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Sciences

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THE FIVE SEXES, REVISITED.

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The emerging recognition that people come in bewildering sexual varieties is testing medical values and social norms

AS CHERYL CHASE STEPPED TO THE FRONT of the packed meeting room in the Sheraton Boston Hotel, nervous coughs made the tension audible. Chase, an activist for intersexual rights, had been invited to address the May 2000 meeting of the Lawson Wilkins Pediatric Endocrine Society (LWPES), the largest organization in the United States for specialists in children's hormones. Her talk would be the grand finale to a four-hour symposium on the treatment of genital ambiguity in newborns, infants born with a mixture of both male and female anatomy, or genitals that appear to differ from their chromosomal sex. The topic was hardly a novel one to the assembled physicians.

Yet Chase's appearance before the group was remarkable. Three and a half years earlier, the American Academy of Pediatrics had refused her request for a chance to present the patients' viewpoint on the treatment of genital ambiguity, dismissing Chase and her supporters as "zealots." About two dozen intersex people had responded by throwing up a picket line. The Intersex Society of North America (ISNA) even issued a press release: "Hermaphrodites Target Kiddie Docs."

It had done my 1960s street-activist heart good. In the short run, I said to Chase at the time, the picketing would make people angry. But eventually, I assured her, the doors then closed would open. Now, as Chase began to address the physicians at their own convention, that prediction was coming true. Her talk, titled "Sexual Ambiguity: The Patient-Centered Approach," was a measured critique of the near-universal practice of performing immediate, "corrective" surgery on thousands of infants born each year with ambiguous genitalia. Chase herself lives with the consequences of such surgery. Yet her audience, the very endocrinologists and surgeons Chase was accusing of reacting with "surgery and shame," received her with respect. Even more remarkably, many of the speakers who preceded her at the session had already spoken of the need to scrap current practices in favor of treatments more centered on psychological counseling.

What led to such a dramatic reversal of fortune? Certainly, Chase's talk at the LWPES symposium was a vindication of her persistence in seeking attention for her cause. But her invitation to speak was also a watershed in the evolving discussion about how to treat children with ambiguous genitalia. And that discussion, in turn, is the tip of a biocultural iceberg--the gender iceberg--that continues to rock both medicine and our culture at large.

Chase made her first national appearance in 1993, in these very pages, announcing the formation of ISNA in a letter responding to an essay I had written for *The Sciences*, titled "The Five Sexes" [March/April 1993]. In that article I argued that the two-sex system embedded in our society is not adequate to encompass the full spectrum of human sexuality. In its place, I suggested a five-sex system. In addition to males and females, I included "herms" (named after true hermaphrodites, people born with both a testis and an ovary); "merms" (male pseudohermaphrodites, who are born with testes and some aspect of female genitalia); and "ferms" (female pseudohermaphrodites, who have ovaries combined with some aspect of male genitalia).

I had intended to be provocative, but I had also written with tongue firmly in cheek. So I was surprised by the extent of the controversy the article unleashed. Right-wing Christians were outraged, and connected my idea of five sexes with the United Nations--sponsored Fourth World Conference on Women, held in Beijing in September 1995. At the same time, the article delighted others who felt constrained by the current sex and gender system.

Clearly, I had struck a nerve. The fact that so many people could get riled up by my proposal to revamp our sex and gender system suggested that change--as well as resistance to it--might be in the offing. Indeed, a lot has changed since 1993, and I like to think that my article was an important stimulus. As if from nowhere, intersexuals are materializing before our very eyes. Like Chase, many have become political organizers, who lobby physicians and politicians to change current treatment practices. But more generally, though perhaps no less provocatively, the boundaries separating masculine and feminine seem harder than ever to define.

Some find the changes under way deeply disturbing. Others find them liberating.

WHO IS AN INTERSEXUAL--AND HOW MANY intersexuals are there? The concept of intersexuality is rooted in the very ideas of male and female. In the idealized, Platonic, biological world, human beings are divided into two kinds: a perfectly dimorphic species. Males have an X and a Y chromosome, testes, a penis and all of the appropriate internal plumbing for delivering urine and semen to the outside world. They also have well-known secondary sexual characteristics, including a muscular build and facial hair. Women have two X chromosomes, ovaries, all of the internal plumbing to transport urine and ova to the outside world, a system to support pregnancy and fetal development, as well as a variety of recognizable secondary sexual characteristics.

That idealized story papers over many obvious caveats: some women have facial hair, some men have none; some women speak with deep voices, some men veritably squeak. Less well known is the fact that, on close inspection, absolute dimorphism disintegrates even at the level of basic biology. Chromosomes, hormones, the internal sex structures, the gonads and the external genitalia all vary more than most people realize. Those born outside of the Platonic dimorphic mold are called intersexuals.

In "The Five Sexes" I reported an estimate by a psychologist expert in the treatment of intersexuals, suggesting that some 4 percent of all live births are intersexual. Then, together with a group of Brown University undergraduates, I set out to conduct the first systematic assessment of the available data on intersexual birthrates. We scoured the medical literature for estimates of the frequency of various categories of intersexuality, from additional chromosomes to mixed gonads, hormones and genitalia. For some conditions we could find only anecdotal evidence; for most, however, numbers exist. On the basis of that evidence, we calculated that for every 1,000 children born, seventeen are intersexual in some form. That number--1.7 percent--is a ballpark estimate, not a precise count, though we believe it is more accurate than the 4 percent I reported.