indeed, the AAP guidelines suggest that a genital examination is required in order to determine the “degree of masculinization,” and to assess the “true
size of the penis” (AAP 2000: 139).

The seriousness with which the male body is regarded in the AAP text, and the comparative insignificance of the female body, is especially apparent when we take into account what qualifies as legitimate female and male genitals. According to AAP recommendations, for a newborn child with XY sex chromosomes to be considered legitimately male, he is required to have a penis that is no smaller than 2 cm when stretched (AAP 2000: 139). What is more, the AAP guidelines state that:

The size of the phallus and its potential to develop at puberty into a sexually functional penis are of paramount importance when one is considering male sex of rearing.

(AAP 2000: 141; Italics my own)

Newborn males whose genitals do not meet these standards are typically assigned as female. In fact, in the AAP text it is stated unequivocally that, “a very small phallus mandates a female sex of rearing” (AAP 2000: 141; Italics my own). In other words, if a newborn’s penis is not considered “masculine” enough, AAP guidelines state that his body has failed to meet the standards required of men in Western society, and therefore, they instruct specialists to assign him a female sex of rearing.

By comparison to the high standards for what counts as a biomedically masculine penis, lower standards for female genitals show that the AAP does not consider the

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4 Although potential for sexual function is considered important, it is the size and the look of the penis that seems to matter most. Newborns, whose penises meet the criteria for size but that may not meet the criteria for potential sexual function are assigned male. For example, testicles are not considered to be a crucial part of a biomedically defined functional penis. In fact, the AAP recommends that specialists assess and remove testis if there is any sign of potential malignant degeneration (AAP 2000: 141).
vagina and uterus to be as significant for the socialization of women as male genitals are for the socialization of men. Indeed, the size and placement of the vagina, let alone the capacity of the uterus to be sexually functional, is not regarded as paramount at all.

The presence of a capacious, low-lying vagina is advantageous if assignment as a female is being considered, but this alone is not of critical importance. A small, high-lying vagina presents more of a surgical challenge but this may be justified when such children are to be fertile.

(AAP 2000; 141)

What is more, in order for females to be considered legitimately feminine, they must not have a clitoris that in any way resembles a penis. As Suzanne Kessler found (1998: 43), a medically acceptable clitoris is usually expected to be no more than 0.9 centimeters long. Although the AAP does not explicitly state a biomedical standard, it does suggest that most intersexed newborns assigned female and raised as girls will "require clitoral reduction" surgery (AAP 2000: 141).

Thus, the AAP's recommendations for the assignment of sexes continue the notion that maleness is the standard by which femaleness is compared. Guidelines for determining sex of rearing are written using language that conceals the ideological perception that female sex is unoriginal compared to the originality of male sex. Because biomedically normal male genitals are considered the standard by which specialists make their decisions regarding the assignment of sex, a surgically constructed vagina becomes legitimized as a marker of femaleness only as a simulacrum — as a cosmetic replica compared to the required integrity of a properly "functional" penis.
Surgically constructed or altered genitals do not function the same way as unaltered genitals do. Yet, the AAP’s recommendations for the size and placement of the vagina are included in the text under the heading, “Capacity for Normal Sexual Function” (AAP 2000: 141). The location and comparative emphasis of this text illustrates a disparity between what is considered a properly functional penis and what is considered a properly functional vagina. Such a disparity not only illustrates the male-centered and phallocentric bias of the AAP text—a newborn’s penis is expected to be capable of fully actualized sexual potential, yet a vagina need only be cosmetic—but it also raises questions about what constitutes the functionality of a replicated vagina, and for whom it is expected to function.

The Male (Hetero)sexual Imperative

The ideological organization of the AAP guidelines is founded on the biomedical supposition that female and male sexes are intended, by nature, to be reproductively viable and compatible. Indeed, biomedicine has normalized human sexes in terms of how they are expected to function in generation. Thus, to be considered legitimate, or “normal”, in Western society, newborns with XY chromosomes are, as I discussed earlier, expected to have a sexually functional penis—this is viewed as paramount—and chromosomal females are expected to be, or have the potential to be, reproductively fertile. The biomedical categorization of what is considered normal extends beyond biological bodies into the social realm of gendered relations, however, where women and men are assumed to engage in the stereotypical expression of their (hetero)sexuality. According to the AAP guidelines, a legitimate man is expected to exhibit typically
masculine behaviors, such as being the penetrating partner, and a legitimate woman is expected to have the capacity to become a mother, or at least have a cosmetic vagina that looks “feminine” and is capable of accommodating a penis.

The normalization of heterosexual relations in the AAP guidelines is particularly evident in the text included under the section discussed earlier entitled, “Capacity for Normal Sexual Function” (AAP 2000: 141). What is most interesting about this section of the AAP text is the continued emphasis on the male body and the seriousness with which its capacity for “normal” sexual function is considered in comparison to the female body. Whereas the size and sexual functionality of the penis are expected to be within the normal range that has been established by biomedicine — that is, the penis must function, or have the potential to function, as a ‘real’ penis — female genitals need not meet the equivalent standards (Dreger 1998:29).

Although it is suggested in the AAP guidelines that potential fertility is an important factor in decisions about assigning a female sex to an intersexed infant, it is not considered paramount to a child’s future psychosexual health as a woman. What seems to matter as much as potential for fertility is vaginal size — the capacity for the vagina to accommodate a penetrating penis. Such an emphasis on penetrability in the AAP text not only highlights a heteronormative conception of sexuality; it also seems to artificially separate the functional capacity of female genitals (conceptually, the vagina is separated from the uterus).

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5 For further analysis of the link between the medical management of intersex and homosexuality, refer to Anne Fausto-Sterling (2000: 71-73).
Thus, the AAP's recommendations for assigning female sex to intersexed children whose penises do not meet the required standards for what counts as a legitimate male, together with what is a lesser standard for female sexual function, seem to illustrate that current rationales for medically managing human intersex are not necessarily concerned with maintaining generative function at all. Instead, what seems to matter most is the maintenance of stereotypical feminine and masculine psychosexual roles — the ways that women and men are expected to behave sexually, according to their gendered social statuses. Thus, men are granted the privilege of having genitals that allow them to maintain their sexual integrity as the penetrating partner. Capacity for normal male sexual function means that men’s sexuality should have the maximum potential of being fully actualized in reproduction. By contrast, however, women are not granted the same privilege. Capacity for normal female sexual function means that if a woman’s body is not fertile — that is, not capable of bearing children so that her social position in the domestic sphere as mother and caregiver is upheld — it should, at least, be capable of functioning in the bedroom as a penetrated simulacrum. Such conceptualizations of female and male bodies in heterosexual relations can be understood to uphold the continued sexual privileges granted to (heterosexual) men, and sexual repression imposed on women in Western society.

Reform Policy: Intersex Autonomy

Following from a conceptualization of human intersex as a natural variation of sex, and the assertion that intersex is best understood from the standpoint of intersexed people themselves, rather than from the assumptions of the biomedical perspective,
Diamond and Sigmundson recommend that decisions about “sex of rearing” should be based on the most likely outcome for the child involved (DS 1997: 1047). In doing so, Diamond and Sigmundson advocate for intersex autonomy, and suggest that no cosmetic surgery or course of hormone therapy be performed until the child can give her or his informed consent (DS 1997:1047). Such reforms to current guidelines have the potential to shift the focus of biomedical intervention away from the look and function of the genitals, and therefore, from the biomedical maintenance of a rigid two sexes equals two genders schema of human sex-differentiation. Instead, emphasis in medical rationales would be placed on the natural developmental potential of the maturing nervous system to influence gender in either a feminine or masculine direction, as well as on the best interest of how an intersexed child might choose to live as an adult.

Unlike the AAP guidelines, therefore, in which intersex is stated as a social emergency, and recommendations that children with medically ambiguous genitals should be “managed” as a threat to human social order, Diamond and Sigmundson’s guidelines remain focused on intersexed people. They encourage medical specialists to offer their patients the option of adopting “intersexed” as an optional identity, asserting that it is not in the best interest of intersexed children to surgically and hormonally fashion their bodies so that they conform to cultural expectations about gender (DS 1997: 1048). Diamond and Sigmundson recommend that parents and families, and indeed society generally, be provided with counseling to help them to accept the assignment of sex without surgical and hormonal intervention. Such a conceptualization has the potential to destabilize the patriarchal ideology of the dominant gender schema, and create room for a broader, more equitable understanding of human sexes, genders, and sexualities.
Conclusion: The Biomedical Organization of Sexes, Genders, and Sexualities

This inquiry has used the research strategy of institutional ethnography to explore the construction of human sex dimorphism, and the biomedical regulation of human sexes, genders, and sexualities, by critically examining the dominant procedural protocols for medically managing human intersex. My primary inquiry has been of the American Academy of Pediatrics’ (AAP 2000) official policy. However, I have situated the AAP’s guidelines within the context of the current debate about how to best “manage” children born with medically ambiguous genitals, and thus, as a counterpoint to the reformist views that are expressed in the guidelines written by Milton Diamond and Keith Sigmundson (1997). Together these texts illustrate some of the social determinants of intersexed people’s erasure in medical practice, which can provide insight into how the medical management of human intersex works to organize human sexes, genders, and sexualities generally.

I began this inquiry with an introduction to the topic of human intersex and a discussion of the formation of the Intersex Society of North America — a social and political movement that has provided intersexed people with a valuable forum from which to speak about their early childhood experiences of surgical and hormonal erasure. In addition to providing the intersexed community with peer support, the ISNA has also made important progress in exposing the frequency of intersex conditions and revealing the routine erasure of intersex identities in medical practice to both specialized and general audiences. In the few years since it was first established, the Intersex Society of North America has made significant advances in raising awareness of the need for an ideological change in medical policy about human intersex.
Current procedures for medically managing intersexed newborns routinely involve corrective genital surgeries and hormone therapies. This intervention is rationalized based on ideological assumptions about biomedically normal sex differentiation and feminine and masculine gender identity. Building on knowledge created during the eighteenth and nineteenth centuries, current medical practice assumes that female/feminine and male/masculine sex and gender identities are the result of a naturalistic process, and that these distinctions are at least partially defined by medically appropriate genitals, which indicate how a person is expected to be socialized according to the normative propositions of the dominant gender schema. As a result, few intersexed children grow into adulthood without some medical intervention, and many carry the stigma of being labeled sex anomalies throughout their lives.

In contrast to a traditional sociological inquiry, this research began from the experiences of intersexed people, and took up the issue of their erasure in medical practice as a place from which to begin exploring how biomedical discourse on sexes, genders, and sexualities is organized and coordinated. Beginning from the standpoint of intersexed people has allowed me to identify the disjuncture that arises between the generalized relations of biomedical discourse, and intersexed people’s experience of clinical erasure in current biomedical practice. It is from within the context of this disjuncture that I established the research questions that have guided this inquiry.

My overall purpose has been to discover the social organization and recursive properties of biomedical definitions of sex, gender, and sexuality, and explicate how biomedical “facts” about normative sex and gender dimorphism and heteronormative sexuality are conceptually held together within the specialized work practices of
physicians who medically manage human intersex. To this end, I have been able to locate for intersexed people and their allies, some of the determinants of intersexed people’s erasure in medical practice. Through an analysis of the dominant medical management guidelines recommended by the American Academy of Pediatrics (2000), and a comparison of this text to the reformist views expressed by Milton Diamond and Keith Sigmundson (1997), I have found that the erasure of human intersex can be understood to be accomplished by four governing ideological beliefs that dominate the practical organization of what specialists do when an intersexed child is born. Because these beliefs are so taken for granted in the North American dominant patriarchal gender schema, however, their organization in medical practice is, to a large extent, rendered invisible. These beliefs are:

1. *Intersex is a threat to social order.* Without swift and decisive intervention, medically ambiguous genitals threaten to undermine the propositions of the dominant gender schema.

2. *Intersex is a problem of masculinity.* Without swift and decisive intervention, medically ambiguous genitals threaten patriarchal conceptualizations of masculine gender and the social privilege of maleness.

3. *The size and functionality of the penis is paramount.* Standards for the size and function of the penis, and recommendations for how to best preserve its integrity are assumed to be the starting point by which all other evaluations and decisions regarding the assignment of sex are made.

4. *The actualization of male (hetero)sexuality is an imperative.* Legitimate men require genitals that allow them to maintain their sexual integrity as the penetrating partner and be capable of fully actualizing their sexuality in reproduction.

The AAP’s emphasis on the male body and masculine gender illustrates how
dominant patriarchal assumptions about human sexes and genders are routinely supported in the procedural protocols for medically managing human intersex. Indeed, in the AAP guidelines it seems to be suggested that the biological processes that bring about femaleness are less important than those processes that bring about maleness. Furthermore, urgent medical intervention is presumed to be required in order to uphold the social distinction between women and men — a hierarchical distinction wherein maleness is viewed as the standard by which femaleness is compared and female bodies and women are regarded as less worthy than male bodies and men.

What seems to matter most is that newborn males have what biomedicine deems to be a properly “masculine” penis. Such a rationalization for clinical practice, although hidden, could be understood as a policy for policing the boundaries of maleness and sanctifying the penis. Even though the dominant model of human sex differentiation presumes a dualism between female and male sexes — that is, between two distinct entities — references to the female body are either absent, seen as secondary, or are included only as they illustrate a comparison to the male body and maleness. Indeed, the AAP could be said to be monistic rather than dualistic in its approach to what qualifies as legitimate sexes in Western society — the male body and masculinity rule. Human intersex is understood as a social emergency because medically ambiguous genitals are seen as a threat to biomedical conceptualizations of masculine gender and the social privilege of maleness. Such conceptualizations of female and male bodies in heterosexual relations can be understood to uphold the continued sexual privileges granted to (heterosexual) men, and sexual subjugation imposed on women in Western society.
Questions about heterosexuality and homosexuality have been a significant part of the theorizing about hermaphroditism and the medical management of intersexuality since nineteenth-century scientific and medical specialists first began medicalizing the human body. Indeed, the historical categorization of two incommensurable biological sexes was one of the ways that nineteenth-century specialists responded to their fear that the existence of hermaphrodites would blur the distinction between “normal” heterosexual and “abnormal” homosexual relations. Similar to the rhetorical questions that historian Alice Dreger posited in relation to biomedical attitudes towards hermaphroditism during the nineteenth-century (1998: 28), therefore, intersex medical specialists today could be understood to have similar concerns about why women and men need to be so clearly defined:

1. How are parents and other members of society to socialize — and female children to learn — the proper roles and rights of girls and women, if one cannot exactly say what a girl or woman is?

2. How are parents and other members of society to socialize — and male children to learn — the proper roles and privileges granted to boys and men, if one cannot exactly say what a boy or man is?

3. How is one to distinguish between heterosexual and homosexual relations if one cannot clearly divide all people into women and men?

These questions are also rhetorical. However, they challenge us to consider why human intersex is viewed as such an urgent social problem in Western society, and why we find it so important to clearly define — for parents as well as for other members of society — the distinctions between two absolutely dimorphic human sexes and genders. These questions also direct our attention to the patriarchal social hierarchy in which
human relationships are organized in the west — a social hierarchy that grants male bodies and masculinity greater social status than female bodies and femininity. The medical management work that specialists do when an intersexed child is born can be seen as one site where the privilege of maleness is actually organized and accomplished as a social imperative.
Works Cited


http://www.lpch.org/DiseaseHealthInfo/HealthLibrary/urology/exsblad.html


AIS (Androgen Insensitivity Syndrome): The most common form of male pseudohermaphroditism where an XY child is born with external genitals that look “female” because of their body’s inability to recognize the presence of fetal or pubertal androgens. At puberty, these children usually develop breasts with a very tall and lean body shape, and they are infertile. The estimated frequency is approximately 1 in 13,000 births (Fausto-Sterling 2000; Preves 1999).

CAIS (Complete Androgen Insensitivity Syndrome): A medically designated severe form of AIS in which an XY child is born with completely “feminized” external genitals. However, children with cAIS have undecended testes and do not have “female” internal reproductive organs. This condition is often not detected until puberty when medical advice is sought because there is no menarche (Zucker 1999). The estimated frequency is included in the number for AIS.

CAH (Congenital Adrenal Hyperplasia): The most common form of female pseudohermaphroditism where an XX child is born with external genitals that look “male” at birth or, in cases of late-onset CAH, during or after puberty. However, in many cases the internal genitals (uterus, upper vagina, and fallopian tubes) develop in a typical fashion and remain reproductively viable. Medically defined “masculinization” of the external genitals can range widely from a slightly enlarged clitoris to a completely fused labia and phallic urethra that resemble a penis and scrotum. Some rare forms of CAH can drastically disrupt salt metabolism and are life-threatening. The estimated frequency is divided into two groups. For classic CAH, the frequency is approximately 1 in 13,000 births. For late-onset CAH (LOCAH), the frequency could be as high as 1 in 100 births (New York Weill Cornell Center, Department of Pediatrics Web site November 3, 2003).

Extra-local: A term meaning “beyond the scope of local experience,” or what can also be referred to as the “bigger picture.”
Exstrophy of the Bladder and Epispadias: In simple terms, exstrophy of the bladder means that the bladder is exposed on the outside of the body. It occurs in approximately 1 in 40,000 births, and is more common in newborn males. Epispadias is commonly seen with bladder exstrophy. Similar to hypospadias (refer to annotation in this glossary), epispadias refers to the position of the urethral opening. In female children with epispadias, the urethral opening can be large, sometimes extending to the bladder. In male children with epispadias, the urethra opens on the topside of the penis (Stanford University Medical Center, Online Health Library July 26, 2003).

Female pseudohermaphroditism: A late nineteenth-century medical term defining the social status of a “female” designated person with an XX chromosomal inheritance and genitals that look anatomically “male” at birth. Considered “pseudo” by clinicians because the “true” chromosomal and gonadal sex is believed to be masked by outward ambiguity.

Gender: A social status usually based on the convincing performance of femininity and masculinity (Devor 1996), and typically expected to be correlated with sex (female with feminine and male with masculine), but ascribed to people as women (girls), men (boys), or variously transgendered, regardless of their sex status (Devor 1997).

Hypospadias: A variation in the positioning of the urethral opening where the urethra does not exit from the tip, or glans, of the penis. In medically designated mild to moderate forms, the urethra exits just shy of the tip of the glans or somewhere along the shaft of the penis. In medically designated severe forms, the urethra may open at the base of the penis near the scrotum and the organ may be “ambiguous” in appearance (Zucker 1999). The estimated frequency of hypospadias is divided into two groups. According to figures published by the ISNA, for mild to moderate forms, the frequency is approximately one in 770 births. For more severe forms, the frequency is approximately 1 in 2000 births (ISNA 2003).

Ideology: A term that refers to the ideas, attitudes, and values that represent the interests of a group of people (Kohl 1992: 154). In this inquiry, I am using the term as Dorothy E.
Smith uses it in her work on the sociology of knowledge. Smith, inspired by the work of Karl Marx and Friedrich Engels, refers to ideology and ideological knowledge as the social expression of the ideas, attitudes, and values of the ruling class in society, particularly as that expression coordinates and organizes human relations. Smith writes that when she uses the term "ideology", she is concerned "with those ideas and images through which the class that rules the society by virtue of its domination of the means of production orders, organizes, and sanctions the social relations that sustain its domination" (Smith 1987: 54).

**Intersexed:** A twentieth-century medical term defining the social status of a person whose body exhibits any form of genital, gonadal, or chromosomal deviation from the scientific and medical norms of female or male sex. This term is commonly used synonymously with "hermaphrodite".

**Klinefelter Syndrome (XXY):** A common form of male chromosomal variation where the typical karotype has more than one X-chromosome. Males with this condition will not usually have medically ambiguous external genitals. However, their testes may be small and infertile. After puberty, there is often breast enlargement. Current medical treatment includes testosterone therapy. The estimated frequency is 1 in 1000 births (Fausto-Sterling 2000; Preves 1999).

**LOCAH (Late-Onset Congenital Adrenal Hyperplasia):** A metabolic condition similar to CAH (Congenital Adrenal Hyperplasia) that occurs later in infancy or in adulthood, and is usually not as severe. Symptoms include acne, excess facial and/or body hair, and early development of pubic hair, receding scalp hairline, menstrual disturbances, and infertility. The estimated frequency is approximately 1 in 100 people, but can be higher (New York Weill Cornell Center, Department of Pediatrics Web site November 3, 2003).

**Male pseudohermaphroditism:** A late nineteenth-century medical term defining the social status of a "male" designated person with an XY chromosomal inheritance and genitals that look anatomically "female" at birth.
Medicalization: A sociological term that is used to describe how certain life events or phenomenon, such as human intersex, are organized and managed by medical professionals. When sociologists use the term "medicalization", they are usually referring to how the objectified knowledge of biomedical discourse and the "expert" practitioner are granted the power to define and label what is considered wellness and sickness, or normal and abnormal (Abercrombie, et al 1994: 262).

Micropenis: A penis that, when stretched, is less than two centimeters at birth (Kessler 1998).

Non-XX and Non-XY Aneuploidies: Sex chromosome aneuploidies include a variety non-typical sex chromosomal compliments, such as those typical of Klinefelter and Turner syndromes. Non-XX and non-XY aneuploidies refer to less frequent compliments. Physiological symptoms can go unnoticed, but mental and behavioral symptoms are frequently diagnosed (Sax 2002).

Phalloplasty: The surgical alteration or construction of a penis.

Sex: A social status assigned to a person usually based on genital appearance at birth as either female, male, or intersexed (Devor 1996).

Sex-differentiation: A biomedical term for the processes by which physical differences between the sexes are presumed to develop.

Sexuality: Sexual fantasies, desires, and practices (Devor 1997).

True hermaphroditism: A term used today to medically define the very rare social status of a person whose body has both ovarian and testicular tissue in the same gonad (ovo-testis) or separately in opposite gonads (one ovary and one testicle). The estimated frequency is approximately 1 in 83,000 births.

Turner Syndrome (X0): The most common form of female chromosomal variation the typical karotype lacks a second X-chromosome. Females with this condition usually do
not have medically ambiguous external genitals. However, their ovaries will not develop, and they will characteristically have underdeveloped breasts, uterus, and vagina. Current medical treatment includes estrogen and growth hormone therapy. The estimated frequency is 1 in 2700 births (Fausto-Sterling 2000; Preves 1999).

**Vaginal Agenesis:** A condition where parts of the vagina do not develop or grow in utero. The estimated frequency is approximately 1 in 5000 births. The most frequent medical treatment is vaginoplasty (Sax 2002).

**Vaginoplasty:** The surgical alteration or construction of a vagina.