The birth of intersexed infants, babies born with genitals that are neither clearly male nor clearly female, has been documented throughout recorded time.1 In the late twentieth century, medical technology has advanced to allow scientists to determine chromosomal and hormonal gender, which is typically taken to be the real, natural, biological gender, usually referred to as “sex.”2 Nevertheless, physicians who handle the cases of intersexed infants consider several factors beside biological ones in determining, assigning, and announcing the gender of a particular infant. Indeed, biological factors are often preempted in their deliberations by such cultural factors as the “correct” length of the penis and capacity of the vagina.

I want to thank my student Jane Weider for skillfully conducting and transcribing the interviews for this article.


In the literature of intersexuality, issues such as announcing a baby’s gender at the time of delivery, postdelivery discussions with the parents, and consultations with patients in adolescence are considered only peripherally to the central medical issues—etiology, diagnosis, and surgical procedures. Yet members of medical teams have standard practices for managing intersexuality that rely ultimately on cultural understandings of gender. The process and guidelines by which decisions about gender (re)construction are made reveal the model for the social construction of gender generally. Moreover, in the face of apparently incontrovertible evidence—infants born with some combination of “female” and “male” reproductive and sexual features—physicians hold an incorrigible belief in and insistence upon female and male as the only “natural” options. This paradox highlights and calls into question the idea that female and male are biological givens compelling a culture of two genders.

Ideally, to undertake an extensive study of intersexed infant case management, I would like to have had direct access to particular events, for example, the deliveries of intersexed infants and the initial discussions among physicians, between physicians and parents, between parents, and among parents and family and friends of intersexed infants. The rarity with which intersexuality occurs, however, made this unfeasible. Alternatively, physicians who have had considerable experience in dealing with this condition were interviewed. I do not assume that their “talk” about how they manage such cases mirrors their “talk” in the situation, but their words do reveal that they have certain assumptions about gender and that they impose those assumptions via their medical decisions on the patients they treat.

Interviews were conducted with six medical experts (three women and three men) in the field of pediatric intersexuality: one


4 It is impossible to get accurate statistics on the frequency of intersexuality. Chromosomal abnormalities (like XOXX or XXXY) are registered, but those conditions do not always imply ambiguous genitals, and most cases of ambiguous genitals do not involve chromosomal abnormalities. None of the physicians interviewed for this study would venture a guess on frequency rates, but all agreed that intersexuality is rare. One physician suggested that the average obstetrician may see only two cases in twenty years. Another estimated that a specialist may see only one a year, or possibly as many as five a year.
clinical geneticist, three endocrinologists (two of them pediatric specialists), one psychoendocrinologist, and one urologist. All of them have had extensive clinical experience with various intersexed syndromes, and some are internationally known researchers in the field of intersexuality. They were selected on the basis of their prominence in the field and their representation of four different medical centers in New York City. Although they know one another, they do not collaborate on research and are not part of the same management team. All were interviewed in the spring of 1985, in their offices, and interviews lasted between forty-five minutes and one hour. Unless further referenced, all quotations in this article are from these interviews.

The theory of intersexuality management

The sophistication of today’s medical technology has led to an extensive compilation of various intersex categories based on the various causes of malformed genitals. The “true intersexed” condition, where both ovarian and testicular tissue are present in either the same gonad or in opposite gonads, accounts for fewer than 5 percent of all cases of ambiguous genitals. More commonly, the infant has either ovaries or testes, but the genitals are ambiguous. If the infant has two ovaries, the condition is referred to as female pseudohermaphroditism. If the infant has two testes, the condition is referred to as male pseudohermaphroditism. There are numerous causes of both forms of pseudohermaphroditism, and although there are life-threatening aspects to some of these conditions, having ambiguous genitals per se is not harmful to the infant’s health. Although most cases of ambiguous genitals do not represent true intersex, in keeping with the contemporary literature, I will refer to all such cases as intersexed.

Current attitudes toward the intersex condition are primarily influenced by three factors. First are the extraordinary advance-


6 For example, infants whose intersexuality is caused by congenital adrenal hyperplasia can develop severe electrolyte disturbances unless the condition is controlled by cortisone treatments. Intersexed infants whose condition is caused by androgen insensitivity are in danger of malignant degeneration of the testes unless they are removed. For a complete catalog of clinical syndromes related to the intersexed condition, see Arye Lev-Ran, “Sex Reversal as Related to Clinical Syndromes in Human Beings,” in Handbook of Sexology II: Genetics, Hormones and Behavior, ed. John Money and H. Musaph (New York: Elsevier, 1978), 157–73.
ments in surgical techniques and endocrinology in the last decade. For example, female genitals can now be constructed to be indistinguishable in appearance from normal natural ones. Some abnormally small penises can be enlarged with the exogenous application of hormones, although surgical skills are not sufficiently advanced to construct a normal-looking and functioning penis out of other tissue. Second, in the contemporary United States the influence of the feminist movement has called into question the valuation of women according to strictly reproductive functions, and the presence or absence of functional gonads is no longer the only or the definitive criterion for gender assignment. Third, contemporary psychological theorists have begun to focus on "gender identity" (one's sense of oneself as belonging to the female or male category) as distinct from "gender role" (cultural expectations of one's behavior as "appropriate" for a female or male). The relevance of this new gender identity theory for rethinking cases of ambiguous genitals is that gender must be assigned as early as possible in order for gender identity to develop successfully. As a result of these three factors, intersexuality is now considered a treatable condition of the genitals, one that needs to be resolved expeditiously.

According to all of the specialists interviewed, management of intersexed cases is based upon the theory of gender proposed first by John Money, J. G. Hampson, and J. L. Hampson in 1955 and developed in 1972 by Money and Anke A. Ehrhardt, which argues that gender identity is changeable until approximately eighteen years old.

Much of the surgical experimentation in this area has been accomplished by urologists who are trying to create penises for female-to-male transsexuals. Although there have been some advancements in recent years in the ability to create a "reasonable-looking" penis from tissue taken elsewhere on the body, the complicated requirements of the organ (both urinary and sexual functioning) have posed surgical problems. It may be, however, that the concerns of the urologists are not identical to the concerns of the patients. While data are not yet available from the intersexed, we know that female-to-male transsexuals place greater emphasis on the "public" requirements of the penis (e.g., being able to look normal while standing at the urinal or wearing a bathing suit) than on its functional requirements (e.g., being able to carry urine or achieve an erection) (Kessler and McKenna, 128–32). As surgical techniques improve, female-to-male transsexuals (and intersexed males) might increase their demands for organs that look and function better.

Historically, psychology has tended to blur the distinction between the two by equating a person's acceptance of her or his genitals with gender role and ignoring gender identity. For example, Freudian theory posited that if one had a penis and accepted its reality, then masculine gender role behavior would naturally follow (Sigmund Freud, "Some Psychical Consequences of the Anatomical Distinctions between the Sexes" [1925], vol. 18 of The Complete Psychological Works, ed. and trans. J. Strachey [New York: Norton, 1976]).
months of age.9 "To use the Pygmalion allegory, one may begin with the same clay and fashion a god or a goddess."10 The theory rests on satisfying several conditions: 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. If these conditions are met, the theory proposes, the intersexed child will develop a gender identity in accordance with the gender assignment (regardless of the chromosomal gender) and will not question her or his assignment and request reassignment at a later age.

Supportive evidence for Money and Ehrhardt's theory is based on only a handful of repeatedly cited cases, but it has been accepted because of the prestige of the theoreticians and its resonance with contemporary ideas about gender, children, psychology, and medi-

9 Almost all of the published literature on intersexed infant case management has been written or cowritten by one researcher, John Money, professor of medical psychology and professor of pediatrics, emeritus, at the Johns Hopkins University and Hospital, where he is director of the Psychohormonal Research Unit. Even the publications that are produced independently of Money reference him and reiterate his management philosophy. Although only one of the physicians interviewed publishes with Money, all of them essentially concur with his views and give the impression of a consensus that is rarely encountered in science. The one physician who raised some questions about Money's philosophy and the gender theory on which it is based has extensive experience with intersexuality in a nonindustrialized culture where the infant is managed differently with no apparent harm to gender development. Even though psychologists fiercely argue issues of gender identity and gender role development, doctors who treat intersexed infants seem untouched by these debates. There are no renegade voices either from within the medical establishment or, thus far, from outside. Why Money has been so single-handedly influential in promoting his ideas about gender is a question worthy of a separate substantial analysis. His management philosophy is conveyed in the following sources: John Money, J. G. Hampson, and J. L. Hampson, "Hermaphroditism: Recommendations concerning Assignment of Sex, Change of Sex, and Psychologic Management," *Bulletin of the Johns Hopkins Hospital* 97 (1955): 284–300; John Money, Reynolds Potter, and Clarice S. Stoll, "Sex Reannunciation in Hereditary Sex Deformity: Psychology and Sociology of Habilitation," *Social Science and Medicine* 3 (1969): 207–16; John Money and Anke A. Ehrhardt, *Man and Woman, Boy and Girl* (Baltimore: Johns Hopkins University Press, 1972); John Money, "Psychologic Consideration of Sex Assignment in Intersexuality," *Clinics in Plastic Surgery* 1 (April 1974): 215–22, "Psychological Counseling: Hermaphroditism," in *Endocrine and Genetic Diseases of Childhood and Adolescence*, ed. L. I. Gardner (Philadelphia: Saunders, 1975): 609–18, and "Birth Defect of the Sex Organs: Telling the Parents and the Patient," *British Journal of Sexual Medicine* 10 (March 1983): 14; John Money et al., "Micropenis, Family Mental Health, and Neonatal Management: A Report on Fourteen Patients Reared as Girls," *Journal of Preventive Psychiatry* 1, no. 1 (1981): 17–27.

10 Money and Ehrhardt, 152.
cine. Gender and children are malleable; psychology and medicine are the tools used to transform them. This theory is so strongly endorsed that it has taken on the character of gospel. "I think we [physicians] have been raised in the Money theory," one endocrinologist said. Another claimed, "We always approach the problem in a similar way and it's been dictated, to a large extent, by the work of John Money and Anke Ehrhardt because they are the only people who have published, at least in medical literature, any data, any guidelines." It is provocative that this physician immediately followed this assertion with: "And I don't know how effective it really is." Contradictory data are rarely cited in reviews of the literature, were not mentioned by any of the physicians interviewed, and have not diminished these physicians' belief in the theory's validity.\(^\text{11}\)

The doctors interviewed concur with the argument that gender be assigned immediately, decisively, and irreversibly, and that professional opinions be presented in a clear and unambiguous way. The psychoendocrinologist said that when doctors make a statement about the infant, they should "stick to it." The urologist said, "If you make a statement that later has to be disclaimed or discredited, you've weakened your credibility." A gender assignment made decisively, unambiguously, and irrevocably contributes, I believe, to the general impression that the infant's true, natural "sex" has been discovered, and that something that was there all along has been found. It also serves to maintain the credibility of the medical profession, reassure the parents, and reflexively substantiate Money and Ehrhardt's theory.

Also according to the theory, if operative correction is necessary, it should take place as soon as possible. If the infant is assigned the male gender, the initial stage of penis repair is usually undertaken in the first year, and further surgery is completed before the child enters school. If the infant is assigned the female gender, vulva repair (including clitoral reduction) is usually begun by three months of age. Money suggests that if reduction of phallic tissue were delayed beyond the neonatal period, the infant would have traumatic memories of having been castrated.\(^\text{12}\) Vaginoplasty, in those females having an adequate internal structure (e.g., the vaginal canal is near its expected location), is done between the ages of one and four years. Girls who require more complicated surgical procedures might not be surgically corrected until

\(^{11}\) Contradictory data are presented in Milton Diamond, "Sexual Identity, Monozygotic Twins Reared in Discordant Sex Roles and a BBC Follow-up," *Archives of Sexual Behavior* 11, no. 2 (1982): 181–86.

\(^{12}\) Money, "Psychologic Consideration of Sex Assignment in Intersexuality."
preadolescence.\textsuperscript{13} The complete vaginal canal is typically constructed only when the body is fully grown, following pubertal feminization with estrogen, although more recently some specialists have claimed surgical success with vaginal construction in the early childhood years.\textsuperscript{14} Although physicians speculate about the possible trauma of an early childhood “castration” memory, there is no corresponding concern that vaginal reconstructive surgery delayed beyond the neonatal period is traumatic.

Even though gender identity theory places the critical age limit for gender reassignment between eighteen months and two years, the physicians acknowledge that diagnosis, gender assignment, and genital reconstruction cannot be delayed for as long as two years, since a clear gender assignment and correctly formed genitals will determine the kind of interactions parents will have with the child.\textsuperscript{15} The geneticist argued that when parents “change a diaper and see genitalia that don’t mean much in terms of gender assignment, I think it prolongs the negative response to the baby. . . . If you have clitoral enlargement that is so extraordinary that the parents can’t distinguish between male and female, it is sometimes helpful to reduce that somewhat so that the parent views the child as female.” Another physician concurred: parents “need to go home and do their job as child rearers with it very clear whether it’s a boy or a girl.”

**Diagnosis**

A premature gender announcement by an obstetrician, prior to a close examination of an infant’s genitals, can be problematic. Money and his colleagues claim that the primary complications in case management of intersexed infants can be traced to mishandling by medical personnel untrained in sexology.\textsuperscript{16} According to one of the pediatric endocrinologists interviewed, obstetricians improperly educated about intersexed conditions “don’t examine the babies closely enough at birth and say things just by looking, before separating legs and looking at everything, and jump to

\textsuperscript{13} Castro-Magana, Angulo, and Colliipp (n. 5 above).


\textsuperscript{16} Money et al. (n. 9 above).
conclusions, because 99 percent of the time it's correct. . . . People get upset, physicians I mean. And they say things that are inappropri- 
ate.” For example, he said that an inexperienced obstetrician might blurt out, “I think you have a boy, or no, maybe you have a girl.” Other inappropriate remarks a doctor might make in postde-
livery consultation with the parents include, “You have a little boy, but he’ll never function as a little boy, so you better raise him as a little girl.” As a result, said the pediatric endocrinologist, “the family comes away with the idea that they have a little boy, and that’s what they wanted, and that’s what they’re going to get.” In such cases parents sometimes insist that the child be raised male despite the physician’s instructions to the contrary. “People have in mind certain things they’ve heard, that this is a boy, and they’re not likely to forget that, or they’re not likely to let it go easily.” The urologist agreed that the first gender attribution is critical: “Once it’s been announced, you’ve got a big problem on your hands.” “One of the worst things is to allow [the parents] to go ahead and give a name and tell everyone, and it turns out the child has to be raised in the opposite sex.”

Physicians feel that the mismanagement of such cases requires careful remedying. The psychoendocrinologist asserted, “When I’m involved, I spend hours with the parents to explain to them what has happened and how a mistake like that could be made, or not really a mistake but a different decision” (my emphasis). One pediatric endocrinologist said, “[I] try to dissuade them from previous misconceptions, and say, ‘Well, I know what they meant, but the way they said it confused you. This is, I think, a better way to think about it.’” These statements reveal physicians’ efforts not only to protect parents from concluding that their child is neither male nor female but also to protect other physicians’ decision-making processes. Case management involves perpetuating the notion that good medical decisions are based on interpretations of the infant’s real “sex” rather than on cultural understandings of gender.

“Mismanagements” are less likely to occur in communities with major medical centers, where specialists are prepared to deal with intersexuality and a medical team (perhaps drawing physicians from more than one teaching hospital) is quickly assembled. The team typically consists of the original referring doctor (obstetrician

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17 There is evidence from other kinds of sources that once a gender attribution is made, all further information buttresses that attribution, and only the most contradictory new information will cause the original gender attribution to be questioned. See, e.g., Kessler and McKenna (n. 2 above).
or pediatrician), a pediatric endocrinologist, a pediatric surgeon (urologist or gynecologist), and a geneticist. In addition, a psychologist, psychiatrist, or psychoendocrinologist might play a role. If an infant is born with ambiguous genitals in a small community hospital, without the relevant specialists on staff, she or he is likely to be transferred to a hospital where diagnosis and treatment are available. Intersexed infants born in poor rural areas where there is less medical intervention might never be referred for genital reconstruction. Many of these children, like those born in earlier historical periods, will grow up and live through adulthood with the condition of genital ambiguity—somehow managing.

The diagnosis of intersexed conditions includes assessing the chromosomal sex and the syndrome that produced the genital ambiguity, and may include medical procedures such as cytologic screening; chromosomal analysis; assessing serum electrolytes; hormone, gonadotropin, and steroids evaluation; digital examination; and radiographic genitography. In any intersexed condition, if the infant is determined to be a genetic female (having an XX chromosome makeup), then the treatment—genital surgery to reduce the phallus size—can proceed relatively quickly, satisfying what the doctors believe are psychological and cultural demands. For example, 21-hydroxylase deficiency, a form of female pseudohermaphroditism and one of the most common conditions, can be determined by a blood test within the first few days.

If, on the other hand, the infant is determined to have at least one Y chromosome, then surgery may be considerably delayed. A decision must be made whether to test the ability of the phallic tissue to respond to (HCG) androgen treatment, which is intended to enlarge the microphallus enough to be a penis. The endocrinologist explained, “You do HCG testing and you find out if the male can make testosterone. . . . You can get those results back probably within three weeks. . . . You’re sure the male is making testosterone—but can he respond to it? It can take three months of waiting to see whether the phallus responds.” If the Y-chromosome infant cannot make testosterone or cannot respond to the testosterone it makes, the phallus will not develop, and the Y-chromosome infant is not considered to be a male after all.

Should the infant’s phallus respond to the local application of testosterone or a brief course of intramuscular injections of low-potency androgen, the gender assignment problem is resolved, but possibly at some later cost, since the penis will not grow again at

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18 Castro-Magana, Angulo, and Collipp (n. 5 above).
puberty when the rest of the body develops. Money’s case management philosophy assumes that while it may be difficult for an adult male to have a much smaller than average penis, it is very detrimental to the morale of the young boy to have a micropenis. In the former case the male’s manliness might be at stake, but in the latter case his essential maleness might be. Although the psychological consequences of these experiences have not been empirically documented, Money and his colleagues suggest that it is wise to avoid the problems of both the micropenis in childhood and the still undersized penis postpuberty by reassigning many of these infants to the female gender. This approach suggests that for Money and his colleagues, chromosomes are less relevant in determining gender than penis size, and that, by implication, “male” is defined not by the genetic condition of having one Y and one X chromosome or by the production of sperm but by the aesthetic condition of having an appropriately sized penis.

The tests and procedures required for diagnosis (and, consequently, for gender assignment) can take several months. Although physicians are anxious not to make a premature gender assignment, their language suggests that it is difficult for them to take a completely neutral position and think and speak only of phallic tissue that belongs to an infant whose gender has not yet been determined or decided. Comments such as “seeing whether the male can respond to testosterone” imply at least a tentative male gender assignment of an XY infant. The psychoendocrinologist’s explanation to parents of their infant’s treatment program also illustrates this implicit male gender assignment. “Clearly this baby has an underdeveloped phallus. But if the phallus responds to this treatment, we are fairly confident that surgical techniques and hormonal techniques will help this child to look like a boy. But we want to make absolutely sure and use some hormone treatments and see whether the tissue reacts.” The mere fact that this doctor refers to the genitals as an “underdeveloped” phallus rather than an overdeveloped clitoris suggests that the infant has been judged to

19 Money, “Psychological Consideration of Sex Assignment in Intersexuality” (n. 9 above).
20 Technically, the term “micropenis” should be reserved for an exceptionally small but well-formed structure. A small, malformed “penis” should be referred to as a “microphallus” (Lee et al. [n. 3 above]).
21 Money et al., 26. A different view is argued by another leading gender identity theorist: “When a little boy (with an imperfect penis) knows he is a male, he creates a penis that functions symbolically the same as those of boys with normal penises” (Robert J. Stoller, Sex and Gender [New York: Aronson, 1968], 1:49).
be, at least provisionally, a male. In the case of the undersized phallus, what is ambiguous is not whether this is a penis but whether it is "good enough" to remain one. If at the end of the treatment period the phallic tissue has not responded, what had been a potential penis (referred to in the medical literature as a "clitoropenis") is now considered an enlarged clitoris (or "penocli- toris"), and reconstructive surgery is planned as for the genetic female.

The time-consuming nature of intersex diagnosis and the assumption, based on gender identity theory, that gender should be assigned as soon as possible thus present physicians with difficult dilemmas. Medical personnel are committed to discovering the etiology of the condition in order to determine the best course of treatment, which takes time. Yet they feel an urgent need to provide an immediate assignment and genitals that look and function appropriately. An immediate assignment that will need to be retracted is more problematic than a delayed assignment, since reassignment carries with it an additional set of social complications. The endocrinologist interviewed commented: "We've come very far in that we can diagnose eventually, many of the conditions. But we haven't come far enough. . . . We can't do it early enough. . . . Very frequently a decision is made before all this information is available, simply because it takes so long to make the correct diagnosis. And you cannot let a child go indefinitely, not in this society you can't. . . . There's pressure on parents [for a decision] and the parents transmit that pressure onto physicians." A pediatric endocrinologist agreed: "At times you may need to operate before a diagnosis can be made. . . . In one case parents were told to wait on the announcement while the infant was treated to see if the phallus would grow when treated with androgens. After the first month passed and there was some growth, the parents said they gave it a boy's name. They could only wait a month."

Deliberating out loud on the judiciousness of making parents wait for assignment decisions, the endocrinologist asked rhetorically, "Why do we do all these tests if in the end we're going to make the decision simply on the basis of the appearance of the genitalia?" This question suggests that the principles underlying physicians' decisions are cultural rather than biological, based on parental reaction and the medical team's perception of the infant's societal adjustment prospects given the way her/his genitals look or could be made to look. Moreover, as long as the decision rests largely on the criterion of genital appearance, and male is defined as having a "good-sized" penis, more infants will be assigned to the female gender than to the male.
The waiting period: Dealing with ambiguity

During the period of ambiguity between birth and assignment, physicians not only must evaluate the infant's prospects to be a good male but also must manage parents' uncertainty about a genderless child. Physicians advise that parents postpone announcing the gender of the infant until a gender has been explicitly assigned. They believe that parents should not feel compelled to tell other people. The clinical geneticist interviewed said that physicians “basically encourage [parents] to treat [the infant] as neuter.” One of the pediatric endocrinologists reported that in France parents confronted with this dilemma sometimes give the infant a neuter name, such as Claude or Jean. The psychoendocrinologist concurred: “If you have a truly borderline situation, and you want to make it dependent on the hormone treatment . . . then the parents are . . . told, ‘Try not to make a decision. Refer to the baby as “baby.”’ Don’t think in terms of boy or girl.’” Yet, when asked whether this is a reasonable request to make of parents in our society, the physician answered: “I don’t think so. I think parents can’t do it.”

New York State requires that a birth certificate be filled out within forty-eight hours of delivery, but the certificate need not be filed with the state for thirty days. The geneticist tells parents to insert “child of” instead of a name. In one case, parents filled out two birth registration forms, one for each gender, and they refused to sign either until a final gender assignment had been made. One of the pediatric endocrinologists claimed, “I heard a story; I don’t know if it’s true or not. There were parents of a hermaphroditic infant who told everyone they had twins, one of each gender. When the gender was determined, they said the other had died.”

The geneticist explained that when directly asked by parents what to tell others about the gender of the infant, she says, “Why don’t you just tell them that the baby is having problems and as soon as the problems are resolved we’ll get back to you.” A pediatric endocrinologist echoes this suggestion in advising parents to say, “Until the problem is solved [we] would really prefer not to discuss any of the details.” According to the urologist, “If [the gender] isn’t announced people may mutter about it and may grumble about it, but they haven’t got anything to get their teeth into and make trouble over for the child, or the parents, or whatever.” In short, parents are asked to sidestep the infant’s

gender rather than admit that the gender is unknown, thereby collaborating in a web of white lies, ellipses, and mystifications.24

Even while physicians teach the parents how to deal with others who will not find the infant’s condition comprehensible or acceptable, physicians must also make the condition comprehensible and acceptable to the parents, normalizing the intersexed condition for them. In doing so they help the parents consider the infant’s condition in the most positive way. There are four key aspects to this “normalizing” process.

First, physicians teach parents normal fetal development and explain that all fetuses have the potential to be male or female. One of the endocrinologists explains, “In the absence of maleness you have femaleness. . . . It’s really the basic design. The other [intersex] is really a variation on a theme.” This explanation presents the intersex condition as a natural phase of every fetal development. Another endocrinologist “like[s] to show picture[s] to them and explain that at a certain point in development males and females look alike and then diverge for such and such reason.” The professional literature suggests that doctors use diagrams that illustrate “nature’s principle of using the same anlagen to produce the external genital parts of the male and female.”25

Second, physicians stress the normalcy of the infant in other aspects. For example, the geneticist tells parents, “The baby is healthy, but there was a problem in the way the baby was developing.” The endocrinologist says the infant has “a mild defect, just like anything could be considered a birth defect, a mole or a hemangioma.” This language not only eases the blow to the parents but also redirects their attention. Terms like “hermaphrodite” or “abnormal” are not used. The urologist said that he advised parents

24 These evasions must have many ramifications in everyday social interactions between parents and family and friends. How people “fill in” the uncertainty so that interactions remain relatively normal is an interesting issue that warrants further study. Indeed, the whole issue of parental reaction is worthy of analysis. One of the pediatric endocrinologists interviewed acknowledged that the published literature discusses intersex management only from the physicians’ point of view. He asks. “How [do parents] experience what they’re told; and what [do] they remember . . . and carry with them?” One published exception to this neglect of the parents’ perspective is a case study comparing two couples’ different coping strategies. The first couple, although initially distressed, handled the traumatic event by regarding the abnormality as an act of God. The second couple, more educated and less religious, put their faith in medical science and expressed a need to fully understand the biochemistry of the defect (ibid.).

“about the generalization of sticking to the good things and not confusing people with something that is unnecessary.”

Third, physicians (at least initially) imply that it is not the gender of the child that is ambiguous but the genitals. They talk about “undeveloped,” “maldeveloped,” or “unfinished” organs. From a number of the physicians interviewed came the following explanations: “At a point in time the development proceeded in a different way, and sometimes the development isn’t complete and we may have some trouble . . . in determining what the actual sex is. And so we have to do a blood test to help us” (my emphasis); “The baby may be a female, which you would know after the buccal smear, but you can’t prove it yet. If so, then it’s a normal female with a different appearance. This can be surgically corrected”; “The gender of your child isn’t apparent to us at the moment”; “While this looks like a small penis, it’s actually a large clitoris. And what we’re going to do is put it back in its proper position and reduce the size of the tip of it enough so it doesn’t look funny, so it looks right.” Money and his colleagues report a case in which parents were advised to tell their friends that the reason their infant’s gender was reannounced from male to female is that “the baby was . . . ‘closed up down there’ . . . when the closed skin was divided, the female organs were revealed, and the baby discovered to be, in fact, a girl” (emphasis mine). It was mistakenly assumed to be a male at first because “there was an excess of skin on the clitoris.”

The message in these examples is that the trouble lies in the doctor’s ability to determine the gender, not in the baby’s gender per se. The real gender will presumably be determined/proven by testing, and the “bad” genitals (which are confusing the situation for everyone) will be “repaired.” The emphasis is not on the doctors creating gender but in their completing the genitals. Physicians say that they “reconstruct” the genitals rather than “construct” them. The surgeons reconstitute from remaining parts what should have been there all along. The fact that gender in an infant is “reannounced” rather than “reassigned” suggests that the first announcement was a mistake because the announcer was confused by the genitals. The gender always was what it is now seen to be.

Finally, physicians tell parents that social factors are more important in gender development than biological ones, even

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Money, Potter, and Stoll (n. 9 above), 211.

The term “reassignment” is more commonly used to describe the gender changes of those who are cognizant of their earlier gender, e.g., transsexuals—people whose gender itself was a mistake.
though they are searching for biological causes. In essence, the physicians teach the parents Money and Ehrhardt’s theory of gender development. In doing so, they shift the emphasis from the discovery of biological factors that are a sign of the “real” gender to providing the appropriate social conditions to produce the “real” gender. What remains unsaid is the apparent contradiction in the notion that a “real” or “natural” gender can be, or needs to be, produced artificially. The physician/parent discussions make it clear to family members that gender is not a biological given (even though, of course, their own procedures for diagnosis assume that it is), and that gender is fluid. The psychoendocrinologist paraphrased an explanation to parents thus: “It will depend, ultimately, on how everybody treats your child and how your child is looking as a person. . . . I can with confidence tell them that generally gender [identity] clearly agrees with the assignment.” Similarly, a pediatric endocrinologist explained: “[I] try to impress upon them that there’s an enormous amount of clinical data to support the fact that if you sex-reverse an infant . . . the majority of the time the alternative gender identity is commensurate with the socialization, the way that they’re raised, and how people view them, and that seems to be the most critical.”

The implication of these comments is that gender identity (of all children, not just those born with ambiguous genitals) is determined primarily by social factors, that the parents and community always construct the child’s gender. In the case of intersexed infants, the physicians merely provide the right genitals to go along with the socialization. Of course, at normal births, when the infant’s genitals are unambiguous, the parents are not told that the child’s gender is ultimately up to socialization. In those cases, doctors do treat gender as a biological given.

Although Money and Ehrhardt’s socialization theory is uncontested by the physicians who treat intersexuality and is presented to parents as a matter of fact, there is actually much debate among psychologists about the effect of prenatal hormones on brain structure and ultimately on gender role behavior and even on gender identity. The physicians interviewed agreed that the animal evidence for prenatal brain organization is compelling but that there is no evidence in humans that prenatal hormones have an inviolate or unilateral effect. If there is any effect of prenatal exposure to androgen, they believe it can easily be overcome and modified by psychosocial factors. It is this latter position that is communicated to the parents, not the controversy in the field. For an argument favoring prenatally organized gender differences in the brain, see Milton Diamond, “Human Sexual Development: Biological Foundations for Social Development,” in Human Sexuality in Four Perspectives, ed. Frank A. Beach (Baltimore: Johns Hopkins University Press, 1976), 22–61; for a critique of that position, see Ruth Bleier, Science and Gender: A Critique of Biology and Its Theories on Women (New York: Pergamon, 1984).
Social factors in decision making

Most of the physicians interviewed claimed that personal convictions of doctors ought to play no role in the decision-making process. The psychoendocrinologist explained: “I think the most critical factors [are] what is the possibility that this child will grow up with genitals which look like that of the assigned gender and which will ultimately function according to gender . . . That’s why it’s so important that it’s a well-established team, because [personal convictions] can’t really enter into it. It has to be what is surgically and endocrinologically possible for that baby to be able to make it . . . It’s really much more within medical criteria. I don’t think many social factors enter into it.” While this doctor eschews the importance of social factors in gender assignment, she argues forcefully that social factors are extremely important in the development of gender identity. Indeed, she implies that social factors primarily enter the picture once the infant leaves the hospital.

In fact, doctors make decisions about gender on the basis of shared cultural values that are unstated, perhaps even unconscious, and therefore considered objective rather than subjective. Money states the fundamental rule for gender assignment: “Never assign a baby to be reared, and to surgical and hormonal therapy, as a boy, unless the phallic structure, hypospadiac or otherwise, is neonatally of at least the same caliber as that of same-aged males with small-average penises.” Elsewhere, he and his colleagues provide specific measurements for what qualifies as a micropenis: “A penis is, by convention, designated as a micropenis when at birth its dimensions are three or more standard deviations below the mean. . . . When it is correspondingly reduced in diameter with corpora that are vestigial . . . it unquestionably qualifies as a micropenis.” A pediatric endocrinologist claimed that although “the [size of the] phallus is not the deciding factor . . . if the phallus is less than 2 centimeters long at birth and won’t respond to androgen treatments, then it’s made into a female.”

These guidelines are clear, but they focus on only one physical feature, one that is distinctly imbued with cultural meaning. This becomes especially apparent in the case of an XX infant with normal female reproductive gonads and a perfect penis. Would the size and shape of the penis, in this case, be the deciding factor in assigning the infant “male,” or would the perfect penis be surgically destroyed and female genitals created? Money notes that this

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29 Money, “Psychological Counseling: Hermaphroditism” (n. 9 above), 610.
30 Money et al. (n. 9 above), 18.
dilemma would be complicated by the anticipated reaction of the parents to seeing "their apparent son lose his penis." Other researchers concur that parents are likely to want to raise a child with a normal-shaped penis (regardless of size) as "male," particularly if the scrotal area looks normal and if the parents have had no experience with intersexuality. Elsewhere Money argues in favor of not neonatally amputating the penis of XX infants, since fetal masculinization of brain structures would predispose them "almost invariably [to] develop behaviorally as tomboys, even when reared as girls." This reasoning implies, first, that tomboyish behavior in girls is bad and should be avoided; and, second, that it is preferable to remove the internal female organs, implant prosthetic testes, and regulate the "boy's" hormones for his entire life than to overlook or disregard the perfection of the penis.

The ultimate proof to these physicians that they intervened appropriately and gave the intersexed infant the correct gender assignment is that the reconstructed genitals look normal and function normally once the patient reaches adulthood. The vulva, labia, and clitoris should appear ordinary to the woman and her partner(s), and the vagina should be able to receive a normal-sized penis. Similarly, the man and his partner(s) should feel that his penis (even if somewhat smaller than the norm) looks and functions in an unremarkable way. Although there is no reported data on how much emphasis the intersexed person, him- or herself, places upon genital appearance and functioning, the physicians are absolutely clear about what they believe is important. The clinical geneticist said, "If you have . . . a seventeen-year-old young lady who has gotten hormone therapy and has breast development and pubic hair and no vaginal opening, I can't even entertain the notion that this

32 Mojtaba Besheshti et al., "Gender Assignment in Male Pseudohermaphrodite Children," Urology (December 1983): 604–7. Of course, if the penis looked normal and the empty scrotum were overlooked, it might not be discovered until puberty that the male child was XX, with a female internal structure.
33 John Money, "Psychologic Consideration of Sex Assignment in Intersexuality" (n. 9 above), 216.
34 Weighing the probability of achieving a perfect penis against the probable trauma such procedures might involve is another social factor in decision making. According to an endocrinologist interviewed, if it seemed that an XY infant with an inadequate penis would require as many as ten genital operations over a six-year period in order to have an adequate penis, the infant would be assigned the female gender. In this case, the endocrinologist's practical and compassionate concern would override purely genital criteria.
young lady wouldn’t want to have corrective surgery.” The urologist summarized his criteria: “Happiness is the biggest factor. Anatomy is part of happiness.” Money states, “The primary deficit [of not having a sufficient penis]—and destroyer of morale—lies in being unable to satisfy the partner.” Another team of clinicians reveals their phallocentrism, arguing that the most serious mistake in gender assignment is to create “an individual unable to engage in genital [heterosexual] sex.”

The equation of gender with genitals could only have emerged in an age when medical science can create credible-appearing and functioning genitals, and an emphasis on the good phallus above all else could only have emerged in a culture that has rigid aesthetic and performance criteria for what constitutes maleness. The formulation “good penis equals male; absence of good penis equals female” is treated in the literature and by the physicians interviewed as an objective criterion, operative in all cases. There is a striking lack of attention to the size and shape requirements of the female genitals, other than that the vagina be able to receive a penis.

In the late nineteenth century when women’s reproductive function was culturally designated as their essential characteristic, the presence or absence of ovaries (whether or not they were fertile) was held to be the ultimate criterion of gender assignment for hermaphrodites. The urologist interviewed recalled a case as late as the 1950s of a male child reassigned to “female” at the age of four or five because ovaries had been discovered. Nevertheless, doctors today, schooled in the etiology and treatment of the various intersex syndromes, view decisions based primarily on gonads as wrong, although, they complain, the conviction that the gonads are the ultimate criterion “still dictates the decisions of the uneducated and uninformed.”

Presumably, the educated and informed now know that decisions based primarily on phallic size, shape, and sexual capacity are right.

Money, “Psychologic Consideration of Sex Assignment in Intersexuality,” 217.

Castro-Magana, Angulo, and Collipp (n. 5 above), 180.

It is unclear how much of this bias is the result of a general, cultural devaluation of the female and how much the result of physicians’ greater facility in constructing aesthetically correct and sexually functional female genitals.

Money, “Psychologic Consideration of Sex Assignment in Intersexuality,” 215.

Remnants of this anachronistic view can still be found, however, when doctors justify the removal of contradictory gonads on the grounds that they are typically sterile or at risk for malignancy (J. Dewhurst and D. B. Grant, “Intersex Problems,” Archives of Disease in Childhood 59 [July–December 1984]: 1191–94). Presumably, if the gonads were functional and healthy their removal would provide an ethical dilemma for at least some medical professionals.
While the prospect of constructing good genitals is the primary consideration in physicians’ gender assignments, another extram­edical factor was repeatedly cited by the six physicians interviewed—the specialty of the attending physician. Although generally intersexed infants are treated by teams of specialists, only the person who coordinates the team is actually responsible for the case. This person, acknowledged by the other physicians as having chief responsibility, acts as spokesperson to the parents. Although all of the physicians claimed that these medical teams work smoothly with few discrepancies of opinion, several of them mentioned decision-making orientations that are grounded in particular medical specializations. One endocrinologist stated, “The easiest route to take, where there is ever any question . . . is to raise the child as female . . . . In this country that is usual if the infant falls into the hands of a pediatric endocrinologist . . . . If the decision is made by the urologists, who are mostly males, . . . they’re always opting, because they do the surgery, they’re always feeling they can correct anything.” Another endocrinologist concurred: “[Most urologists] don’t think in terms of dynamic processes. They’re interested in fixing pipes and lengthening pipes, and not dealing with hormonal, and certainly not psychological issues . . . . ‘What can I do with what I’ve got.’ ” Urologists were defended by the clinical geneticist: “Surgeons here, now I can’t speak for elsewhere, they don’t get into a situation where the child is a year old and they can’t make anything.” Whether or not urologists “like to make boys,” as one endocrinologist claimed, the following example from a urologist who was interviewed explicitly links a cultural interpretation of masculinity to the medical treatment plan. The case involved an adolescent who had been assigned the female gender at birth but was developing some male pubertal signs and wanted to be a boy. “He was ill-equipped,” said the urologist, “yet we made a very respectable male out of him. He now owns a huge construction business—those big cranes that put stuff up on the building.”

**Postinfancy case management**

After the infant’s gender has been assigned, parents generally latch onto the assignment as the solution to the problem—and it is. The physician as detective has collected the evidence, as lawyer has presented the case, and as judge has rendered a verdict. Although most of the interviewees claimed that the parents are equal participants in the whole process, they gave no instances of parental
participation prior to the gender assignment. After the physicians assign the infant's gender, the parents are encouraged to establish the credibility of that gender publicly by, for example, giving a detailed medical explanation to a leader in their community, such as a physician or pastor, who will explain the situation to curious casual acquaintances. Money argues that "medical terminology has a special layman's magic in such a context; it is final and authoritative and closes the issue." He also recommends that eventually the mother "settle [the] argument once and for all among her women friends by allowing some of them to see the baby's reconstructed genitalia." Apparently, the powerful influence of normal-looking genitals helps overcome a history of ambiguous gender.

Some of the same issues that arise in assigning gender recur some years later when, at adolescence, the child may be referred to a physician for counseling. The physician then tells the adolescent many of the same things his or her parents had been told years before, with the same language. Terms like "abnormal," "disorder," "disease," and "hermaphroditism" are avoided; the condition is normalized, and the child's gender is treated as unproblematic. One clinician explains to his patients that sex organs are different in appearance for each person, not just those who are intersexed. Furthermore, he tells the girls "that while most women menstruate, not all do . . . that conception is only one of a number of ways to become a parent; [and] that today some individuals are choosing not to become parents." The clinical geneticist tells a typical female patient: "You are female. Female is not determined by your genes. Lots of other things determine being a woman. And you are a woman but you won't be able to have babies."

A case reported by one of the pediatric endocrinologists involving an adolescent female with androgen insensitivity provides an

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39 Although one set of authors argued that the views of the parents on the most appropriate gender for their child must be taken into account (Dewhurst and Grant, 1192), the physicians interviewed denied direct knowledge of this kind of participation. They claimed that they personally had encountered few, if any, cases of parents who insisted on their child's being assigned a particular gender. Yet each had heard about cases where a family's ethnicity or religious background biased them toward males. None of the physicians recalled whether this preference for male offspring meant the parents wanted a male regardless of the "inadequacy" of the penis, or whether it meant that the parents would have greater difficulty adjusting to a less-than-perfect male than with a "normal" female.

40 Money, "Psychological Counseling: Hermaphroditism" (n. 9 above), 613.

41 As with the literature on infancy, most of the published material on adolescents is on surgical and hormonal management rather than on social management. See, e.g., Joel J. Roslyn, Eric W. Fonkalsrud, and Barbara Lippe, "Intersex Disorders in Adolescents and Adults," American Journal of Surgery 146 (July 1983): 138-44.

42 Mazur (n. 25 above), 421.
intriguing insight into the postinfancy gender-management process. She was told at the age of fourteen “that her ovaries weren’t normal and had been removed. That’s why she needed pills to look normal. . . . I wanted to convince her of her femininity. Then I told her she could marry and have normal sexual relations . . . [her] uterus won’t develop but [she] could adopt children.” The urologist interviewed was asked to comment on this handling of the counseling. “It sounds like a very good solution to it. He’s stating the truth, and if you don’t state the truth . . . then you’re in trouble later.” This is a strange version of “the truth,” however, since the adolescent was chromosomally XY and was born with normal testes that produced normal quantities of androgen. There were no existing ovaries or uterus to be abnormal. Another pediatric endocrinologist, in commenting on the management of this case, hedged the issue by saying that he would have used a generic term like “the gonads.” A third endocrinologist said she would say that the uterus had never formed.

Technically these physicians are lying when, for example, they explain to an adolescent XY female with an intersexed history that her “ovaries . . . had to be removed because they were unhealthy or were producing ‘the wrong balance of hormones.’ ”43 We can presume that these lies are told in the service of what the physicians consider a greater good—keeping individual/concrete genders as clear and uncontaminated as the notions of female and male are in the abstract. The clinician suggests that with some female patients it eventually may be possible to talk to them “about their gonads having some structures and features that are testicular-like.”44 This call for honesty might be based at least partly on the possibility of the child’s discovering his or her chromosomal sex inadvertently from a buccal smear taken in a high school biology class. Today’s litigious climate is possibly another encouragement.

In sum, the adolescent is typically told that certain internal organs did not form because of an endocrinological defect, not because those organs could never have developed in someone with her or his sex chromosomes. The topic of chromosomes is skirted. There are no published studies on how these adolescents experience their condition and their treatment by doctors. An endocrinologist interviewed mentioned that her adolescent patients rarely ask specifically what is wrong with them, suggesting that they are accomplices in this evasion. In spite of the “truth” having been evaded, the clinician’s impression is that “their gender identities and general senses of well-being and self-esteem appear not to have suffered.”45

42 Dewhurst and Grant, 1193.
44 Mazur, 422.
45 Ibid.
Conclusion

Physicians conduct careful examinations of intersexed infants' genitals and perform intricate laboratory procedures. They are interpreters of the body, trained and committed to uncovering the "actual" gender obscured by ambiguous genitals. Yet they also have considerable leeway in assigning gender, and their decisions are influenced by cultural as well as medical factors. What is the relationship between the physician as discoverer and the physician as determiner of gender? Where is the relative emphasis placed in discussions with parents and adolescents and in the consciousness of physicians? It is misleading to characterize the doctors whose words are provided here as presenting themselves publicly to the parents as discoverers of the infant's real gender but privately acknowledging that the infant has no real gender other than the one being determined or constructed by the medical professionals. They are not hypocritical. It is also misleading to claim that physicians' focus shifts from discovery to determination over the course of treatment: first the doctors regard the infant's gender as an unknown but discoverable reality; then the doctors relinquish their attempts to find the real gender and treat the infant's gender as something they must construct. They are not medically incompetent or deficient. Instead, I am arguing that the peculiar balance of discovery and determination throughout treatment permits physicians to handle very problematic cases of gender in the most unproblematic of ways.

This balance relies fundamentally on a particular conception of the "natural." Although the deformity of intersexed genitals would be immutable were it not for medical interference, physicians do not consider it natural. Instead they think of, and speak of, the surgical/hormonal alteration of such deformities as natural because such intervention returns the body to what it "ought to have been" if events had taken their typical course. The nonnormative is converted into the normative, and the normative state is considered natural. The genital ambiguity is remedied to conform to a "natural," that is, culturally indisputable, gender dichotomy. Sherry Ortner's claim that the culture/nature distinction is itself a


47 This supports sociologist Harold Garfinkel's argument that we treat routine events as our due as social members and that we treat gender, like all normal forms, as a moral imperative. It is no wonder, then, that physicians conceptualize what they are doing as natural and unquestionably "right" (Harold Garfinkel, Studies in Ethnomethodology [Englewood Cliffs, N.J.: Prentice Hall, 1967]).
construction—a product of culture—is relevant here. Language and imagery help create and maintain a specific view of what is natural about the two genders and, I would argue, about the very idea of gender—that it consists of two exclusive types: female and male. The belief that gender consists of two exclusive types is maintained and perpetuated by the medical community in the face of incontrovertible physical evidence that this is not mandated by biology.

The lay conception of human anatomy and physiology assumes a concordance among clearly dimorphic gender markers—chromosomes, genitals, gonads, hormones—but physicians understand that concordance and dimorphism do not always exist. Their understanding of biology's complexity, however, does not inform their understanding of gender's complexity. In order for intersexuality to be managed differently than it currently is, physicians would have to take seriously Money's assertion that it is a misrepresentation of epistemology to consider any cell in the body authentically male or female. If authenticity for gender resides not in a discoverable nature but in someone's proclamation, then the power to proclaim something else is available. If physicians recognized that implicit in their management of gender is the notion that finally, and always, people construct gender as well as the social systems that are grounded in gender-based concepts, the possibilities for real societal transformations would be unlimited. Unfortunately, neither in their representations to the families of the intersexed nor among themselves do the physicians interviewed for this study draw such far-reaching implications from their work. Their "understanding" that particular genders are medically (re)constructed in these cases does not lead them to see that gender is always constructed. Accepting genital ambiguity as a natural option would require that physicians also acknowledge that genital ambiguity is "corrected" not because it is threatening to the infant's life but because it is threatening to the infant's culture.

Rather than admit to their role in perpetuating gender, physicians "psychologize" the issue by talking about the parents' anxiety and humiliation in being confronted with an anomalous infant. The physicians talk as though they have no choice but to respond to the parents' pressure for a resolution of psychological discomfort, and as though they have no choice but to use medical technology in the service of a two-gender culture. Neither the psychology nor the technology is doubted, since both shield physicians from respon-


49. Money, "Psychological Counseling: Hermaphroditism" (n. 9 above), 618.
sibility. Indeed, for the most part, neither physicians nor parents emerge from the experience of intersex case management with a greater understanding of the social construction of gender. Society's accountability, like their own, is masked by the assumption that gender is a given. Thus, cases of intersexuality, instead of illustrating nature's failure to ordain gender in these isolated "unfortunate" instances, illustrate physicians' and Western society's failure of imagination—the failure to imagine that each of these management decisions is a moment when a specific instance of biological "sex" is transformed into a culturally constructed gender.

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