

INDIVIDUALS WITH DIFFERENCES IN SEX DEVELOPMENT:
CONSULT TO COLOMBIA CONSTITUTIONAL COURT
REGARDING SEX AND GENDER

By: Hazel Glenn Beh & Milton Diamond¹

INTRODUCTION.....	421
I. INTERSEXUALITY IN CULTURE AND MEDICINE.....	424
II. MAKING ROOM FOR VARIATIONS OF SEXUAL DEVELOPMENT	432
A. Manifestations of Variations.....	432
B. Accepting Differences	435
III. THE RIGHT OF IDENTITY RESIDES WITH THE INDIVIDUAL	440
CONCLUSION	445

INTRODUCTION

In October of 2012, one of us (Milton Diamond) received a request from the Constitutional Court of Colombia in a case of an intersex individual that concerned the official system of national registration.² This registration system

1. Hazel Glenn Beh, Professor of Law, William S. Richardson School of Law, University of Hawai'i at Mānoa. Milton Diamond, Ph.D., Professor, John A. Burns School of Medicine, University of Hawai'i at Mānoa.

We use the words intersex and DSD interchangeably, and the word hermaphrodite in historical context. When we use the term DSD, we recognize that by consensus of many physicians, it stands for "Disorders of Sexual Development." See Peter A. Lee et al., *Consensus Statement on Management of Intersex Disorders*, 2 J. PEDIATRIC UROLOGY 148 (2006). However, our premise is that intersexuality constitutes a different pathway of sex development. Thus, when the authors refer to DSD, respectfully, we recognize it to mean "Differences of Sex Development." See Milton Diamond & Hazel G. Beh, *Changes in the Management of Children With Intersex Conditions*, 4 NATURE CLINICAL PRACTICE, ENDOCRINOLOGY & METABOLISM 4-5 (Jan. 2008); Milton Diamond & Hazel G. Beh, *Variations in Sex Development Instead of Disorders of Sex Development*, ARCH. DIS. CHILD. (BRITISH MED. J.) 2006 Electronic Letter, (July 27, 2006). See generally Ellen K. Feder & Katrina Karkazis, *What's in A Name? The Controversy Over "Disorders of Sex Development,"* 38 HASTINGS CTR REP. 33 (2008); Ieuan Hughes, *The Quiet Revolution*, 24 BEST PRACTICE & RES. CLINICAL ENDOCRINOLOGY & METABOLISM 159 (2010). We use the term intersex to refer to anatomical, genetic, hormonal, gonadal, and psychological manifestations of sex development that exist along the spectrum between male and female.

2. Here is the initial request received by Professor Diamond:

The Colombian Constitutional Court is currently studying a case of an intersex person. The decision on this particular case can have a great impact on the National Registration System and in the society in general. In order to get inputs and illustration on this subject, the Court has submitted some questions to experts of different fields.

is used for recording births, deaths, marriage and other affairs of state. This is the second consultation request received from Colombia; in 1998, the Colombian courts sought advice concerning a case of transsexuality.

Colombia, like many jurisdictions throughout the world, has struggled to understand the biological/medical terms *male* and *female*, and associated social terms such as *boy/man* and *girl/woman*.³ Although it was once thought that a uniform and common understanding of such basic concepts of the human condition existed, the legal construction of sex and gender has confounded modern courts.

Sex and gender are definitionally different, although the two often have been conflated in the law.⁴ One's *sex* refers to biological characteristics.⁵ One's

It would be very important for us to know your opinion on it. The key questions are:

1. As expert in the field, do you recognize or accept the existence of people who can not be or may not be classified as female or male?
2. In such a case, which are the criteria to define the person who cannot be classified in one of these known categories and how she should be called or named?
3. The recognition of this category, what kind of effects produces from the medical, psychological, familiar and social points of view?
4. Who is in the best position to decide the category within the person should be classified (the person herself, the family, the medical community, the State)?
5. Should the State recognize a category different to female or male in order to identify a person?

The Colombian Constitutional Court will highly appreciate your valuable opinions on this matter. It will be desirable to receive your comments in the next five days, if possible.

3. Issues related to the classification of gender and sex of sexual minorities are put before courts in the context of discrimination, providing fundamental rights such as marriage, legal status for group membership based on categories of male and female, incarceration, and medical treatment, among others. Courts around the world have considered many of these issues and remain divided.

4. The conflation of sex and gender is pervasive in case law. See Jillian Todd Weiss, *Transgender Identity, Textualism, and the Supreme Court: What is the "Plain Meaning" of "Sex" in Title VII of the Civil Rights Act of 1964?*, 18 TEMP. POL. & CIV. RTS. L. REV. 573 (2009) (discussing historical and judicial distinctions between sex and gender in context of transgender discrimination). In one well-known example, Justice Ruth Bader Ginsberg has explained that she deliberately chose the word "gender" as a substitute for "sex" when crafting briefs in discrimination cases to avoid conjuring distracting aspects of sex in her judicial audience. See *Mary Ann Case, Disaggregating Gender from Sex and Sexual Orientation: The Effeminate Man in the Law and Feminine Jurisprudence*, 105 YALE L.J. 1, 9-10 (1995) (Ginsberg recounting that the substitution of gender for sex came as a suggestion from her secretary in order to avoid distractions). Justice Scalia has urged more precision. "The word 'gender' has acquired the new and useful connotation of cultural or attitudinal characteristics (as opposed to physical characteristics) distinction to the sexes. That is to say, gender is to sex as feminine is to female and masculine is to male." *J.E.B. v. Alabama*, 511 U.S. 127, 157 n.1 (1994).

gender refers to a social or psychological presentation.⁶ In this regard it is obvious that a biological male can act and live socially as a girl or woman and similarly, a biological female can act socially like a boy or man. Sex and gender can be completely discordant. One's sex may be ambiguous, but one's gender may be firmly male or female. Likewise, one's sex can be firmly male or female, yet one's gender identity can be of the opposite counterpart. Alternatively, one's sex characteristics and/or one's gender presentation may be ambiguous. Because sex and gender can be aligned or discordant in a variety of ways, classifications cannot rely on either one's sex or gender as a final arbiter of one's identity label.⁷

Generally, it is assumed that one's gender will follow from the sex noted at birth, but there is no certainty concerning one's birth sex and one's later gender presentation.⁸ Deepening scientific knowledge has contributed to legal uncertainty; the biological sciences have provided a more complex, but not more definitive, understanding of sex differentiation and this has eroded our belief that humans are immutably men or women. More importantly, sexual minorities on their own journey toward equality and recognition have forced courts to reevaluate a simplistic binary construction of sex that was once regarded as a universal truth.

Considering new knowledge and social changes accumulated over the past several decades, it is now apparent that legal concepts associated with the terms *male* and *female* were and are too limiting. Humankind defies a binary construction, and neither law nor any other social institutions can change that reality.⁹ As Professor Julie Greenburg has observed, "Sex classification

5. See generally Milton Diamond, *Biased-Interaction Theory of Psychosexual Development: "How Does One Know if One is Male or Female?"*, 55 SEX ROLES 589, 591-95 (2006) [hereinafter *Biased-Interaction Theory*] (discussing influences on sex and gender in sexual development).

6. *Id.* at 590 ("gender refers best to an imposed or adopted social and psychological condition").

7. Milton Diamond employs the acronym PRIMO to describe how to evaluate one's sexual profile. The P refers to one's gender Patterns of behavior, R to Reproduction, I to sexual Identity, M to sexual Mechanisms, and O to sexual Orientation. Each PRIMO factor may be discordant in relation to the others. See Milton Diamond, *Biological Aspects of Sexual Orientation and Identity*, in THE PSYCHOLOGY OF SEXUAL ORIENTATION, BEHAVIOR AND IDENTITY: A HANDBOOK 45-80 (Louis Diamant & Richard McNulty eds., 1995), available at <http://www.hawaii.edu/PCSS/biblio/articles/1961to1999/1995-biological-aspects.html#ref51>.

8. Diamond, *Biased-Interaction Theory*, *supra* note 5, at 590.

9. However, federal law has certainly tried to make sex a black and white proposition. For example, the Defense of Marriage Act provided:

In determining the meaning of any Act of Congress, or of any ruling, regulation, or interpretation of the various administrative bureaus and agencies of the United States, the word "marriage" means only a legal union between one man and one woman, as husband and wife, and the word "spouse" refers only to a person of the opposite sex who is a husband or a wife.

1 U.S.C. § 7 (2012). In 2013, the United States Supreme Court held that the provision within the Defense of Marriage, which by definition reserved marriage to heterosexual unions, was

systems . . . are still based primarily on the assumptions that sex is binary, unambiguous, and can be biologically determined, despite scientific research that indicates that none of these assumptions are completely accurate.”¹⁰ Undeniably, the disconnect between society’s construction of sex and gender and the reality of human biology impedes the law’s ability to be just.

The request from the Colombian Constitutional Court offers an opportunity for the authors to demonstrate how to infuse the legal construction of sex and gender with principles of self-actualization and autonomy that derives from a deeper understanding of sex differentiation. We believe that a more sophisticated appreciation of variations of human sex development will lead democratic societies to strengthen the rights of sexual minorities and in particular their right to describe and define their own identity.

Building on the questions the Colombian court asked, this paper posits that there is a justification to recognizing biological reality, autonomy, and self-actualization as guiding principles in establishing sex and gender legal classifications. It is widely recognized that the construction of sex and gender for legal purposes is more complex than it was believed to be a few decades ago. As a result, as a society we have become more cautious and enlightened in how to sort and label humankind. Yet, this journey is far from complete. In the future, rather than expecting legal systems to more “accurately” classify individuals by sex and gender, we believe value will be found in refraining from labeling and sorting; or when needed and appropriate, in allowing self-identification and permitting delayed, tentative, and fluid identification to exist within legal classifications.

This paper will expand on the answers provided to the Colombian courts by considering the general legal ramifications associated with definitions of the terms *male* and *female*, *boy* and *girl*, and *man* and *woman*. Part II will provide a brief description of how medical science became the arbiter of sex, and the role it has played in defense of the modern myth of absolute sexual dichotomy. Part III discusses recent developments in recognizing a third sex designation, as a catchall classification for sexual minorities. Part IV questions whether society unnecessarily sorts people and suggests that to preserve a right to self-identify, one step might be to classify individuals only when necessary and not for all purposes, rather than rigidly and routinely.

I. INTERSEXUALITY IN CULTURE AND MEDICINE

Across times and cultures, the outward characteristics of the gross physical body have likely been a dominant method for sorting humans as male

unconstitutional as a deprivation of the liberty of the person protected by the Fifth Amendment. *United States v. Windsor*, 133 S. Ct. 2675, 2691 (2013).

10. Julie A. Greenberg, *Deconstructing Binary Race and Sex Categories: A Comparison of the Multiracial and Transgendered Experience*, 39 SAN DIEGO L. REV. 917, 922 (2002).

and female,¹¹ but sorting by physical characteristics also never has sufficed. The fact that sex variations occur has always been part of the social fabric of civilizations.¹² Indeed, archeologists studying Neolithic societies have observed that gender construction and social organization accepted more complexity than simple anatomical categorization.¹³ Neolithic era figurines displaying mixed and discordant sex and gender characteristics confirm that early societies maintained a cultural space for ambiguity.¹⁴ French historian Marie Delcourt describes the role of hermaphrodites in myths and rites in ancient societies and the social complexity to their status. In her accounts of ancient Greek, Roman, Etruscan, and Asian civilizations, she locates instances where the hermaphrodite was deified in formative myths,¹⁵ celebrated as a corporeal form,¹⁶ and regarded both as asexual¹⁷ and hypersexual.¹⁸ She notes, too, that the birth of a mixed sex infant could be a bad omen – the birth of a monster threatening the entire community – that must be dealt with harshly.¹⁹

11. One notable example of the sharp line of demarcation between man and woman is found within the biblical Genesis story, with God forming woman from the rib of the man. *Genesis* 2:22.

12. KATHLEEN LONG, *HERMAPHRODITES IN RENAISSANCE EUROPE* 6-7 (2006). Long notes the variety of depictions in prehistoric, early Christian, Greek, and Roman depictions of hermaphrodites, from divine to subhuman. *Id.* at 7. Noted archeologist Lynn Meskell cautions any interpretation to recognize the risk of “conflating ancient and modern experience.” Lynn Meskell, *The Intersections of Identity and Politics in Archaeology*, 31 *ANN. REV. ANTHROPOLOGY* 279, 279-81 (2002). Of the iterative nature of understanding sex and gender in other civilizations, she notes, “It has taken time to convince archaeologists that ours is a subjective enterprise that is far from agenda-free.” *Id.* at 293.

13. Maria Mina, *Carving Out Gender in the Prehistoric Aegean: Anthropomorphic Figurines of the Neolithic and Early Bronze Age*, 21 *J. MEDITERRANEAN ARCHAEOLOGY* 213, 233 (2008).

14. Artifacts, particularly figurines recovered from the Neolithic and Bronze Age, reveal that while the male or female body was an important determinant of social organization, there existed a substantially more complex and less binary construction. For example, archeologist Mira Mina, examining artifacts from prehistoric Greece found in addition to male and female figurines, both asexual and ambiguous figurines as well. Mina describes prehistoric societies as having a complex gender organization “not organized along a bi-polar axis.” *Id.*

15. MARIE DELCOURT, *HERMAPHRODITE, MYTHS AND RITES OF THE BISEXUAL FIGURE IN CLASSICAL ANTIQUITY* 17-32 (Jennifer Nicholson trans., Studio Books 1961) (1956) (describing deification of hermaphrodites in myth). In North American indigenous cultures, two-spirited male and female individuals, who were individuals with sexual variances, held often venerated roles. See WALTER WILLIAMS, *THE SPIRIT AND THE FLESH: SEXUAL DIVERSITY IN AMERICAN CULTURE* (1986). And in Hinduism, the God Shiva often appears as an hermaphrodite, with a fusion of male and female characteristics. See B.N. Raveesh, *Aradhanareeshwara Concept: Brain and Psychiatry*, 55 *INDIAN J. PSYCHIATRY* S263 (2013).

16. DELCOURT, *supra* note 15, at 56-59.

17. *Id.* at 52-53.

18. *Id.* at 64-66.

19. *Id.* at 43-45. Positive cultural views of intersex conditions have been noted in North American cultures. WILLIAMS, *supra* note 15.

Uneasiness best describes the modern era's attitude toward intersexuality.²⁰ The reality that some are born with ambiguous sex characteristics has presented a challenge to modern western culture's belief that an absolute divide exists between male and female. Anne Fausto-Sterling, in her seminal article, *The Five Sexes*, asserts that modern western cultures gravitated toward a more rigidly binary understanding of sex than earlier cultures.²¹ She notes that Western cultures insisted that hermaphrodites choose a male or female designation to claim their personhood, in order to preserve the myth of sexual dichotomy.²² Fausto-Sterling explains, "[i]n Europe a pattern emerged by the end of the Middle Ages that, in a sense, has lasted to the present day: hermaphrodites were compelled to choose an established gender role and stick with it."²³ Similarly, Alice Dreger, examining the medicalization of sexual ambiguity, explains that the hermaphrodite was perceived as a threat to the impermeable social and biologic boundaries between male and female, and medicine became the frontline defense of the stark border.²⁴ Dubbing the

20. The modern era, usually regarded somewhat arbitrarily as commencing as the late Middle Ages, ends in the 1500s. See OXFORD AMERICAN DICTIONARY 961 (4th ed. 2006) ("Modern History" is "history from the end of the middle ages to the present day"). See also *Larousse Encyclopedia of Modern History: From 1500 to the Present Day* (Marcel Dunan et al. eds., 1964).

21. Anne Fausto-Sterling, *The Five Sexes*, 33 THE SCIENCES 20 (1993).

22. *Id.* at 23. Kathleen Long, providing the most in-depth historical account of intersexuality, describes alternative cultural characterizations of hermaphrodites as monsters, deities, or comic figures. LONG, *supra* note 12, at 7.

23. Fausto-Sterling, *supra* note 21, at 23. Foucault described the law of the Middle Ages as allowing a tentative sex designation in childhood, but then requiring the individual to declare a permanent sex designation in adulthood that could not be again switched. See Katrina C. Rose, *A History of Gender Variance in Pre-20th Century Anglo-American Law*, 14 TEX. J. WOMEN & L. 77, 88 (2005) (citing Michel Foucault, *Introduction to HERCULINE BARBIN—BEING THE RECENTLY DISCOVERED MEMOIRS OF A NINETEENTH CENTURY HERMAPHRODITE* (Richard McDougall trans., Random House Inc.) (1980)).

Kathleen Long describes how the existence of hermaphrodites challenged and confounded the "expectation of clear sex distinctions" that defined culture, law, and social norms from the sixteenth century onward. In truth, the existence of the hermaphrodite forced an uneasy acknowledgment that immutable distinctions between male and female existed. She writes,

Because the hermaphrodite was and is inconceivable within social boundaries, its mere existence calls these boundaries into question. The bodily reality of the hermaphrodites, obliterated by social norms, remains the ungraspable truth which calls all of these gender based norms into question. It is the only truly subversive figure, standing in the margins, mocking the construction of gender.

LONG, *supra* note 12, at 22-26.

24. Alice Dreger, *Doubtful Sex: The Fate of the Hermaphrodite in Victorian Medicine*, 38 VICTORIAN STUDIES 335, 339-40 (1995). "Still, however mixed and multifaceted sex was shown able to be, however overt and extreme the disagreements about the nature of sex, medical men never ceased to assume that in the final analysis there were still two, and only two distinct, 'true' human sexes. And, as the end of the century neared, it became certain that any given body could and would only be entitled to one." *Id.* at 340.

Victorian era “the age of gonads,”²⁵ Dreger explains that by this time the binary narrative had annealed to a firm conviction that each individual born was either male or female, and in the case of an ambiguity, it was medicine’s mission to find that true sex.²⁶ Historian Christina Matta lends support to the view, explaining that “correcting” gender variance by surgery constituted a uniquely modern instinct emerging in the early 1850s.²⁷ By the latter half of the nineteenth century, physicians adopted it as their “moral obligation to correct their patients’ bodies to forestall inevitable tendencies towards sexual deviance, even if it meant complete removal of their sexual organs.”²⁸

In the modern era, discoveries within the biological sciences were deployed to shore up the binary myth. Yet, while scientific advancements have yielded a more complex understanding of sex differentiation beyond simple observation of gross anatomy, in reality, science has shed no greater light onto the question of where the intersex community fits in either a unified biological theory of sexuality or in society. Nevertheless, scientific discoveries revealing the complexity of genetics, hormones, and gonadal differentiation shifted the responsibility for sex classification for social and legal purposes to the domains of medicine and science.²⁹

Great leaps in scientific understanding of sex determination abounded in the modern era. Among them, in the 1870s, Edwin Klebs offered up gonadal tissue as the key sex determinant, above external anatomy.³⁰ Eventually, the gonadal-focused “Klebs system” shared the stage within biology with other science-generated explanations for sex determination. Notably, in the twentieth century, a richer understanding of sex differentiation and sex determination emerged from discoveries within the developing field of human genetics and from a deeper understanding of hormonal influences on fetal development. In human genetics, historic milestones included Theophilus Painter’s early twentieth century discovery of the chromosomal link to sex determination and Murray Barr’s identification of intercellular inactive X chromosomes in a female somatic cell, now known as Barr bodies, as a visual proxy within human

25. See Alice D. Dreger, *A History of Intersexuality From the Age of Gonads to the Age of Consent*, 9 J. CLINICAL ETHICS 345-46 (1998).

26. *Id.* at 346-47. See also ALICE D. DREGER, *HERMAPHRODITES AND THE MEDICAL INVENTION OF SEX* (1998).

27. Christina Matta, *Ambiguous Bodies and Deviant Sexualities: Hermaphrodites, Homosexuality, and Surgery in the United States, 1859-1904*, 48 PERSPECTIVES IN BIOLOGY & MED. 74, 76 (2005).

28. *Id.* at 79.

29. Katrina Rose, examining legal cases from the 1600s, describes the medical examinations of gross anatomy employed to determine the legal sex. In one instance, “a jury of five midwives” examined the subject and declared her “perfect in all her parts, by us inspected, and that she doth not at all partake either inwardly or outward of the masculine sex.” See Rose, *supra* note 23, at 101.

30. See DREGER, *HERMAPHRODITES AND THE MEDICAL INVENTION OF SEX*, *supra* note 26, at 145-47 (describing the influence of the Klebs System).

tissue that could predict chromosomal sex.³¹ Early twentieth century scientists also isolated hormones in human blood and observed hormonal differences in males and females. In 1939, biochemists Adolf Butenandt and Leopold Ruzicka jointly won the Nobel Prize in Chemistry for their work in isolating male and female hormones.³² In 1959, the publication of a paper by Charles H. Phoenix, Robert W. Goy, Arnold A. Gerall, and William C. Young identified for the first time the role of hormonal influences on the brain to explain sex differentiation.³³ Discoveries such as these allowed the biological sciences to claim naming, describing, and classifying human differences in sex determination as its domain.

The problem with enshrining science as an arbiter of sex differentiation is that science tolerates a level of uncertainty that other social institutions, including medicine and law, cannot countenance. The study of sex differentiation in human biology exemplifies that truth. Even with an ever-richer understanding of anatomy, gonads, hormones, and genetics, biologists still cannot explain precisely how and why variations in sex and gender occur. Simply put, there remains much for biologists to uncover about sex differentiation. For instance, in the latter part of the twentieth century, biologists hypothesized that the expression of the SRY gene³⁴ on the Y

31. Murray L. Barr, *The Significance of the Sex Chromatin*, 19 INT'L REV. CYTOLOGY 35 (1966). The chromatin cell fragments came to be called Barr bodies after the scientist that first described them. The Barr body was identified as an artifact within the cell nucleus that became evident on staining the cell. Its presence revealed an XX (female) chromosomal pattern. See Fiona Alice Miller, *'Your True and Proper Gender': The Barr Body as a Good Enough Science of Sex*, 37 STUD. HIST. & PHIL. BIOLOGICAL & BIOMEDICAL SCI. 459, 460 (2006).

32. See *Nobel Prize in Chemistry 1939*, NOBEL PRIZE, http://www.nobelprize.org/nobel_prizes/chemistry/laureates/1939 (last visited Nov. 1, 2014).

33. See Charles H. Phoenix, et al., *Organizing Action of Prenatally Administered Testosterone Propionate on the Tissues Mediating Mating Behavior in the Female Guinea Pig*, 65 ENDOCRINOLOGY 369 (1959). This publication is described as "a major turning point in the study of sex differences in the brain." Arthur P. Arnold, *The Organizational-Activational Hypothesis as the Foundation for a Unified Theory of Sexual Differentiation of All Mammalian Tissues*, 55 HORMONES & BEHAV. 570 (2009). Milton Diamond describes the significance of this landmark 1959 article by stating, "[t]he central finding of that paper was, as is now well known, that the adult sexual behavior of animals could be significantly established (organized) by prenatal androgenic events and these behaviors in the adult could be later elicited (activated) by these same hormones. To put it simply: the research demonstrated that the neural tissues—somewhere in the brain—mediating adult sexual behavior could be modified during critical stages of prenatal development." Milton Diamond, *Clinical Implications of the Organizational and Activational Effects of Hormones*, 55 HORMONES & BEHAV. 621, 622 (2009).

34. SRY (also known as Sry) refers to the "Sex Determining Region" on the Y chromosome. At the early embryonic stage, the cells are sexually indifferent. Scientists searching for the mechanism and moment that triggers sex differentiation discovered the SRY gene. "The first sex-specific event in the molecular cascade leading to the divergent development of the gonads in the two sexes is the expression of the Y chromosome gene Sry . . . in the undifferentiated gonadal ridge of the male." Arthur P. Arnold, *The End of Gonad-Centric Sex Determination in Mammals*, 28 TRENDS IN GENETICS 55 (2012).

chromosome at the appropriate point in prenatal gonadal development might mark the precise moment of male testis development and male versus female differentiation.³⁵ SRY mutations have now been implicated in certain DSD conditions.³⁶ However, the SRY gene has not yielded an overarching explanation of how or why sex differentiation happens. Biologists now theorize that there are a number of sex determining factors, both known and unknown currently, and that “Sry is not the only or the earliest of the primary sex-determining factors, and there are probably numerous others.”³⁷ For those persons labeled sexually ambiguous, each new discovery offers some bit of information about the nature of their differences, but no definitive answers.

Importantly, when the biological sciences came to be considered the arbiter of sex, variations in sexual development became “pathological” within the purview of science’s sister field of medicine. Scientific theories that explained intersex conditions as errors of nature justified medical intervention.³⁸ For example, from the 1950s onward, many intersex infants were subjected to surgical interventions on the mistaken belief that every person must have a male or female sex.³⁹ Yet the premises for surgical intervention, with roots in developing scientific theories of sex differentiation in the twentieth century, have never been satisfactorily established.⁴⁰

Fiona Miller recounts how in the mid-twentieth century the Barr body rose and then declined as the “definitive evidence of . . . a true, underlying sex.”⁴¹ Hers is a cautionary message about placing absolute clinical faith in uncertain science:

35. *Id.* (explaining that the original Sry theory held that “the expression of the Y chromosome gene Sry . . . in the undifferentiated gonadal ridge” . . . begins a “cascade leading to the divergent development of the gonads in the two sexes”).

36. See Remko Hersmus, et al., *SRY Mutation Analysis By Next Generation (Deep) Sequencing in a Cohort of Chromosomal Disorders of Sex Development (DSD) Patients with a Mosaic Karyotype*, 13 *BMC MEDICAL GENETICS* 1471 (2012) (explaining that mutations of the SRY gene explain only a rare number of DSD patients with mixed chromosomal patterns).

37. Arnold, *supra* note 34, at 56 (describing the role of newly discovered Xist gene expression as a female trigger event).

38. See JOHN MONEY, *SEX ERRORS OF THE BODY: DILEMMAS, EDUCATION, COUNSELING* (1968). See also Alison Redick, *What Happened at Hopkins: The Creation of the Intersex Management Protocols*, 12 *CARDOZO J. L. & GENDER* 289 (2005).

39. See Hazel Glenn Beh & Milton Diamond, *An Emerging Ethical and Medical Dilemma: Should Physicians Perform Sex Assignment Surgery on Infants with Ambiguous Genitalia?*, 7 *MICH. J. GENDER & L.* 1, 2-3 (2000); Hazel Glenn Beh & Milton Diamond, *David Reimer’s Legacy: Limiting Parental Discretion*, 12 *CARDOZO J. L. & GENDER* 5 (2005). Alison Redick describes how scientific theories of sex development fueled faulty surgical clinical protocols to treat the intersex infant in the 1950s. See Redick, *supra* note 38, at 295.

40. Miller, *supra* note 31, at 476 (“The psychiatric and psychological research conducted by [John] Money and [Joan and John] the Hampsons was highly reliant on the status of the Barr body as a definitive marker of genetic or chromosomal sex.”).

41. *Id.*

Some things changed as the 1950s became the 1960s, but much remained the same . . . [t]he cultural and clinical faith in sexually dichotomous nature of the human species, and the valuation of genetic information in defining that sexual identity, continued. When Barr's 1950s reading of the Barr body was revealed to be in error, the faith in scientific markers of true sexual identity merely switched its object. After 1959, the Y chromosome (and more recently, the sex determining region of the Y chromosome, SRY) became the arbiter of a true, underlying sexual identity.⁴²

Recently, clinicians have developed in utero medical interventions to prevent the virilization of female genitalia associated with Congenital Adrenal Hyperplasia (CAH), one form of DSD. Preventive treatment is rationalized that in keeping with the view that there are two sexes, variants are anomalies to be treated if possible.⁴³ The treatment emerged when, in the 1980s, several French physicians reported that they had treated pregnant mothers at risk for bearing offspring with CAH with dexamethasone and that treatment had reduced clinical outward signs of virilization in female offspring with CAH.⁴⁴ The prenatal treatment affects only the cosmetic appearance of the genitals in CAH girls, it does not prevent CAH, nor does it offer any helpful effect on CAH males or any of the fetuses that the CAH recessive genetic condition has skipped who must also be exposed to the drug regimen for some time in utero.⁴⁵ The treatment is ethically controversial because of 1) questions regarding whether treatments aimed solely at altering the appearance of genitals are medically necessary and 2) whether the risk-benefits of treatment are justified in light of the fact that the treatment exposes potentially affected and unaffected fetuses to a drug with unknown effects on the fetal brain.⁴⁶ Prevention of CAH virilization in utero through medical interventions in order

42. *Id.* at 480. Miller recounts how in the decades after its discovery in the 1940's, it was widely believed that the discovery of the Barr body could provide clinical answers to the diagnosis and management of sex anomalies, though the theory was later established as flawed. *Id.* at 462.

43. See Sharon E. Systma, *The Ethics of Using Dexamethasone to Prevent Virilization of Female Fetuses*, in 29 ETHICS AND INTERSEX 241, 245 (Sharon E. Systma ed., 2006) (explaining why treatment might be "desirable and attractive" in order to obviate distress of uncertainty).

44. Michel David & Maguelone G. Forest, *Prenatal Treatment of Congenital Adrenal Hyperplasia Resulting from 21-Hydroxylase Deficiency*, 105 J. PEDIATRICS 799 (1984).

45. See *Technical Report: Congenital Adrenal Hyperplasia*, 106 PEDIATRICS 1511, 1512, 1515 (2000) [hereinafter *Technical Report*].

46. On February 3, 2010, thirty-five bioethicists sent a "Letter of Concern from Bioethicists" to the Food and Drug Administration, as well as to the home institutions of two of the leading proponents and providers of the treatment. In response, several prominent physicians jumped to the defense of their colleagues and condemned the letter writers. The American Journal of Bioethics devoted an issue to the controversy in 2010. See Laurence B. McCullough et al., *A Case Study in Unethical Transgressive Bioethics: "Letter of Concern From Bioethicists" About the Prenatal Administration of Dexamethasone*, 10 AM. J. BIOETHICS 35 (2010).

to achieve “normal looking” genitals provides an example of how medicine often serves as a frontline defender of the male-female binary myth.⁴⁷

Scientific discoveries regarding sex differentiation and classification influenced the development of the law, just as they did clinical medical decision-making. Although scientific discoveries about the effect of hormones and genetics on sex differentiation provided a more sophisticated and complex understanding of sex classification, what legal institutions misunderstood was that increasing complexity in understanding sex did not necessarily translate to more certainty in classifying individuals by sex.⁴⁸ Fundamentally, whether courts looked at only the anatomy or employed more sophisticated theories of sex classification made no difference because the premise that all individuals must be either male or female was faulty.

Corbett v. Corbett,⁴⁹ widely heralded for its progressive recognition that multiple factors contribute to sex differentiation, also revealed the tenacity of law’s adherence to the binary myth. In this case, an English court, deciding the validity of a marriage between a post-operative male-to-female transgender individual and a male, accepted the proposition that sex determination was dictated by chromosomal, gonadal, genitalia, psychological, and hormonal factors.⁵⁰ Yet, quite arbitrarily, of those factors, the court declared that the greatest weight went to the biological factors over the psychological ones.⁵¹ Even while acknowledging the complexity of sex classification and the possibility of discordance among factors, the court, like medicine, nevertheless remained dedicated to finding a “true sex.”⁵²

Other social institutions, wanting to classify individuals by sex, also deferred to medicine to inform that process. In competitive sports, the Olympics for example, testing moved beyond simple visual inspection of the so-called “compulsory ‘nude parades,’” of the 1960s, to chromosomal testing,

47. Miller, *supra* note 31, at 480 (observing that the Barr body reinforced “the cultural and clinical faith in the sexually dichotomous nature of the human species, and the valuation of genetic information in defining that sexual identity”).

48. *Id.*

49. *Corbett v Corbett* [1970] 2 AER 33 (employing a biological factor test to determine sex).

50. *Id.* at 44.

51. *Id.* at 48-49.

52. *Id.* The first United States case to consider sex classification of individual, *M.T. v. J.T.*, 355 A.2d 204 (N.J. Super. Ct. App. Div. 1976), rejected *Corbett*’s analysis that anatomical sex at birth was the primary determinant of sex for legal purposes. *M.T.* involved an individual classified as male at birth. At the time of the proceeding, *M.T.* had sex assignment surgery. *Id.* at 205. Moreover, the case indicates that *M.T.* might have had some congenital ambiguity. *M.T.* sought support and maintenance based on a marriage to a male partner. *Id.* The court determined *M.T.* was female for the purposes of her family law claim. *Id.* at 211. Importantly, the court concluded that sex at birth was not immutably determined and that sex was not ordained by anatomy. *Id.* at 208.

Subsequent cases in the United States often favored *Corbett*, that there is but one “true sex,” based on anatomy and fixed at birth. See *Kantaras v. Kantaras*, 884 So. 2d 155, 161 (Fla. Dist. Ct. App. 2004); *In re Ladrach*, 32 Ohio Misc. 2d 6 (1987); *Littleton v. Prange*, 9 S.W.3d 223, 231 (Tex. App. 1999).

and then to testing for the SRY gene.⁵³ Most recently, the International Olympic Committee began testing for excessive androgenic hormones as its decisive test, on the assumption that androgen hormone levels explain any athletic unfair advantage of male over female athletes.⁵⁴ Although these tests have been rationalized as necessary to preserve fairness and detect fraud, the tests have not been effective in achieving either aim.⁵⁵ As to the latest testing efforts, critics point out that, “Despite the many assumptions about the relationship between testosterone and athletic advantage, there is no evidence showing that successful athletes have higher testosterone levels than less successful athletes.”⁵⁶

If anything, a review of the evolving science of sex development should alert an outside observer that no test of classification, and certainly no “scientific test,” should be regarded as definitive test for maleness or femaleness. Science is necessarily limited by what it has yet to discover. Some warn that social institutions must recognize the inherent limitations of the biosciences, “in the case of the socio-medical disorders . . . matters are not ‘settled’ permanently or satisfactorily in biology, but only temporarily in local settings and contexts.”⁵⁷ Nevertheless, other social intuitions have unfortunately demurred to the biological sciences to define male and female, man and woman, in the belief that science has harvested absolute truths about sex or gender.

II. MAKING ROOM FOR VARIATIONS OF SEXUAL DEVELOPMENT

A. *Manifestations of Variations*

As a preliminary matter, not all differences of sex differentiation are apparent at birth; some do not show up until the individual enters puberty or

53. See Katrina Karkazis, et al., *Out of Bounds? A Critique of the New Policies on Hyperandrogenism in Elite Female Athletes*, 12 AM. J. BIOETHICS 3, 6-7 (2012) (describing evolving testing policies since women first competed in the 1900 Olympics). Karkazis notes that the International Olympic Committee adopted SRY gene testing for a short time, but soon found the test unreliable. At various recent points the Olympics has also employed a medical “ad hoc” clinical and laboratory testing approach. *Id.* at 6-7.

54. *Id.* at 7.

55. These tests have uncovered instances of sex variation, but naturally occurring individual sex variations do not serve as a reasonable proxy for competitive advantage (let alone unfair advantage), nor are these individuals acting fraudulently in being themselves. *Id.* at 7-8.

56. *Id.* at 8. The authors point out that an individual might excel when at their own ‘optimal level’ of testosterone, but “comparing testosterone levels across individuals is not of any apparent scientific value.” *Id.* The test fails altogether in certain instances of DSD. For example, women with Androgen Insensitivity Syndrome are unresponsive to androgens, and so regardless of androgen levels, it will yield no advantage to them. Women with Congenital Adrenal Hyperplasia, typically have high androgen levels, but often have physical characteristics that place them at a disadvantage in athletic competition. *Id.*

57. Miller, *supra* note 31, at 462 (citing Jonathan Dumit, a medical anthropologist examining the phenomenon of “good enough” medical science).

beyond.⁵⁸ In fact, many individuals with DSD characteristics never discover their condition, nor do those around them.⁵⁹ Adding further complication, regardless of whether the sex of a child is certain or not, gender identification must await the expression of one's preference—an individual's gender identification and expression may not be in accord with the sex.⁶⁰ Gender discordance or preference can never be known at birth. The gender that one will manifest in life involves complex interactions among many influences, including inborn biological factors that organize predispositions together with postnatal interactions in society.⁶¹ In this regard, there is increasing evidence that the brain develops via a process known as "biased-interaction."⁶² Biased-interaction means that sex and gender are as much a process as a status.⁶³ Persons with intersex conditions may find that as they mature, they prefer a

58. There are many types of intersex, or DSD (Differences of Sex Development) conditions; such conditions are not rare. Most intersex conditions are occult; some are obvious at birth. With proper medical examination, most cases of intersex in an infant can be diagnosed with an aim to discovering the most likely social identity that will be chosen or preferred by the individual as an adult. This prediction can thus be the basis for a tentatively assigned sex if sex designation is essential. For example, an infant born with the most common intersex condition known as CAH (Congenital Adrenal Hyperplasia), despite looking as if the infant has a penis yet with XX chromosomes, should be identified as a female on a birth registration. An infant born looking like a female at birth but testing positive for cAIS (complete Androgen Insensitivity Syndrome), despite having XY chromosomes and testicles, should also be registered as a female because that individual will most likely want to identify as a female. See generally Milton Diamond & Linda A. Watson, *Androgen Insensitivity Syndrome and Klinefelter's Syndrome: Sex and Gender Considerations*, in 13 CHILD & ADOLESCENT PSYCHIATRIC CLINICS: SEX AND GENDER 623 (Milton Diamond & Alyane Yates, eds. 2004) [hereinafter SEX & GENDER].

Persons born looking like females yet with XY chromosomes and testicles, if shown by testing to have conditions known as 5-alpha or 17-beta, should be tentatively designated as males. These designations would be based on the knowledge and experience that the majority of infants with said characteristics, as adults, if treated appropriately, accept male gender identity and want to live as males. See Vivian Sobel & Julianne Imperato-McGinley, *Gender Identity in XY Intersexuality*, in SEX & GENDER 609, 609-613 (summarizing studies and recommending male upbringing).

59. Androgen Insensitivity, for example, is a condition where an XY-affected individual is insensitive to androgen. In cases of Complete Androgen Insensitivity, the infant will appear female externally and will have male internal structures (e.g. undescended testicles). The child will look like a female and may identify as one. Unless the individual seeks treatment for infertility or failure to menstruate at some point in her life, these women may wholeheartedly accept a female identity and may not learn that they are XY. *Id.* at 616. Sex testing in international sports has "caught" such XY women unaware of their chromosomal make-up. See Karkazis, *supra* note 53, at 7.

60. See Hazel Beh & Milton Diamond, *Ethical Concerns Related to Treating Gender Nonconformity in Children and Adolescence: Lessons from the Family Court of Australia*, 15 HEALTH MATRIX: J. L. & MED. 239, 257-266 (2005)[hereinafter Ethical Concerns] (describing characteristics of gender nonconformity in children).

61. Diamond, *Biased-Interaction Theory*, *supra* note 5, at 592-93.

62. *Id.* at 593 (discussing biological influences that "organize and bias" gender behaviors and the interaction with "forces of nurture" to explain psychosexual development).

63. Sobel & Imperato-McGinley, *supra* note 59, at 610-14 (describing progression in gender identity in individuals with 5-alpha-reductase deficiency).

gender that does not conform to the sex initially assigned at birth.⁶⁴ In these cases, prenatal organizing factors may overcome postnatal social influences.

The recessive genetic condition known as 5-alpha-reductase deficiency provides one example of how both pre- and post-natal influences can leave gender expression unsettled over time. A genotypic male infant born with 5-alpha-reductase deficiency will generally appear female at birth.⁶⁵ Although genotypically male, that child will likely be classified as female and raised as female because this DSD is not recognized or because the parents and medical team deem it appropriate to raise the child female based on the outward appearance of the child's genitals.⁶⁶ At puberty, masculinizing hormonal influences in the genotypic male child may cause anatomical virilization and may draw the child to a more masculine psychosocial presentation.⁶⁷ Therefore, at puberty, the child may begin to identify as a male and prefer that life. If, on the other hand, this child is given treatment to suppress virilization and promote feminization that occurs at puberty, the child might come to accept a female identity.⁶⁸ Here the natural progression of the condition, as well as treatment decisions, leads to changing gender identification across the age span.

The transgender child's developmental experience, like that of some children with intersex conditions, may also be fluid over time. The transgender individual also has a variation of human sexuality that confounds a simple classification system. A transgender individual may identify with a gender that is discordant with the individual's gross anatomical or biological sex⁶⁹ or the gender assigned at birth. For a sizeable portion of transgender individuals, discordant gender identity manifests in childhood.⁷⁰ But for others, the discordance manifests much later in life.⁷¹ There is no way to know that an infant may one day identify with a gender that is not in concordance with that infant's anatomical sex or the gender assigned at birth.⁷² Gender identity

64. *Id.*

65. *Id.* at 610.

66. *Id.*

67. *Id.*

68. *Id.* at 610-14.

69. Beh & Diamond, *supra* note 60, at 257-59.

70. *Id.* at 260-66 (describing childhood presentations of GID).

71. In fact, there have been reports of individuals transitioning in late life. *See, e.g., East Sussex Pensioner to have Sex Change Op*, BBC NEWS, May 2, 2012, <http://www.bbc.co.uk/news/uk-england-sussex-17913771> (reporting on a 78-year-old who will have sex change operation on National Health Service healthcare); Horace Lu, *Man Enough to Be a Woman*, SHANGHAIIST, Jun. 14, 2012, <http://shanghaiist.com/2012/06/14/man-enough-to-be-a-woman-at-84.php> (reporting on a news report in China's Southern Metropolitan Daily of 84 year old transitioning from male to female).

72. *See generally* Beh & Diamond, *Ethical Concerns*, *supra* note 60, at 259-71 (summarizing literature regarding the fluidity of gender in children with Gender Identity Disorder throughout childhood and adolescence).

discordance can be fluid, particularly in childhood.⁷³ Even though gender identity is expressed after birth, there is increasing evidence to suggest that the etiology of this dichotomy is biological and begins within utero hormonal exposure that alters brain structure.⁷⁴ Put simply, the evidence is growing that, like established intersex conditions, transsexuality involves a biologically rooted variation of sex development.

B. Accepting Differences

Anne Fausto-Sterling posed a remarkable question twenty years ago, “what if things were altogether different?”⁷⁵ She challenged, “Imagine a world in which the same knowledge that has enabled medicine to intervene in the management of intersexual patients has been placed in the service of multiple sexualities.”⁷⁶ Rather than allowing intersex children to be “squeezed into one of the two prevailing sexual categories,” she called on parents and intersex children “to be brave pioneers” so that these individuals might achieve “unimpeded intersexuality” as their rightful identity.⁷⁷

In effect, Fausto-Sterling’s question is precisely what the Colombian court was exploring. The Colombian court asked how best to name and categorize those with DSD, and wondered what impact labeling someone other than male or female might have on them, their families, and important social institutions including law. It is appropriate to carefully consider this question, because it reflects a more sophisticated understanding that sex is not categorical and it recognizes how many stakeholders care about these matters.

In this section, we consider alternative responses to the diversity of sex differentiation, including incremental approaches. One approach might be to “carve [a] small legal exception[] specifically for the intersexed”⁷⁸ that would allow them to change their legal sex in order to provide a later correction. Along similar lines, an infant with a DSD condition that cannot be classified at

73. Kenneth Zucker et al., *A Developmental Biopsychosocial Model for the Treatment of Children with Gender Identity Disorder*, 59 J. HOMOSEXUALITY 369, 392 (2012). See also Beh & Diamond, *Ethical Concerns*, *supra* note 60, at 260-66.

74. See Diamond, *supra* note 33; Milton Diamond, *Transsexuality Among Twins: Identity Concordance, Transition, Rearing and Orientation*, 14 INT’L J. TRANSGENDERISM 24 (2013) (comparing and reporting concordance and discordance values for transsexuality in monozygotic and fraternal twins); Milton Diamond & Nancy L. Segal, *Identical Reared Apart Twins Concordant for Transsexuality*, 6 J. EXPERIMENTAL & CLINICAL MED. 74 (2014) (case study); Frederick Coolidge et al., *The Heritability of Gender Identity Disorder in a Child and Adolescent Twin Sample*, 32 BEHAV. GENETICS 251 (2002) (demonstrating strong heritable component); Peggy T. Cohen-Kettenis et al., *Cognitive Ability and Cerebral Lateralisation in Transsexuals*, 23 PSYCHONEUROENDOCRINOLOGY 631 (1998) (reporting on study supporting theory of perinatal hormonal influences in gender identification).

75. Fausto-Sterling, *supra* note 21, at 24.

76. *Id.*

77. Fausto-Sterling, *supra* note 21, at 24.

78. Darra L. Clark Hofman, *Male, Female, and Other: How Science, Medicine and Law Treat the Intersexed, and the Implications for Sex-Dependent Law*, 21 TUL. J.L. & SEXUALITY 1, 19 (2012).

birth might receive a notation on the birth certificate stating, “Undetermined at Birth.”⁷⁹ At least these solutions have the advantage of recognizing the uncertainty and preserving the infant’s right to develop their own identity in time. Thus, some recordation of uncertainty might be a welcome alternative when the sex or future gender is not certain.

Other countries, notably Nepal and Germany, have recently made changes to how intersex individuals might navigate various government registration systems that classify by sex with more acceptance and dignity.⁸⁰ For example, in 2013, Germany enacted a personhood law that allows parents to indicate an indeterminate sex of birth on the birth records; previously, Germany forced parents to select a male or female designation promptly.⁸¹ Germany also plans to make a similar allowance in passport applications.⁸² German law followed recommendations of the German Ethics Council, an independent council of academics and scientists from many fields, including medicine, natural sciences, philosophy, theology, ethics, economics, and law.⁸³ The Council

79. Undetermined at Birth has the disadvantage of serving merely as a “placeholder” and putting pressure on the family and the physician to determine the sex promptly. See Elizabeth Reilly, *Radical Tweak—Relocating the Power to Assign Sex*, 12 CARDOZO J.L. & GENDER 297 n.2 (2005).

80. While some states and countries do not allow individuals to “reclassify” their sex, with some amount of documentation and the right circumstances many do. See Dean Spade, *Documenting Gender*, 59 HASTINGS L.J. 731 (2008). Some countries have adopted a policy of recognition rather than reassignment. Note authors, Michael Bochenek and Kyle Knight, surveying countries, have found third sex registrations allowed at least in some government documents in Australia and New Zealand (passports), Pakistan (on behalf of Eunuchs). Michael Bochenek & Kyle Knight, *Establishing a Third Gender Category In Nepal: Process and Progress*, 26 EMORY INT’L L. REV. 11 (2012) (discussing the decision, and the administrative process to implement decision, across governmental agencies). Recently, the India Supreme Court issued a sweeping opinion recognizing the legal status of transgender individuals (sometimes referred to as Hijra) as a third gender with equal rights. The Indian Court wrote:

By recognizing TGs as third gender, this Court is not only upholding the rule of law but also advancing justice to the class, so far deprived of their legitimate natural and constitutional rights. It is, therefore, the only just solution which ensures justice not only to TGs but also justice to the society as well. Social justice does not mean equality before law in papers but to translate the spirit of the Constitution, enshrined in the Preamble, the Fundamental Rights and the Directive Principles of State Policy into action, whose arms are long enough to bring within its reach and embrace this right of recognition to the TGs which legitimately belongs to them.

National Legal Services Authority v. Union of India and others, Writ Petition (Civil) No. 400 of 2012, India: Supreme Court, 15 April 2014, available at <http://www.refworld.org/docid/5356279d4.html>.

81. See German Ethics Council, *Intersexuality* 8.2.1 at 115 (2012), available at <http://www.ethikrat.org/files/opinion-intersexuality.pdf>.

82. See Bill Chappell, *Germany Offers Third Gender Option on Birth Certificates*, NPR, THE TWO-WAY, (Nov. 1, 2013), <http://www.npr.org/blogs/thetwo-way/2013/11/01/242366812/germany-offers-third-gender-option-on-birth-certificates>.

83. See Personenstandsgesetz [PstG] [Law on Civil Status], Nov. 1, 2013, BUNDESGESETZBLATT [BGBl. I] at 1122, § 22(3), no. 23 (Ger.).

expressed concern that the unnecessary pressure to declare a sex of birth was a contributing factor in enticing parents to authorize improvident medical interventions.⁸⁴ Germany plans not to insist that individuals definitively select male or female eventually, instead the law allows the indeterminate sex designation to remain on the birth certificate permanently or until changed.⁸⁵

Nepal has implemented the most sweeping changes in recognizing the right of sexual minority individuals to self-identify.⁸⁶ In a 2007 decision, the Supreme Court of Nepal called on the government to eliminate all discriminatory laws, including how sexual minorities are identified in government documents.⁸⁷ In response, the government has begun the task of changing its regulations to allow citizens to designate themselves as a “third gender” in various contexts.⁸⁸

Nepal and Germany’s approaches are noteworthy because their policies were guided by a desire to elevate principles of self-identity and autonomy. In fact, these principles were placed above the science of sex. Germany’s decision in part was dictated out of concern that the administrative urgency to declare a child’s sex fed the unwelcome social urgency that pressures parents to opt for improvident surgeries to establish a child as either male or female.⁸⁹

Nepal’s approach is extraordinarily progressive; its Supreme Court based recognition of the third sex not on the worry that one might be wrongly classified, but squarely on one’s fundamental right to self-identify. *Pant v. Nepal* set as the sole criterion for the designation of one’s identification as a third sex as one’s own “self-feeling;” the government demands no physical examination to prove or disprove one’s “right” sex.⁹⁰ The Court explained the nature of the right:

84. See German Ethics Council, *Intersexuality*, 135-36 (2012), <http://www.ethikrat.org/files/opinion-intersexuality.pdf>. The German Ethics Council is an influential independent body established by German law to advise lawmakers on ethical issues related to the life sciences. See GERMAN ETHICS COUNCIL MANDATE (2013), available at <http://www.ethikrat.org/about-us/our-mandate>.

85. Chappell, *supra* note 82.

86. See Bochenek & Knight, *supra* note 80 (discussing the decision and the administrative process to implement decision across governmental agencies).

87. *Pant v. Nepal*, Writ No. 917 of the year 2064 BS (2007 AD) (translated at 2 NATIONAL ACAD. JUD. L.J. 261 (2008), available at http://njanepal.org.np/index.php?option=com_rokdownloads&view=folder&Itemid=157).

88. While not establishing a universally recognized alternative sex designation, Australia and New Zealand have both implemented policies to allow individuals to both switch their designated sex or to indicate unspecified on passports. Internationally accepted passports must designate a sex, but will accept an undesignated classification. Bochenek & Knight, *supra* note 80, at 26-28. An Australian court has recently expanded the right to note indeterminate and to identify as a third gender for registration purposes. See *NSW Registrar of Births, Deaths and Marriages v. Norrie* (2014) 244 CLR 390 (Austl.). For an explanation of the ruling see Julia Baird, *Neither Female Nor Male*, N.Y. TIMES, Apr. 7, 2014, at A23.

89. See German Ethics Council, *supra* note 84, at 135-36.

90. *Pant v. Nepal*, Writ No. . 917 of the year 2064 BS (2007 AD) (translated at 2 NATIONAL ACAD. JUD. L.J. 261-286 (2008), available at http://njanepal.org.np/index.php?option=com_rokdownloads&view=folder&Itemid=157).

When an individual identifies her/his gender identity according to the self-feelings, other individuals, society, the state or law are not the appropriate ones to decide as to what type of genital s/he should have, what kind of sexual partner s/he needs to choose and with whom s/he should have marital relationship. Rather, it is a matter falling entirely within the ambit of the right to self-determination of such an individual.⁹¹

Certainly an “undetermined,” “third,” or “other” sex could mark a step forward for the intersex and usefully captures some of the diversity within human sexual development. “Other” has the advantage of incrementally chipping away at the law’s rigid binary view of male and female that dominates current registration systems without toppling the male-female social order that predominates. “Other” can be seen as merely establishing an exception to the rule, and thus gives legal recognition to individuals who otherwise lose their identity because they do not fit within that binary system without challenging the binary myth.⁹²

However, “other” might herald its own problems. If “other” comes with a requirement that certain criterion must be met to justify that classification, it remains too wedded to medicine as the arbiter of sex. Worse, if “other” is used to socially sort individuals, it may have the unintended consequence of heightening an awareness of sex differences, and the “other” classification become a source of discrimination and rejection.⁹³

“Other” may not be regarded as accurate to the intersex because it is not nuanced. “Other” does not capture the diversity of sex differentiation that occurs within humans. “Other” has the ring of “the world is male or female or everyone else” and so suffers the same simple-mindedness that plagues the current approach. “Other” might be flawed as well if it is a static classification that does not admit that sex and gender can be fluid and exist along a spectrum with no lines of demarcation.

The “other” designation also would not serve the transgender individual’s interests either, although it might be incrementally better than forcing a transgender person to retain a male or female birth sex designation that they have rejected. “Other” is imperfect because it is too static and inaccurate to capture the transgender experience. In the case of transgender individuals, a rigid classification of male or female will fail because their biological sex and

91. *Id.* at 280. The decision has sweeping breadth, articulating the rights of all sexual and gender minorities to equal and nondiscriminatory rights and recognizing a right of self-identification.

92. A third sex identification also satisfies the current administrative obstacle for international travel. Currently, in order to comply with the United Nations International Civil Aviation Organization, which sets the uniform standards for international civil aviation, a passport must designate sex. However, that sex designation may be marked with an “<” for unspecified. See INTERNATIONAL CIVIL AVIATION ORGANIZATION, MACHINE READABLE TRAVEL DOCUMENTS, DOC. 9303, VOL. 1, PART VI, TECHNICAL SPECIFICATIONS (2006), available at http://www.icao.int/publications/Documents/9303_p1_v1_cons_en.pdf.

93. *Cf.* Hofman, *supra* note 78, at 20.

gender identity is discordant based upon societal notions of gender, but it is not ambiguous. Thus, the transgender individual is not of a so-called third sex; the issue for the transgender individual is how a single classification can capture gender and biological sex dissonance. Transgender individuals also require a system that allows change. When a transgender individual is born, no one can predict when or if they will seek to change the sex assigned at birth. Legal disputes regarding registration systems in the case of transsexuals arise when authorities resist self-identification and instead fixate on prominent biological factors to determine sex.⁹⁴

One might ask if social institutions organized around sexual boundaries really must change to accommodate the intersex. If intersexuality is regarded as a “disorder,” why should “normal” people reorganize social order for the benefit of those who are disordered?

The incidence of intersexuality is neither rare nor common. Estimates of the incidence of various conditions classified as DSD range widely from .018% to 4%.⁹⁵ There are a variety of types of conditions that fall within the definition of DSD and only some of those are apparent at birth.⁹⁶ Yet knowing how often or why these variations occur is of little import to the more fundamental fact that sexual variation occurs within the human population. There must be room in the law to account for the personhood of those who are persons. If the law insists that sex designation is integral to legal personhood, then the law must ensure that each individual’s sex is justly represented.

In sum, when it comes to classifying individuals by sex, the lessons to be drawn from current understanding variations of sex development are three-fold. First, a binary system of sex classification for legal, social, or medical purposes is inadequate to capture the extent of human diversity. The existence of

94. Some courts regard the transgender individual’s sex as fixed at birth. *See, e.g.,* Kantaras v. Kantaras, 884 So. 2d 155, 161 (Fla. Dist. Ct. App. 2004) (holding marriage void ab initio, sex is immutable characteristic of birth); *In re Ladrach*, 32 Ohio Misc. 2d 6, 13 (1987) (considering whether post-surgical male to female transsexual can marry a male and adhering to sex of birth classification); Littleton v. Prange, 9 S.W.3d 223, 231 (Tex. App. 1999) (holding that a transgender male to female was male and marriage to a male was invalid). Other courts are receptive to change. *See e.g., In re Estate of Gardiner*, 22 P.3d 1086, 1110 (Kan. Ct. App. 2001) (adopting a multi-factor test of sex that acknowledged possibility of change), *rev’d*, 42 P.3d 120, 136-37 (Kan. 2002) (denying post-operative male to female transsexual her intestate spousal share); *M.T. v. J.T.*, 355 A.2d 204, 211 (N.J. Super. Ct. App. Div. 1976) (affirming validity of marriage).

95. *See* Alison Davidian, *Beyond the Locker Room: Changing Narratives on Early Surgery for Intersex Children*, 26 WIS. J.L. GENDER & SOC’Y 1, 4 (2011) (describing discrepancies in estimates, summarizing: “Some experts report that up to 4% of the world’s population is born with an intersex condition while others claim the incidence is 0.018% of all births.”); Greenberg, *supra* note 10, at 927 n.53 (describing divergent estimates and noting the difficulty of estimation); Melanie Blackless, et al., *How Sexually Dimorphic Are We?*, 12 AM. J. HUM. BIOLOGY 151, 151 (2000) (estimating 2 per cent and those infants’ surgical correction at possibly 1 or 2 per 1,000).

96. *See* Beh & Diamond, *David Reimer’s Legacy: Limiting Parental Discretion*, *supra* note 39, at 10 (describing range of developmental conditions, noting that “[t]here are well over a dozen intersex conditions, each having unique and different characteristics.”).

individuals with variations of sex development within all societies and across the span of history demonstrates that concepts of sex and gender are more diverse than a binary system recognizes.

Second, a fixed sex classification is too rigid. Some individuals are not statically male or female in sex characteristics or in gender identity.⁹⁷ Sex or gender is not necessarily intractably fixed at birth; in some individuals, sex and gender responds to developmental, hormonal, psychosocial, and biological influences after birth and may therefore change.⁹⁸ Moreover, some intersex and transgender individuals ambiguously manifest both male and female gender traits.⁹⁹ Thus, a system that fixes sex as male or female at birth will not be able to account for individuals whose sex (or gender) might change after birth or who occupy a position along the male-female spectrum.

Finally, no system of sex classification can establish or declare one's sex or gender because sex and gender identity is not a label from without, but an expression that emerges from within the individual. Sex and gender result from a complex interaction of prenatal and postnatal influences of biology and social interaction on the human brain; a system to differentiate individuals on this basis must account for fluidity and variation. For half a century or more, it has been fairly commonplace to assign intersex infants a sex, to surgically create the appearance of that sex, and then to raise that child in a manner that promoted the gender attributes of that assigned sex.¹⁰⁰ The failure of this treatment serves as a cautionary lesson that sex and gender cannot be assigned by others but must be acknowledged as intrinsic and individual.

III. THE RIGHT OF IDENTITY RESIDES WITH THE INDIVIDUAL

Beyond giving those with DSD an "other" or "indeterminate" designation, there may be a wiser alternative that is more protective of the right of self-determination. Simply put, classifying by sex for medical, legal, and social reasons need not proceed in a lock-step fashion. It might be more prudent to consider whether a legal classification of male or female is as essential as it is perceived to be.

There is unnecessary haste in declaring the sex of a newborn, and much of the haste is driven by social pressure on the family of a newborn. The family is

97. As discussed *supra*, some intersex conditions, such as 5 alpha-reductase deficiency cause a shift in identity in reaction to hormonal influences at puberty. See *supra* notes 66-69 and accompanying text. Likewise, transgender individuals may seek to transition at any point in their lifetime; gender identity is thought to solidify as an individual moves from childhood, to adolescence, and then to adulthood. See Beh & Diamond, *Ethical Concerns*, *supra* note 60, at 256-70.

98. Diamond, *Biased-Interaction Theory*, *supra* note 5, at 589.

99. *Id.* at 595 (noting that individuals can express a mixing and melding of gender characteristics).

100. See Beh & Diamond, *Emerging Medical and Ethical Dilemma: Should Physicians Perform Sex Assignment Surgery on Infants with Ambiguous Genitalia?*, *supra* note 39, at 2-3; Beh & Diamond, *David Reimer's Legacy: Limiting Parental Discretion*, *supra* note 39, at 13.

anxious to announce the birth and one common question that parents must field in a social context is whether the child is a boy or a girl.¹⁰¹ Parents and physicians experience a sense of urgency that is borne of anxiety rather than medical necessity; this anxiety drives that need to resolve the determination of the child's sex. Unfortunately, the birth of an intersex child is usually regarded as a "social emergency" even today.¹⁰² While parents may desire a prompt resolution to the question of an infant's sex, they may not appreciate that premature and erroneous designations have social and psychological consequences as well. Therefore a more prudent approach to this social emergency is to counsel patience and provide education and family coping strategies.¹⁰³

Admittedly, some intersex infants do need prompt, life-saving medical or surgical interventions after birth, but these measures must be separated from medical and surgical interventions to fix the sex or "correct" ambiguous genitalia.¹⁰⁴ For example, an infant born with the salt-wasting form of Congenital Adrenal Hyperplasia may suffer a life threatening adrenal crisis in the first few weeks of life without prompt diagnosis and treatment to replace excessive sodium loss.¹⁰⁵ However, interventions aimed at treating medical crises must be evaluated separately from unnecessary interventions intended to establish or impose a sex of the child. As to those surgical interventions that irreversibly assign gender to the newborn, physicians now widely consider or acknowledge that inadequate study has been conducted to assess long-term

101. See Beh & Diamond, *David Reimer's Legacy: Limiting Parental Discretion*, *supra* note 39, at 13 (explaining that parental urgency to announce a sex caused physicians to regard newborn intersex conditions as a "social emergency").

102. See, e.g., Alan D. Perlmutter, *Intersex*, in *UROLOGICAL SURGERY IN INFANTS AND CHILDREN* 2, 14 (Lowell R. King ed., 1997) (characterizing it as "an urgent medical and social problem that requires a careful and thorough assessment to make an appropriate gender assignment as soon as feasible").

103. See Mary Elizabeth Moran & Katarina Karkazis, *Developing a Multidisciplinary Team for Disorders of Sex Development: Planning, Implementation, and Operation Tools for Care Providers*, 2012 *ADVANCES IN UROLOGY* 1.

104. Some medical conditions attend or present with intersex conditions. Congenital Adrenal Hyperplasia of the salt-wasting type requires urgent medical attention to prevent sodium loss. See *Technical Report*, *supra* note 45. William Reiner has described the treatment of a rare and devastating birth defect known as cloacal exstrophy. William G. Reiner, *Psychosexual Development in Genetic Males Assigned Female: The Cloacal Exstrophy Experience*, 13 *CHILD ADOLESCENT PSYCHIATRIC CLINICS NORTH AMERICA: SEX AND GENDER* 657 (2004). Cloacal exstrophy typically involves the entire pelvic field, including the bowel, anus, bladder, and skeleton, also affects the genitalia. *Id.* at 659. Until surgical and medical techniques improved beginning in the 1960s, most of these infants died. Now, almost 90% survive. As part of the surgical repair, it was common to perform feminizing surgery. Reiner examined the outcomes, now that these children survived into adulthood, and found that male infants with surgical assignment to female often rejected their assignment. Reiner writes, "Of the 24 subjects who were sex-assigned female, 13 have declared themselves male." *Id.* at 664.

105. See *Technical Report*, *supra* note 45, at 1511, 1515.

outcomes.¹⁰⁶ Therefore, depending on the condition, there is no longer medical consensus to perform surgical interventions immediately on newborns.¹⁰⁷ While our social and legal systems may compel a declaration of sex in a newborn, biological and medical reality can help predict but cannot provide any such declaration with certainty.¹⁰⁸

Nevertheless, most parents will want to announce the sex of their child soon after birth and a sex designation for social purposes will likely occur fairly soon afterwards. Play, school, and friendships are often sex-segregated and the compulsion to sort children for social purposes is strong.¹⁰⁹ As a child matures, the child's own preferences will emerge. That too can drive the designation, and parents and children can be assisted as they navigate issues of a child's sex and gender identification.¹¹⁰ Who does the child play with; how should the child dress; even what to name the child are all questions a parent must confront from the outset. Simply put, sex designation matters socially because modern childhood is fairly sex-segregated. Medical consensus can provide parents guidance, based on predicting the preferences that usually manifests

106. Compare Rodrigo L.P. Romao et al., *Update on the Management of Disorders of Sex Development*, 59 PEDIATRIC CLINIC N. AMERICA 853 (2012) (while recommending selection of a sex of rearing and surgical interventions early for better functional outcomes, acknowledging that the timing and nature of genital surgery is controversial and evidence is limited), with Jennifer H. Yang et al., *Gender Identity Disorder of Sex Development: Review Article*, 75 UROLOGY 153 (2010) (commenting "existing studies [on sex assignment outcomes] often present conflicting outcomes, in addition to the tremendous amount of data unveiling the ever-evolving complexities of the neurobiological and psychosexual development regarding gender identity" and noting that for some conditions, it is difficult to predict whether an infant assigned to one sex will later switch on their own).

107. A recent update observed that the timing of surgery to repair or construct genitalia is "truly unsettled" and "long-term outcome studies are extremely scarce." Romao, *Update on the Management*, *supra* note 106, at 859-60. See also Milton Diamond & Jameson Garland, *Evidence Regarding Cosmetic and Medically Unnecessary Surgery*, 10 J. PEDIATRIC UROLOGY 2 (2014).

108. See Lee, *Consensus Statement*, *supra* note 1, at 491 (explaining the factors that influence gender assignment in the DSD infant and noting the current rates of predictive error by condition). For example, in infants born with Partial Androgen Insensitivity Syndrome, "there is dissatisfaction with the sex or rearing in about ~25% of individuals whether raised male or female." *Id.*

109. See Janna Jackson, '*Dangerous Presumptions*': *How Single-Sex Schooling Reifies False Notions of Sex, Gender, and Sexuality*, 22 GENDER & EDUC. 227 (2010) (expressing concern regarding the rise in single sex public schools as accentuating false assumptions about sex differences between boys and girls).

110. Recently, California enacted a law allowing children to choose their gender preference for participated in school-based sex segregated activities, without regard to the designation on their birth certificate. Section § 221.5(f) provides:

A pupil shall be permitted to participate in sex-segregated school programs and activities, including athletic teams and competitions, and use facilities consistent with his or her gender identity, irrespective of the gender listed on the pupil's records.

CAL. EDUC. CODE § 221.5 (2013).

with a given condition, but it must acknowledge that guidance as predictive and not certain.¹¹¹

On the other hand, there is no urgent legal imperative to designate an infant's sex, other than that imposed by common practice. Sex-segregating for legal purposes does not begin until school age or more likely into adolescence or adulthood. California's recent law to allow children to participate in sex-segregated school activities in the gender they prefer, not based on anatomy, may signal erosion of that methodology of social organization.¹¹² Likewise, the German and Nepalese steps giving legal recognition to personhood unbound from sex heralds new possibilities.¹¹³ Even the legal need for sex labeling in later childhood and adult life has diminished in recent years; for example sex as a determinant of work, marriage, and military service has eroded.¹¹⁴

Professor Elizabeth Reilly observed that part of the rush to assign the sex of the child is artificially created by unnecessary legal requirements to declare the sex at birth.¹¹⁵ She notes, "[b]irth certificates, which matter little to most people, loom large in the social and legal lives of intersexuals" and that "[t]he need to fill out the birth certificate helps create the 'social emergency' confronting parents and physicians at the birth of an intersexed child."¹¹⁶ Reilly argues that the artificial legal construct that an infant must be classified as male or female in order to have a legal "identity" has contributed to the medicalization of sex differences and exacerbates the stigmatization of intersex infants.¹¹⁷ That early rush to label children similarly makes it more difficult for the transgender child to accept the gender identity that emerges.

111. See Lee, *Consensus Statement*, *supra* note 1, at 496.

112. CAL. EDUC. CODE § 221.5 (2013).

113. See discussion of these cases, *supra* notes 84, 87.

114. Two of the most traditionally segregated institutions, military combat and marriage, have become less sex segregated. For example, in 2013, the United States began allowing women to serve in combat. See News Release, Department of Defense, Defense Department Rescinds Direct Combat Exclusion Rule; Services to Expand Integration of Women into Previously Restricted Occupations and Units (Jan. 24, 2013), available at <http://www.defense.gov/releases/release.aspx?releaseid=15784>. State-by-state efforts for and against marriage equality create a changing landscape. By December 2014, through either legislation or litigation, 35 states and the District of Columbia recognize same sex marriage. Moreover, litigation involving claims both for and against recognition continues in the state and federal courts. See *Same-Sex Marriage Laws*, NAT'L CONFERENCE OF STATE LEGISLATURES (Oct. 17, 2014), <http://www.ncsl.org/research/human-services/same-sex-marriage-laws.aspx>. *Id.*

115. Elizabeth Reilly, *Radical Tweak – Relocating the Power to Assign Sex*, 12 CARDOZO J. L. & GENDER 297 (2005). Hoffman has similarly written, "this author advocates that we move toward a legal model where rights are not dependent upon sex" and writes that the "best solution" for the intersex is to "eliminate sex as a category that determines peoples' rights." Hoffman, *supra* note 78, at 19-21.

116. Reilly, *supra* note 115, at 310.

117. *Id.* at 310-12. She notes that the requirement to label every child male or female "marks the point at which the 'perfect' and 'healthy' child the parents see becomes the medical anomaly the physicians see as a problem in need of 'correction' before the birth can be registered appropriately." *Id.* at 297-98.

Reilly argues that early sex designations on legal documents creates a false aura of “truth and permanence” that undermines self-identity.¹¹⁸ She therefore calls for disaggregating data gathering of birth information for such purposes as census and health surveillance from legal identification.¹¹⁹

The Birth Certificate thus reflects the thinking that sex designation at birth is an assigned, legal, “identity.” “Identification,” an external process is conflated with “identity,” a subjective and internal process not susceptible to external assignment. The proposed change will shift the understanding of sex designation from establishing “identity” to providing statistical public health “information.”¹²⁰

Reilly explains that a legal determination of sex can await self-identification at puberty or beyond, because it is usually at puberty that sex identity for legal purposes begins to matter.¹²¹ If the law does not demand that individuals be classified by sex until a legal need actually arises, it can leave room for the individual to develop gender and sex that is their own, rather than is imposed.

Therefore, rather than fixating on the correct “criterion” by which to classify individuals by their sex (and this includes who earns some form of “other” designation), three aims should be paramount: 1) allowing families to wait; 2) preserving the individual’s right to their own self-identity; and 3) acknowledging sexual ambiguity as its own status.

First, any registration system that insists on a sex designation must not feed the sense of urgency to perform irreversible medical interventions but instead must give families and physicians the space to wait, in order to protect the child’s right to self-identity. If we are to counsel that prudent parents must allow the child’s own nature to emerge, then the legal regulations surrounding birth and early childhood registration must respect the parent’s decision to wait. Some legal classifications by sex may be justified at various milestones of life; however, none of those justifications attend the legal status of newborn or child. Thus, a birth registration system should not compel classifying children by sex at birth.

Second, we recognize that selecting a social sex for child-rearing that follows the binary narrative is desirable for many families in current society. Professionals can help parents navigate the decision of how to rear the sex-ambiguous child in a sex-segregated society. Not all parents and children can be Fausto-Sterling’s willing “brave pioneers” in a march toward a genderless

118. *Id.* at 311-12.

119. *Id.* at 317-19.

120. *Id.* at 312.

121. *Id.* at 316. “Intersex people, particularly, may choose whether to select a male or female identity, or to claim a distinctive identity as a intersexed, neither-sexed or multiple-sexed, similar to the treatment of race identity as a nonexclusive category for those who experience their own identity as nonexclusive.” *Id.*

society.¹²² Nevertheless, parents must protect the child's right to self-identity and autonomy over the fundamental question of "who am I." Thus, any social assignment must be a "soft" assignment that allows the child later decision-making control.

Third, a system of registration must not artificially force all individuals into rigid male-female roles. As Fausto-Sterling warned, "[I]f the state and the legal system have an interest in maintaining a two-party sexual system, they are in defiance of nature."¹²³ Instead, in nature, "sex is a vast, infinitely malleable continuum."¹²⁴ A classification system that demands those who are neither male nor female to be one or the other denies those individuals their own identity. Self-identity means that *that who one is* and *how one lives* defines the person rather than any scientific or legal pronouncement.

CONCLUSION

A dichotomous construction of sex and gender has pervaded modern societies, but this construction has never squared with the reality that humans exist along a sexual spectrum that ranges between male and female characteristics. In the modern era, society has depended on the biological sciences to facilitate the sorting of individuals into male and female classifications. A dubious assumption underlies the male-female dichotomy that an ambiguous sex presentation represents an error of nature to be set right by moving the individual to one end of sexual spectrum or the other.

Another alternative might be to accept those with DSD or GID as having their own identity, and to understand their condition as a variant or difference in human sexuality, not a disorder.¹²⁵ This alternative approach recognizes that medical science has a helping, but not defining, role to play in establishing the legal status of sexual minorities. With greater acceptance that sex and gender exists along a spectrum comes recognition that the intersex hold equal space along that sexual spectrum. By accepting intersex and transgender as manifesting variation not disorder, it follows that a right to self-identity and autonomy must be infused into any governmental system that seeks to impose sex classifications onto individuals and that no registration of an infant by sex should be compelled at birth. Most individuals will probably have a strong leaning toward male or female; but leaving that choice to the individual is an important human freedom.

122. Fausto-Sterling, *supra* note 21, at 24.

123. *Id.* at 21. As Milton Diamond has often said, "Nature loves variety, unfortunately society hates it."

124. *Id.*

125. Feder and Karkazis contend that characterizing those with intersexed conditions as "disordered" opens the door for a destigmatized approach (moving from the idea, "disorders like no other" to "disorders like many others") but that, on the other hand, characterizing these conditions as variants, tends to "trivialize the genuine medical needs of those with atypical anatomies." Feder & Karkazis, *supra* note 1, at 35.

