

Hermaphrodites and the Medical Invention of Sex (1998), by Alice Domurat Dreger

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.

In the Prologue, "But My Good Woman, You Are a Man," Dreger tells the story of Sophie V., who in 1886 at the age of forty-two, sought medical help in a Belgium surgical clinic from a physician, whom Dreger calls Professor Michaux. Sophie V. sought help because her newly married husband could not enter her vagina during sexual intercourse. Michaux examined Sophie and discovered what he believed to be a testicle and a penis, and he declared that Sophie V. was a man. To Michaux, Sophie V.'s 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, and vagina. People whose anatomical combinations did not match one of those standards were typically classed 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, 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 (CAH), a condition in which a genetically female fetus produces large amounts of androgens or male sex hormones, is the predominant cause of female pseudo-hermaphroditism. The

androgens 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 has testes but lacks the receptor that can use the androgens produced by the testes, so the external genitalia develop to look like those on normal females. Dreger recounts that around 1837, Isidore Geoffrey Saint-Hilaire, a professor of comparative anatomy at the Faculty of Sciences, in Paris, France, included hermaphrodites in the field he named teratology, 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 meetings. Doctors, Dreger asserts, often viewed hermaphrodites with a sense of amusement and voyeurism. A physician, Franciszek Neugebauer, and a surgeon, Jean Samuel Pozzi, who were both in Europe during the 1920s, traveled to consult on suspected cases of hermaphroditism and chronicled the cases in an effort to increase scientific knowledge about hermaphroditism.

Although many scientists claimed that hermaphroditism arose because of arrested or altered sexual development in the fetus, they couldn't explain the developmental changes. Researchers looked at the family histories of hermaphrodites to determine if in the family histories there were other hermaphrodites. They also questioned the mother of the child, as many held that maternal impressions or frightful experiences of the pregnant woman could affect the development of the fetus. With Frank Rattray Lillie's study of the freemartin in 1916, scientists and researchers began to study the internal secretions or hormones released by the fetus during development as a cause for changes in sexual differentiation.

In Chapter 3, "In Search of the Veritable Vulva," Dreger details the characteristics that physicians commonly used to determine the sex of a hermaphrodite. Many physicians asserted that the gonads of an individual would reveal themselves through various behaviors. If a person with ambiguous genitalia was raised as a female, and yet did not exhibit the expected modesty or gentle play behavior of a female, physicians might have labeled her a true male. Likewise, physicians may have assigned the true sex of a hermaphrodite raised as a male to female if the hermaphrodite possessed little facial or body hair. Dreger states that physicians also included sexual desires in the characteristics that would identify the true sex of an individual. Using this rationale, if the individual in question preferred females, then the true sex of that individual was determined to be male.

Dreger discusses the manner in which Louise-Julie-Anna was treated to begin Chapter four "Hermaphrodites in Love". Like Sophie V., Louise-Julie-Anna was raised as a woman and identified herself as a woman. The physicians who examined her disagreed when they discovered on her a small penis and testicles. Because Louise-Julie-Anna stated that she was sexually attracted to men, the physicians questioned her psychological and moral state, as by their definition Louise-Julie-Anna was a man.

In 1911 Samuel Pozzi, a physician in France, developed a method to classify the sexuality of hermaphrodites. His criteria coincided with the many physicians of his time, who emphasized that doctors check that the sexual desire of an individual matched the sexual desires that they considered appropriate for the hermaphrodite's gonads. For Pozzi, if an individual had testicles, the appropriate sexual desires for the individual would be toward women, whereas if the individual had ovaries, the appropriate sexual desire would be for men.

Dreger states in Chapter 5 "The Age of Gonads" that classification systems of hermaphrodites in the middle of the nineteenth century were not divided along gonadal lines. Scientists in France commonly used Isidore Geoffrey Saint-Hilaire's classification system, which devoted one of the four teratological kingdoms to hermaphroditism. In Britain, scientists used the system devised by physi-

cian James Young Simpson, which differed from Saint-Hilaire's. Theodor Albrecht Edwin Klebs, a researcher in Germany, introduced the classification system which divided hermaphrodites into true hermaphrodites and pseudo hermaphrodites based upon their gonads in 1876.

In 1896 George F. Blacker, a physician, and Thomas William Pelham Lawrence, a museum curator, both in London, UK, adapted Klebs's system to further refine a definition of true hermaphroditism. Blacker and Lawrence insisted that a microscopic examination of the gonadal tissue was the only method to determine the sex of the gonads. Dreger asserts that Blacker and Lawrence sought to clear the historical record of any mistaken cases of true hermaphroditism. Many previously reported cases of true hermaphroditism did not meet their requirements and thus, Blacker and Lawrence excluded many of them. Further, as physicians rarely performed biopsies on living persons in the early twentieth century, Blacker and Lawrence's insistence on microscopic examination of gonadal tissue meant that other true hermaphrodites could only be identified after death or castration. Dreger suggests that such classification systems preserved the differences between males and females, based upon their reproductive capabilities, at a time when she claims sexual boundaries were being challenged.

According to Dreger, Blair Bell, a surgeon in London, UK, was the first to distinguish between sex and gender in 1915. Bell maintained that assigning a true sex to match non-functioning gonads would disrupt the social happiness of the patient. Bell suggested that the predominance of the secondary sex characteristics should be a contributing factor to the determination of the true sex, and that physicians and surgeons could surgically eliminate any confusion in anomalous bodies.

In the Epilogue, "Categorical Imperatives", Dreger highlights the influences of early twentieth century medicine in the medical treatment of intersexuality in late twentieth century medicine. Many physicians used the psychosocial gender-identity theory 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

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