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An Introduction to Gender Identity

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GENDER IDENTITY IS A COMPLEX TERM

Although awareness of being man or woman, or some variation thereof, is as old as humanity¹, the concept of gender identity is still evolving. The American Psychological Association (APA) describes gender identity as a deeply felt inherent sense of being a boy, a man, or male; or being a girl, a woman, or female; or being a nonbinary gender (e.g., genderqueer, gender-nonconforming, gender-neutral, agender, gender-fluid) that may or may not correspond to one's sex as at birth. The birth-assigned sex is a presumed gender, usually based on visible primary and secondary sex characteristics². Some individuals reject the binary man-woman gender categories³.

Before continuing, several things must be clarified. First, the expression “deeply felt” could lead one to think that gender identification is just another emotion, and our experience tells us emotions come and go. Gender identity is best understood if we define it as the stable, cognitive-emotional conviction of being a man or a woman, or the awareness of being man or woman, or some other condition. Second, “sex” refers to the primary biological sexual characteristics, the gonads, and the secondary characteristics, the genitalia, the masculine or feminine bodily appearance that determines if one will be assigned as male or female at birth. Although sex and gender are separate concepts, they are nevertheless difficult to disentangle and complex⁴. The appearance of the genitals works as a reasonable proxy and accurately predicts future gender in most individuals. However, gender actually emerges later from the interaction of biological (sex) and social conditions that one experiences. Whether an individual is cisgender or transgender, it is impossible to avoid the developmental influences of the

¹ Jansen (2020).

² APA Style.

³ Polderman et al. (2018).

⁴ Fausto-Sterling (2019); Fausto-Sterling & Sung (2023); Quintana & Pfaus (2024).

gonadal hormones before and soon after birth, and their interactions with the environment.

On approaching the study of gender identity, the first thing one encounters is a thicket of words and concepts that further complicates the study and that is continuously under constant revision. Words like cisgender, transgender, *transsexuality*⁵, or expressions like gender non-conforming, gender dysphoria, gender incongruence, intersex, reassignment surgery, natal sex, assigned sex, affirmation surgery, etc., are only different species of trees in a forest that needs to be explored (see Glossary).

GENDER IDENTITY IS A RELATIVELY RECENT CONCEPT

The term gender identity was introduced in 1964 by the psychoanalyst Robert Stoller⁶. He attempted to avoid the ambiguity of the term sexual identity, which could also refer to sexual activity and fantasies. With this new concept, Stoller separated one's self-image of belonging to a given sex from one's behavior, and thus emphasized one's consciousness of being a man or a woman. For Stoller, gender identity was due to three factors: the parents' attitude to the child's sex, the development of self-consciousness in relation to one's genitalia and Freud's theory of an uncontrollable biological force. Currently, the scientific approach to gender identity refers to these earlier concepts as biological force and social interaction.

John Money was studying the psychosexual development of children with endocrine disorders and ambiguous genitalia at Johns Hopkins University Hospital in Baltimore from another perspective. In order to differentiate between genital anatomy and psychosexual identity, Money used the terms "gender identity" and "gender role"⁷. He regarded gender role as how a person's behavior manifested that they were a boy or man, a girl or woman. Money's concept of gender role was not restricted to sex or eroticism. In a revision of his terminology thirty years later, he concluded that in both popular and scientific use, sex referred to a person's anatomy, whereas gender identity was their conviction of being female or male, and gender role referred to the cultural stereotypes associated with typical male or female behaviors⁸. This terminology was widely adopted, and ultimately dichotomized sex (genital) and gender (psychological). A misinterpretation of Money's ideas resulted in the belief that sex should be considered exclusively on the basis of biology, and gender exclusively as the product of social variables. This was inconsistent with Money's view: he regarded gender as the totality

⁵ With time, the nomenclature on gender identity has evolved reflecting the understanding and sensitivity to the stigma associated with transgender individuals. For example, we no longer use transsexuality or transsexual, but transgender. Nevertheless, for historical reasons, and to avoid confusion when consulting the literature, the earlier nomenclature as used in the cited texts will be maintained in italics in some places in this work.

⁶ Stoller (1968); Byrne (2023); Janssen (2023).

⁷ Money (1955).

⁸ Money (1985).

of masculine/feminine, including, but not limited to, the genitals. Indeed, identity and gender role are two sides of the same coin. Understanding Money's conceptualization is essential to avoid a sterile discussion of whether biological or social factors predominate in the development of one's gender identity.

There are two essential questions about gender identity that constitute the hinge upon which any scientific explanation pivots: (1) Is gender diversity a psychopathological phenomenon? and (2), Is gender identity a binary or non-binary phenomenon? Both questions are interrelated. If we were to accept that gender is only binary, then variations would be outside of what is considered *normal* and therefore might be considered pathological. However, as we shall see, and contrary to what one might assume, gender is not exclusively binary, and several cerebral phenotypes are associated with gender identities⁹.

One way to approach these two questions is to take them separately and examine how ideas and concepts have evolved up to the present. The initial view of gender incongruity was that it was certainly a psychopathological disorder. In fact, the existence of individuals we currently refer to as transgender individuals can be historically traced from Hippocrates to the present day¹⁰. Since the beginning of time, one's manner of dressing, and display of feminine or masculine behavior, (something we now perceive of as gender role), was noted.

The assumption that gender incongruity was a disorder began with Hippocrates and continued into the modern era. In 1864, Ulrich, a German lawyer, journalist and early sexologist, conflated gender identity and sexual orientation to posit the existence of a "third sex" as an explanation of homosexuality. Ulrich described such individuals as having the spirit of a woman in the body of a man, or vice versa. This version was the seed of what would ultimately become the popular adage that *transsexuals* are people who feel "trapped in the wrong body".

At the end of the nineteenth century, and well into the twentieth, German psychiatrists steadfastly held that *transsexuality* was a psychopathological disorder. Freud attributed homosexuality to an unresolved Oedipus complex. Since then, many psychoanalysts have continued to maintain that transgender individuals suffer from pre-oedipal narcissistic traumas.

Other German psychiatrists likewise perpetuated the view that transgender individuals suffered from severe psychopathology. Kraft-Ebbing, in his *Psychopathia Sexualis* (1886), a psychopathology textbook, documented cases of people who desired to live as a member of a gender other than their birth assigned gender, a disorder he referred to as "*sexual metamorphosis paranoia*".

In 1910, Hirschfeld, a psychiatrist, published *Die Transvestiten*, in which he introduced the term "*transvestitism*". This, Hirschfeld proclaimed, was a medico-psycho-bi-

⁹ Guillamon et al. (2016), Polderman et al. (2018).

¹⁰ Janssen (2021).

ological phenomenon. Hirschfeld's "patients" would today be considered individuals with gender incongruence or dysphoria. Hirschfeld was the first to distinguish homosexuality (the attraction to members of one's same sex) from *transsexuality*, and thus played a monumental role in our understanding of the distinction between gender and sexual orientation. It took decades for this distinction to be accepted, and some theories still conflate the two concepts.

In the 1920's, some European surgeons began to perform genital reconstruction surgeries, now called gender affirmation surgeries¹¹. However, it was through widespread media attention that *transsexual* people impacted society, largely owing to the emergence of Christine Jorgensen. Christine, born in the United States as George, underwent genital reconstruction in Denmark in 1951, and returned to the U.S. as a woman the following year. Her transition was widely publicized in the American press. The specialists who treated Christine reported her hormonal and surgical treatment in the *Journal of the American Medical Association*¹², opening a pathway within medicine to treat transgender individuals. The publication of Jorgensen's affirmation treatment in a scientific journal awoke medical and psychiatric interest in the concept of gender identity. This is the point in time from which people who sought to make a gender transition were acknowledged. Another giant step forward in treatment was made possible by Harry Benjamin. Born in Germany and practicing endocrinology in America, Benjamin published the seminal work *The Transsexual Phenomenon* in 1966¹³. In 1979, he joined in the creation of the Harry Benjamin International Gender Dysphoria Association [now renamed the World Professional Association for Transgender Health (WPATH)]. The current standards of care for the healthcare/treatment of transgender people are promulgated by this association. The clinicians who contributed to the recognition and treatment of transgender people include some of the people cited above. The theoretical concepts about gender identity that we uphold today could not be understood without the early work of these researchers¹⁴.

In the field of clinical practice, the concept of gender identity is tied to the evolution of the concept of gender diversity. The fact that concepts like gender incongruence and gender dysphoria are listed in clinical classifications like the International Statistical Classification of Diseases (ICD) of the World Health Organization (WHO) and the Diagnostic and Statistical Manual of Mental Disorders (DSM) of the American Psychiatric Association (APA), indicates that these organizations still consider gender statuses to be clinical conditions (Table 1.1). This remains an ongoing issue in the field.

¹¹ Gómez-Gil & Esteva (2006); Ettner et al. (2016).

¹² Hamburger et al. (1953).

¹³ Benjamin (1966).

¹⁴ Richard Green (1974), Ray Blanchard (1989b), Heino Meyer-Bahlburg (1982), among others in America and Canada and, in Europe, the Dutch group: Cohen-Kettenis and colleagues (2008).

Table 1.1. Evolution of psychiatric concepts on transgender identity

Year	ICD	DSM	Category	Diagnosis name
1965	ICD-8		Sexual deviations	Transvestitism
1968		DSM-II	Sexual deviations	Transvestitism
1975	ICD-9		Sexual deviations	Transvestitism
1980		DSM-III	Psychosexual disorders	Transsexualism
1990	ICD-10		Gender identity disorders	Transsexualism
1994		DSM-IV	Sexual & gender identity disorders	Gender identity disorder
2000		DSM-IVTR	Sexual & gender identity disorders	Gender identity disorder
2013		DSM-5	Gender dysphoria	Gender dysphoria
2022	ICD-11		Conditions related to sexual health	Gender incongruence

ICD: International Classification of Diseases, World Health Organization; DSM: Diagnostic and Statistical Manual of Mental Disorders, American Psychiatric Association.

From the evolution of the 1965 ICD-8 edition to the 2022 ICD-11, and the 1968 DSM-II publication to the current DSM-5, discussion of gender conditions has been moved from the chapter “Sexual deviations and sexual identity disorders” and included in the chapter “Conditions related to sexual health” (ICD-11)¹⁵ or “Gender dysphoria” in the DSM-5¹⁶. The World Health Organization (WHO) took an important step when it removed gender conditions from the category of “mental and behavioral disorders” and introduced the diagnostic term “gender incongruence”, but gender incongruence remains listed in the manual for the International Classification of Diseases, and individuals with a gender incongruence diagnosis make up a subgroup within the wider spectrum of transgender people. On its part, the American Psychiatric Association de-pathologized transgender people. By eliminating the nomenclature “gender identity disorder”, which implied that one’s identity was disordered, the new terminology focused on the diagnostically relevant aspect, the intense discomfort, arising from the incongruence between identity and birth assigned sex –gender dysphoria– that some individuals experience.

It must be underscored that researchers and clinicians who are experts in gender and sexuality are actively working to de-pathologize gender diversity. The specialist groups that made the proposals for the ICD-11 and the DSM-5 are composed of people with wide experience in diagnosing and treating gender conditions. Why, then, was it impossible to de-pathologize gender dysphoria, particularly in the DSM-5? When one reads what some committee members have written to explain their personal position,

¹⁵ World Health Organization.

¹⁶ American Psychiatric Association.

it appears a compromise was reached to justify treating the specific health needs of transgender people through public health services and insurance companies. In other words, they wanted to find a way to finance the surgical and hormonal treatments for people who require these interventions. Surgical treatments are expensive while hormonal treatments can last a lifetime and require close medical follow-up. On the other hand, moving the placement of the gender conditions from one chapter to another and focusing interest on gender incongruence (ICD-11) and dysphoria (DSM-5) decreased social stigma.

WHAT IS TRANSGENDER IDENTITY?

Transgender refers to the wide spectrum of persons who either transitorily or permanently identify with a gender other than the one assigned at birth¹⁷. This spectrum encompasses two different groups, those that move within the male-female binary schema, and those that feel themselves to be outside that schema, or “non-binary”. In the introductory paragraphs of the gender dysphoria chapter, the DSM-5 defines a variety of terms including *transsexual*. We cite this term because most of the past work done on brain structure and functions studied *transsexual* persons, (now called transgender individuals). What is understood by the term “*transsexual*”? The DSM-5 defines this as a person who “...searches for, or has undergone, a social transition from male to female or from female to male, which, in many cases, but not all, implies a somatic transition employing continuous treatment with hormones of the opposite sex and genital surgery”¹⁸. As language in this field is evolving, the term *transsexual* has been abandoned¹⁹ in most Western countries, since it conflates gender with sex. Moreover, it should be underscored that there are transgender individuals, binary and non-binary, who do not want hormonal or surgical affirmation treatment to transition toward their affirmed gender. Besides, some youths with non-binary identities do not identify as transgender at all²⁰.

IS CONSCIOUSNESS OF ONLY BEING EITHER MALE OR FEMALE THE LIMIT?

The second question we posed earlier was whether gender identity should be understood within the concept of a binary or non-binary framework. Although there are degrees of interrelatedness along the masculine/ feminine continuum, criticism of the binary system results from the existence of individuals who do not feel as though they fall within this male-female dichotomy. Examples of non- or extra-binary systems or of

¹⁷ DSM-5 (2013); Polderman et al. (2018).

¹⁸ DSM-5 (2013).

¹⁹ DSM-5-TR (2022) considers transsexual a historical term.

²⁰ Richards et al. (2016).

a “third gender” are well-established in some cultures, such as the Hijra in India or the “two spirited” indigenous people of North America²¹.

Be that as it may, some gender-diverse people either view themselves as consistent with a binary gender identification while others seek partial or total affirmation treatments or no treatment at all, and there are even individuals who view themselves as neither male nor female. Some individuals regard themselves as gender fluid, meaning they may experience both genders at the same time or either one or the other gender at different times. Others claim an identity that is agender, rejecting the binary or membership in any gender at all. All of these individuals probably fall within the category of non-binary gender. But they also use other terms to refer to themselves such as “gender queer” or “gender diverse”²², “fluid gender”, “neutral”, or “theybies” –children raised with neutrality toward their gender by their parents. Many non-binary young people do not identify as transgender but as gender queer (Q). For these young people, the frequency of depression, anxiety and suicidal thoughts is similar if not higher than in binary transgender young adults²³. Identities outside the binary category of male or female are beginning to be recognized at a medical, psychological, and legal level²⁴. Nevertheless, for the most part, scientific research and psychobiological methodology have focused on transgender people with binary gender identities. Specifically, the people previously referred to as *transsexuals*, as described in the DSM-5, and now described as transgender individuals, are the focus of this book.

TRANSGENDER PREVALENCE IN THE POPULATION

When we speak of transgender people, what is their prevalence²⁵ in the population? Prevalence refers to the proportion of individuals who present a feature or condition at a given point or period with respect to a complete or representative sample of the general population at the same time.

Estimating the prevalence of transgender people in the population poses serious conceptual and methodological difficulties. First, the transgender population itself is heterogeneous and estimating prevalence depends on the definition of transgender employed. This is further complicated by the fact that the concept and classification of transgender individuals has changed several times in the last fifty years. The most reliable data proceed from statistics based on individuals who attend clinics for treatment of gender dysphoria. However, this leaves out all the binary and non-binary indi-

²¹ Meyer-Bahlburg (2019).

²² The concept of queer is quite wide, and there is a new tendency to substitute LGBTQ for Q (queer/questioning/diverse) to englobe all the sexual minorities. In this way attention is centered more on the individual than on the groups (Rauch, 2019).

²³ Chew et al. (2020).

²⁴ Richards et al. (2016).

²⁵ Prevalence is a statistically neutral term to measure any trait in the population and should not be considered as pathologizing anything.

viduals who do not desire or require treatment. Also, it must be remembered that the emergence of gender incongruence varies with the age of the individual. Research into prevalence rates in children and adolescents is done by measuring their self-reported identification or by answers their parents give to questionnaires used for clinical diagnosis. Regarding non-binary, “gender queer” or gender nonconforming individuals, studying prevalence is even more complicated. Zucker²⁶ noted that Facebook searches indicate more than seventy non-binary ways in which people identify themselves.

The DSM-5 reports a prevalence rate of 0.005% to 0.014% for gender dysphoria in adults assigned as male at birth and 0.002% for gender dysphoria to 0.003% in those assigned as female. This is an under-estimation because not all such adults request hormonal and/or surgical affirmation treatment.

Several recently published studies provide information on the present landscape²⁷. Arcelus and colleagues conducted a meta-analysis based on data from the existing literature. They reported the prevalence rate for *transsexualism* to be 4.6 per 100,000 individuals: 6.8 for trans women and 2.6 for trans men. They also noted an increase in reported prevalence over the last 50 years. Another analysis of the literature, including Western and Eastern countries, reported prevalence rates ranging from 0.1% to 2% for the transgender population²⁸. This analysis classified publications from 2009 through 2019 into two groups, data from large health systems or data from population surveys. In the health systems data, the prevalence rate ranged from 17 to 33 per 100,000 enrollees. However, in population-based surveys, the proportion ranged from 0.3% to 0.5% in adults, and 1.2% to 2.7% among children and adolescents²⁹.

Zucker’s data on children, adolescents, and adults, can be summarized as estimating that the prevalence of self-reported transgender identity in these three groups ranges from 0.5% to 1.3%, which is markedly higher than the prevalence rates based on clinic-referred adults. Zucker emphasizes the importance of considering the sex ratio. The boy/girl ratio favors those who are assigned male at birth, but this difference decreases with age. However, over the last 15 years this ratio has reversed itself in adolescents. As an example, Table 1.2 shows the evolution of children and adolescents seen in the UK Gender Identity Development Service over a 10-year period³⁰. There is a marked increase in the number of children and adolescents seeking consultation, and a reversed sex ratio.

²⁶ Zucker (2017).

²⁷ Arcelus et al (2015); Zucker (2017).

²⁸ Goodman et al. (2019).

²⁹ Zhang et al. (2020).

³⁰ de Graaf et al. (2018).