2

"THAT SEXE WHICH PREVAILETH"

The Sexual Continuum

In 1843 Levi Suydam, a twenty-three-year-old resident of Salisbury, Connecticut, asked the town's board of selectmen to allow him to vote as a Whig in a hotly contested local election. The request raised a flurry of objections from the opposition party, for a reason that must be rare in the annals of American democracy: it was said that Suydam was "more female than male," and thus (since only men had the right to vote) should not be allowed to cast a ballot. The selectmen brought in a physician, one Dr. William Barry, to examine Suydam and settle the matter. Presumably, upon encountering a phallus and testicles, the good doctor declared the prospective voter male. With Suydam safely in their column, the Whigs won the election by a majority of one.

A few days later, however, Barry discovered that Suydam menstruated regularly and had a vaginal opening. Suydam had the narrow shoulders and broad hips characteristic of a female build, but occasionally "he" felt physical attractions to the "opposite" sex (by which "he" meant women). Furthermore, "his feminine propensities, such as fondness for gay colors, for pieces of calico, comparing and placing them together and an aversion for bodily labor, and an inability to perform the same, were remarked by many."[1] (Note that this nineteenth-century doctor did not distinguish between "sex" and "gender." Thus he considered a fondness for piecing together swatches of calico just as telling as anatomy and physiology.) No one has yet discovered whether Suydam lost the right to vote.[2] Whatever the outcome, the story conveys both the political weight our culture places on ascertaining a person's correct "sex" and the deep confusion that arises when it can't be easily determined.

about Levi Suydam (and elsewhere in this book) I have had to invent conventions—s/he and h/er to denote individuals who are clearly neither/both male and female or who are, perhaps, both at once. Nor is the linguistic convenience an idle fancy. Whether one falls into the category of man or woman matters in concrete ways. For Suydam—and still today for women in some parts of the world—it meant the right to vote. It might mean being subject to the military draft and to various laws concerning the family and marriage. In many parts of the United States, for example, two individuals legally registered as men cannot have sexual relations without breaking antisodomy laws.[3]

But if the state and legal system has an interest in maintaining only two sexes, our collective biological bodies do not. While male and female stand on the extreme ends of a biological continuum, there are many other bodies, bodies such as Suydam's, that evidently mix together anatomical components conventionally attributed to both males and females. The implications of my argument for a sexual continuum are profound. If nature really offers us more than two sexes, then it follows that our current notions of masculinity and femininity are cultural conceits. Reconceptualizing the category of "sex" challenges cherished aspects of European and American social organization.

Indeed, we have begun to insist on the male-female dichotomy at increasingly early ages, making the two-sex system more deeply a part of how we imagine human life and giving it the appearance of being both inborn and natural. Nowadays, months before the child leaves the comfort of the womb, amniocentesis and ultrasound identify a fetus's sex. Parents can decorate the baby's room in gender-appropriate style, sports wallpaper—in blue—for the little boy, flowered designs—in pink—for the little girl. Researchers have nearly completed development of technology that can choose the sex of a child at the moment of fertilization.[4] Moreover, modern surgical techniques help maintain the two-sex system. Today children who are born "either/or—neither/both"[5]—a fairly common phenomenon—usually disappear from view because doctors "correct" them right away with surgery. In the past, however, intersexuals (or hermaphrodites, as they were called until recently)* were culturally acknowledged (see figure 2.1).

How did the birth and acknowledged presence of hermaphrodites shape ideas about gender in the past? How did, modern medical treatments of intersexuality develop? How has a political movement of intersexuals and their supporters emerged to push for increased openness to more fluid sexual iden-

* Members of the present-day Intersexual Movement eschew the use of the word *hermaphrodite.*

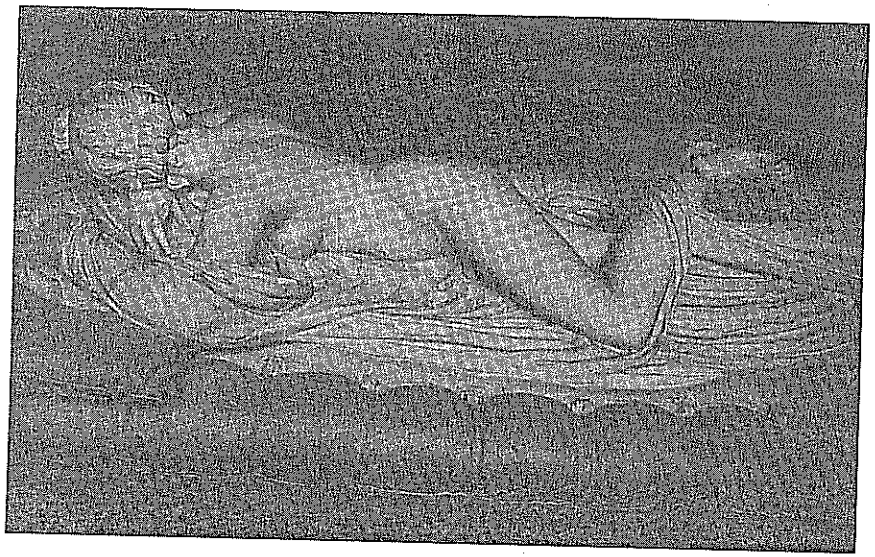


FIGURE 2.1: Sleeping hermaphrodite, Roman second century B.C.
(Erich Lessing, from Art Resource; reprinted with permission)

tities, and how successful have their challenges been? What follows is a most literal tale of social construction—the story of the emergence of strict surgical enforcement of a two-party system of sex and the possibility, as we move into the twenty-first century, of the evolution of a multiparty arrangement.

Hermaphrodite History

Intersexuality is old news. The word *hermaphrodite* comes from a Greek term that combined the names Hermes (son of Zeus and variously known as the messenger of the gods, patron of music, controller of dreams, and protector of livestock) and Aphrodite (the Greek goddess of sexual love and beauty). There are at least two Greek myths about the origins of the first hermaphrodite. In one, Aphrodite and Hermes produce a child so thoroughly endowed with the attributes of each parent that, unable to decide its sex for sure, they name it Hermaphroditos. In the other, their child is an astonishingly beautiful male with whom a water nymph falls in love. Overcome by desire, she so deeply intertwines her body with his that they become joined as one.

If the figure of the hermaphrodite has seemed odd enough to prompt speculation about its peculiar origins, it has also struck some as the embodiment of

into two individuals, male and female, only after falling from grace. Plato wrote that there were originally three sexes—male, female, and hermaphrodite—but that the third sex became lost over time.[6]

Different cultures have confronted real-life intersexuals in different ways. Jewish religious texts such as the Talmud and the Tosefta list extensive regulations for people of mixed sex, regulating modes of inheritance and of social conduct. The Tosefta, for example, forbids hermaphrodites from inheriting their fathers' estates (like daughters), from secluding themselves with women (like sons), and from shaving (like men). When they menstruate they must be isolated from men (like women); they are disqualified from serving as witnesses or as priests (like women); but the laws of pederasty apply to them. While Judaic law provided a means for integrating hermaphrodites into mainstream culture, Romans were not so kind. In Romulus's time intersexes were believed to be a portent of a crisis of the state and were often killed. Later, however, in Pliny's era, hermaphrodites became eligible for marriage.[7]

In tracking the history of medical analyses of intersexuality, one learns more generally how the social history of gender itself has varied, first in Europe and later in America, which inherited European medical traditions. In the process we can learn that there is nothing natural or inevitable about current medical treatment of intersexuals. Early medical practitioners, who understood sex and gender to fall along a continuum and not into the discrete categories we use today, were not fazed by hermaphrodites. Sexual difference, they thought, involved quantitative variation. Women were cool, men hot, masculine women or feminine men warm. Moreover, human variation did not, physicians of this era believed, stop at the number three. Parents could produce boys with different degrees of manliness and girls with varying amounts of womanliness.

In the premodern era, several views of the biology of intersexuality competed. Aristotle (384–322 B.C.), for example, categorized hermaphrodites as a type of twin. He believed that complete twinning occurred when the mother contributed enough matter at conception to create two entire embryos. In the case of intersexuals, there was more than enough matter to create one but not quite enough for two. The excess matter, he thought, became extra genitalia. Aristotle did not believe that genitalia defined the sex of the baby, however. Rather, the heat of the heart determined maleness or femaleness. He argued that underneath their confusing anatomy, hermaphrodites truly belonged to one of only two possible sexes. The highly influential Galen, in the first century A.D., disagreed, arguing that hermaphrodites belonged to

with interactions between the left and right sides of the uterus. From the overlaying of varying degrees of dominance between male and female seed on top of the several potential positions of the fetus in the womb, a grid containing from three to seven cells emerged. Depending upon where on the grid an embryo fell, it could range from entirely male, through various intermediate states, to entirely female. Thus, thinkers in the Galenic tradition believed no stable biological divide separated male from female.[8]

Physicians in the Middle Ages continued to hold to the classical theory of a sexual continuum, even while they increasingly argued for sharper divisions of sexual variation. Medieval medical texts espoused the classical idea that the relative heat on the right side of the uterus produced males, the cooler fetus developing on the left side of the womb became a female, and fetuses developing more toward the middle became manly women or womanly men.[9] The notion of a continuum of heat coexisted with the idea that the uterus consisted of seven discrete chambers. The three cells to the right housed males, the three to the left females, while the central chamber produced hermaphrodites.[10]

A willingness to find a place for hermaphrodites in scientific theory, however, did not translate into social acceptance. Historically, hermaphrodites were often regarded as rebellious, disruptive, or even fraudulent. Hildegard of Bingen, a famous German abbess and visionary mystic (1098–1179) condemned any confusion of male and female identity. As the historian Joan Cadden has noted, Hildegard chose to place her denunciation "between an assertion that women should not say mass and a warning against sexual perversions. . . . A disorder of either sex or sex roles is a disorder in the social fabric . . . and in the religious order."[11] Such stern disapproval was unusual for her time. Despite widespread uncertainty about their proper social roles, disapproval of hermaphrodites remained relatively mild. Medieval medical and scientific texts complained of negative personality traits—lustfulness in the masculine femalelike hermaphrodite and deceitfulness in the feminine malelike individual,[12] but outright condemnation seems to have been infrequent.

Biologists and physicians of that era did not have the social prestige and authority of today's professionals and were not the only ones in a position to define and regulate the hermaphrodite. In Renaissance Europe, scientific and medical texts often propounded contradictory theories about the production of hermaphrodites. These theories could not fix gender as something real and stable within the body. Rather, physicians' stories competed both with medicine and with those elaborated by the Church, the legal profession, and politicians. To further complicate matters, different European nations had different

For example, in France, in 1601, the case of Marie/Marin le Marcis engendered great controversy. "Marie" had lived as a woman for twenty-one years before deciding to put on men's clothing and registering to marry the woman with whom s/he cohabited. "Marin" was arrested, and after having gone through harrowing sentences—first being condemned to burn at the stake, then having the penalty "reduced" to death by strangling (and we thought *our* death row was bad!!)—s/he eventually was set free on the condition that s/he wear women's clothing until the age of twenty-five. Under French law Marie/Marin had committed two crimes: sodomy and cross-dressing.

English law, in contrast, did not specifically forbid cross-gender dressing. But it did look askance at those who donned the attire of a social class to which they did not belong. In a 1746 English case, Mary Hamilton married another woman after assuming the name "Dr. Charles Hamilton." The legal authorities were sure she had done something wrong, but they couldn't quite put their finger on what it was. Eventually they convicted her of vagrancy, reasoning that she was an unusually ballsy but nonetheless common cheat.[14]

During the Renaissance, there was no central clearinghouse for the handling of hermaphrodites. While in some cases physicians or the state intervened, in others the Church took the lead. For instance, in Piedra, Italy, in 1601, the same year of Marie/Marin's arrest, a young soldier named Daniel Burghammer shocked his regiment when he gave birth to a healthy baby girl. After his alarmed wife called in his army captain, he confessed to being half male and half female. Christened as a male, he had served as a soldier for seven years while also a practicing blacksmith. The baby's father, Burghammer said, was a Spanish soldier. Uncertain of what to do, the captain called in Church authorities, who decided to go ahead and christen the baby, whom they named Elizabeth. After she was weaned—Burghammer nursed the child with his female breast—several towns competed for the right to adopt her. The Church declared the child's birth a miracle, but granted Burghammer's wife a divorce, suggesting that it found Burghammer's ability to give birth incompatible with role of husband.[15]

The stories of Marie/Marin, Mary Hamilton, and Daniel Burghammer illustrate a simple point. Different countries and different legal and religious systems viewed intersexuality in different ways. The Italians seemed relatively nonplussed by the blurring of gender borders, the French rigidly regulated it, while the English, although finding it distasteful, worried more about class transgressions. Nevertheless, all over Europe the sharp distinction between male and female was at the core of systems of law and politics. The rights of

pate in the political system were all determined in part by sex. And those who fell in between? Legal experts acknowledged that hermaphrodites existed but insisted they position themselves within this gendered system. Sir Edward Coke, famed jurist of early modern England wrote "an Hermaphrodite may purchase according to that sexe which prevaileth."[16] Similarly, in the first half of the seventeenth century, French hermaphrodites could serve as witnesses in the court and even marry, providing that they did so in the role assigned to them by "the sex which dominates their personality."[17]

The individual him/herself shared with medical and legal experts the right to decide which sex prevailed but, once having made a choice, was expected to stick with it. The penalty for reneging could be severe. At stake was the maintenance of the social order and the rights of man (meant literally). Thus, although it was clear that some people straddled the male-female divide, the social and legal structures remained fixed around a two-sex system.[18]

The Making of the Modern Intersexual

As biology emerged as an organized discipline during the late eighteenth and early nineteenth centuries, it gradually acquired greater authority over the disposition of ambiguous bodies.[19] Nineteenth-century scientists developed a clear sense of the statistical aspects of natural variation,[20] but along with such knowledge came the authority to declare that certain bodies were abnormal and in need of correction.[21] The biologist Isidore Geoffroy Saint-Hilaire played a particularly central role in recasting scientific ideas about sexual difference. He founded a new science, which he dubbed *teratology*, for the study and classification of unusual births. Saint-Hilaire and other like-minded biologists set out to study all anatomical anomalies, and they established two important principles that began to guide medical approaches to natural variation. First, Saint-Hilaire argued that "Nature is one whole"[22]—that is, that even unusual or what had been called "monstrous" births were still part of nature. Second, drawing on newly developed statistical concepts, he proclaimed that hermaphrodites and other birth anomalies resulted from abnormal embryonic development. To understand their genesis, he argued, one must understand normal development. Studying abnormal variations could in turn illuminate normal processes. Saint-Hilaire believed that unlocking the origins of hermaphrodites would lead to an understanding of the development of sexual difference more generally. This scientific transposition of the old mythic fascination with hermaphrodites has remained, to this day, a guiding

gender roles and behaviors of nonintersexuals. (See chapters 3 and 4 for a discussion of the modern literature.)

Saint-Hilaire's writings were not only of importance to the scientific community, they served a new social function as well. Whereas in previous centuries, unusual bodies were treated as unnatural and freakish, the new field of teratology offered a natural explanation for the birth of people with extraordinary bodies.[23] At the same time, however, it redefined such bodies as pathological, as unhealthy conditions to be cured using increased medical knowledge. Ironically, then, scientific understanding was used as a tool to obliterate precisely the wonders it illuminated. By the middle of the twentieth century, medical technology had "advanced" to a point where it could make bodies that had once been objects of awe and astonishment disappear from view, all in the name of "correcting nature's mistakes."[24]

The hermaphrodite vanishing act relied heavily on the standard scientific technique of classification.[25] Saint-Hilaire divided the body into "sex segments," three on the left and three on the right. He named these zones the "profound portion," which contained ovaries, testicles, or related structures; the "middle portion," which contained internal sex structures such as the uterus and seminal vesicles; and the "external portion," which included the external genitalia.[26] If all six segments were wholly male, he decreed, so too was the body. If all six were female, the body was clearly female. But when a mixture of male and female appeared in any of the six zones, a hermaphrodite resulted. Thus, Saint-Hilaire's system continued to recognize the legitimacy of sexual variety but subdivided hermaphrodites into different types, laying the groundwork for future scientists to establish a difference between "true" and "false" hermaphrodites. Since the "true" hermaphrodites were very rare, eventually a classification system arose that made intersexuality virtually invisible.

In the late 1830s, a physician named James Young Simpson, building on Saint-Hilaire's approach, proposed to classify hermaphrodites as either "spurious" or "true." In spurious hermaphrodites, he wrote, "the genital organs and general sexual configuration of one sex approach, from imperfect or abnormal development, to those of the opposite," while in true hermaphrodites "there actually coexist upon the body of the same individual more or fewer of the genital organs."[27] In Simpson's view, "genital organs" included not only ovaries or testes (the gonads) but also structures such as the uterus or seminal vesicles. Thus, a true hermaphrodite might have testes and a uterus, or ovaries and seminal vesicles.

Simpson's theory presaged what the historian Alice Dreger has dubbed the

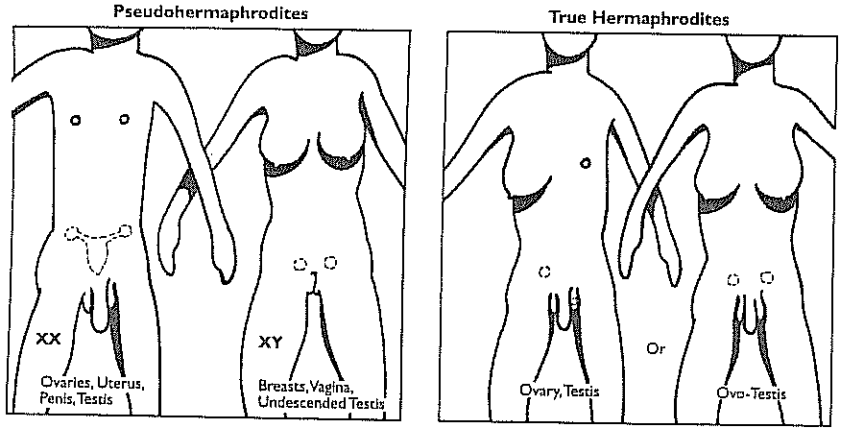


FIGURE 2.2: "Pseudo-hermaphrodites" have either ovaries or testes combined with the "opposite" genitalia. "True hermaphrodites" have an ovary and a testis, or a combined gonad, called an ovo-testis.
(Source: Alyce Santoro, for the author)

German physician named Theodor Albrecht Klebs, who published his ideas in 1876. Like Simpson, Klebs contrasted "true" with what he called "pseudo"-hermaphrodites. He restricted the term *true hermaphrodite* to someone who had both ovarian and testicular tissue in h/her body. All others with mixed anatomies—persons with both a penis and ovaries, or a uterus and a mustache, or testes and a vagina—no longer, in Klebs's system, qualified as true hermaphrodites. But if they were not hermaphrodites, what were they? Klebs believed that under each of these confusing surfaces lurked a body either truly male or truly female. Gonads, he insisted, were the sole defining factor in biological sex. A body with two ovaries, no matter how many masculine features it might have, was female. No matter if a pair of testes were nonfunctional and the person possessing them had a vagina and breast, testes made a body male. The net result of this reasoning, as Dreger has noted, was that "significantly fewer people counted as 'truly' both male and female."[28] Medical science was working its magic: hermaphrodites were beginning to disappear.

Once the gonads became the decisive factor (figure 2.2), it required more than common sense to identify an individual's true sex. The tools of science—in the form of a microscope and new methods of preparing tissue for microscopic examination—became essential.[29] Rapidly, images of the hermaphrodite's body disappeared from medical journals, replaced by abstract photo-

as Alice Dreger points out, the primitive state of surgical techniques, especially the lack of anesthesia and antisepsis, at the end of the nineteenth century meant that doctors could obtain gonadal tissue samples only after death or castration: "Small in number, dead, impotent—what a sorry lot the true hermaphrodites had become!"[30] People of mixed sex all but disappeared, not because they had become rarer, but because scientific methods classified them out of existence.

At the turn of the century (1896, to be exact), the British physicians George F. Blackler and William P. Lawrence wrote a paper examining earlier claims of true hermaphroditism. They found that only three out of twenty-eight previously published case studies complied with the new standards. In Orwellian fashion, they cleansed past medical records of accounts of hermaphroditism, claiming they did not meet modern scientific standards,[31] while few new cases met the strict criterion of microscopic verification of the presence of both male and female gonadal tissue.

Arguing About Sex and Gender

Under the mantle of scientific advancement, the ideological work of science was imperceptible to turn-of-the-century scientists, just as the ideological work of requiring Polymerase Chain Reaction Sex Tests of women athletes is, apparently, to the I.O.C. (See chapter 1.) Nineteenth-century theories of intersexuality—the classification systems of Saint-Hilaire, Simpson, Klebs, Blackler, and Lawrence—fit into a much broader group of biological ideas about difference. Scientists and medical men insisted that the bodies of males and females, of whites and people of color, Jews and Gentiles, and middle-class and laboring men differed deeply. In an era that argued politically for individual rights on the basis of human equality, scientists defined some bodies as better and more deserving of rights than others.

If this seems paradoxical, from another point of view it makes good sense. Political theories that declared that "all men are created equal" threatened to do more than provide justification for colonies to overthrow monarchies and establish independent republics. They threatened to undermine the logic behind fundamental social and economic institutions such as marriage, slavery, or the limiting of the right to vote to white men with property. Not surprisingly, then, the science of physical difference was often invoked to invalidate claims for social and political emancipation.[32]

In the nineteenth century, for example, women active in the movement to abolish slavery in the United States, soon began to insist on their right to speak

were demanding better educational opportunities and economic rights and the right to vote. Their actions met fierce resistance from scientific experts.[34] Some doctors argued that permitting women to obtain college degrees would ruin their health, leading to sterility and ultimately the degeneration of the (white, middle-class) human race. Educated women angrily organized counterattacks and slowly gained the right to advanced education and the vote.[35]

Such social struggles had profound implications for the scientific categorization of intersexuality. More than ever, politics necessitated two and only two sexes. The issue had gone beyond particular legal rights such as the right to vote. What if, while thinking she was a man, a woman engaged in some activity women were thought to be incapable of doing? Suppose she did well at it? What would happen to the idea that women's natural incapacities dictated social inequity? As the battles for social equality between the sexes heated up in the early twentieth century, physicians developed stricter and more exclusive definitions of hermaphroditism. The more social radicals blasted away at the separations between masculine and feminine spheres, the more physicians insisted on the absolute division between male and female.

Intersexuals Under Medical Surveillance

Until the early nineteenth century, the primary arbiters of intersexual status had been lawyers and judges, who, although they might consult doctors or priests on particular cases, generally followed their own understanding of sexual difference. By the dawn of the twentieth century, physicians were recognized as the chief regulators of sexual intermediacy.[36] Although the legal standard—that there were but two sexes and that a hermaphrodite had to identify with the sex prevailing in h/her body—remained, by the 1930s medical practitioners had developed a new angle: the surgical and hormonal suppression of intersexuality. The Age of Gonads gave way to the even less flexible Age of Conversion, in which medical practitioners found it imperative to catch mixed-sex people at birth and convert them, by any means necessary, to either male or female (figure 2.3).

But patients, troubling and troublesome patients, continued to place themselves squarely in the path of such oversimplification. Even during the Age of Gonads, medical men sometimes based their assessment of sexual identity on the overall shape of the body and the inclination of the patient—the gonads be damned. In 1915, the British physician William Blair Bell publicly suggested that sometimes the body was too mixed up to let the gonads alone dictate treatment. The new technologies of anesthesia and asepsis made it

FIGURE 2.3: A cartoon history of intersexuality. (Source: Diane DiMassa, for the author)

living patients. Bell encountered a patient who had a mixture of external traits—a mustache, breasts, an elongated clitoris, a deep voice, and no menstrual period—and whose biopsy revealed that the gonad was an ovo-testis (a mixture of egg-producing and sperm-producing tissues).

Faced with a living and breathing true hermaphrodite Bell reverted to the older legal approach, writing that "predominating feminine characteristics

on the gonads to decide which sex a patient must choose, but that "the possession of a [single] sex is a necessity of our social order, for hermaphrodites as well as for normal subjects."[37] Bell did not abandon, however, the concepts of true and pseudo-hermaphroditism. Indeed, most physicians practicing today take this distinction for granted. But faced with the insistent complexity of actual bodies and personalities, Bell urged that each case be dealt with flexibly, taking into account the many different signs presented by the body and behaviors of the intersexual patient.

But this returned doctors to an old problem: Which signs were to count? Consider a case reported in 1924 by Hugh Hampton Young, "the Father of American Urology."[38] Young operated on a young man with a malformed penis,[39] an undescended testis, and a painful mass in the groin. The mass turned out to be an ovary connected to an underdeveloped uterus and oviducts. Young pondered the problem:

> A normal-looking young man with masculine instincts [athletic, heterosexual] was found to have a . . . functioning ovary in the left groin. What was the character of the scrotal sac on the right side? If these were also undoubtedly female, should they be allowed to remain outside in the scrotum? If a male, should the patient be allowed to continue life with a functioning ovary and tube in the abdomen on the left side? If the organs of either side should be extirpated, which should they be?[40]

The young man turned out to have a testis, and Young snagged the ovary. As his experience grew, Young increasingly based his judgment calls on his patients' psychological and social situations, using sophisticated understandings of the body more as a guide to the range of physical possibilities than as a necessary indicator of sex.

In 1937, Young, by then a professor of urology at Johns Hopkins University, published *Genital Abnormalities, Hermaphroditism and Related Adrenal Diseases*, a book remarkable for its erudition, scientific insight, and open-mindedness. In it he further systematized the classification of intersexes (maintaining Blackler and Lawrence's definition of true hermaphroditism) and drew together a wealth of carefully documented case histories, both his own and others', in order to demonstrate and study the medical treatment of these "accidents of birth." He did not judge the people he described, several of whom lived as "practicing hermaphrodites"—that is, they had sexual experiences as both men and women.[41] Nor did he attempt to coerce any of them into treatment.

up as a female. With both a large clitoris (one or two inches in length) and a vagina, s/he could have "normal" heterosexual sex with both men and women. As a teenager s/he had sex with a number of girls to whom she was deeply attracted, but at age nineteen s/he married a man with whom s/he experienced little sexual pleasure (although, according to Emma, he didn't have any complaints). During this and subsequent marriages, Emma kept girlfriends on the side, frequently having pleasurable sex with them. Young described h/her as appearing "to be quite content and even happy." In conversation, Dr. Young elicited Emma's occasional wish to be a man. Although he assured her that it would be a relatively simple matter, s/he replied, "Would you have to remove that vagina? I don't know about that because that's my meal ticket. If you did that I would have to quit my husband and go to work, so I think I'll keep it and stay as I am. My husband supports me well, and even though I don't have any sexual pleasure with him, I do have lots with my girlfriend." Without further comment or evidence of disappointment, Young proceeded to the next "interesting example of another practicing hermaphrodite."[42]

His case summary mentions nothing about financial motivations, saying only that Emma refused a sex fix because she "dreaded necessary operations,"[43] but Emma was not alone in allowing economic and social considerations to influence her choice of sex. Usually this meant that young hermaphrodites, when offered some choice, opted to become male. Consider the case of Margaret, born in 1915 and raised as a girl until the age of 14. When her voice began to deepen into a man's, and her malformed penis grew and began to take on adult functions, Margaret demanded permission to live as a man. With the help of psychologists (who later published a report on the case) and a change of address, he abandoned his "ultrafeminine" attire of a "green satin dress with flared skirt, red velvet hat with rhinestone trimming, slippers with bows, hair bobbed with ends brought down over his cheeks." He became, instead, a short-haired, baseball- and football-playing teenager whom his new classmates called Big James. James had his own thoughts about the advantages of being a man. He told his half-sister: "It is easier to be a man. You get more money (wages) and you don't have to be married. If you're a girl and you don't get married people make fun of you."[44]

Although Dr. Young illuminated the subject of intersexuality with a great deal of wisdom and consideration for his patients, his work was part of the process that led both to a new invisibility and a harshly rigid approach to the treatment of intersexual bodies. In addition to being a thoughtful collection of case studies, Young's book is an extended treatise on the most modern

Although less judgmental and controlling of patients and their parents than his successors, he nevertheless supplied the next generation of physicians with the scientific and technical bedrock on which they based their practices.

As was true in the nineteenth century, increased knowledge of the biological origins of sexual complexity facilitated the elimination of their signs. Deepening understandings of the physiological bases of intersexuality combined with improvements in surgical technology, especially since 1950, began to enable physicians to catch most intersexuals at the moment of birth.[45] The motive for their conversion was genuinely humanitarian: a wish to enable individuals to fit in and to function both physically and psychologically as healthy human beings. But behind the wish lay unexamined assumptions: first, that there should be only two sexes; second, that only heterosexuality was normal; and third, that particular gender roles defined the psychologically healthy man and woman.[46] These same assumptions continue to provide the rationale for the modern "medical management" of intersexual births.

3

OF GENDER AND GENITALS:

THE USE AND ABUSE OF THE MODERN INTERSEXUAL

Confronting the Intersex Newborn

THE DOCTORS

A CHILD IS BORN IN A LARGE METROPOLITAN HOSPITAL IN THE UNITED States or Western Europe. The attending physician, realizing that the newborn's genitalia are either/or, neither/both, consults a pediatric endocrinologist (children's hormone specialist) and a surgeon. They declare a state of medical emergency.[1] According to current treatment standards, there is no time to waste in quiet reflection or open-ended consultations with the parents. No time for the new parents to consult those who have previously given birth to mixed-sex babies or to talk with adult intersexuals. Before twenty-four hours pass, the child must leave the hospital "as a sex," and the parents must feel certain of the decision.

Why this rush to judgment? How can we feel so certain within just twenty-four hours that we have made the right assignment of sex to a newborn?[2] Once such decisions are made, how are they carried out and how do they affect the child's future?

Since the 1950s, psychologists, sexologists, and other researchers have battled over theories about the origins of sexual difference, especially gender identity, gender roles, and sexual orientation. Much is at stake in these debates. Our conceptions of the nature of gender difference shape, even as they reflect, the ways we structure our social system and polity; they also shape and reflect our understanding of our physical bodies. Nowhere is this clearer than in the debates over the structure (and restructuring) of bodies that exhibit sexual ambiguity.

Oddly, the contemporary practice of "fixing" intersex babies immediately after birth emerged from some surprisingly flexible theories of gender. In the

that "while the *power* of the human sex drive may possibly be largely dependent on physiological factors . . . the *direction* of this drive does not seem to be directly dependent on constitutional elements."[3] In other words, in the development of masculinity, femininity, and inclinations toward homo- or heterosexuality, nurture matters a great deal more than nature. A decade later, the Johns Hopkins psychologist John Money and his colleagues, the psychiatrists John and Joan Hampson, took up the study of intersexuals, whom, Money realized, would "provide invaluable material for the comparative study of bodily form and physiology, rearing, and psychosexual orientation."[4] Agreeing with Ellis's earlier assessment, Money and his colleagues used their own studies to state in the extreme what these days seems extraordinary for its complete denial of the notion of natural inclination. They concluded that gonads, hormones, and chromosomes did not automatically determine a child's gender role: "From the sum total of hermaphroditic evidence, the conclusion that emerges is that sexual behavior and orientation as male or female does not have an innate, instinctive basis."[5]

Did they then conclude that the categories "male" and "female" had no biological basis or necessity? Absolutely not. These scientists studied hermaphrodites to prove that nature mattered hardly at all. But they never questioned the fundamental assumption that there are only two sexes, because their goal in studying intersexuals was to find out more about "normal" development.[6] Intersexuality, in Money's view, resulted from fundamentally abnormal processes. Their patients required medical treatment because they *ought* to have become either a male or a female. The goal of treatment was to assure proper psychosexual development by assigning the young mixed-sex child to the proper gender and then doing whatever was necessary to assure that the child and h/her parents believed in the sex assignment.[7]

By 1969, when Christopher Dewhurst (Professor of Obstetrics and Gynecology in London at the Queen Charlotte Maternity Hospital and the Chelsea Hospital for Women) and Ronald R. Gordon (Consultant Pediatrician and Lecturer in Child Health at Sheffield University) wrote their treatise on *The Intersexual Disorders*, medical and surgical approaches to intersexuality neared a state of hitherto unattained uniformity. It seems hardly surprising that this coalescence of medical views occurred during the era that witnessed what Betty Friedan dubbed "the feminine mystique"—the post–World War II ideal of the suburban family structured around strictly divided gender roles. That people failed to conform fully to this ideal can be gleaned from the near hysterical tone of Dewhurst and Gordon's book, which contrasts markedly with the calm and reason of Young's founding treatise.

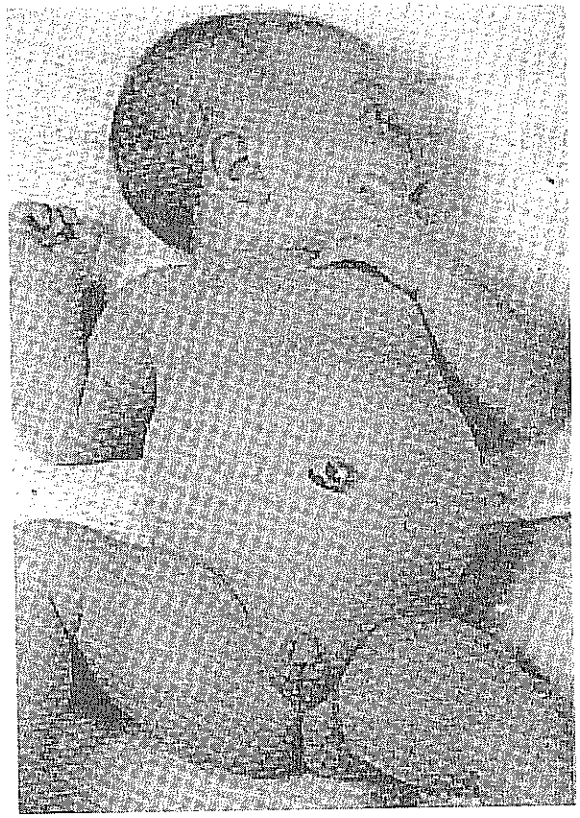


FIGURE 3.1: A six-day old XX child with masculinized external genitalia. (Original photo by Lawson Wilkins in Young 1961 [figure 23.1, p. 1405]; reprinted with permission, Williams and Wilkins)

Dewhurst and Gordon open their book with a description of a newborn intersexual child, accompanied by a close-up photograph of the baby's genitals. They employ the rhetoric of tragedy: "One can only attempt to imagine the anguish of the parents. That a newborn should have a deformity . . . (affecting) so fundamental an issue as the very sex of the child . . . is a tragic event which immediately conjures up visions of a hopeless psychological misfit doomed to live always as a sexual freak in loneliness and frustration."

They warn that freakhood will, indeed, be the baby's fate should the case be improperly managed, "but fortunately, with correct management the outlook is infinitely better than the poor parents—emotionally stunned by the event—or indeed anyone without special knowledge could ever imagine."

Luckily for the child, whose sweet little genitalia we are invited to examine intimately (figure 3.1), "the problem was faced promptly and efficiently by the local pediatrician." Ultimately, readers learn, the parents received assurance that despite appearances, the baby was "really" a female whose external genitalia had become masculinized by unusually high levels of androgen present during fetal life. She could, they were told, have normal sexual relations (after surgery to open the vaginal passageway and shorten the clitoris) and even be able to bear children.[8]

Dewhurst and Gordon contrast this happy outcome with that of incorrect treatment or neglect through medical ignorance. They describe a fifty-year-old who had lived h/her life as a woman, again treating the reader to an intimate close-up of the patient's genitalia,[9] which shows a large phallic-like clitoris, no scrotum, and separate urethral and vaginal openings. S/he had worried as a teenager about her genitals and lack of breasts and menstruation, the doctors report, but had adjusted to "her unfortunate state." Nevertheless, at age fifty-two the doubts returned to "torment" h/her. After diagnosing h/her as a male pseudo-hermaphrodite, doomed to the female sex assignment in which she had lived unhappily, Dewhurst and Gordon noted that the case illustrated "the kind of tragedy which can result from incorrect management."[10] Their book, in contrast, is meant to provide the reader (presumably other medical personnel) with lessons in correct management.

Today, despite the general consensus that intersexual children must be corrected immediately, medical practice in these cases varies enormously. No national or international standards govern the types of intervention that may be used. Many medical schools teach the specific procedures discussed in this book, but individual surgeons make decisions based on their own beliefs and what was current practice when they were in training—which may or may not concur with the approaches published in cutting-edge medical journals. Whatever treatment they choose, however, physicians who decide how to manage intersexuality act out of, and perpetuate, deeply held beliefs about male and female sexuality, gender roles, and the (im)proper place of homosexuality in normal development.

THE PARENTS

When a mixed-sex child is born, somebody (sometimes the surgeon, sometimes a pediatric endocrinologist, more rarely a trained sex education counselor) explains the situation to the parents.[11] A "normal" boy, they say, may be born with a penis (defined as a phallus that has a urethral tube [through which urine flows] running lengthwise through its center and opening at

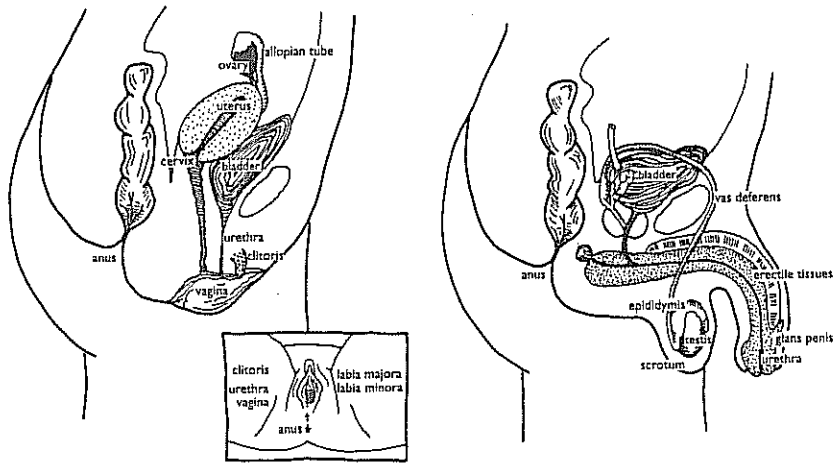


FIGURE 3.2: *A*: Female reproductive anatomy. *B*: Male reproductive anatomy. (Source: Alyce Santoro, for the author)

descended into scrotal sacs, and a variety of tubing, which in the sexually mature male transports sperm and other components of the seminal fluid to the outside world (figure 3.2B).

Just as often, the child has a clitoris (a phallus that does not have a urethra) which, like a penis, contains ample supplies of blood and nerves. Physical stimulation can cause both to become erect and to undergo a series of contractions that we call orgasm.[12] In a "normal" girl the urethra opens near the vagina, a large canal surrounded at its opening by two sets of fleshy lips. The canal walls connect on the inside to the cervix, which in turn opens up into the uterus. Attached to the uterus are oviducts, which, after puberty, transport egg cells from the nearby pair of ovaries toward the uterus and beyond (figure 3.2A). If this child also has two X chromosomes (XX), we say she is female.

The doctors will also explain to the parents that male and female embryos develop by progressive divergence from a common starting point (figure 3.3). The embryonic gonad makes a choice early in development to follow a male or female pathway, and later in development the phallus ends up as either a clitoris or a penis. Similarly, the embryonic urogenital swellings either remain open to become vaginal labia or fuse to become a scrotum. Finally, all embryos contain structures destined to become the uterus and fallopian tubes and ones with the potential to become the epididymis and vas deferens (both are tubu-

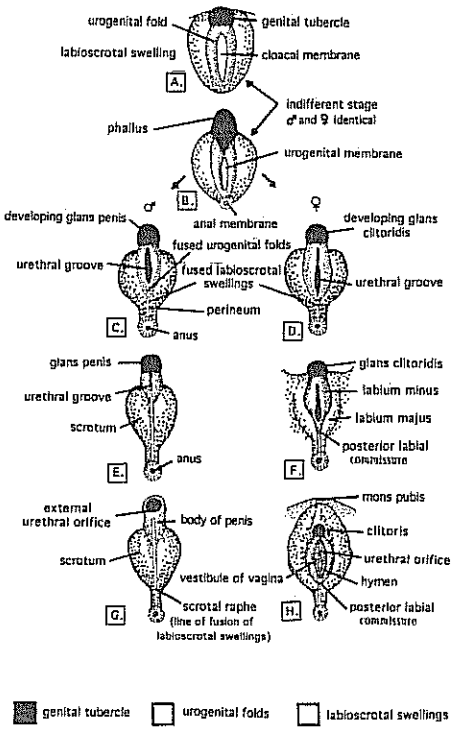


FIGURE 3.3: The development of external genitalia from the embryonic period through birth. (Source: Redrawn by Alyce Santoro from Moore 1977, p. 241, with permission from W. B. Saunders)

exterior). When the sex is chosen, the appropriate structures develop and the rest degenerate.

So far, so good. The doctors have simply recounted some basics of embryology. Now comes the tricky part: what to tell the parents of a child whose development has not proceeded along the classic path. Generally doctors inform parents that the infant has a "birth defect of unfinished genitalia," and that it may take a little time before they'll know whether the child is a boy or a girl.[13] The doctors can and will, they assure the parents, identify the "true" sex that lies underneath the surface confusion. Once they do, their hormonal and surgical treatments can complete nature's intention.[14]

Modern medical practitioners still use the nineteenth-century categories of "true" and "male pseudo" or "female pseudo" hermaphrodites.[15] Since most intersexuals fall into the pseudo category, doctors believe that an intersexual child is "really" a boy or a girl. Money, and others trained in his an-

the parents. Instead, doctors use more specific medical terminology—such as "sex chromosome anomalies," "gonadal anomalies," and "external organ anomalies"[16] —that indicate that intersex children are just unusual in some aspect of their physiology, *not* that they constitute a category other than male or female.

The most common types of intersexuality are congenital adrenal hyperplasia (CAH), androgen insensitivity syndrome (AIS), gonadal dysgenesis, hypospadias, and unusual chromosome compositions such as XXY (Klinefelter Syndrome) or XO (Turner Syndrome) (see table 3.1). So-called true hermaphrodites have a combination of ovaries and testes. Sometimes an individual has a male side and a female side. In other cases the ovary and testis grow together in the same organ, forming what biologists call an ovo-testis.[17] Not infrequently, at least one of the gonads functions quite well (the ovary more often than the testis),[18] producing either sperm or eggs and functional levels of the so-called sex hormones—androgens or estrogens. In theory, it might be possible for a hermaphrodite to give birth to h/her own child, but there is no recorded case of that occurring. In practice, the external genitalia and accompanying genital ducts are so mixed that only after exploratory surgery is it possible to know what parts are present and what is attached to what.[19]

Parents of intersexuals often ask how frequently children like theirs are born and whether there are any parents of similar children with whom they might confer. Doctors, because they generally view intersex births as urgent cases, are unaware of available resources themselves, and because the medical research is scanty, often simply tell parents that the condition is extremely rare and therefore there is nobody in similar circumstances with whom they can consult. Both answers are far from the truth. I will return to the question of support groups for intersexuals and their parents in the next chapter. Here I address the question of frequency.

How often are intersex babies born? Together with a group of Brown University undergraduates, I scoured the medical literature for frequency estimates of various categories of intersexuality.[20] For some categories, usually the rarest, we found only anecdotal evidence. But for most, numbers exist. The figure we ended up with—1.7 percent of all births (see table 3.2) —should be taken as an order-of-magnitude estimate rather than a precise count.[21]

Even if we've overestimated by a factor of two, that still means a lot of intersexual children are born each year. At the rate of 1.7 percent, for example, a city of 300,000 would have 5,100 people with varying degrees of intersexual development. Compare this with albinism, another relatively uncom-

TABLE 3.1 *Some Common Types of Intersexuality*

NAME	CAUSE	BASIC CLINICAL FEATURES
Congenital Adrenal Hyperplasia (CAH)	Genetically inherited malfunction of one or more of six enzymes involved in making steroid hormones	In XX children, can cause mild to severe masculinization of genitalia at birth or later; if untreated, can cause masculinization at puberty and early puberty. Some forms drastically disrupt salt metabolism and are life-threatening if not treated with cortisone.
Androgen Insensitivity Syndrome (AIS)	Genetically inherited change in the cell surface receptor for testosterone	XY children born with highly feminized genitalia. The body is "blind" to the presence of testosterone, since cells cannot capture it and use it to move development in a male direction. At puberty these children develop breasts and a feminine body shape.
Gonadal Dysgenesis	Various causes, not all genetic; a catch-all category	Refers to individuals (mostly XY) whose gonads do not develop properly. Clinical features are heterogeneous.
Hypospadias	Various causes, including alterations in testosterone metabolism[a]	The urethra does not run to the tip of the penis. In mild forms, the opening is just shy of the tip; in moderate forms, it is along the shaft; and in severe forms, it may open at the base of the penis.
Turner Syndrome	Females lacking a second X chromosome. (XO)[b]	A form of gonadal dysgenesis in females. Ovaries do not develop; stature is short; lack of secondary sex characteristics; treatment includes estrogen and growth hormone.
Klinefelter Syndrome	Males with an extra X chromosome (XXY)[c]	A form of gonadal dysgenesis causing infertility; after puberty there is often breast enlargement; treatments include testosterone therapy.

a. Aaronson et al. 1997.

b. The story is, of course, more complicated. For some recent studies, see Jacobs, Dalton, et al. 1997; Boman et al. 1998.

c. There are a great many chromosomal variations classified as Klinefelter (Conte and Grumbach 1989).

TABLE 3.2 *Frequencies of Various Causes of Nondimorphic Sexual Development*

CAUSE	ESTIMATED FREQUENCY/ 100 LIVE BIRTHS
Non-XX or non-XY (except Turner's or Klinefelter's)	0.0639
Turner Syndrome	0.0369
Klinefelter Syndrome	0.0922
Androgen Insensitivity Syndrome	0.0076
Partial Androgen Insensitivity Syndrome	0.00076
Classic CAH (omitting very high-frequency population)	0.00779
Late-onset CAH	1.5
Vaginal agenesis	0.0169
True hermaphrodites	0.0012
Idiopathic	0.0009
TOTAL	1.728

Albino births occur much less frequently than intersexual births—in only about 1 in 20,000 babies.[22]

The figure of 1.7 percent is an average from a wide variety of different populations; the number is not uniform throughout the world. Many forms of intersexuality result from an altered genetic state, and in some populations, the genes involved with intersexuality are very frequent. Consider, for example, the gene for congenital adrenal hyperplasia (CAH). When present in two doses (that is, when an individual is homozygous for the gene), it causes XX females to be born with masculinized external genitalia (although their internal reproductive organs are those of a potentially fertile woman) (see table 3.1). The frequency of the gene for CAH varies widely around the world. One study found that 3.5 per thousand Yupik Eskimos born had a double dose of the CAH gene. In contrast, only 0.005/1,000 New Zealanders express the trait. The frequency of a related genetic change that leaves the genitalia unaffected but can cause premature pubic hair growth in children and symptoms

varies widely around the world. These altered genes result in symptoms in 3/1,000 Italians. Among Ashkenazic Jews, the number rises to 37/1,000.[23]

Furthermore, the incidence of intersexuality may be on the rise. There has already been one medical report of the birth of a child with both an ovary and testes to a mother who conceived via in vitro fertilization. It seems that two embryos, one XX and one XY, fused after three were implanted into her uterus. Save for the ovary, the resulting fetus was a normal, healthy boy, formed from the fusion of an XX and an XY embryo![24] There is also concern that the presence of environmental pollutants that mimic estrogen have begun to cause widespread increases in the incidence of intersex forms such as hypospadias.[25]

But if our technology has contributed to shifts in our sexual makeup, it nevertheless also provides the tools to negate those changes. Until very recently, the specter of intersexuality has spurred us to police bodies of indeterminate sex. Rather than force us to admit the social nature of our ideas about sexual difference, our ever more sophisticated medical technology has allowed us, by its attempts to render such bodies male or female, to insist that people are either naturally male or female. Such insistence occurs even though intersexual births occur with remarkably high frequency and may be on the increase. The paradoxes inherent in such reasoning, however, continue to haunt mainstream medicine, surfacing over and over in both scholarly debates and grassroots activism around sexual identities.

"Fixing" Intersexuals

THE PRENATAL FIX

To produce gender-normal children, some medical scientists have turned to prenatal therapy. Biotechnology has already changed the human race. We have, for example, used amniocentesis and selective abortion to lower the frequency of Down Syndrome births, and in some parts of the world we have even altered the sex ratio by selectively aborting female fetuses,[26] and now both the sonogram and amniotic testing of pregnant women can detect signs of the baby's gender as well as a wide variety of developmental problems.[27] Most types of intersexuality cannot be changed by prenatal interventions, but one of the most frequent kinds—CAH—can. Is this a good thing? How might the elimination of a major cause of genital ambiguity affect our understanding of "that which qualifies a body for life within the domain of cultural intelligibility"?[28]

The genes that cause CAH are well characterized, and several approaches

she may be pregnant with a CAH baby (if she or someone in her family carries CAH) can undergo treatment and then get tested. I put it in that order, because to prevent masculinization of an XX-CAH child's genitalia, treatment (with a steroid called dexamethasone) must begin as early as four weeks after conception.[30] The earliest methods for diagnosis, however, can't be used until the ninth week.[31] For every eight fetuses treated for CAH, only one will actually turn out to be an XX child with masculinized genitals[32]. If it turns out that the fetus is a male (physicians are not worried about fetal masculinization—you can never, apparently be *too* masculine)[33] or does not have CAH, treatment can be discontinued.[34] If, however, the fetus is XX and is affected by CAH, the mother and fetus continue dexamethasone treatment for the duration of the pregnancy.[35]

It might sound like a good idea, but the data are slim. One study compared seven untreated CAH girls (born with masculinized genitals) with their prenatally treated sisters. Three were born with completely female genitals, while four were only mildly masculinized compared with their siblings.[36] Another study of five CAH girls reported considerably more feminine genital development.[37] In medicine, however, everything has a price. The diagnostic tests[38] stand a 1 to 2 percent chance of inducing miscarriage, and the treatment produces side effects in both mother and child: mothers may retain fluids, gain a lot of extra weight, develop hypertension and diabetes, have increased and permanent scarring along abdominal stretch lines, grow extra facial hair, and become more emotional. "The effect on fetal 'metabolism' is not known,"[39] but one recent study reports negative effects such as failure to thrive and delayed psychomotor development. Another research group found that prenatal dexamethasone treatment may cause a variety of behavioral problems, including increased shyness, less sociability, and greater emotionality.[40]

Today many still do not advocate such treatment because "the safety of this experimental therapy has not been established in rigorously controlled trials."[41] On the other hand, prenatal diagnosis allows physicians to recognize the metabolic alterations and begin treatment at birth. Early and continuous treatment can prevent possible salt-wasting crises (which endanger the child's life) and address other CAH-related problems, such as premature growth stoppage and extremely early puberty. This also benefits XY CAH kids, since they still have the metabolic problems, even if their genitals are fine. Finally, genital surgery on XX CAH children can be eliminated or minimized.

Parents have given prenatal therapy mixed reviews. In one study of 176 pregnancies, 101 parents accepted prenatal treatment after being apprised of

seventy-five had CAH fetuses (eight XX and seven XY), and parents chose to abort three of the untreated XX fetuses.[42] In another study, researchers surveyed 38 mothers' attitudes after experiencing treatment. Although each woman had severe side effects and was concerned about the possible short- and long-term effects of dexamethasone on her child and herself, each said she would do it again to avoid giving birth to a girl with masculine genitals.[43]

Prenatal *diagnosis* seems warranted because it can prepare physicians and parents alike for the birth of a child whose chronic medical problems will demand early hormonal treatment. Whether prenatal *therapy* is ready for prime time is another question. To put it starkly: Are seven unnecessary treatments, with their attendant side effects worth one less virilized girl child? If you believe that virilization requires extensive reconstructive surgery in order to avoid damage to the child's mental health, the answer will probably be yes.[44] If, however, you believe that many of the surgeries on CAH children are unnecessary, then the answer might well be no. Perhaps compromises are possible. If one could lessen the side effects of dexamethasone treatment by limiting it to the period of initial genital formation, this would probably alleviate the most severe genital problems, such as fusion of the labia, but might not halt clitoral enlargement. Surgeries involving fused labia and reconstruction of the urogenital sinus are complex, not always successful, and essential if the affected individual wants to bear children. All other things being equal, it would seem best to avoid such surgery. As I argue in the rest of this chapter and the next, however, downsizing an overgrown clitoris is simply not necessary.

THE SURGICAL FIX

If there has been no prenatal "fix" and an intersex child is born, doctors must decide, as they would put it, nature's intention. Was the newborn infant "supposed" to have been a boy or a girl? Dr. Patricia Donahoe, Professor of Surgery at Harvard Medical School and a highly accomplished researcher in the fields of embryology and surgery, has developed a rapid procedure for choosing an ambiguous newborn's gender assignment. First she ascertains whether the newborn has two X chromosomes (is chromatin-positive) and then whether the child has symmetrically placed gonads. She places a chromatin-positive child with symmetrical gonads in the female pseudo-hermaphrodite box. In contrast, she is likely to classify an XX child with asymmetrical gonads as a true hermaphrodite, since the asymmetry most commonly reflects the presence of a testis on one side and an ovary on the other.

Children with one X chromosome (chromatin-negative) can also be di-

gonads. Babies with gonadal symmetry who are chromatin-negative fall into the male pseudo-hermaphrodite cubbyhole, while gonadally asymmetrical chromatin-negatives receive the label mixed-gonadal dysgenesis, a catchall category containing individuals whose potentially male gonads have some form of abnormal development.[45] This stepwise decision tree, which uses the permutations derived from the symmetry of gonads and the presence or absence of a second X, enables the physician to categorize the intersexual newborn fast. A more thorough and accurate assessment of the individual's specific situation can take weeks or months.

Enough is known about each of the four categories (true, male pseudo, female pseudo, and gonadal dysgenesis) to predict with considerable, although not complete, accuracy how the genitalia will develop as the child grows and whether the child will develop masculine or feminine traits at puberty. Given such knowledge, medical managers employ the following rule: "Genetic females should always be raised as females, preserving reproductive potential, regardless of how severely the patients are virilized. In the genetic male, however, the gender of assignment is based on the infant's anatomy, predominantly the size of the phallus."[46]

Doctors insist on two functional assessments of the adequacy of phallus size. Young boys should be able to pee standing up and thus to "feel normal" during little-boy peeing contests; adult men, meanwhile, need a penis big enough for vaginal penetration during sexual intercourse.[47] How big must the organ be to fulfill these central functions and thus fit the definition of *penis?* In one study of 100 newborn males, penises ranged in length from 2.9 to 4.5 centimeters (1.25 to 1.75 inches).[48] Donahoe and her co-workers express concern about a phallus of 2.0 centimeters, while one less than 1.5 centimeters long and 0.7 centimeters wide results in a female gender assignment.[49]

In fact, doctors are not sure what to count as a normal penis. In an "ideal" penis, for example, the urethra opens at the very tip of the glans. Suburethral openings are often thought of as a pathology designated with the medical term *hypospadias.* In a recent study, however, a group of urologists examined the location of the urethral opening in 500 men hospitalized for problems unrelated to hypospadias. Judged by the ideal penis, only 55 percent of the men were normal.[50] The rest had varying degrees of mild hypospadias, in which the urethra opened near, but not at, the penis tip. Many never knew that they had been urinating from the wrong place their entire lives! The authors of this study conclude:

Pediatric urologists should be aware of the observed "normal distribu-

surgery should be to restore the individual to normal. However, pure esthetic surgery would try to surpass the normal . . . this is the case in many patients with hypospadias in whom the surgeon attempts to place the meatus in a position where it would not be found in 45% of so-called normal men.[51]

The worries in male gender choice are more social than medical.[52] Physical health is usually not an issue, although some intersexed babies might have problems with urinary tract infection, which, if very severe, can lead to kidney damage. Rather, early genital surgery has a set of psychological goals. Can the surgery convince parents, caretakers, and peers—and, through them, the child him/herself—that the intersexual is really a male? Most intersexual males are infertile, so what counts especially is how the penis functions in social interactions—whether it "looks right" to other boys, whether it can "perform satisfactorily" in intercourse. It is not what the sex organ does for the body to which it is attached that defines the body as male. It is what it does vis-à-vis other bodies.[53] Even our ideas about how large a baby's penis needs to be to guarantee maleness are fairly arbitrary. Perhaps unintentionally, Donahoe drove home the social nature of the decision-making process when she commented that "phallus size at birth has not been reliably correlated with size and function at puberty."[54] Thus, doctors may choose to remove a small penis at birth and create a girl child, even though that penis may have grown to "normal" size at puberty.[55]

Deciding whether to call a child a boy or a girl, then, employs social definitions of the essential components of gender. Such definitions, as the social psychologist Suzanne Kessler observes in her book *Lessons from the Intersexed,* are primarily cultural, not biological.[56] Consider, for instance, problems caused by introducing European and American medical approaches into cultures with different systems of gender. A group of physicians from Saudi Arabia recently reported on several cases of XX intersex children with congenital adrenal hyperplasia (CAH), a genetically inherited malfunction of the enzymes that aid in making steroid hormones. Despite having two X chromosomes, some CAH children are born with highly masculinized genitalia and are initially identified as males. In the United States and Europe such children, because they have the potential to bear children later in life, are usually raised as girls. Saudi doctors trained in this European tradition recommended such a course of action to the Saudi parents of CAH XX children. A number of parents, however, refused to accept the recommendation that their child, initially identified as a son, be raised instead as a daughter. Nor would they accept

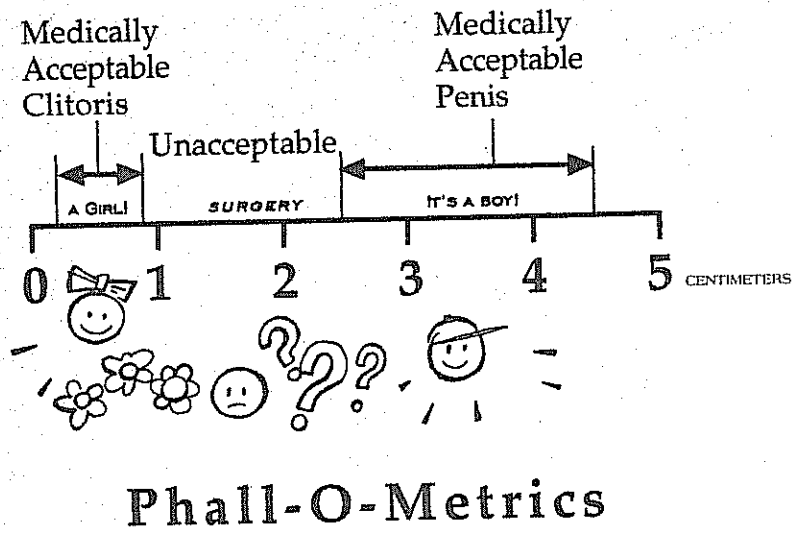


FIGURE 3.4: Phall-o-Metrics. The ruler numbers indicate centimeters (not to scale). (Source: Alyce Santoro, for the author)

upbringing was resisted on social grounds. . . . This was essentially an expression of local community attitudes with . . . the preference for male offspring."[57]

If labeling intersex children as boys is tightly linked to cultural conceptions of the maleness and "proper penile function," labeling such children as girls is a process even more tangled in social definitions of gender. Congenital adrenal hyperplasia (CAH) is one of the most common causes of intersexuality in XX children. CAH kids have the potential to become fertile females in adulthood. Doctors often follow Donahoe's rule that reproductive function be preserved, although Kessler reports one case of a physician choosing to reassign as male a potentially reproductive genetic female infant rather than remove a well-formed penis.[58] In principle, however, the size rule predominates in male assignment. One reason is purely technical. Surgeons aren't very good at creating the big, strong penis they require men to have. If making a boy is hard, making a girl, the medical literature implies, is easy. Females don't need anything built; they just need excess maleness subtracted. As one surgeon well known in this field quipped, "you can make a hole but you can't build a pole."[59]

As a teaching tool in their struggle to change the medical practice of infant genital surgery, members of the Intersexual Rights Movement have designed

TABLE 3.3 *Recent History of Clitoral Surgery*

TYPE OF SURGERY	# OF PUBLISHED REPORTS	YEARS OF PUBLICATION	TOTAL # OF PATIENTS REPORTED ON
Clitorectomy	7	1955–1974	124
Clitoral Reduction	8	1961–1993	51
Clitoral Recession	7	1974–1992	92
Comparative Papers	2	1974, 1982	93[a]

Source: Extracted from data found in Rosenwald et al. 1958; Money 1961; Randolf and Hung 1970; Randolf et al. 1981; Donahoe and Hendren 1984; Hampson 1955; Hampson and Money 1955; Gross et al. 1966; Lattimer 1961; Mininberg 1982; Rajfer et al. 1982; van der Kamp et al. 1992; Ehrhardt et al. 1968; Allen et al. 1982; Azziz et al. 1986; Newman et al. 1992b; Mulaikal et al. 1987; Kumar et al. 1974; and Hendren and Crawford 1969.

a. May include previously reported data.

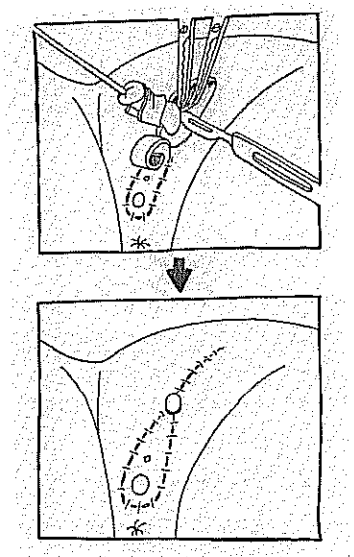
sible ranges of phallus size for males and females at birth. It provides a graphic summary of the reasoning behind the decision-making process for assigning gender. If the clitoris is "too big" to belong to a girl, doctors will want to downsize it,[60] but in contrast to the penis, doctors have rarely used precise clitoral measurements in deciding the gender of a newborn child. Such measurements, however, do exist. Since 1980, we have known that the average clitoral size of newborn girls is 0.345 centimeters.[61] More recent studies show that clitoral length at birth ranges from 0.2 to 0.85 centimeters.[62] One surgeon prominent in the field of sex reassignment surgery, when interviewed in 1994, seemed unaware that such information existed. He also thought the measurements irrelevant, arguing that for females "overall appearance" counts rather than size.[63] Thus, 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.[64] Physicians' ideas about the appropriate size and look of female genitals thus sometimes leads to unnecessary and sexually damaging genital surgery.[65]

Consider, for example, infants whose genitalia lie in that phallic limbo: bigger than 0.85 but smaller than 2.0 centimeters long (see figure 3.4). A

ideas about female sexuality and, consequently, their notions of appropriate surgical treatment for female-intersex babies (see table 3.3). In the early days of surgical treatment, doctors performed complete clitorectomies on children assigned to be females (the procedure is illustrated in figure 3.5), reasoning that female orgasm was vaginal rather than clitoral.[66]

During the 1960s, physicians slowly began to acknowledge the clitoral basis of female orgasm, although even today some surgeons maintain that the clitoris is unnecessary for female orgasm.[67] In the sixties, then, physicians turned to the procedures still used in some form today. In the operation known as a clitoral reduction, the surgeon cuts the shaft of the elongated phallus and sews the glans plus preserved nerves back onto the stump (figure 3.6). In the less frequently used clitoral recession, the surgeon hides the clitoral shaft (referred to by one group of surgeons as "the offending shaft") under a fold of skin so that only the glans remains visible (figure 3.7). Depending upon their anatomy at birth, some female-assigned children face additional surgery: vaginal construction or expansion and labio-scrotal reduction.

Intersex children assigned to become boys also face extensive surgery. There are over 300 surgical "treatments" described in the medical literature for hypospadias, the opening of the urethra at some point along the shaft



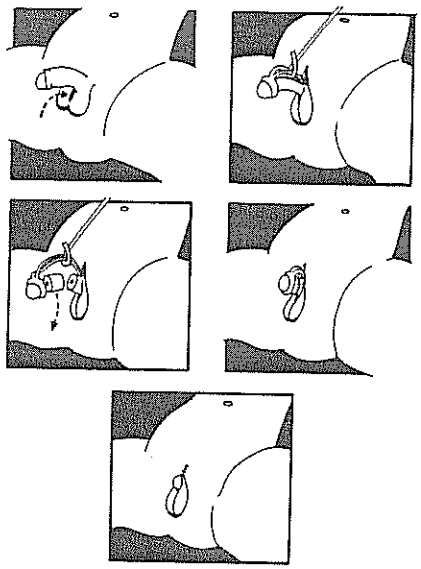


FIGURE 3.6: Reducing the clitoris (clitoral reduction).
(Source: Alyce Santoro, for the author)

the penis rather than at its tip (necessitating that the child urinate sitting down). Some of these operations address penile chordee, the binding of the penis to the body by tissue, which causes it to curve and have difficulty becoming erect—a condition that often results from intersexual development.[69] Except for the most minor forms of hypospadias all involve extensive suturing and, on occasion, skin transplants. A male-assigned child may receive as many as three operations on the penis during the first couple of years of life, and even more by the time puberty hits. In the most severe cases, multiple operations can lead to densely scarred and immobile penises, a situation one physician has dubbed "hypospadias cripple."[70]

No consensus has formed about which technique consistently results in the lowest complication rates and necessitates the fewest operations. The enormous surgical literature on hypospadias is inconclusive. Every year dozens of new papers appear describing new surgical techniques, each supposed to give better results than the dozens of preceding techniques.[71] Many of the surgical reports focus on special techniques for what the surgeons call "secondary operations"—that is, surgery designed to repair previously failed surgeries.[72]

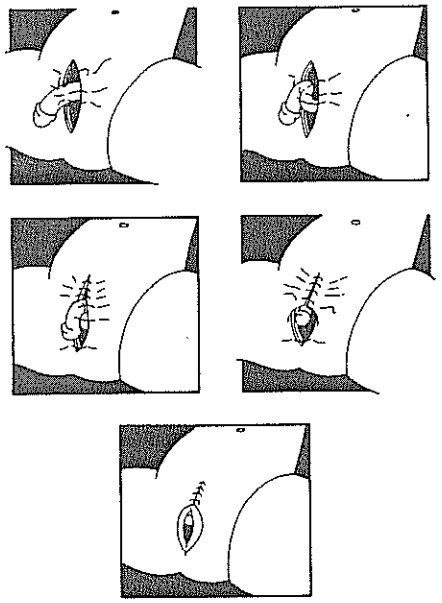


FIGURE 3.7: Hiding the clitoris (clitoral recession).
(Source: Alyce Santoro, for the author)

view of the literature also suggests that surgeons take particular pleasure in pioneering new approaches to penile repair. Even medical professionals have remarked on this obsession with penis-building. As one prominent urologist who has a technique for hypospadias named after himself writes: "Each hypospadias surgeon has his fetishes."[73]

THE PSYCHOLOGICAL FIX

Although influential researchers such as John Money and John and Joan Hampson believed that gender identity formation during early childhood is extraordinarily malleable, they also thought that gender ambiguity later in life was pathological. How, then, was an intersex infant to make the transition from the open-ended possibilities present at birth to the fixed gender identity the medical establishment deemed necessary for psychological health? Because a child's psychological schema developed in concert with his or her body image, Money and the Hampsons insisted, early genital surgery was imperative. A child's body parts had to match his or her assigned sex. While such anatomical clarity was important for the young child,[74] Money, the Hamp-