In the second chapter, "Doubtful Status," Dreger reports that some hermaphrodites were
boundaries in the early twentieth century. Dreger notes that some characteristics to body parts,
definitively assign a sex of either male or female to persons whose anatomies differ from the standard
sex by which each had been raised. Dreger contends that by the 1870s most researchers held the view that embryos begin with
the external genitalia were not fully developed masculine genitalia, or looked feminine, and such
anatomy outweighed the forty-two years she had lived as a woman. Dreger asserts that Sophie V.'s story highlights the
difficulties that arise when trying to assign a sex of either male or female to persons whose anatomies differ from the standard
combinations of attributes considered to be male, such as a penis, prostate, and testicles, or those considered to be female that
include a clitoris, uterus [10], and vagina [8]. People whose anatomical combinations did not match one of those standards were
typically classified as hermaphrodites, and after the early 1900s also came to be medically labeled as intersexual. Dreger then
outlines the chapters of the book, noting that the chapters are arranged thematically rather than chronologically.

Dreger tells of two other hermaphrodites in the first chapter, "Doubtful Sex." Their anatomies guided physicians to question the
sex by which each had been raised. Dreger contends that by the 1870s most researchers held the view that embryos begin with
the same anatomy but develop differently in utero to become either male or female fetuses. Dreger charges that many of the
men of medical and scientific profession espoused that male genitalia represented a higher level of development than did female
genitalia.

As of the end of the twentieth century, hermaphrodites were classified into three categories: true hermaphrodite, male pseudo-
hermaphrodite, or female pseudo-hermaphrodite. A true hermaphrodite was an individual who had one or more gonads that
contained testicular and ovarian attributes, or an ovotestis. A female pseudo-hermaphrodite had ovarian tissue, and exhibited an
XX chromosomal basis, but the external genitalia was masculinized. A male pseudo-hermaphrodite had testicular tissue, an XY
chromosomal basis, but the external genitalia were not fully developed masculine genitalia, or looked feminine, and such an
individual may also develop breasts. Dreger calls the period of time from 1890 to 1915 the "Age of the Gonads"—when using
gonadal tissue, functioning or not, to label an individual was first employed. In 1917 Richard Goldschmidt [11], a researcher in
Germany, used the term intersexual to describe individuals with a wide range of sexual ambiguities, and Dreger reports in her
book, that the term was sometimes used by medical professionals, although individuals with ambiguous genitalia were still
commonly labeled hermaphrodites.

Dreger describes some of the conditions that cause pseudo-hermaphroditism. Congenital adrenal hyperplasia [12] (CAH), a
condition in which a genetically female fetus [13] produces large amounts of androgens [14] or male sex hormones [16], is the
predominant cause of female pseudo-hermaphroditism. The androgens [14] cause a male-like development of the external
genitalia. Androgen insensitivity syndrome (AIS) is one cause of male pseudo-hermaphroditism. With AIS, a genetically male
fetus [13] has testes [16] but lacks the receptor that can use the androgens [14] produced by the testes [16], so the external genitalia
develop to look like those on normal females. Dreger recounts that around 1837, Isidore Geoffroy Saint-Hilaire, a professor of
comparative anatomy at the Faculty of Sciences, in Paris, France, included hermaphrodites in the field he named teratology [17],
which studied the phenomena that he called monstrosities, so that such anomalies could be prevented in the future.

Dreger notes that by the end of the twentieth century, the medical community still struggled to determine the characteristics that
definitively assign a sex of either male or female to hermaphrodites. She asserts that researchers didn't limit these
characteristics to body parts, but also included behaviors and desires. Some homosexuals and early feminists challenged sexual
boundaries in the early twentieth century. Dreger notes that some scientists argued that the social sex order mirrored a natural
order.

In the second chapter, "Doubtful Status," Dreger reports that some hermaphrodites were famous because they were on
exhibition. This was as either curiosities in public fairs or to medical men through medical texts and professional society
Dreger challenged physicians to delay surgeries or hormonal treatments that are not medically necessary. For genetic females, regardless of the appearance of their genitalia, physicians determined a person's sex based on the predominance of the secondary sex characteristics. This approach should be fixed early in a child's life and encourages surgery to correct ambiguous genitalia, espoused in the 1950s by John Money, a researcher at Johns Hopkins in Baltimore, Maryland, which states that gender identity should be fixed early in a child's life and encourages surgery to correct ambiguous genitalia. According to Dreger, in these instances, physicians determined a person's sex based upon the future ability for sexual intercourse. Specifically, if a genetic male child has a penis length of less than 2.5 centimeters, surgeons should remove the penis and reconstruct the genitalia for a female appearance. For genetic females, regardless of the appearance of their genitalia, surgeons should fashion the genitalia to acceptable female norms.

Dreger challenged physicians to delay surgeries or hormonal treatments that are not medically necessary until the intersexed child can choose his or her sex. Dreger suggests that physicians meet with the parents of an intersexed child to articulate how
the child's anatomy may develop based upon the child's genetic composition, hormone production levels, and current anatomy. Dreger also recommends that physicians direct parents of an intersexed child to support groups, so that an intersexed child will understand that he or she is not alone.

Hermaphrodites and the Medical Invention of Sex received conflicting reviews. Some faulted Dreger's argument that the classification system of hermaphrodites gave rise to a homosexual identity. Despite this criticism, the book offers a historical account of hermaphroditism with regard to the medical and scientific communities in the late nineteenth century and early twentieth century, and it describes how beliefs generated in that time influenced later views of sex, gender and sexuality.

Sources

8. Money, John, Joan G. Hampson, and John L. Hampson. "Imprinting and the establishment of gender role." Archives of Neurology and Psychiatry 77 (1957): 333

Hermaphrodites and the Medical Invention of Sex, by historian of science Alice Domurat Dreger, was published in 1998 by Harvard University Press. In the book, Dreger describes how many doctors and scientists treated human hermaphrodites from the late nineteenth century to the early twentieth century. She states that during this time period, many physicians and scientists struggled to determine the nature sex, and to support a classification of sex as male or female, many physicians and scientists resorted to viewing a person's gonads for identification of his or her sex. At the time that this book was published, Dreger was a faculty associate at the Center for Ethics and Humanities in the Life Sciences at the College of Medicine, University of Michigan, Michigan.

Subject


Topic