

## ESSAY REVIEW

# The Sex/Gender Perplex

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Alice Domurat Dreger, *Hermaphrodites and the Medical Invention of Sex* (Cambridge, MA: Harvard University Press, 1998), xiii + 268 pp., IDBN 0-674-08927-8, hardback.

Suzanne J. Kessler, *Lessons from the Intersexed* (New Brunswick, NJ: Rutgers University Press, 1998), x + 193 pp., ISBN 0-8135-2530-6, paperback.

Over the last few decades, the relation between social expression of masculinity and femininity and their physical underpinnings have been hotly debated in scientific and social arenas.<sup>1</sup> In 1972 sexologists John Money and Anke Ehrhardt popularized their idea that sex and gender were separate categories. Sex, they argued, referred to physical attributes and was anatomically and physiologically determined. Gender they saw as a psychological transformation of the self<sup>2</sup>—the internal conviction that one was either male or female (gender identity), and the behavioral expressions of that conviction.<sup>3</sup>

Meanwhile, second-wave feminists also argued that sex was distinct from gen-

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<sup>1</sup>This review is based on material from my new book: *Sexing the Body: Gender Politics and the Construction of Human Sexuality* (New York: Basic Books, 2000).

<sup>2</sup>'[G]ender role: everything that a person says and does, to indicate to others or to the self the degree that one is either male, or female, or ambivalent . . .' (Money and Ehrhardt, 1972, p. 4).

<sup>3</sup>'Gender Identity: The sameness, unity, and persistence of one's individuality as male, female, or ambivalent . . . Gender identity is the private experience of gender role, and gender role is the public experience of gender identity' (Money and Ehrhardt, 1972, p. 4). For a discussion of Money's separation of 'sex' from 'gender' see Hausman (1995). Money and Ehrhardt distinguish between chromosomal sex, fetal gonadal sex, fetal hormonal sex, genital dimorphism, brain dimorphism, others' behavior, body image, juvenile gender identity, pubertal hormonal sex, pubertal eroticism, pubertal morphology and adult gender identity. All of these factors work together to define a person's adult gender identity.

der. Indeed, it was social institutions, themselves designed to perpetuate gender inequality, that produced most of the differences between men and women.<sup>4</sup> Feminists argued that although men's and women's bodies served different reproductive functions, few other sex differences were inborn in the body and remained unchangeable by life's vicissitudes. If girls couldn't learn math as easily as boys, the problem wasn't built into their brains. The difficulty resulted from gender norms—different expectations and opportunities for boys and girls. Having a penis rather than a vagina was a sex difference. That boys performed better than girls on math exams was a gender difference. Presumably, the latter could be changed even if the former could not.

Money, Ehrhardt and feminists thus set the terms so that 'sex' represented the body's anatomy and physiological workings, while 'gender' represented social forces that molded behavior.<sup>5</sup> Feminists did not question the realm of physical sex; it was the psychological and cultural meanings of these differences—gender—that was at issue. Alice D. Dreger's *Hermaphrodites and the Medical Invention of Sex* and Suzanne J. Kessler's *Lessons from the Intersexed* each challenge the sex/gender distinction. Dreger discusses the medical invention of the idea of a true corporeal sex by examining how, historically, medical doctors have approached the birth of intersexuals—individuals bearing mixed anatomical signs of gender. Kessler uses the eyes of a social psychologist to examine contemporary issues arising from the medical confrontation with intersexuality (including new militant intersexual rights organizations). In this book she continues her earlier argument that there is no sex, only gender.<sup>6</sup> Each of these books is lively and well-written, appropriate both for the working scholar and for use in the classroom.

As Dreger recounts, in the late 1830s, physician James Young Simpson 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 coexist upon the body of the same individual more or fewer of the genital organs . . .'.<sup>7</sup> In Simpson's view 'genital organs', included not only ovaries or testes (i.e. 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 Dreger dubs 'The Age of Gonads'. In 1876, the German physician Theodor Albrecht Klebs awarded full definitional powers to

<sup>4</sup>See, for example, Rubin (1975). Rubin also questions the biological basis of homosexuality and heterosexuality. Note that feminist definitions of gender applied to institutions as well as personal or psychological differences.

<sup>5</sup>The sex/gender dichotomy often became a synonym for debates about nature versus nurture, or mind versus body. For a discussion of how to use debated dichotomies as an aid to better understanding the intertwining of social and scientific belief systems, see Figlio (1976).

<sup>6</sup>Kessler and McKenna (1978).

<sup>7</sup>Quoted in Dreger (1998), p. 143.

the gonads. 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 his/her body. All others with mixed anatomies—persons with both a penis and ovaries, a uterus and a mustache, or testes and a vagina—would cease to be regarded as true hermaphrodites. But if they were not hermaphrodites, what were they? Klebs believed that under each of these confusing surfaces there 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 non-functional and the person possessing them had a vagina and breasts. 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'<sup>8</sup> Medical science was working its magic: hermaphrodites began to disappear.

Once the gonads became the decisive factor, 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.<sup>9</sup> No longer could one simply examine the body's exterior, as did doctors in earlier times. Now only a microscopic examination of tissue extracted from suspect gonads could do the trick. Rapidly, the hermaphrodite's body disappeared from medical journals, replaced instead by abstract photographs of microscopic sections of gonadal tissue. Moreover, as Dreger points out, the primitive state of surgical techniques at the end of the nineteenth century meant that doctors could obtain gonadal tissue samples only after death or castration. Thus Dreger writes: 'Small in number, dead, impotent—what a sorry lot the true hermaphrodites had become!'.<sup>10</sup> People of mixed sex disappeared, not because they had become particularly rare, but because modern, scientific methods of classification had defined them out of existence.

In 1896, the British physicians George F. Blacker and William P. Lawrence wrote a paper re-examining earlier claims of true hermaphroditism. They found that only 3 out of 28 previously published case studies complied with the new microscopic standards. They thus cleansed past medical records of accounts of hermaphroditism, by claiming that they did not meet modern scientific standards.<sup>11</sup> Not only did Blacker and Lawrence erase variety from the past, they limited its appearance in the future. Few new cases met the strict criterion of microscopic verification of the presence of both male and female gonadal tissue. Under the mantle of scientific advancement—the introduction of the most modern techniques

<sup>8</sup>Dreger (1998), p. 146.

<sup>9</sup>The microscope was not new, of course, although it underwent continued improvement in the nineteenth century. Just as important was the development of techniques to slice tissues into very thin strips and to stain the tissues to make them distinct under microscopic examination (Nyhart, 1995).

<sup>10</sup>Dreger (1998), p. 150.

<sup>11</sup>For current estimates using this 'modern' system see Blackless *et al.* (2000).

available to solve a long-standing problem—the ideological work of science was imperceptible to turn-of-the-century scientists.

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. Over the course of the nineteenth century physicians became increasingly involved in arbitrating cases of sexual intermediacy.<sup>12</sup> By the dawn of the twentieth century, physicians were recognized as the chief regulators of sexual intermediacy. Although the legal standard—that there were but two sexes and that a hermaphrodite had to identify with the sex prevailing in his/her body—remained, by the 1930s medical practitioners had developed a new angle—the surgical and hormonal suppression of intersexuality.<sup>13</sup> The Age of Gonads gave way to the 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.

This task was no simple one. In the creation of biological knowledge and the practice of medicine, ideology counts for a great deal. But so, too, do bodies. By the end of the nineteenth century, physicians' commitments to the ideal of two sexes seemed to reign. But patients, troubling and troublesome patients, continued to place themselves squarely in the path of 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. He had run into dilemmas generated by the new technologies of anaesthesia and asepsis that made it possible to take small tissue samples (biopsies) from the gonads of living patients. Bell encountered a patient who had a mixture of external traits—a mustache, breasts, an elongated clitoris, 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 an actual, living and breathing true hermaphrodite, what was one to do? Bell reverted to the older legal approach, writing that 'predominating feminine characteristics have decided the sex adopted.'<sup>14</sup> 'The possession of a [single] sex is a necessity of our social order, for hermaphrodites as well as for normal subjects',<sup>15</sup> wrote Bell, but he emphasized that one need not wholly rely on the gonads to decide which sex a patient must choose. Bell did not abandon, however, the

<sup>12</sup>Dreger based her book on over 300 cases in the medical literature in Britain and France.

<sup>13</sup>The use of surgical intervention began in the nineteenth century, but only with the perfection of surgical technique, improvements in anesthesia, the development of antibiotics and a better understanding of the hormonal regulation of bodily functions, all of which came together in the period from 1930–1950, could the medical community fully establish a program of medical management of intersexuality. On the origins of endocrinology, see chapters 6 and 7 of Fausto-Sterling (2000).

<sup>14</sup>Quoted in Dreger (1998), p. 161.

<sup>15</sup>Quoted in Dreger (1998), p. 1.

concepts of true and pseudo-hermaphroditism. Indeed, most physicians practising in the late 1990s still, at the tail end of the twentieth century, take this distinction for granted.<sup>16</sup> But faced with the insistent complexity of actual living and breathing bodies and personalities, Bell urged that each case be dealt with flexibly. He advocated taking into account the many different signs presented by the body and behaviors of the intersexual patient in determining sex.

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’.<sup>17</sup> Young operated on a young man with a malformed penis,<sup>18</sup> 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?<sup>19</sup>

The young man turned out to have a testis and Young snagged the ovary. As his experience grew, Young increasingly based his judgement 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.

It is precisely the sorts of difficulties faced by Young that lead Kessler to argue that sex itself is a culturally constructed idea, and a confusing one at that. ‘There is no sex,’ she writes, ‘only gender, and what has primacy in everyday life is the gender that is performed, regardless of the flesh’s configuration under the clothes.’<sup>20</sup> To concretize Kessler’s point, consider how physicians decide whether an unusually sized phallus ought to belong to a male or a female child. If a child is to be raised as a boy, doctors insist on two functional assessments of the adequacy of phallus size. First, young boys should be able to pee standing up and thus to ‘feel normal’ when they play in little boy peeing contests; second, adult men need a penis big enough for vaginal penetration during sexual intercourse.<sup>21</sup> How big must the organ be to fulfill these central functions and thus fit the definition of ‘penis’? In one study, 100 newborn males had penises ranging in length from 2.9–

<sup>16</sup>The current taxonomy is thoroughly anachronistic. If we need to categorize, let’s have a single heading ‘intersexuality’. Subcategories would include a wide variety of individuals, those whom we now label ‘true hermaphrodites’ as well as all of those with two of a kind gonads but other features which do not match.

<sup>17</sup>Newsom (1994).

<sup>18</sup>The man suffered from hypospadias, a failure of the urethra to run to the tip of the penis. Men with hypospadias have difficulties with urination.

<sup>19</sup>Quoted in Hausman (1995), p. 80.

<sup>20</sup>Kessler (1998), p. 90.

<sup>21</sup>Lee (1994), p. 58.

4.5 cm (1.25–1.75 in).<sup>22</sup> One pediatric surgeon has expressed concern about a phallus of 2.0 cm, while one less than 1.5 cm long and 0.7 cm wide dictates a female gender assignment, regardless of chromosomes, gonads and even hormonal status.<sup>23</sup>

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 glands. Suburethral openings are often thought of as a pathology designated with the 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. If judged by the ideal of the normal penis, only 55% of the men in this study were ‘normal’<sup>24</sup>. 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, for their entire life, urinated from the wrong place! The authors of this study conclude:

Pediatric urologists should be aware of the observed ‘normal distribution’, of meatal {urethral} positions . . . since the aim of reconstructive surgery should be to restore the individual to normal. However, pure aesthetic 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.<sup>25</sup>

The decision to assign an intersex infant to the male gender is more social than medical. 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 sex, i.e. penetrate a vagina. 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 the organ does *vis-à-vis* other bodies.<sup>26</sup> Even our ideas about how large a baby’s penis ‘needs’ to be to guarantee maleness are fairly arbitrary. Perhaps unintentionally, one surgeon drove home the social nature of the decision-making process when she commented that

<sup>22</sup>Flatau *et al.* (1975); recently, standards have been published for penis size in premature infants. Does this mean we will start to see genital surgery on premature infants? See Tuladhar *et al.* (1998). The concern is that micropenis unrelated to the prematurity be recognized right away so that treatment or sex reassignment will not be delayed.

<sup>23</sup>Donahoe *et al.* (1991).

<sup>24</sup>I owe this phrase to Leonore Tiefer, who has written persuasively about the normalization of demands for certain types of sexual function. The upsurge of demand for Viagra suggests that the idealization of penile function does not reflect the norm of daily life. (Tiefer, 1994a,b).

<sup>25</sup>These authors note that there is the first study of the normal distribution of the urethral opening, which should form a basis for deciding whether hypospadias surgery is needed (Fichtner *et al.*, 1995).

<sup>26</sup>Newman *et al.* (1992), p. 646, write that what matters ‘is the presence of a . . . phallus sufficient in size to function as a male urinary conduit, to offer a satisfactory appearance when compared to peers, and to function satisfactorily for sexual activity’; see also Kupfer *et al.* (1992), esp. p. 328.

'phallus size at birth has not been reliably correlated with size and function at puberty'.<sup>27</sup> Thus doctors may choose to remove a small penis at birth and officially create a girl child, even though that penis may grow at puberty.<sup>28</sup>

Deciding whether to call a child a boy or a girl, then, employs social definitions of the essential components of gender. Such definitions, as Suzanne Kessler observes, are primarily cultural, rather than biological.<sup>29</sup> Consider, as another example of this claim, problems caused by introducing European and American medical approaches into cultures with different systems of gender. For example, 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 enzymes which 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 feminizing surgery for their child. As the reporting physicians write, 'female upbringing was resisted on social ground . . . . This was essentially an expression of local community attitudes with . . . the preference for male offspring.'<sup>30</sup>

If labelling intersex children as boys is tightly linked to cultural conceptions of the maleness and 'proper' penile function, labelling 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 children have the potential to become fertile females in adulthood. Doctors often follow the rule that reproductive function be preserved, although Kessler<sup>31</sup> reports one case of a physician choosing to reassign as male a potentially reproductive genetic female infant rather than remove a well-formed penis. 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 sub-

<sup>27</sup>Donahoe and Lee (1983), p. 233.

<sup>28</sup>Obsession with organ size is not universal. The Greeks thought the smaller penis to be more manly and sexy.

<sup>29</sup>Kessler (1998).

<sup>30</sup>Sripathi *et al.* (1997), pp. 738–787. A commentator on this example wrote: 'It has to be accepted that attitudes towards sex of rearing and in particular toward feminizing genitoplasties in late-diagnosed patients with CAH in the Middle East is going to be very different from those in Europe.' (Frank, 1997). See also Ozbey (1998) and Abdullah *et al.* (1991).

<sup>31</sup>Kessler (1990).

tracted. As one surgeon well known in this field quipped, ‘you can make a hole but you can’t build a pole.’<sup>32</sup>

As a teaching tool in their struggle to change the medical practice of infant genital surgery, members of the Intersexual Rights Movements<sup>33</sup> designed a ‘phall-o-meter’ a small ruler that depicts the permissible ranges of phallus size for males and females at birth, and a range intermediate between the two which is impermissible—too small for a boy, too large for a girl. Those in the impermissible range require surgery to render them intelligible as a penis or a clitoris. The phall-o-meter 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 down-size it,<sup>34</sup> 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 cm.<sup>35</sup> More recent studies show that clitoral length at birth ranges from 0.2 to 0.85 cm.<sup>36</sup> 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.<sup>37</sup> 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.<sup>38</sup>

Both Dreger and Kessler advocate major changes in the medical management of intersexuality. Unusually for an historical work, Dreger jumps to the present in her final chapter, to plead the case that intersexual infants be offered counselling rather than surgery. Kessler agrees that surgery can wait until the patient is old enough to make his or her own decisions—devil’s choices between losing sexual function in exchange for gaining at least partial cosmetic normality (statistically speaking). Kessler, working in the present, uses the voices of intersex patients and their parents as one of her starting points for change. ‘Genital variability’, she writes, can . . . be seen in a new way—as an expression of what is meant by female and male.<sup>39</sup>

These two works of passionate, systematically argued scholarship fuse the examination of a problem with a mandate for change. As do I, Dreger and Kessler

<sup>32</sup>Hendricks (1993), p. 15; for more on the attitudes of some surgeons see Miller (1993).

<sup>33</sup>For more on the intersexual rights movement, see the web page of the Intersex Society of North America (<http://www.isna.org>).

<sup>34</sup>See for example, the discussions of clitoral size in Kumar *et al.* (1974).

<sup>35</sup>Riley and Rosenbloom (1980).

<sup>36</sup>Oberfield *et al.* (1989); see also Sane and Pescovitz (1992).

<sup>37</sup>Lee (1994), p. 59.

<sup>38</sup>Doctors refer to such cases as ‘idiopathic clitoromegaly’, that is, the clitoris is enlarged for unknown reasons.

<sup>39</sup>See p. 131.

collaborate with intersexuals themselves to imagine a future in which the hierarchical divisions between patient and doctor, parent and child, male and female, heterosexual and homosexual, will dissolve. It is possible to envision a new ethic of medical treatment, one that permits ambiguity to thrive, rooted in a culture that has moved beyond gender hierarchies. An intersexual's major medical concerns would be potentially life threatening conditions, such as salt imbalance due to adrenal malfunction, higher frequencies of gonadal tumors, and hernias, which sometimes accompany intersex development. Medical intervention aimed at synchronizing body image and gender identity would only rarely occur before the age of reason. Such technological intervention would be a cooperative venture between physician, patient and gender advisors. As Kessler notes, the unusual genitalia of intersexuals could be considered to be 'intact' rather than 'deformed'; surgery, seen now as a creative gesture (surgeons 'create' a vagina), might be seen to be destructive (tissue is destroyed and removed), and thus to be used only when life itself is a stake.<sup>40</sup> I urge everyone to read these books. They stimulate us by moving forward on-going debates about sex and gender. And they contribute, in a way that only activist scholarship can, to contemporary social change. Last but not least, in reading these books, we learn a lot about the social nature of scientific and medical knowledge.

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<sup>40</sup>Kessler (1998), p. 40.

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