

### **What are the differences between biologic sex, gender role, gender identity, and sexual orientation?**

The *biologic sex* of an organism in the majority of species is defined by the gametes it produces: males produce spermatozoa and females produce ova. The biologic sex of humans is also defined by an XY sex determination system consisting of 22 pairs of autosomal chromosomes and one pair of sex chromosomes. Normal karyotypes for women contain two X chromosomes and are denoted 46,XX; men have both an X and a Y chromosome denoted 46,XY (Gilbert, 2006). Human sexual dimorphism aside from the reproductive system is also evidenced in a multitude of secondary sex characteristics such as appearance in addition to structural differences in the brain. Generally, among males and females of similar ethno-racial background, males are of taller stature, have larger body mass and extensive capacity to grow facial hair; females are not as tall, have smaller muscle mass, more fatty deposits, and no comparable capacity to grow of facial hair. Males have more pronounced thyroid cartilage and a larger larynx due to their larger vocal cords, while women have higher-pitched voices and shorter vocal cords. These are but a few enumerated biologic sex differences between males and females; until recent history, however, biologic sex was the only accepted marker of the individual's identity and sexual orientation. It is only during recent decades that a combination of research and social advocacy has begun to decouple biologic sex from the construct of gender, in which gender role, gender identity and sexual orientation are expressed independent of the biologic sex of the individual.

In his studies on intersex children, John Money (1955) coined the term *gender role*

to be an all-inclusive description of "all those things that a person says or does to disclose himself or herself as having the status of a boy or man, girl or woman, respectively" (p. 305). In 1965, Money amended this term as "the public expression of gender identity," which in turn was to become "the private experience of gender role." Soon thereafter, psychologist Sandra Bem developed her gender schema theory to explain how individuals use gender as an organizing category in all aspects of their life. Her theory is based on the combination of aspects of social learning theory and cognitive development of gender role acquisition. She created the Bem Sex Role Inventory (1971) to measure an individual's traditional gender role by characterizing personalities as masculine, feminine, androgynous, or undifferentiated. Through gender-schematic processing, a person spontaneously sorts attributes and behaviors into masculine and feminine categories; therefore, the individual processes information and regulates behavior based on prevailing cultural definitions of femininity and masculinity. In our current post-modern society where the individual takes precedence over the group, gender roles can be fluid, independent of biologic sex, gender identity and sexual orientation. The issue of sexual orientation may be paradoxical, however, in that it includes assumptions that men who have sex with men engage in effeminate gender roles both professionally and privately. Concomitantly, lesbians have also been assumed to function in opposite gender roles, with the general public sometimes confounding a non-traditional female appearance with stereotypical male gender role behavior. In terms of gender role ideology, these belief systems appear to be prevalent worldwide and reflect a consensus that conflate sexual orientation with the behavioral expression of gender roles.

The term *gender identity* was first used by John Money in conjunction with the opening of the Gender Identity Disorder clinic at Johns Hopkins Hospital in 1966 (Money, 1994). He proposed that gender identity is the individual's internal sense or conviction of maleness or femaleness as distinguished from actual biological sex. Person and Ovesey (1983) defined gender identity generically as composed of two categories – core gender identity and gender role identity. In this context, core gender identity according to male-female polarity reflects a biological self-image and is defined as “an individual's self-designation of biological femaleness or maleness.” In contrast, gender role identity along the masculine-feminine polarity reflects a psychological self-image and can be defined as “an individual's self-evaluation of psychological femaleness or maleness.” For the majority of individuals, gender identity is an uncomplicated concept congruent with biological sex. Independent of sexual orientation and even gender role, the phenomenological understanding of one's gender identity as male or female has been accepted since early childhood. For a small minority, however, the internal experience of the gendered self is dissonant with the external, physical presentation as either male or female. For some, the daily experience of living with a conflicted gender identity is so disabling that these individuals seek psychotherapy and counseling. Such a person is said to be suffering from gender dysphoria and may be diagnosed with Gender Identity Disorder according to the *Diagnostic and Statistical Manual of Mental Disorders*, (American Psychiatric Association, 1994). If the gender dysphoria and concomitant cross-gender feelings has been long-standing, pervasive and accelerated throughout adolescence and adulthood, the individual may well be described in clinical terms as transgendered or transsexual, depending on the paradigm

of the clinician. One way to characterize human sexuality is along the dimension of *sexual orientation*. This means the direction of sexual feelings or behavior toward individuals of the opposite sex (heterosexuality), the same sex (homosexuality) or a combination of the two (bisexuality). In his research on the biological roots of sexual behavior, LeVay (1993) noted that “the direction of sexual feelings is undoubtedly more significant, deeper and less susceptible to change than the direction of sexual behavior;” however, he pointed out that there is good reason to consider both aspects when discussing sexual orientation. Individuals may differ greatly in the execution of orientational behavior, and preferences may expand or alter as the individual progresses through adult development. When considering the distribution of sexual orientation in the population, a problem arises in researching a representative sample. Since homo- and bisexuality are still somewhat stigmatized within the general population, accurate numbers may be difficult to ascertain. Kinsey (1948) estimated that 37% of the male population in his research had at least some overt homosexual experience to the point of orgasm between adolescence and old age, however, only 4% were exclusively homosexual post adolescence. LeVay “guesstimated” that 4-5% of the male population and 2-4% of the female population in the United States are predominantly homosexual, although he cautioned against interpreting the results in too literal a fashion. Current research on the origins of sexual orientation is mainly concerned with the development of homosexuality, since heterosexuality is “the norm,” considered congruent with biologic sex, gender identity and largely gender role. At this time, there is also increased acceptance of biological theories, differences of brain structure and of the genetics of homosexual orientation, despite vociferous criticism from feminists and social constructionists worldwide.

In 1953, the term *transsexual* was first introduced by pioneering endocrinologist-researcher Harry Benjamin, who authored the article *Transvestism and Transsexualism* after having begun to treat his patients with hormone therapy in 1949. In the most recent, completely revised version of the *Diagnostic and Statistical Manual of Mental Disorders* (American Psychiatric Association, 1994), transsexualism as a category and its subtypes has been removed and replaced by the diagnosis of Gender Identity Disorder. The term *transsexual* is often used to describe three commonly related phenomena: the wish to become the opposite sex, a life in the opposite gender role, and a person who has undergone sex reassignment surgery (SRS). The most current meaning includes but also separates transsexuals from those who label themselves *transgender*, which in essence has become an umbrella term for all gender-variant individuals. A transsexual is now distinguished from other transgendered individuals only by his or her status as having undergone genital confirmation surgery (GCS). While the individual is legally and surgically opposite of his or her natal sex, gender role and sexual orientation may be considerably more fluid than documented in earlier research literature. Bornstein (1994), an author and a post-operative male-to-female transsexual, has declared that it is not entirely clear if transsexuals are male or female. In doing so, s/he [sic] is accepting the notion that biologic sex is fixed, but also subverting the construct of transsexuals as being required to alter the physical appearance and function of their genitalia, in order to gain access to privileges afforded to those who belong to a binary sex/gender system. The fluidity and inclusive aspects of transgenderism now includes such diverse orientations such as bi-gendered and partially transgendered individuals, in addition to transsexuals.

The term *crossdresser* has frequently been used to describe a transvestite who engages

in the activity of fetishistic transvestism. Crossdressing has been observed by several generations of clinicians, and contemporary sex researchers have provided ample clinical descriptions of the predominantly male individual who is dependent on wearing female attire, often undergarments, in order to achieve sexual arousal and orgasmic climax, with or without a partner while masturbating (Money, 1986). In addition, fetishistic transvestism is a bona fide diagnosis in the DSM-IV (American Psychiatric Association, 1994.) Zucker and Blanchard (cited in Laws & O'Donohue, 1997) have also expanded on the boundaries of transvestic fetishism by postulating that there exist four subtypes of "autogynephilia," where fantasies accompanying the crossdressing revolve around imagery incorporating being pregnant, having breasts and/or a vagina, and engaging in some stereotypically female activities such as knitting. On the other hand, this author who is a clinician for gender variant populations has found that "crossdresser" is experienced as a pejorative term, and that someone being *partially transgendered* represents a more accurate point along the continuum of gender identity. Thus, the difference between crossdressers and transsexuals resides in the degree to which the phenotypical gender variance is expressed, while being part of the same clinical syndrome. Gender variance is expressed independent of biologic sex, gender role and is not used to self-manipulate sexual orientation; the experience of *gender comfort* is sought when presenting in the opposite gender to others or while in solitude. What is clear is that the individual does not crossdress uniquely as a prerequisite for masturbatory activity or same-sex activity – the crossdresser also experiences episodic discomfort with the natal gender, but perhaps to a lesser extent and incidence than does the transsexual individual.

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