

OUTRUNNING BIAS: UNMASKING THE JUSTIFICATIONS FOR EXCLUDING NON-BINARY ATHLETES IN ELITE SPORT

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The inclusion of intersex and transgender athletes in sport has long been the subject of vigorous debate. Elite sport governing bodies like the International Association of Athletics Federations have attempted to articulate policies limiting the extent to which such athletes can compete in the female category. The most common reasons given to prevent their participation include: (1) the presence of testosterone and attendant physiological advantages, (2) the unfairness of competing against athletes with typically male-attributed qualities, and (3) the need to protect women’s sport from those who may destroy it. This Article looks to the historical use of gender verification tests as a starting point to question these justifications. It then shows that the lack of scientific evidence connecting testosterone to increased athleticism and sports’ tolerance of other physiological differences both fail to support the dominant “unfair advantage” claims. This Article suggests that current regulations are instead grounded in the reification of traditional gender norms and circumscribed notions of femininity. Rather than protecting the fairness of women’s sports, the ongoing exclusion of non-binary athletes polices gender norms in ways that extend far beyond the arena.¹

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¹ “Performance in sports is both a celebration of and a challenge posed by our embodiment. All bodies, to one degree or another, present functional limitations; sports provide an opportunity to live fully in those bodies, to test their capabilities and their limits, and to integrate them with our will, intellect, and character. We need to move beyond policing biologically natural bodies and the resultant exceptional scrutiny of extraordinary women.” Katrina Karkazis et al., *Out of Bounds? A Critique on the New Policies on Hyperandrogenism in Elite Female Athletes*, 12 AM. J. BIOETHICS 3, 14 (2012) (internal citation and quotation marks omitted).

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INTRODUCTION

Gender is an idea shot through with confusion.² Historically, there has been broad support for a biologically based—and unwaveringly dichotomous—understanding of male and female, particularly in the sports context.³ As a result, sports regulatory authorities have traditionally organized compe-

² See generally, e.g., KATE MILLETT, *SEXUAL POLITICS* (1971) (maintaining that gender norms are problematic in that gendered behavior reinforces women's subordination); Gayle Rubin, *The Traffic in Women: Notes on the Political Economy of Sex*, in *TOWARD AN ANTHROPOLOGY OF WOMEN* (1975) (describing gender as an oppressive, "socially imposed division of the sexes"); ELIZABETH SPELMAN, *INESSENTIAL WOMAN* (1988) (arguing against gender realism with a particularity argument that considers gender constructs to be dependent upon race, class, ethnicity, and nationality); Sally Haslanger, *Ontology and Social Construction*, 23 *PHIL. TOPICS* 95 (1995) (arguing that gender differences result from "intended or unintended product[s] of a social practice"); Iris M. Young, *Gender as Seriality: Thinking about Women as a Social Collective*, in *INTERSECTING VOICES* (1997) (reasoning that to "conceptualize oppression as a systematic, structured, institutional process," feminists must understand "women" as a category in some way); JUDITH BUTLER, *GENDER TROUBLE* (1999) (holding that the biological sex/social gender distinction is unintelligible); Tomás Bogardus, *Gender's Journey from Sex to Psychology: A Brief History*, *QUILLETTE* (Mar. 13, 2019), <https://quillette.com/2019/03/13/genders-journey-from-sex-to-psychology-a-brief-history/> [<https://perma.cc/3BYU-7ZDD>] (giving a historical meta-survey on the issue of defining sex and gender).

³ See, e.g., Cheryl Cooky et al., "What Makes a Woman a Woman?" Versus "Our First Lady of Sport": A Comparative Analysis of the United States and the South African Media Coverage of Caster Semenya, 37 *J. SPORT & SOC. ISSUES* 31, 35 (2013) (detailing and expanding upon the ways in which feminist sport scholars have argued that "sport reaffirms the sex/gender binary as inherent, natural, and inevitable") [hereinafter Cooky et al., *What Makes a Woman a Woman?*].

titions along binary, sex-segregated lines to ensure fairness in competition.⁴ However, modern trends indicate an increased recognition that people do not fall neatly into a rigid gender binary,⁵ raising questions about the policing of gender in sport.⁶

The goal of this Article is to challenge uncritically accepted assumptions in sports regulation, and to prompt careful reflection about the justifications for when and why we promote binary gender policies, particularly at the professional level. The International Olympic Committee (IOC)⁷ and the International Association of Athletics Federation for track and field (IAAF)⁸ are two sports governing bodies that have attempted to respond to the rise of non-gender-conforming athletes, while pledging to maintain a level playing field.⁹ However, promises of fairness frequently result in unsatisfying policies that marginalize non-binary¹⁰ athletes and perpetuate gender stereotypes, with few measurable positive effects on competitive equity¹¹ overall.

Of all the hurdles an elite female athlete may be forced to overcome to compete, perhaps the most controversial is proving her gender. Responding

⁴ “[A]thletic events are sexually segregated in those sports where sexual differences in musculature strength, height, and skeletal proportions may affect athletic performance.” Lisa M. Bassis, *A Legal Conundrum – Transsexuals in Athletics*, 1 HASTINGS COMM. & ENT. L.J. 369, 372 (1978).

⁵ For some recent trends regarding non-binary individual acceptance from around the world, see Tanya Mohn, *The Shifting Global Terrain of L.G.B.T.Q. Rights*, N.Y. TIMES (June 21, 2018), <https://www.nytimes.com/2018/06/21/world/lgbtq-global-rights.html> [<https://perma.cc/3ANU-A37P>].

⁶ See, e.g., Nancy Leong, *Against Women’s Sports*, 95 WASH. U. L. REV. 1249, 1249 (2018) (arguing that sex segregation in sport reflects and reinforces an unsupported and unhelpful binary view of gender and “uncritically prioritizes athletic activities involving strengths typically associated with male bodies, without requiring us to ask why we view these strengths as the most important in the first place”).

⁷ The IOC is an “international, nongovernmental, nonprofit organization that exists to serve as the authority organization of the Olympic Movement.” Claire Sullivan, *Gender Verification and Gender Policies in Elite Sport: Eligibility and “Fair Play”*, 35 J. SPORT & SOC. ISSUES 400, 401 (2011). See also Emily J. Cooper, *Gender Testing in Athletic Competitions—Human Rights Violations: Why Michael Phelps is Praised and Caster Semenya is Chastised*, 14 GENDER, RACE & JUST. 223, 245–46 (2010) (describing the structure of the IOC).

⁸ The IOC recognizes International Federations (IFs), which administer specific sports worldwide. Cooper, *supra* note 7, at 245. “IFs are responsible for enforcing the rules of their sports, establishing eligibility for competing in their sport, and assuming the responsibility for the technical control and direction of their sport at the Olympic Games” *Id.* (internal quotation marks omitted). The IAAF is the “international governing body for the sport of . . . track and field.” Sullivan, *supra* note 7, at 401. “[A]ll international sports federations have, by necessity, adopted regulations governing the conditions under which a given sport is played, which athletes must (in principle) accept as a precondition of participating in that discipline.” *Id.* (internal citation omitted). Recently, the IAAF changed its name to World Athletics. *IAAF Unveils New Name and Logo*, WORLD ATHLETICS (June 09, 2019), <https://www.worldathletics.org/news/press-release/iaaf-unveils-new-name-and-logo> [<https://perma.cc/YE6S-QKJW>]. This Article uses “IAAF” for consistency.

⁹ See *infra* § II (discussing non-binary athlete regulations and their attendant justifications).

¹⁰ See *infra* § I.A. (defining “non-binary” as it is used in this Article).

¹¹ The term “equity” is used interchangeably with “fairness” throughout this Article.

to the rise of female athleticism—which challenged traditional notions of femininity—the implementation of sex-verification testing was based on the premise that competitors can be sorted into two categories via established scientific and social rules.¹² While society has grappled with an evolving understanding of what it means to be “male” and “female,” pointing with increasing frequency to the conclusion that gender is more aptly described as falling along a spectrum,¹³ sports organizations have tended to deny anything other than a binary understanding of gender.¹⁴ Thus, policies such as sex-verification testing often communicate unwarranted and one-sided concerns about competitive equity; namely, the belief that some (non-binary) athletes must be excluded from women’s competitions to guarantee an artificial “fairness,” one that translates into more opportunities for (“real”) women to win. Such a belief is rooted in stereotypes that challenge the legitimacy of *all* female athletes, including the proposition that women are categorically inferior to men, as illustrated in the common critique that women with male-like qualities necessarily have a competitive advantage, and those without such qualities should be shielded from them.¹⁵

This Article does not intend to suggest that there is something morally suspect about valuing fairness in sport. For example, arguments of competitive fairness appropriately call for the exclusion of athletes who dope with illegal substances to gain a competitive edge.¹⁶ Generally, the distinction is

¹² “The first assumption of sex testing is that sex exists naturally as a dichotomous binary.” Cheryl Cooky & Shari Dworkin, *Policing the Boundaries of Sex: A Critical Examination of Gender Verification and the Caster Semenya Controversy*, 50 J. SEX RES. 103, 106 (2013) [hereinafter, Cooky & Dworkin, *Policing the Boundaries of Sex*]. Although a body’s sex is too complex, “sport organizations continue to police the boundaries of sex through sex testing and the segregation of sports by sex, and the policies in place ostensibly are there to ‘ensure’ that participants of men’s competitions are male, and women’s competitions are female.” *Id.*

¹³ See, e.g., Walter Liszewski et al., *Persons of Nonbinary Gender – Awareness, Visibility, and Health Disparities*, 25 N. ENGL. J. MED. 2391, 2391 (2018) (discussing discrimination in health treatment, despite the increased visibility of non-binary people in popular culture, social media, and throughout the United States); KC Clements, *What Does it Mean to Identify as Genderqueer?*, HEALTHLINE (Oct. 27, 2017), <https://www.healthline.com/health/transgender/genderqueer> [<https://perma.cc/8HL4-Q6FE>] (noting different identities under the transgender umbrella, explaining that gender identity and expression exist along a spectrum, and highlighting that acceptance of gender non-conforming people is on the rise).

¹⁴ “[T]he institution of sport is formally organized around the notion that there are only two sexes—male and female—and sport is largely segregated by binary sex category. Therefore, historically there has been no formal place within the institution of competitive organized sport for athletes who exist outside of the dichotomous categories of male and female and who subsequently ‘fail’ sex testing.” Cooky & Dworkin, *Policing the Boundaries of Sex*, *supra* note 12, at 104.

¹⁵ “The new policies are informed not by scientific evidence, but by age-old cultural assertions that those who do not conform to social gender roles are not ‘real’ women or men.” Hilda Patricia Vilorio & María José Martínez-Patiño, *Reexamining Rationales of “Fairness”: An Athlete and Insider’s Perspective on the New Policies on Hyperandrogenism in Elite Female Athletes*, 12 AM. J. BIOETHICS 17, 17 (2012).

¹⁶ For example, “[t]hree main traditional arguments support doping control. First, the user of a banned substance or method receives an unfair advantage. Second, the use of

that athletes who take performance enhancing drugs do so deceptively and strategically to create an unfair advantage, whereas the differences in androgen levels in non-binary females are either naturally occurring—in the case of intersex and hyperandrogenic athletes¹⁷—or part of a prescribed hormone therapy included in the IOC’s requirements to compete—as in the case of transgender athletes.¹⁸ In either instance, there is an absence of an intent to deceive or unfairly enhance athletic performance on the part of non-binary female athletes.¹⁹ Accordingly, this Article distinguishes between fairness arguments that perpetuate outdated gender norms and the marginalization of people, and fairness arguments used to discredit the athlete who has intentionally taken a banned drug to gain an artificial, external advantage.

Section I begins by defining the relevant terms used throughout this Article and gives a brief history of women in sex-segregated sports. Section II surveys the rise of sex-verification testing as well as its proponents’ justifications, and introduces the current regulations surrounding non-binary athletes’ participation in elite sport. Broadly, organized sport’s history of gender discrimination, the exclusion of women from sport, and the marginalizing sex-centric policies that target non-binary athletes provide a frame of reference for this discussion. Section III explores the role of inconclusive science in framing exclusionary policies, the inconsistent application of fairness arguments in sport, and the influence of international sport regulations on society’s understanding of what it means to be a woman. Ultimately, Section III argues that restrictions placed on non-binary athletes purport to be based on

banned substances endangers the user and other athletes by the creation of unnatural force or speed. Third, if banned substances were permitted, other athletes would feel compelled to use them to escape disadvantage.” Daniel Gandert et al., *The Intersection of Women’s Olympic Sport and Intersex Athletes: A Long and Winding Road*, 46 *IND. L. REV.* 387, 415 (2013).

¹⁷ Lance Wahlert & Autumn Fiester, *Gender Transports: Privileging the “Natural” in Gender Testing Debates for Intersex and Transgender Athletes*, 12 *AM. J. BIOETHICS* 19, 20 (2012).

¹⁸ “[I]t is inappropriate to liken transgendered athletes, who meet the IOC’s requirements to compete at the Olympic Games, to athletes who use banned substances and methods, intentionally break rules and abuse [therapeutic use exemptions] to excel at sport. While many of the most pressing issues involved in transgendered athletes’ participation in elite sport are similar to doping issues, there is a marked difference between using performance-enhancing drugs to increase athleticism and using the same drugs as part of a prescribed hormone therapy.” Sarah Teetzel, *On Transgendered Athletes, Fairness and Doping: An International Challenge*, 9 *SPORT IN SOCIETY* 227, 247 (2006).

¹⁹ See, e.g., John William Devine, *Gender, Steroids, and Fairness in Sport*, 13 *SPORT, ETHICS & PHIL.* 161, 166 (2019) (“The continuing advantage enjoyed by the returning doper is an example of benefitting from past injustice: the returning doper continues to benefit from her past misconduct. However, no such claim of misconduct can be levelled at the [non-binary] woman. Her advantage arises from her gender identity, not any kind of cheating. The moral imperative to prevent unfairness may be more strict when that unfairness arises from unjust conduct.”); Cooky & Dworkin, *Policing the Boundaries of Sex*, *supra* note 12, at 107 (“Fairness is understood as an adherence to the same rules. ‘Unnatural’ advantages, such as those gained from drug doping, violate standards of fairness in sport. However . . . , while unnaturally obtained advantages may violate standards of fairness, fairness requires no such categorical limitation on naturally obtained advantages.” (internal citation and quotation marks omitted)).

notions of fairness, but are instead grounded in conventional norms of femininity and reflect the reification of a traditional gender binary. Consequently, policing strict gender boundaries is both impossible and comes at an impermissibly high social cost: the institutional marginalization of those who represent the complexities of sex and gender. This treatment is indefensible when viewed against the negligible (if any) increase in competitive equity it provides.

I. THE FEMALE ATHLETE

This Part defines the term ‘non-binary’ as used throughout the Article and introduces the categories of athletes the Article considers. It then presents a history of women in sports to contextualize sex testing in elite athletics and modern gender-based policies.

A. *Non-Binary Individuals*

Society has historically considered both sex and gender to be comprised of binary opposites—i.e., man/woman and male/female.²⁰ This is particularly true in the sports context, where “the categories are treated as both mutually exclusive and all-encompassing. That is, an athlete is either male or female, and either a man or a woman, but never both, and certainly not neither one.”²¹ The assignment of men and women to their respective events and competitions is premised on the existence of cisgender individuals, where a cisgender person is one whose sex and gender identification align.²² These individuals fall neatly into the traditional sex/gender binary. However, contrary to what the institution of sport tends to believe, sex and gender are not always in alignment.

For the sake of brevity, the term “non-binary” as used in this Article refers to individuals who do not neatly fall on one side of the traditional sex/gender divide. Here, this includes intersex, hyperandrogenic, and transgender individuals.²³ Of course, this Article recognizes there is no perfect

²⁰ See generally, e.g., *Feminist Perspectives on Sex and Gender*, STAN. ENCYCLOPEDIA PHIL. (Oct. 25, 2017), <https://plato.stanford.edu/entries/feminism-gender> [<https://perma.cc/882P-GJC3>] (discussing cultural conceptions of the sex/gender distinction and the view that sex classifications are solely a matter of biology).

²¹ Leong, *supra* note 6, at 1262.

²² *Cisgender*, MERRIAM-WEBSTER, <https://www.merriam-webster.com/dictionary/cisgender> [<https://perma.cc/QH3C-2ZPY>].

²³ Note that it is unclear how often transgender, intersex, and hyperandrogenic conditions occur. Estimates of the prevalence of transsexual and intersex people are highly dependent on the definitions used in each study. For example, Anne Fausto-Sterling suggested that the prevalence of intersex might be as high as 1.7%. See ANNE FAUSTO-STERLING, *SEXING THE BODY: GENDER POLITICS AND THE CONSTRUCTION OF SEXUALITY* 51 (2000). However, Leonard Sax noted that “this figure includes conditions which most clinicians do not recognize as intersex, such as Klinefelter syndrome, Turner syndrome, and late-onset adrenal hyperplasia.” Leonard Sax, *How Common is Intersex? A Response*

term to refer to non-cisgender people elegantly and inclusively. Some transgender and intersex individuals hold fast to a binary view of gender, identify as diverse, or identify as gender fluid, for example.²⁴ The term non-binary as it is used in this Article is simply attempting to encompass those individuals who are not cisgender. Additionally, though these categories are by no means exhaustive,²⁵ they do incorporate individual athletes who have made headlines, and thus provide illustrative examples of the difficulties in maintaining strict binary sex policies and in relying on sex-verification testing in sports.²⁶ Thus far, sports have been generally averse to creating an impartial and inclusive approach for addressing non-binary athletes, where a rigid adherence to cisgender norms is pervasive.²⁷

To begin, intersex people are born with “reproductive anatomy, chromosomes and/or hormones that cannot be straightforwardly categorized as male or female.”²⁸ Intersex individuals may have entirely XO, XXY, XYY,

to Anne Fausto-Sterling, 39 J. SEX RES. 174, 174 (2002). See also generally Lindsay Collin et al., *Prevalence of Transgender Depends on the “Case” Definition: A Systematic Review*, 13 J. SEXUAL MED. 613 (2016) (giving a “systematic review and meta-analysis . . . to evaluate how various definitions of transgender affect prevalence estimates”). In any case, to answer that question in a meaningful (and uncontroversial) way, there would first need to be a consensus on what qualifies as transgender and intersex and also on what qualifies as strictly male or female. As of yet, no such consensus exists.

²⁴ See, e.g., Alia E. Dastagir, *LGBTQ Definitions Every Good Ally Should Know*, USA TODAY (June 25, 2017), <https://www.usatoday.com/story/news/2017/06/15/lgbtq-glossary-slang-ally-learn-language/101200092/> [<https://perma.cc/MYE6-FD6K>] (defining terms commonly used by the L.G.B.T.Q.I.A. community).

²⁵ “The number of disorders of sex differentiation (DSD) can be counted in the order of tens, with variable degrees of severity, and can be classified as sex chromosome abnormalities, gonadal abnormalities and sex hormone abnormalities.” Silvia Camporesi & Paolo Maugeri, *Caster Semenya: Sport, Categories and the Creative Role of Ethics*, 36 J. MED. ETHICS 378, 378 (2010). See also generally Cooper, *supra* note 7, at 239–41 (discussing the occurrence of intersex conditions and other sexual development disorders); Melanie Blackless et al., *How Sexually Dimorphic Are We? Review and Synthesis*, 12 AM. J. HUM. BIOL. 151 (2000) (same).

²⁶ See, e.g., Dawn Ennis, *Chris Mosier Makes History at Olympic Trials, Calling it “Incredible and Heartbreaking”*, OUTSPORTS (Jan. 27, 2020), <https://www.outsports.com/2020/1/27/21083208/chris-mosier-transgender-olympic-trials-tokyo-2020-race-walking> [<https://perma.cc/CB3H-9PWB>] (discussing athlete Mosier, the first transgender male to compete in an Olympic trial alongside cisgender men); Rick Broadbent, *I was Caster Semenya of the 1980s, says Maria José Martínez-Patiño*, TIMES U.K. (May 06, 2019), <https://www.thetimes.co.uk/article/i-was-caster-semenya-of-the-1980s-says-maria-jose-martinez-patino-n5clbzjg5> [<https://perma.cc/6RWC-29QR>] (considering the case of Martínez-Patiño, a woman with complete androgen insensitivity syndrome (CAIS) who was thrown off her Spanish national team and stripped of her national records after competing in the World Track and Field Championships in 1983; her preclusion from the sport was one of the last high-profile bannings based on gender verification tests until Caster Semenya).

²⁷ See, e.g., Jill Pilgrim et al., *Far from the Finish Line: Transsexualism and Athletic Competition*, 13 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 495, 533 (2003) (promoting a theory in which spectators, opposing competitors, and sports officials push back against non-binary athlete inclusion, as it would “detract from competition and the ‘purity’ of sport”).

²⁸ Taryn Knox et al., *Transwomen in Elite Sport: Scientific and Ethical Considerations*, 45 J. MED. ETHICS 395, 395 (2019).

or XXX chromosomal patterns, or an intersex person with mosaicism may have some cells containing XX chromosomes and some cells containing XY chromosomes.²⁹ In other cases, an irregular hormonal balance at conception may result in an individual with a sexually nuanced and obscure status.³⁰ For instance, a man may have ovaries instead of testes, or an individual with an XY chromosomal pattern—triggering the production of androgens (male sex hormones)—may have androgen insensitivity syndrome (AIS), which causes the body to not respond to the androgens, developing instead (at least partially) in a female manner.³¹ These atypical chromosomal pairings have raised difficult questions for elite sport officials, both in determining whether such individuals qualify to compete in the female category and how to balance unfair advantage claims against conditions such as AIS.³²

Hyperandrogenism is especially relevant to the international sporting world. Hyperandrogenism refers to the body's natural production of hormones at a higher level than that of a typical person.³³ Although it is a common characteristic of intersex conditions, a woman may be hyperandrogenic and not classified as intersex.³⁴ In the sports context, the focus is on the hyper-production of testosterone: a hormone that primarily stimulates the development of male secondary sex characteristics.³⁵ The IOC and IAAF have targeted this characteristic because they fear that “women competing

²⁹ “The result of such chromosomal patterns may produce atypical physical characteristics ranging from extra height (such as in the case of XYY males) to reduced fertility, ambiguous genitalia, and androgyny.” Erin Buzuvis, *Transsexual and Intersex Athletes*, in *SEXUAL MINORITIES IN SPORTS: PREJUDICE AT PLAY* 55, 57 (2013) [hereinafter Buzuvis, *Transsexual and Intersex Athletes*].

³⁰ See, e.g., *id.* at 58 (“Another such condition is congenital adrenal hyperplasia, which causes individuals with XX chromosomes to have masculine genitalia. Other conditions that affect physical development in utero or at puberty produce internal and external genitalia that defy classification as entirely male or female . . .”).

³¹ See *id.* at 57–58.

³² See, e.g., Cooky & Dworkin, *Policing the Boundaries of Sex*, *supra* note 12, at 103–05 (discussing the challenges regarding the “eligibility of nonnormatively sexed/gendered bodies to participate in international sporting competition,” particularly when the task of classifying athletes with intersexual conditions is further complicated by the presence of AIS).

³³ See Vilorio & Martínez-Patiño, *supra* note 15, at 17.

³⁴ There are other forms of hyperandrogenism. For example, three of the more common androgen excess disorders are: polycystic ovary syndrome, idiopathic hyperandrogenism, and non-classic 21-hydroxylase deficiency, stemming primarily from excess hormone secretions from adrenals or ovaries. Enrico Carmina, *Ovarian and Adrenal Hyperandrogenism*, 1092 ANN. N.Y. ACAD. SCI. 130, 130–31 (2006). “Hyperandrogenism is most frequently related to the polycystic ovary syndrome (PCOS), one of the most common hormonal disorders affecting women.” Robert Rosenfiled et al., *Puberty and its Disorders in the Female*, in *PEDIATRIC ENDOCRINOLOGY* (2014).

³⁵ “These hormones are thought to have important effects on: Ovarian function; Bone strength; [and] Sexual behavior Testosterone is so much more than its reputation would suggest. Men and women need the proper amount of testosterone to develop and function normally. However, the optimal amount of testosterone is far from clear.” *Testosterone – What it Does and Doesn't Do*, HARVARD HEALTH (Aug. 29, 2019), <https://www.health.harvard.edu/drugs-and-medications/testosterone—what-it-does-and-doesnt-do/> [<https://perma.cc/56GW-HJTF>].

against women with a degree of hyperandrogenism that gives them a male physiology are likely to be at a disadvantage *tantamount to competing in the male category*.³⁶ Accordingly, an evaluation of gender policies in elite sport must also consider hyperandrogenic women.

Intersex conditions do not always show up at birth; some individuals will go their entire lives with intersex anatomy without anyone (including themselves) ever knowing or questioning their status.³⁷ Further, due to the wide variety of intersex conditions, it is impossible to generalize about how and whether such a condition affects gender identity. For example, for those whose intersex condition was not discovered until required medical testing for the Olympics, their gender identity may not be affected by virtue of their being intersex: “[p]rior to that time, they never questioned their femaleness, because in every physical and psychological way that mattered, these athletes were female.”³⁸

In short, intersex individuals fundamentally disrupt a binary notion of gender. It is impossible to use traditional sex markers—like chromosomes—to perfectly assign such athletes to one side of a male/female gender divide. This is true regardless of identity considerations, which present an additional layer of complexity to the gender spectrum, as evidenced by transgender individuals.

Broadly, a transgender person possesses a set of anatomical features belonging to one sex, who nevertheless believes, regardless of physical or genetic characteristics, that he or she is of the opposite gender.³⁹ Transgender individuals may choose to take medical steps, such as hormone therapy or surgery, to align their sex with their gender.⁴⁰ Doing so may change the method by which a transgender athlete is classified. For example, a transgender individual may be classified by chromosomal sex at the outset, but after a sex reassignment surgery, she may be reclassified by her phenotype

³⁶ Stéphane Bermon et al., *Women with Hyperandrogenism in Elite Sports: Scientific and Ethical Rationales for Regulating*, 100 J. CLIN. ENDOCRINOL. & METAB. 828, 829 (2015) (emphasis added).

³⁷ See *What is Intersex?*, INTERSEX SOCIETY OF N. AM., https://isna.org/faq/what_is_intersex [https://perma.cc/2DHH-JQFA].

³⁸ Buzuvis, *Transsexual and Intersex Athletes*, *supra* note 29, at 58.

³⁹ Bassis, *supra* note 4, at 369 n.1. Though the etiology of transsexualism is unknown, scholars such as Anne Fausto-Sterling have suggested that gender identity may originate from either biological (genetic, hormonal, intrauterine environment) processes, from social causes (such as upbringing), or both (her emphasis is on the former). Anne Fausto-Sterling, *Gender/Sex, Sexual Orientation, and Identity Are in the Body: How Did They Get There?*, 56 J. SEX RES. 529, 529–30 (2019). See also generally Sheri A. Berenbaum & Adriene M. Beltz, *How Early Hormones Shape Gender Development*, 7 CURRENT OP. BEHAV. SCI. 53 (2016) (studying the effect of prenatal androgens on gender development); Mohammad Reza Mohammadi & Ali Khalegi, *Transsexualism: A Different Viewpoint to Brain Changes*, 16 CLINICAL PSYCHOPHARMACOLOGY & NEUROSCIENCE 136 (2005) (“[T]ransgender individuals experience change in lifestyle, context of beliefs and concepts and, as a result, their culture and behaviors. Given the close relationship and interaction between culture, behavior and brain, the individual’s brain adapts itself to the new condition (culture) and concepts and starts to alter its function and structure.”).

⁴⁰ Cooper, *supra* note 7, at 239.

or gender identity.⁴¹ As with intersex individuals, transgender persons shake the foundation upon which a dichotomous gender division rests and force sport authorities to decide whether, and to what extent, gender identity should be recognized as determinative.⁴²

Transgender, intersex, and hyperandrogenic women have faced similar criticisms in the sports context, primarily owing to the idea that high testosterone levels give them an unfair competitive advantage.⁴³ Though this Article discusses each type of athlete, some of the most challenging questions focus on intersex and hyperandrogenic athletes, as they face different challenges from transgender athletes, owing—at least in part—to the fact that their physiological characteristics may preclude their fitting into either sex category, notwithstanding how they identify.⁴⁴ In either case, as this Article describes below, it is unclear which characteristics, if any, give transgender or intersex athletes a competitive advantage, and at which point any advantages should be deemed sufficiently unfair to warrant their exclusion from sport.⁴⁵

These few examples demonstrate that people are not always neatly divisible into the categories of male and female as we have traditionally understood them. Despite this, binary sex policies pervade the sporting world. To contextualize such policies, this next Part describes society's reaction to women's entry onto the international sport stage and highlights the conventional gender norms upon which rules adhering to a strict binary system rest.

B. A Brief History of Women in Sports

To understand the role of binary sex policies and sex testing in elite sport, we must acknowledge the history of discriminatory treatment and stereotypes that have served as a basis for limiting female athletic opportunities.⁴⁶ Sports—particularly in patriarchal Western societies—were originally

⁴¹ See Bassis, *supra* note 4, at 376 (noting also that the determination “will [also] depend on the jurisdiction in which the action is brought and the purpose for which the change in sex designation is sought”).

⁴² “To validate transgender identities is to understand that one’s gender classification is not necessarily limited to binary categories and that it is more complicated than one’s physical characteristics at birth.” Erin Buzuvis, *Hormone Check: Critique of Olympic Rules on Sex and Gender*, 31 WIS. J.L. GENDER & SOC’Y 29, 35 (2016) [hereinafter Buzuvis, *Hormone Check*].

⁴³ This is the relevant commonality for this Article and is further discussed *infra* § III.A.2.

⁴⁴ *But see* Andria Bianchi, *Something’s Got to Give: Reconsidering the Justification for a Gender Divide in Sport*, 4 PHIL. 1, 4 (2019) (“[T]he crux of this paper is focused on transgender women athletes who arguably encounter greater criticisms [than intersex women athletes] because of their cisgender male anatomy and changed gender identity.”).

⁴⁵ See discussion *infra* § III.A.-C.

⁴⁶ See Shawn M. Crincoli, *You Can Only Race if You Can’t Win? The Curious Cases of Oscar Pistorius & Caster Semenya*, 12 TEX. REV. ENT. & SPORTS L. 133, 163 (2011).

created with only men in mind.⁴⁷ Women could not so much as attend the ancient Olympic Games that began in the late 700s,⁴⁸ and the belief that women should be barred from competing in the Games persisted through the formation of the modern Olympic movement in 1896, when founder Baron Pierre de Coubertin opposed the inclusion of female athletes, saying: “No matter how toughened a sportswoman may be, her organism is not cut out to sustain certain shocks.”⁴⁹

The resistance to female participation incrementally began to subside in the early 1900s, when twenty-two women were permitted to compete in the Olympics for the first time in sailing, tennis, croquet, equestrian, and golf.⁵⁰ Additionally, women began to form voluntary, informal athletic clubs and express a greater interest in playing sports at all-female educational institutions by the start of the century.⁵¹ However, strenuous physical activities had long been considered by medical professionals, sports officials, and spectators as inappropriate for women, and opponents of women’s athletic participation offered countless reasons why they were not physiologically or psychologically capable of competing.⁵² Indeed, a common perspective of elite sports officials and medical observers was that women could not safely perform events requiring strength and stamina—especially after the onset of menstruation—as female bodies were unsuited to athletics, such activities were dangerous to reproductive health, and “feminine muscle development interfere[d] with motherhood.”⁵³

Notwithstanding these concerns, the development of women’s athletics was “closely tied to the fortunes of the more general movements for female emancipation. As these have waxed and waned, so too has the expansion of opportunities for women in sport.”⁵⁴ For example, with the women’s suffrage movement in the 1920s came a heightened interest in athletic activities; women’s participation in the workforce during World War II led to an increased

⁴⁷ The essence “of any patriarchal ideology is precisely to present that division [between the sexes] as being of biological, natural, or divine essence.” E. REYNAUD, *HOLY VIRILITY: THE SOCIAL CONSTRUCTION OF MASCULINITY* 9 (1983).

⁴⁸ *Welcome to the Ancient Olympic Games*, OLYMPIC, <https://www.olympic.org/ancient-olympic-games> [<https://perma.cc/FD7L-4GPL>]. See also Buzuvis, *Hormone Check*, *supra* note 42, at 31 (discussing female involvement in the ancient Olympic games).

⁴⁹ *Women, Gender Equality and Sport*, UNITED NATIONS: WOMEN 2000 AND BEYOND 2 (Dec. 2007), <https://www.un.org/womenwatch/daw/public/Women%20and%20Sport.pdf> [<https://perma.cc/PJE3-YF94>].

⁵⁰ *Key Dates in the History of Women in the Olympic Movement*, INT’L OLYMPIC COMM., <https://www.olympic.org/women-in-sport/background/key-dates> [<https://perma.cc/U4JS-QBBB>].

⁵¹ See Patricia Vertinsky, *Women, Sport, and Exercise in the 19th Century*, in *WOMEN AND SPORT: INTERDISCIPLINARY PERSPECTIVES* 63, 73–75 (1994).

⁵² See *id.* at 68–69.

⁵³ Sonja Erikainen, *Policing the Sex Binary: Gender Verification and the Boundaries of Female Embodiment in Elite Sport*, FINAL REPORT FOR THE IOC OLYMPIC STUDIES CENTRE 12 (Dec. 31, 2016). See also Vertinsky, *supra* note 51, at 68–69 (discussing the justifications for limiting female athletic participation).

⁵⁴ Vertinsky, *supra* note 51, at 77.

sense of physical capability; and the Civil Rights Era in the 1950s and 1960s caused a shift in awareness of those involved in women's sports as activists pushed for gender equality.⁵⁵ These societal shifts saw parallel surges in female participation at the Olympic Games, including an increase from 12% to 21% between 1948 and 1972,⁵⁶ and by the end of the century, the IOC provided that any new sport seeking to be included on the Olympic program had to include women's events.⁵⁷

Despite these positive trends in female athletics, notions of inherent differences between the sexes and attendant beliefs of female inferiority are deeply ingrained cultural assumptions that have pervaded the sociohistorical context of sports.⁵⁸ Resistance to women's unbounded participation in sports—specifically via strict sex-segregation mandates and by limiting female participation in sports requiring strength and endurance—was encouraged by relying on gender stereotypes, including the need to maintain a sense of male competitive superiority.⁵⁹

To illustrate, scholars have noted that men generally tend to respond with unease to changing gender roles by turning to sports to lend credibility to the belief that social and physical differences consistently distinguish men from women.⁶⁰ One such “crisis of masculinity” undergirded the modern institutional formation of sport.⁶¹ From the turn of the century into the 1920s, drastic changes in work and social spheres, as well as increased participation in feminist movements, led to bitter opposition to women's growing partici-

⁵⁵ Michael Messner, *Sports and Male Domination: The Female Athlete as Contested Ideological Terrain*, 5 Soc. SPORT J. 197, 199–202 (1988). For other discussions on the gains made by female athletes in the twentieth century and their relation to shifting societal norms, see Shari Dworkin & Cheryl Cooky, *Sport, Sex Segregation, and Sex Testing: Critical Reflections on This Unjust Marriage*, 12 AM. J. BIOETHICS 21, 21 (2012) [hereinafter Dworkin & Cooky, *Critical Reflections*]; Richard Bell, *A History of Women in Sport Prior to Title IX*, 21 SPORT J. 1, 3–4 (2008); Leong, *supra* note 6, at 1255–59.

⁵⁶ Leong, *supra* note 6, at 1256.

⁵⁷ *Key Dates in the History of Women in the Olympic Movement*, *supra* note 50.

⁵⁸ See, e.g., Cooky & Dworkin, *Policing the Boundaries of Sex*, *supra* note 12, at 109 (giving examples of women being restricted from direct competition with men and of sex discrimination in sports, notwithstanding challenges being raised against policing biology to ensure fair play); Vanessa Heggie, *Testing Sex and Gender in Sports: Reinventing, Reimagining and Reconstructing Histories*, 34 ENDEAVOUR 157, 157 (2010) (“It comes as no surprise that as major international sporting events were developed in the very late nineteenth century issues of physical display, modesty, muscularity, competition and the perpetual risk of sterility were all used to exclude women from many sporting activities.”).

⁵⁹ See, e.g., Erikainen, *supra* note 53, at 12 (emphasizing the historical context of gender verification tests and the attendant beliefs that athleticism is inherently masculine and that female bodies were not built for athletic efforts); Cooky & Dworkin, *Policing the Boundaries of Sex*, *supra* note 12, at 109 (“[I]t was not until the 1984 Olympics that the marathon was added to the women's Olympic Games events; medical experts deemed women too frail and vulnerable to reproductive problems should they compete in endurance events . . . ; [and] in 2010, despite protests, women's ski jumping was not added to the Olympics even though the numbers of women in the sport had risen dramatically.”).

⁶⁰ See, e.g., Dworkin & Cooky, *Critical Reflections*, *supra* note 55, at 21; Messner, *supra* note 55, at 199.

⁶¹ Messner, *supra* note 55, at 199–201.

pation in sports, marked by claims that athleticism conflicted with conventional femininity.⁶² Consequently, differences in strength, height, and weight were reemphasized to justify the strict separation of the sexes in athletic competition.⁶³ As more women entered the professional and education realms, “gender roles were in a state of rapid flux,” and the reliance on sport as an all-male environment was accentuated to “quell fears of male social feminization and were viewed as providing suitable societal forums to turn boys into men.”⁶⁴

The history of women in sports underscores the “assumption that there are two, and only two, obviously universal, bipolar, mutually exclusive sexes that necessarily correspond to stable gender identity and gendered behavior.”⁶⁵ Furthermore, given that the institution of sport formed in part to revitalize notions of manhood, when women began to enter the field of male-dominated sport, their appearance was fiercely contested.⁶⁶ Thus, relying on deeply rooted beliefs, such as inherent sex differences and male competitive superiority, sports organizations responded to women’s arrival by promoting binary sex-centric policies, including sex testing.

II. POLICING GENDER BOUNDARIES

Notwithstanding scientific evidence of real biological variation as seen in Section I, sports regulatory entities have long held fast to a binary view of sex. Sex-verification testing—primarily in which female athletes competing in international sports are forced to prove themselves female as a prerequisite for participation—evinces such a binary view.⁶⁷ One of the central

⁶² *Id.*

⁶³ See Bassis, *supra* note 4, at 372 (“Evidence establishes that the male body has a competitive advantage over the female physique founded upon anatomical differences. This has been revealed by a statistical comparison between male and female performance ratios in athletic events. Consequently, athletic events are sexually segregated in those sports where sexual differences in musculature strength, height, and skeletal proportions may affect athletic performance.”). Of course, this generalization fails to recognize that while most men outperform most women, sport performance is a continuum in which some women outperform some men, and “there are sport events where a male advantage does not hold, such as in long-distance running and swimming.” Dworkin & Cooky, *Critical Reflections*, *supra* note 55, at 22. However, not all elite sports are separated by sex; for instance, men and women compete against each other in equestrian, shooting, and sailing events. Pilgrim et al., *supra* note 27, at 528. This is primarily because sex differences among competitors in these specific events are considered irrelevant to athletic performance. *Id.*

⁶⁴ Dworkin & Cooky, *Critical Reflections*, *supra* note 55, at 21 (internal quotation marks omitted).

⁶⁵ Shari L. Dworkin et al., (*In*)*Justice in Sport: The Treatment of South African Track Star Caster Semenya*, 39 FEMINIST STUD. 40, 42 (2013) [hereinafter Dworkin et al., *Injustice in Sport*] (citing Susan Birrell & C.L. Cole, *Double Fault: Renee Richards and the Construction and Naturalization of Difference*, 7 SOC. SPORT J. 1, 3 (1990)).

⁶⁶ Dworkin & Cooky, *Critical Reflections*, *supra* note 55, at 21.

⁶⁷ See e.g., *id.* at 21–22 (“[I]t is critical to underscore that sport governing bodies and organizations believe that sex testing is necessary not only given ideologies of fair

themes behind sex-verification testing is the discomfort felt when women display extraordinary athletic talent.⁶⁸ “Checking to validate, through sex testing, that female athletes are in fact ‘fully’ women while all men in sport are assumed to be ‘real men’ at the outset reinforces that ‘normal’ women cannot possibly be outstanding in athletics,”⁶⁹ and suggests that the historical stereotypes against female athletic participation described in Section I remain. This Section will expand upon the history of women in sports and the existence of non-binary athletes by detailing the development of sex testing. It will then introduce the most current sex-centric regulations in international sport. In doing so, this Section further illuminates the foundations upon which the most common arguments against non-binary female athletes’ participation have been advanced.

A. *The Rise of Sex-Verification Testing*

Sex-verification testing⁷⁰ refers to the procedures that sports organizations implement to ensure that only (cisgender) females compete against other (cisgender) females. Specifically, the IOC and IAAF created policies of sex testing to combat the fear of men competing against women and to ensure a level playing field, devoid of unfair competitive advantages.⁷¹ Preventing women and men from competing against one another “ostensibly ensures that sex-segregated sports are free from ‘intruders’ who are not ‘real’ (i.e., biological) women.”⁷²

The first gender-verification policies, where sports organizations relied upon medical professionals to determine an athlete’s eligibility to compete in the female category, appeared as early as the 1930s and 1940s.⁷³ In the Ber-

play but also given the belief in categorical sex differences in sport performance (i.e., biological males are stronger, bigger, faster, and thus superior athletes to all biological females.” (emphasis omitted)).

⁶⁸ “Sex testing is one of the very tools that shores up categorical difference because it is primarily deployed when women’s athletic performances offer evidence of an overlapping continuum of male and female athletic excellence.” *Id.* at 22.

⁶⁹ *Id.* at 21. Moreover, “sex testing and sex segregation are mutually constitutive. Both are justified by sport governing bodies as a way to ensure a fair and level playing field in sport for female competitors. And, given the ostensibly ‘natural’ differences that exist between men and women, it is unquestioned that male athletes and female athletes should compete separately.” *Id.* at 22.

⁷⁰ For purposes of this Article, the term “sex-verification testing” is synonymous with gender testing, as the terms are used interchangeably in the literature and discussion.

⁷¹ Dworkin et al., *Injustice in Sport*, *supra* note 65, at 44.

⁷² Cooky et al., *What Makes a Woman a Woman?*, *supra* note 3, at 35.

⁷³ As a few historians have noted, the popular opinion is that such tests arose in the 1960s; however, these later dates are generally linked to some misinformation surrounding classic examples of gender fraud, including Stella Walsh and Heinrich Ratjen, which “have been reinvented to fit narratives about the Cold War and the politicisation of sport. . . .” Heggie, *supra* note 58, at 158. *See also generally* Erikainen, *supra* note 53 (giving a history of women in sport that includes the existence of sex testing in the 1930s); SUSAN CAHN, *COMING ON STRONG: GENDER AND SEXUALITY IN WOMEN’S SPORT* (2nd ed. 2015) (same).

lin Olympics of 1936, Polish runner Stanisława Walasiewicz accused American runner Helen Stephens of being a man, after Walasiewicz narrowly lost to Stephens.⁷⁴ Shortly after this accusation, Stephens's team coach, Avery Brundage, called for stricter policing of sex segregation in sports, pointing to two cases where athletes who had previously competed as females later identified as males: Czechoslovakian runner Zdenka (Zdenek) Koubkova and British shot putter and javelin thrower Mary (Mark) Weston.⁷⁵ In 1946, responding to additional calls for sex testing, the IAAF formally introduced a rule requiring each female competitor to provide documentation from a team or family doctor, certifying she was eligible to compete, with the IOC following suit in 1948.⁷⁶ These certificates indicate that concerns of policing gender boundaries in women's sport were long-standing, though such a process was not yet representative of a standardized gender test.⁷⁷ "Since neither the IOC nor the IAAF actually defined 'femininity[.]' the assumption was that the social or cultural definition in any nation was acceptable for sports, and that any nation's judgement could be trusted. It is this that changed in the 1960s."⁷⁸

Again, female athleticism challenged traditional (Western) notions of femininity. Women competing in professional sports had muscular physiques and were making a "spectacle" of themselves by participating in strenuous physical competitions.⁷⁹ The irony is, "the activities we recognize as sports are overwhelmingly those which favor a physiology which we consider 'masculine.'"⁸⁰ Thus, women who were particularly tall, had higher muscle-to-fat ratios, or simply demonstrated a sporting advantage, undercut assumed notions of female frailty and were automatically suspected of having "borderline" male-sexed embodiments.⁸¹

Then, cases of alleged "gender fraud" began to appear in the 1950s and 1960s.⁸² The most well-known example is that of Heinrich (Dora) Ratjen,

⁷⁴ Heggie, *supra* note 58, at 158. Ironically, nearly forty-five years later, Walasiewicz (known by her Anglicized name, Stella Walsh), was killed, and her autopsy revealed "ambiguous" sexual features. *Id.*

⁷⁵ *Id.*

⁷⁶ *Id.* at 159.

⁷⁷ *Id.*

⁷⁸ *Id.*

⁷⁹ See, e.g., Erikainen, *supra* note 53, at 12 ("[W]omen were taking part in sport in increasing numbers, and among these newly visible women athletes were females who demonstrated aptitude for 'strenuous' sports. Due to their ability to endure the demands of physical strain, such females failed to exhibit the presumed female bodily frailness and consequently some observers considered them to be suspiciously male-like. This was the case in particular for females participating in sports such as athletics, considered to require pure bodily strength understood to be a fundamentally male-like/masculine attribute.").

⁸⁰ Heggie, *supra* note 58, at 158.

⁸¹ See, e.g., Erikainen, *supra* note 53, at 13; Heggie, *supra* note 58, at 158; Sullivan, *supra* note 7, at 403 ("[T]he female athletic body was and remains suspicious both because of its apparent masculinization and its position as a border case that challenges the normalized feminine and masculine body." (internal citation omitted)).

⁸² Heggie, *supra* note 58, at 157–58.

who confessed in 1957 that German officials forced him to compete in the women's high jump event disguised as a woman in the 1936 Berlin Olympics (though evidence indicates Ratjen's assignment to the female category was more likely a case of gender confusion than gender fraud).⁸³ Consequently, responding to fears of men "masquerading"⁸⁴ as women—combined with a rising discomfort relating to female athleticism and doubts surrounding the veracity of femininity certification procedures already in place—systematic, standardized, and scientific sex-verification testing became routine beginning in the 1960s.⁸⁵

First, the IOC and IAAF conducted a physical inspection or gynecological examination of female athletes to verify their sex.⁸⁶ Disrobed female athletes were asked to undergo this physical evaluation before a panel of experts beginning in 1966 at the European Track and Field Championships.⁸⁷ Other international sports federations utilized similar investigations, including a "manual examination" at the 1966 Commonwealth Games in Jamaica and a "naked parade" at the 1967 Pan-American Games in Winnipeg.⁸⁸ However, the organizations were quick to discontinue these phenotypic tests of sex because they were unreliable, inapplicable to individuals with organs of both sexes, and humiliating for female athletes.⁸⁹

In 1968, the IOC adopted the Barr Body test, where administrators would perform a chromosomal evaluation using a scraping of the inner cheek cells, rather than relying on external genitalia.⁹⁰ "The Barr Body is the inactivated second X chromosome found in genetic female cells. Genetic males . . . do not show this Barr Body since they typically only have one X

⁸³ See *id.* at 161–63 (explaining that "[a]lthough the story of deliberate Nazi fraud makes for better headlines, Ratjen's story is probably a more homely and familiar one of medical error, gender uncertainty, and embarrassed silences").

⁸⁴ To clarify, masquerading refers to a biological male who identifies as such competing against females to obtain a competitive advantage (in other words, a cisgender male committing gender fraud). See, e.g., *id.* at 157–58 (discussing popularized cases of alleged gender fraud). This is a common justification for policing the gender binary in sports. See, e.g., Cooky & Dworkin, *Policing the Boundaries of Sex*, *supra* note 12, at 107 ("Historically, the rationale for sex testing in women's events was to prevent men who might 'masquerade' as women in sport, which sport-governing bodies argue would prohibit a level playing field for the 'real' . . . female athletes."); Erikainen, *supra* note 53, at 18–22 ("The whole purpose of a 'sex test' is to *disqualify the male athlete who attempts to masquerade as a female in women's events*. [T]his purpose is most simply and economically achieved by physical inspection.") (internal citation and quotation marks omitted).

⁸⁵ See, e.g., Erikainen, *supra* note 53, at 13–15 (discussing the worries over "sex binary-polluting bodies" in combination with publicity around athletes who expressly "crossed sexed physiological boundaries").

⁸⁶ Dworkin et al., *Injustice in Sport*, *supra* note 65, at 44; Louis J. Elsas et al., *Gender Verification of Female Athletes*, 2 *GENETICS IN MED.* 249, 250 (2000).

⁸⁷ Heggie, *supra* note 58, at 159.

⁸⁸ *Id.*

⁸⁹ See Joe Leigh Simpson et al., *Gender Verification in the Olympics*, 284 *JAMA* 1568, 1568 (2000).

⁹⁰ Heggie, *supra* note 58, at 160.

chromosome, which remains active.”⁹¹ The IOC and IAAF reasoned that every female Olympian would have to be tested to establish physical equality and prevent unfair advantage.⁹² After the test, athletes would be given a “fem card” that acted as a gender certificate and was required at all competitions.⁹³ However, this test was eventually abandoned, as it disqualified women with an XY chromosomal pattern but whose bodies are resistant to testosterone (thus negating any advantage),⁹⁴ but permitted women with an XX chromosomal pattern to compete despite the presence of a condition that would give them a competitive edge in the form of greater muscle mass and strength, such as congenital adrenal hyperplasia (CAH).⁹⁵

To illustrate the weaknesses of this test, consider the case of the Spanish hurdler Maria Martínez-Patiño. She failed a Barr Body test at the World University Games in Japan in 1985.⁹⁶ However, she also had complete androgen insensitivity syndrome (CAIS), which prevented her body from responding properly to testosterone, thereby causing her to develop as a woman.⁹⁷ While a phenotypic sex test would find her to be female, the chromosomal Barr Body test determined she was male, ignoring the fact that CAIS negated any potential advantage she might have had through increased testosterone in her body.⁹⁸ Consequently, the Barr Body tests could not stand up to the unfair advantage justification for sex-verification testing.

By the 1990s, not one male had been found “masquerading” as a woman since testing began, and opposition to sex testing was mounting.⁹⁹ When

⁹¹ Sullivan, *supra* note 7, at 404 (internal citations omitted).

⁹² See Simpson et al., *supra* note 89, at 1569 (“[The IOC and IAAF] consistently stated that the aim of gender verification tests was not to differentiate between sexes, but to prevent male imposters from participating in female competitions . . . [and] to exclude athletes with intersexuality, especially if androgen production was perceived to confer competitive advantages” (internal quotation marks omitted)).

⁹³ Sullivan, *supra* note 7, at 404.

⁹⁴ This is known as androgen insensitivity syndrome (AIS). Individuals with AIS generally have testes that do not descend, so the external genitalia appear female. *Id.*

⁹⁵ “[W]omen with CAH are likely to have a masculine phenotype, with well-developed skeletal muscle mass, due to their high levels of produced testosterone.” *Id.* at 404–05.

⁹⁶ Heggie, *supra* note 58, at 160.

⁹⁷ *Id.*

⁹⁸ *Id.*

⁹⁹ It should be noted that there is no evidence that cisgender men have gone (or ever would go) through steps (such as transitioning from a male to a female) for the sole purpose of gaining a competitive advantage over women. However, this is not to say that no one with an XY chromosome has ever participated in a women’s sports league. For instance, consider the high-profile case of Renee Richards. In the mid-1970s, Richards, a forty-three-year-old postoperative transgender female challenged the chromosomal sex test administered by the United States Tennis Association (USTA) (which identified Richards as a male) in an effort to compete as a woman in the 1977 U.S. Open. See Bassis, *supra* note 4, at 371, 401. The USTA “decided the chromosome test used in the Olympics would be required of all contestants . . . to prevent the introduction of ‘inequality and unfairness into the Championships.’” *Id.* at 402. The USTA Management Committee ratified the use of the Barr Body test, but “permitted each tournament committee to make its own determination as to whether it should use the chromosome test.” *Id.* at 403. Richards was allowed to compete in multiple tournaments between 1966 and 1967.

the IAAF convened a committee in 1990 for a workshop on methods of sex verification, the recommendation was to discontinue sex testing.¹⁰⁰ In 1992, the IAAF did abandon both chromosomal and visual testing, arguing that urine analyses in connection with doping regulations and contemporary athletic clothing rendered male “masquerading” impossible.¹⁰¹ The IOC broke from the IAAF, and replaced the Barr Body test with a different DNA-based test in 1992.¹⁰² This test focused on the genetic makeup of the Y chromosome and tested for the presence or absence of a single important gene in testis formation, which was considered to be a more accurate evaluation of gender than the presence of X or Y chromosomes.¹⁰³ Not long after its implementation, this test also demonstrated its inefficiency. At the summer Olympics in 1996, eight female athletes failed this test and were initially disqualified but were reinstated upon further examination and given their appropriate sex-verification certificates.¹⁰⁴

Each of these tests failed to unequivocally determine sex, as “[h]uman biology simply does not break down into male and female as politely as sport governing bodies wish it would.”¹⁰⁵ Moreover, since the inception of sex testing, critics have underscored the fact that only women are tested, the tests are unreliable and often inaccurate,¹⁰⁶ the tests are discriminatory against non-binary female athletes,¹⁰⁷ and, when female athletes fail the tests,

Id. In evaluating the propriety of this test, the court in *Richards v. United States Tennis Association* found it to be “grossly unfair, discriminatory and inequitable, and violative of her rights under the Human Rights Law of this state.” 400 N.Y.S.2d 267, 272 (1977). The court noted that the only justification for the test was to prevent fraud (i.e., men masquerading as women, and competing against women), and rejected such a suggestion as applied to Richards, further reasoning that there are few biological males who are accomplished tennis players who are transsexual. *See id.* The court underscored that “*unfounded fears and misconceptions . . . must give way to the overwhelming medical evidence that this person is now a female.*” *Id.* (emphasis added). Though the court did not strike down the Barr Body test as a tool for determining sex, it did hold that it should not be a sole criterion for eligibility. *Id.* at 273.

¹⁰⁰ Sullivan, *supra* note 7, at 406.

¹⁰¹ Heggie, *supra* note 58, at 160.

¹⁰² Sullivan, *supra* note 7, at 406.

¹⁰³ Heggie, *supra* note 58, at 160.

¹⁰⁴ “Of these, seven had androgen insensitivity syndrome (AIS), four partial AIS, and three complete. The eighth athlete had previously undergone a gonadectomy, the surgical removal of the testes, and was presumed to have 5-alpha-reductase deficiency. Many born with this enzyme deficiency have testes and male internal structures along with female appearing external genitals or ‘ambiguous’ genitals. They are often identified and raised as girls throughout childhood. Masculinization occurs at puberty when their testes secrete testosterone (i.e., voice deepens, penis, and testicles enlarge). Having a gonadectomy would not result in masculinization.” Sullivan, *supra* note 7, at 406–07.

¹⁰⁵ David Epstein, *Inside the Science of Extraordinary Athletic Performance*, in *THE SPORTS GENE* 58 (2014).

¹⁰⁶ There is a “lack of scientific validity associated with gender verification testing given the inability to conclusively determine dichotomous sex categories.” Dworkin et al., *Injustice in Sport*, *supra* note 65, at 44.

¹⁰⁷ Simpson et al., *supra* note 89, at 1568.

they have few workable follow-up procedures to contest the decision.¹⁰⁸ Finally, and importantly, the tests perpetuate gender stereotypes.

Given that success in sports is often reliant on explosive and muscular physical performances, and given that these qualities are not associated with traditional notions of femininity, sporting women's biological and/or social standing as "normal" women is often called into question. Feminist scholars have shown how female athletes who display superior athleticism frequently face accusations that they are not "real women" or not "real biological females." They are masculinized, accused of lesbianism, or even recast as men.¹⁰⁹

Although the IAAF and IOC discontinued their policies of mandatory sex testing for female athletes in 1992 and 2000, respectively, each has retained the right to deploy such testing in cases where suspicions are raised and the gender identity of an athlete is challenged.¹¹⁰ In theory, the IOC and IAAF conducted these tests to prevent scandal and ensure fair competition. However, in practical effect, sex verification tests simply served as one method of policing the boundaries of gender; effectively granting sports' governing authorities the power to decide what standards women must conform to if they wish to compete. The history of sex-verification testing—and the attendant struggles of using a binary system against the reality that human bodies are exceptionally diverse—provides an important context for the most recent non-binary regulations. Specifically, international sports organizations would consider both varied biological and physical markers of sex as well as gender identities in an attempt to create modern policies aimed at intersex and transgender athletes, but would significantly narrow their fo-

¹⁰⁸ See *id.* ("Systematic follow-up was rarely available for female athletes 'failing' the test, which often was performed under very public circumstances. Follow-up was crucial because the problem was not male impostors, but rather confusion caused by misunderstanding of male pseudohermaphroditism.").

¹⁰⁹ Dworkin et al., *Injustice in Sport*, *supra* note 65, at 43 (citing Mary Jo Kane, *Resistance/Transformation of the Oppositional Binary: Exposing Sport as a Continuum*, 19 J. SPORT & SOC. ISSUES 191, 210 (1995)).

¹¹⁰ Heggie, *supra* note 58, at 160–61. Note also that while the most recent regulations provide that there should be no improper discrimination on the grounds of sex or gender identity, "this is precisely how these regulations operate because of the identification of women for screening based on the degree to which they adhere to subjective expectations for femininity. Moreover, despite the claim that the regulations do not question the sex or gender identity of any athlete, the very singling out women for investigation based on their sex and gender characteristics functions as an investigation of the sex and gender identity of athletes." Katrina Karkazis & Morgan Carpenter, *Impossible "Choices": The Inherent Harms of Regulating Women's Testosterone in Sport*, 15 BIOETHICAL INQUIRY 579, 582 (2018).

cus by targeting women with high levels of androgens as a way to live up to the promise of fair competition.¹¹¹

B. Contemporary Regulations of Non-Binary Athletes

1. Introducing a Transgender Policy

In 2003, the IOC Medical Commission met in Stockholm to adopt a policy for transgender athletes who had undergone sex reassignment surgery.¹¹² The IOC's policy provided that eligibility to compete in accordance with a transgender athlete's gender identity would be conditioned upon (1) the completion of surgical anatomical changes, including external genital changes and a gonadectomy, (2) hormone treatments for at least two years, and (3) legal recognition of their transitioned sex.¹¹³ This became known as the Stockholm Consensus and, when adopted in 2004, was considered the first Olympic policy granting access to transgender athletes.¹¹⁴

However, the policy was criticized for being singularly aimed at male-to-female (MTF) transgender athletes; re-emphasizing the commitment to police female athletics only.¹¹⁵ Indeed, there are no discernible athletic reasons to require a female-to-male (FTM) transgender person to have genital surgery (as this does not cause any physical changes to the body that cannot otherwise be achieved by hormone requirements) nor to require the FTM transgender athlete to engage in hormone therapy (given the purported contribution of testosterone to athletic advantage) to minimize gender related advantages and fairly compete as a man.¹¹⁶ “[T]he only plausible purpose for a surgery requirement is to impose a sincerity test to weed out men who may be willing to perpetrate gender fraud by taking hormones for several years, but would presumably stop short of permanent removal of their genitals.”¹¹⁷ Despite these critiques, this version of the Stockholm Consensus would remain in place for over a decade.

Later, in response to public criticism of the IAAF's treatment of South African middle-distance runner Caster Semenya—who was ordered to take a

¹¹¹ See Erikainen, *supra* note 53, at 27 (reasoning that the suggestion that androgen levels could be used to police the sex binary significantly impacted twenty-first century policies).

¹¹² *Final Statement on the Stockholm Consensus on Sex Reassignment in Sports*, INT'L OLYMPIC COMM. (Oct. 28, 2003), https://stillmed.olympic.org/Documents/Reports/EN/en_report_905.pdf [<https://perma.cc/Y5DR-84ER>].

¹¹³ *Id.*

¹¹⁴ Sullivan, *supra* note 7, at 407–08.

¹¹⁵ See *id.* at 408–09 (discussing how the gender policy was framed to protect fair play for female competitors, to scientifically and medically define sex, to maintain a two-sex category system, and to reiterate the belief in female athletic inferiority).

¹¹⁶ *Id.* at 409.

¹¹⁷ Buzuvis, *Hormone Check*, *supra* note 42, at 36.

gender test immediately after winning the World Championships in 2009,¹¹⁸ chastised by the media, and exposed to worldwide scrutiny when her results were made public¹¹⁹—the IOC and IAAF shifted their focus to drawing new guidelines that would cover intersex and hyperandrogenic athletes, transitioning to an approach that hinged on hormones.

2. *The Hyperandrogenism Rule*

Under a hormone-based rule, athletes are allegedly excluded not based on a question of their status or identity as female, but rather owing to the belief that they have competitive advantages by virtue of their biological characteristics. Specifically, the IOC and IAAF focused on women with elevated levels of endogenous (naturally occurring) testosterone and recommended a hyperandrogenism rule. Namely, an athlete may be eligible to compete in the female category if her androgen levels are below ten nanomoles per liter (nmol/L)—considered at the lower end of the male range—or if she demonstrates an androgen resistance and thus derives no competitive advantage from having testosterone levels above ten nmol/L.¹²⁰ If an athlete does not meet these conditions, she may undergo medical treatment to suppress the testosterone in her body and ensure eligibility; otherwise, she will be deemed ineligible for competition in the female category.¹²¹

Subsequently, and to maintain consistency, the IOC expanded the scope of the hyperandrogenism rule to explicitly govern transgender women as well. In 2015, the IOC updated its earlier Stockholm Consensus, permitting

¹¹⁸ Dworkin et al., *Injustice in Sport*, *supra* note 65, at 40. The IAAF stated that the results of the gender verification test “would determine if Semenya would be allowed to race as a woman in future sports competitions.” *Id.*

¹¹⁹ See, e.g., Jeré Longman, *Understanding the Controversy Over Caster Semenya*, N.Y. TIMES (Aug. 18, 2016), <https://www.nytimes.com/2016/08/20/sports/caster-semenya-800-meters.html> [<https://perma.cc/5TVQ-SLKR>] (noting that after her win, Pierre Weiss, the general secretary of the IAAF, said: “She is a woman, but maybe not 100 percent”); Dworkin et al., *Injustice in Sport*, *supra* note 65, at 52 (“The immediate effect of the news was evident in the nasty statements [Semenya’s] competitors made about her: Italy’s Elisa Cusma Piccione called Semenya a man, while Russia’s Mariya Savinova admonished journalists to ‘just look at her.’”). Semenya’s case “prompted the IAAF and IOC to revisit the issue of fairness in women’s sports, in particular the conundrum of fitting persons with complex genetic and phenotypic sex characteristics into dimorphic gender-based competition” Neena A. Xavier & Janet B. McGill, *Hyperandrogenism and Intersex Controversies in Women’s Olympics*, 97 J. CLIN. ENDOCRINOL. & METAB. 3902, 3902 (2012).

¹²⁰ See IAAF Regulations Governing Eligibility of Females with Hyperandrogenism to Compete in Women’s Competition, INT’L ASSOC. OF ATHLETICS FED’NS 1, 12 (May 01, 2011), <https://www.sportsintegrityinitiative.com/wp-content/uploads/2016/02/IAAF-Regulations-Governing-Eligibility-of-Females-with-Hyperandrogenism-to-Compete-in-Women%E2%80%99s-Competition-In-force-as-from-1st-May-2011-6.pdf> [<https://perma.cc/E9XP-UDZ9>]; IOC Addresses Eligibility of Female Athletes with Hyperandrogenism, OLYMPIC (Apr. 05, 2011), <https://www.olympic.org/news/ioc-addresses-eligibility-of-female-athletes-with-hyperandrogenism> [<https://perma.cc/LEK4-BCUG>].

¹²¹ See IAAF Regulations Governing Eligibility of Females with Hyperandrogenism to Compete in Women’s Competition, *supra* note 120, at 12–14.

MTF transgender athletes to compete in the female category if two conditions are satisfied: (1) a transwoman must declare that her gender identity is female for at least four years and (2) she must maintain a testosterone level below ten nmol/L for a period of twelve months prior to her first competition (at which point it is assumed that any male physical advantages will have been suppressed) and throughout her desired period of eligibility.¹²² Thus, the new guidelines removed the requirements of a legally recognized gender-identity change, sex-reassignment surgery, and two years of hormone replacement therapy that were present in the Stockholm Consensus. The guidelines also expressly recognized the ability of transgender FTM athletes to compete in men's sports without restriction.¹²³

While the updated policies reflected some positive shifts forward,¹²⁴ the hyperandrogenism rule was challenged in the Court of Arbitration for Sport (CAS)¹²⁵ in 2014, when the IAAF excluded Indian sprinter Dutee Chand for (unreported) testosterone levels above the cutoff.¹²⁶ Because the hyperandrogenism rule was discriminatory on its face—it did not set an upper limit on men's testosterone and thus only affected women—the burden was on the IAAF to show that the exclusion of hyperandrogenic women was “necessary, reasonable and proportionate for the purposes of establishing a level playing field for female athletes.”¹²⁷

The IAAF's ten nmol/L hyperandrogenism rule was suspended in 2015 when the CAS announced its decision in Chand's case, holding that the IAAF had established that hyperandrogenic women do have a competitive advantage to some degree, but had failed to meet its burden in demonstrating that the advantage was substantial enough to warrant the exclusion of wo-

¹²² *IOC Consensus Meeting on Sex Reassignment and Hyperandrogenism*, INT'L OLYMPIC COMM. 2 (Nov. 2015), https://stillmed.olympic.org/Documents/Commissions_PDFfiles/Medical_commission/2015-11_ioc_consensus_meeting_on_sex_reassignment_and_hyperandrogenism-en.pdf [<https://perma.cc/U7R5-E755>]. The IOC planned to introduce stricter guidelines for transgender athletes before the Tokyo Games, but the draft guidelines were delayed due to disagreement among its panel of scientists. Sean Ingle, *IOC Delays New Transgender Guidelines After Scientists Fail to Agree*, GUARDIAN (Sept. 24, 2019), <https://www.theguardian.com/sport/2019/sep/24/ioc-delays-new-transgender-guidelines-2020-olympics> [<https://perma.cc/2BQM-NKCF>].

¹²³ *IOC Consensus Meeting on Sex Reassignment and Hyperandrogenism*, *supra* note 122, at 2.

¹²⁴ For instance, the IOC stated that the guidelines were necessary to ensure that transgender athletes were not excluded from the opportunity to participate in elite sports. *Id.* “The overriding sporting objective is and remains the guarantee of fair competition. To require surgical anatomical changes as a precondition to participation is not necessary to preserve fair competition and may be inconsistent with developing legislation and notions of human rights.” *Id.*

¹²⁵ The CAS was formed by the IOC in response to increased disputes in international sports; accordingly, it provides a forum for disputes arising in connection with the Olympic Games to be heard and decided. Cooper, *supra* note 7, at 245–46.

¹²⁶ Buzuvis, *Hormone Check*, *supra* note 42, at 39.

¹²⁷ *Id.* (citing *Chand*, CAS 2014/A/3759 ¶¶ 118, 450). In articulating the standard and burden of proof, the CAS looked to the IOC Charter, the IAAF Constitution, and the laws of Monaco. *See Chand*, CAS 2014/A/3759 ¶¶ 106–07.

men with testosterone levels below ten nmol/L.¹²⁸ The CAS reasoned that the justification for having sex-segregated categories was a “10-12% difference in athletic performance between elite male and elite female athletes.”¹²⁹ While the CAS did not specify what an acceptable percentage difference between cisgender women and hyperandrogenic women would be, it did suggest that a slight advantage, such as 1%, “may not justify a separation of athletes within the female category, given other relevant variables that legitimately affect athletic performance.”¹³⁰ The CAS suspended the rule for two years, asking the IAAF to produce more scientific evidence on the relationship between testosterone and competitive advantage in hyperandrogenic women.¹³¹

3. *The DSD Regulations*

In March 2018, the IAAF informed the CAS panel that it intended to withdraw the hyperandrogenism regulations and replace them with a new policy: restricting athletes with certain differences of sex development (DSD)—specifically, women with 46 XY DSD¹³²—from competing in the elite female category, specifically in races from the 400 meters to the mile, unless they lower their natural testosterone levels below five nmol/L for at least six months prior to competing and maintain such levels for the duration of their eligibility.¹³³ The IAAF contended that the new DSD regulations were a progressive and fair compromise, based on scientific, legal, and ethical foundations, and appropriately prioritized biology over gender identity.¹³⁴

The DSD Regulations took effect on November 1, 2018.¹³⁵ Prior to that date, Caster Semenya commenced arbitration proceedings before the CAS, challenging their validity.¹³⁶ After hearing from experts in gynecology, an-

¹²⁸ Buzuvis, *Hormone Check*, *supra* note 42, at 40 (citing *Chand*, CAS 2014/A/3759 ¶¶ 522, 524).

¹²⁹ *Id.* (citing *Chand*, CAS 2014/A/3759 ¶ 522).

¹³⁰ *Id.* (citing *Chand*, CAS 2014/A/3759 ¶ 527).

¹³¹ *Id.*

¹³² “46 XY DSD” refers to “conditions where the affected individual has XY chromosomes.” Court of Arbitration for Sport, *Semenya, ASA and IAAF: Executive Summary* ¶ 6 (May 2019), <https://www.tas-cas.org/en/general-information/news-detail/article/semenya-asa-and-iaaf-executive-summary.html> [<https://perma.cc/UZ3T-ESYV>] [hereinafter *CAS Executive Summary*]. The majority of the CAS panel concluded that “androgen sensitive female athletes with 46 XY DSD enjoy a significant performance advantage over other female athletes without such DSD, and that this advantage is attributable to their exposure to levels of circulating testosterone in the normal adult male range, rather than the normal adult female range.” *Id.* ¶ 23. See also Selma Witchel, *Disorders of Sex Development*, 48 *BEST PRACT. RES. CLIN. OBSTET. GYNAECOL.* 90, 93 (2018) (listing categories of DSD).

¹³³ *Semenya*, CAS 2018/O/5798 ¶¶ 433–34, https://www.tas-cas.org/fileadmin/user_upload/CAS_Award_-_redacted_-_Semenya_ASA_IAAF.pdf [<https://perma.cc/F83W-JT78>].

¹³⁴ *Id.* ¶¶ 285–86, 289.

¹³⁵ CAS Executive Summary, *supra* note 132 ¶ 8.

¹³⁶ *Id.*

drology, genetics, endocrinology, ethics, and sports regulation, the CAS issued a decision on April 30, 2019, upholding the IAAF's new five nmol/L rule.¹³⁷

The CAS expressed concern over the application of the IAAF regulations, including the possibility of “unintentional and unavoidable non-compliance,” as it is difficult in practice for a female athlete with 46 XY DSD to ensure her naturally produced testosterone levels consistently remain below five nmol/L.¹³⁸ The CAS also noted the absence of consistent medical evidence indicating an advantage of testosterone at distances over 1,500 meters and suggested that the IAAF not apply the rules to the 1,500 meter or mile events until more evidence is available.¹³⁹ Finally, the CAS ruled that although the policy was discriminatory against athletes with DSD, “such discrimination is a necessary, reasonable and proportionate means of achieving the aim of what is described as the integrity of female athletics and the upholding of the ‘protected class’ of female athletes in certain events.”¹⁴⁰

Chand and Semenya's cases, taken together, reveal the CAS's endorsement of the IAAF's reliance on endogenous testosterone as the means of policing the boundaries of women's sport. Specifically, the cases demonstrate an acceptance of the following propositions: (1) endogenous testosterone accounts for the difference between non-binary and cisgender female athletic performance, and (2) even when the regulations are discriminatory,

¹³⁷ *Id.* ¶¶ 1, 11.

¹³⁸ *Semenya*, CAS 2018/O/5798, *supra* note 133 ¶¶ 617, 622. “The Panel notes the strict liability aspect of the DSD Regulations and repeats its concern as to an athlete's potential inability to remain in compliance with the DSD Regulations in periods of full compliance with treatment protocols” *Id.* ¶ 622. Additionally, the CAS noted that some athletes, in attempting to regulate their testosterone levels below five nmol/L, could face significant side effects. *Id.* ¶ 615.

¹³⁹ *Id.* ¶ 623.

¹⁴⁰ *Id.* ¶ 626. As the CAS is based in Switzerland, Semenya appealed to the Swiss Federal Tribunal, Switzerland's supreme court, to overturn the CAS decision on the basis of civil rights. See Jacob Bogage, *Caster Semenya Appeals Testosterone Ruling to Swiss Supreme Court*, WASH. POST (May 29, 2019), <https://www.washingtonpost.com/sports/2019/05/29/caster-semenya-appeals-testosterone-ruling-swiss-supreme-court/> [https://perma.cc/EM7R-AED2]. While the appeal was pending, the Swiss court allowed Semenya to continue competing without taking hormone suppressants to lower her testosterone levels. Hailey Middlebrook, *New Ruling Prevents Caster Semenya from Defending 800-Meter World Championship Title*, RUNNERS WORLD (July 30, 2019), <https://www.runnersworld.com/news/a28556020/caster-semenya-ruling-world-championships/> [https://perma.cc/FL85-TLVF]. However, Semenya lost her final appeal to defend her 800 meter title in the postponed Tokyo Olympics, as the Swiss Federal Tribunal ruled that the CAS had “the right to uphold the conditions of participation issued for female athletes with the genetic variant 46 XY DSD in order to guarantee fair competition for certain running disciplines in female athletics.” Jeré Longman, *Track's Caster Semenya Loses Appeal to Defend 800-Meter Title*, N.Y. TIMES (Sept. 08, 2020), <https://www.nytimes.com/2020/09/08/sports/olympics/caster-semenya-court-ruling.html> [https://perma.cc/C2YN-D4EW]. The Swiss court also said that “Semenya's ‘guarantee of human dignity’ was not undermined in agreeing that an athlete's biological characteristics may supersede a person's gender identity to protect fair competition.” *Id.*

they may nevertheless be necessary to protect the interests of the larger (and supposedly, more vulnerable) group: cisgender female athletes.

* * *

Sections I and II detailed the historical stereotypes surrounding women in sports and masculinity, the erratic administration of sex-verification testing, and the ongoing efforts to regulate the extent to which non-binary athletes should be permitted to compete against cisgender athletes. This provides the context for the argument in Section III, which maintains that the IOC and IAAF's policies only purport to be rooted in competitive equity.

III. FAIRNESS IN WOMEN'S SPORTS?

Broadly, there is much ambiguity and uncertainty surrounding what fairness means in sport. To be sure, sport cannot be completely fair, insofar as everyone being equal in terms of skill, genetics, and opportunity, as there would be no winners and losers.¹⁴¹ Fairness in this context—that is, fairness as applied to the participation of non-binary athletes competing in the female category—is further complicated by the inconsistent arguments behind maintaining exclusionary policies. The overarching goals of this Section are to (1) demonstrate that the foundation upon which sex-verification testing rests is weak and leads to discriminatory outcomes that marginalize athletes who are extraordinary, but not in the way society tolerates, (2) reveal that non-binary exclusionary policies are grounded not in fairness, but instead in the reification of gender norms, and (3) illustrate the far reaching influence of these arguments.

A. *Conflicting Scientific Evidence*

Science is a common go-to for policymakers and society in determining whether there is unfair play.¹⁴² Prima facie, if scientific evidence proves that non-binary female athletes have competitive advantages over their cisgender counterparts, similar to the advantages cisgender male athletes have, then allowing the former to compete must be unfair (owing to the same reasons

¹⁴¹ See Teetzel, *supra* note 18, at 231 (“[Fairness] does not come down to simply trying to ensure every athlete has an equal starting point, although this is certainly an important consideration. Fairness in sport, which includes justice, impartiality and equality, involves more than just following the rules.”).

¹⁴² See, e.g., Sharon A. West-Sell et al., *Law, Policy, and Physiology as Determinants of Fairness for Transgender Athletes*, 22 PROF. EXERCISE PHYSIOLOGY 1 (2019) (discussing the role of scientific evidence and cultural sentiment in determining the scope and extent of fairness and eligibility in sport); Maayan Sudai, *The Testosterone Rule—Constructing Fairness in Professional Sport*, 4 J.L. & BIOSCI. 181, 186 (2017) (noting that in the context of determining whether testosterone provides an unfair competitive advantage, policymakers refer to whatever empirical evidence is available).

we have sex-segregated sports to begin with). However, science is not in agreement on two fronts. First, medical experts are split on how to define a person's sex and gender, leading to categorization problems and challenging sport's binary approach at the outset.¹⁴³ Second, medical evidence determining whether non-binary athletes have or retain any physiological advantages associated with their unique biological characteristics—perhaps the most pressing issue—is both scant and inconsistent.¹⁴⁴

1. *Defining Sex and Gender*

Much of the difficulty in determining who is eligible to compete lies in articulating the appropriate criteria necessary for assigning athletes to their “proper” gender category. The IOC and IAAF's gender policies regulate access to female sports by using binary classifications, despite the fact that there is increasing scientific evidence (and public recognition) that gender instead falls along a spectrum.¹⁴⁵

Moreover, although medical experts have offered a variety of tests and factors to determine a person's sex, their application tends to be widely inconsistent, particularly when ambiguities arise.¹⁴⁶ For instance, some medical authorities attempt to assign the sex of non-binary persons in accordance with their chromosomal or gonadal designation, while others argue that using such tests on an intersex person is unhelpful, as there is no single criterion that is determinative of the “proper” sex for such an individual.¹⁴⁷ One test may also be appropriate in one instance but not another, even for the

¹⁴³ See, e.g., Karkazis et al., *supra* note 1, at 6 (“[S]ex is *always* complex. There are many biological markers of sex but none is decisive: that is, none is actually present in *all* people labeled male or female. Sex testing has been and continues to be problematic because there is no single physiological or biological marker that allows for the simple categorization of people as male or female.”).

¹⁴⁴ See, e.g., *id.* at 8 (“Although it may be surprising, given that this is a popular belief and is stated as fact in both IAAF and IOC statements, the link between athleticism and androgens in general or testosterone in particular has not been proven. 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.*” (internal citation omitted)). The former question is important for “proper” categorization purposes, as discussed above. The latter is important as it reflects the oft-cited reason for “protecting” cisgender female athletes by separating them from non-binary females.

¹⁴⁵ See, e.g., Alexandra Kralick, *We Finally Understand that Gender Isn't Binary. Sex Isn't, Either*, SLATE (Nov. 13, 2018), <https://slate.com/technology/2018/11/sex-binary-gender-neither-exist.html> [<https://perma.cc/3DU4-G6PR>] (giving a brief history of the disintegration of a hard-and-fast separation between the sexes); *US Proposal for Defining Gender Has No Basis in Science*, NATURE (Oct. 30, 2018), <https://www.nature.com/articles/d41586-018-07238-8> [<https://perma.cc/38NE-MAYL>] (discussing a draft memo leaked to *The New York Times* that indicated the Department of Health and Human Services was proposing to establish a legal definition of whether someone is male or female based solely and immutably on the genitals they are born with, and arguing that such a move has no basis in science).

¹⁴⁶ See *supra* § I.A.

¹⁴⁷ Bassis, *supra* note 4, at 373.

same person. For example, prior to sex reassignment surgery, a transgender individual may be classified by a chromosomal test, while after surgery she may be more appropriately reclassified by a psychological or phenotype test.

Additionally, sex verification tests tend to give false positives and false negatives regarding both who is female and who may have a genetic advantage.¹⁴⁸ As an example of the former, a woman with Turner's syndrome who is missing her second X chromosome would fail a Barr Body test and be excluded from competing in the female category, while a man with Klinefelter's syndrome who has an XXY chromosomal pattern would pass the test and could be considered to meet the IOC and IAAF's definitions of woman.¹⁴⁹ As an example of the latter, Polish sprinter Ewa Klobukowska passed a visual phenotype inspection, but was found to have "one chromosome too many to be declared a woman for the purposes of athletic competition" and was disqualified, though her mosaic chromosomal pattern (XX/XXY) gave her no genetic advantage.¹⁵⁰

In short, determining the sex of putative female athletes is extraordinarily difficult, medical experts may not agree on which test to utilize or which factors to emphasize, and sex-verification tests have historically been inaccurate.¹⁵¹ At the outset, scientific evidence indicates that it is impractical to paint a precise and consistent picture of who should and should not be deemed sufficiently female to compete; raising a red flag for strict binary policies.

2. *Testosterone: The Elixir of Success?*

In addition to the above definitional and categorization issues, the IOC and IAAF have consistently relied upon disputed scientific evidence when it comes to the number one driver of non-binary athlete exclusion: testosterone.

¹⁴⁸ See, e.g., Heggie, *supra* note 58, at 159–60 (discussing the relative weaknesses of various sex tests at accurately identifying female athletes); Sullivan, *supra* note 7, at 405 ("Over the years, 13 women failed the IOC gender-verification [Barr Body] test, most of whom were reinstated."); Karkazis, *supra* note 1, at 7 ("After a round of false positives in the 1996 Olympics—which identified eight women with intersex traits—the IOC finally also abandoned all forms of routine sex testing of female athletes." (internal citations omitted)).

¹⁴⁹ Karkazis et al., *supra* note 1, at 7; Sullivan, *supra* note 7, at 404–05.

¹⁵⁰ Sullivan, *supra* note 7, at 405. Other examples of false positives regarding advantages include women with an XY chromosomal pattern who have AIS. *Id.* at 404. These women may fail a sex-verification test and be barred from competition, despite the fact that their bodies are resistant to testosterone. *Id.* See also *supra*, note 95 and accompanying text (discussing CAH).

¹⁵¹ "Utilization of a test which relies on the concurrence of these factors is not accurate in the case of [intersexual] and transsexual[] [people], as these syndromes are characterized by ambiguous or conflicting factors. The use of a simple majority of agreeing factors would be inconclusive as it incorrectly assumes each factor is of equal significance." Bassis, *supra* note 4, at 376.

Transgender MTF, intersex, and hyperandrogenic athletes often face a similar critique: testosterone gives them an unfair advantage over cisgender female athletes. For intersex and hyperandrogenic athletes, the concern is often that their current endogenous testosterone levels are too high.¹⁵² For transgender MTF athletes, the concern is that their bodies retain advantages related to increased muscle size and bone density, owing to the presence of testosterone during development (even after lowering their testosterone levels to an average female range via hormone treatments).¹⁵³ Notably, issues surrounding testosterone are most frequently called to attention when a female athlete has stereotypically masculine qualities, such as a deep voice or muscular build, and is simply winning by too wide a margin.¹⁵⁴

As the argument goes, science shows (and society generally accepts) that cisgender men usually have a competitive advantage over cisgender women in sports owing to characteristics such as height, weight, muscle size, and cardiovascular capacity.¹⁵⁵ This requires (most) sports to be sex-segregated, giving cisgender women a fair chance to win.¹⁵⁶ And, the argument continues, these dominating characteristics are in large part a result of the presence of testosterone.¹⁵⁷ Therefore, if non-binary female athletes have

¹⁵² Note, however, that the IOC, IAAF, and CAS have referred only to athletes with DSD having presently high testosterone levels in the most recent hyperandrogenism regulations. See, e.g., *Semenya*, CAS 2018/O/5798, *supra* note 133 ¶ 569 (noting that the necessity of the DSD Regulations turns on the question of whether the degree of the performance advantage that “Relevant Athletes” enjoy by virtue of their elevated testosterone levels is so significant as to require the imposition of restrictions on their eligibility to compete against other female athletes who do not enjoy that advantage). The arguments distinguishing between testosterone’s effects on intersex and transgender athletes are more prevalent in the literature. See, e.g., Wahlert & Fiester, *supra* note 17, at 19–20 (praising arguments by scholars who make thorough cases “in the service of elite female athletes with intersex conditions or disorders of sexual development,” but noting that argument strategies focusing on claims that such athletes are “born female,” experience a “natural occurrence and variation of androgens,” and so forth, are value laden, and “exacerbate[] perceptions of transpersons as nonnormative”).

¹⁵³ See, e.g., Teetzel, *supra* note 18, at 228 (“The most pressing issue . . . is whether a transgendered athlete, who has surgically changed his or her sex from that with which he or she was born, retains any physiological advantages associated with his or her sex at birth. Particularly with male-to-female transgendered athletes, the question of whether the athlete maintains or gains any performance-enhancing advantages from going through puberty as a member of the opposite sex is a major point of contention.”).

¹⁵⁴ For example, Katrina Karkazis, a Stanford University bioethicist, stated that Semenya was punished simply for “being too fast and supposedly too masculine by Western standards.” Longman, *supra* note 119.

¹⁵⁵ See, e.g., *Semenya*, CAS 2018/O/5798, *supra* note 133 ¶ 571 (CAS panel noting its satisfaction on the following points: testosterone levels are higher in male than female athletes, testosterone impacts and enhances athletic performance and allows male athletes to significantly outperform female athletes, and the non-binary athletes in question have high levels of testosterone that give such athletes a significant sporting advantage over cisgender female athletes). But see Cooky & Dworkin, *Policing the Boundaries of Sex*, *supra* note 12, at 109 (“While biology and the need for ensuring fair play through sex segregation are often cited as the reason for differences in women’s and men’s athletic performances, numerous sport and gender scholars have challenged this logic.”).

¹⁵⁶ See, e.g., *Semenya*, CAS 2018/O/5798, *supra* note 133 ¶ 456.

¹⁵⁷ See, e.g., *id.*; Karkazis et al., *supra* note 1, at 8.

high testosterone levels, and otherwise manifest typically male-attributed qualities, then it must also be fair to keep them from competing against cisgender women.¹⁵⁸ Standing alone, and at first glance, this argument seems to be correct: cisgender women should not have to compete against non-binary women who possess these male-associated characteristics. However, a harder look at the science behind these claims reveals that such a conclusion is unsupported.

To be sure, scientists can generally point to evidence highlighting the effects testosterone has on physiology, including muscle gain, bone density, cardiovascular functioning, and respiratory capacity.¹⁵⁹ However, there is no scientific consensus on whether and to what extent any such effects are retained after hormone treatments,¹⁶⁰ and conflicting results of testosterone's impact on athleticism are common.¹⁶¹ For instance, one study indicates that transgender MTF individuals may preserve bone density after gender-affirming treatment,¹⁶² and another found that even after twelve months of hormonal therapy, a transgender woman will still likely have performance benefits over a cisgender woman.¹⁶³ However, Myron Genel, an IOC Medical Commission consultant, has argued that post-operative hormone therapy for a transgender MTF athlete is sufficient to eliminate strength advan-

¹⁵⁸ See, e.g., *Semenya*, CAS 2018/O/5798, *supra* note 133 ¶ 580; Bianchi, *supra* note 44, at 3 (“So, if a trans woman has the biological characteristics of a cisgender male, then the idea is that they will possess athletic advantages that a cisgender woman is unable to naturally attain, thereby making their participation unfair.”); Devine, *supra* note 19, at 163–64 (“[T]rans-women athletes may . . . enjoy lasting physiological gains on account of the adaptations achieved while training with higher levels of endogenous testosterone, compared to their cis female and trans women competitors whose testosterone level was always female-typical Such trans women athletes would then enjoy the benefit of years, often even decades, of training with higher testosterone levels than their cisgender counterparts.”).

¹⁵⁹ See, e.g., Knox et al., *supra* note 28, at 397; Karkazis et al., *supra* note 1, at 8.

¹⁶⁰ For an interesting conceptual comparison of the benefit enjoyed by returning athletes arising from physiological gains made by steroid use and the gains retained by transgender female athletes, see generally Devine, *supra* note 19.

¹⁶¹ For an in-depth analysis of two of the largest testosterone studies in elite sport, see Sudai, *supra* note 142, at 186–87, citing the following studies: Stéphane Bermon et al., *Serum Androgen Levels in Elite Female Athletes*, 99 J. CLIN. ENDOCRINOL. & METAB. 4328 (2014); M. L. Healy, et al., *Endocrine Profiles in 693 Elite Athletes in the Postcompetition Setting*, 81 J. CLIN. ENDOCRINOL. 294 (2014).

¹⁶² See E. Van Caenegem, *Preservation of Volumetric Bone Density and Geometry in Trans Women During Cross-Sex Hormonal Therapy: A Prospective Observational Study*, 26 OSTEOPOROS INT. 35, 35 (2015) (studying trans-identified males over two years of testosterone suppression, before and after one- and two-year periods of cross-sex hormonal therapy as compared to a control group of males; concluding that the skeletal status is preserved during hormonal treatment, despite substantial muscle loss).

¹⁶³ See generally Anna Wiik et al., *Muscle Strength, Size, and Composition Following 12 Months of Gender-affirming Treatment in Transgender Individuals*, 105 J. CLIN. ENDOCRINOL. & METAB. 1, 13 (2020). The researchers did acknowledge that the study was conducted with *untrained* individuals, leaving it uncertain how the findings would translate to transgender athletes. *Id.*

tages,¹⁶⁴ and the Canadian Centre for Ethics in Sport has underscored that although there is a “persistent, ingrained assumption . . . that men are generally faster, stronger, and better at sport than women, there is a lack of scientific evidence to directly and consistently connect endogenous testosterone levels with athletic performance.”¹⁶⁵

Accordingly, while some clinical studies may confirm testosterone’s impact on physiology, it does not necessarily follow that a person with more testosterone will have greater athleticism.¹⁶⁶ Indeed, variability among women’s endogenous testosterone levels does not correspond to a similar degree of variability in athletic performance; female athletes who take hormonal contraceptives that lower their androgen levels do not experience a parallel drop in athletic performance; and some male athletes remain competitive despite having androgen levels in the female range.¹⁶⁷ Additionally, women with CAIS are unresponsive to testosterone and yet are overrepresented among elite athletes, providing an illustration of the proposition that testosterone “is far from the decisive factor in athleticism.”¹⁶⁸ Moreo-

¹⁶⁴ Teetzel, *supra* note 18, at 245. “He [also] points out that some characteristics, such as size, are not often reversible, [but] he maintains, ‘if you’re going to discriminate against transgendered athletes on the basis of their height or their wingspan, then we ought to set clear limits for women who compete, since there are six foot-six women who compete in sports such as basketball and volleyball.’” *Id.*

¹⁶⁵ Knox et al., *supra* note 28, at 396 (internal quotation marks omitted); *cf.* Bermon et al., *supra* note 36, at 828 (maintaining that although testosterone levels may not accurately predict performance in female athletes, “there are grounds to claim” that very high levels of androgens are *per se* performance-enhancing in females with androgen sensitivity).

¹⁶⁶ Karkazis, *supra* note 1, at 8 (“Clinical studies do confirm that testosterone (among many other factors) helps individuals to increase their muscle size, strength, and endurance. It may seem logical to infer, then, that a person with more testosterone will have greater athletic advantage than one with less testosterone, but this is not necessarily so. Individuals have dramatically different responses to the same amounts of testosterone, and testosterone is just one element in a complex neuroendocrine feedback system, which is just as likely to be affected by as to affect athletic performance.” (internal citations omitted)).

¹⁶⁷ *See, e.g.,* Buzuvis, *Hormone Check, supra* note 42, at 41 (“Testosterone levels among women in the ‘normal’ female range vary widely, including for example, both .1 nmol/L and 3 nmol/L. That is a 30-fold difference, *yet the difference does not translate to a 30-fold, or even measurable, difference in athletic performance.* Similarly, the ten-fold difference between average female and average male levels of endogenous testosterone not only fails to correspond to a ten-fold difference in athletic ability between men and women, it fails to explain that even among elite athletes, male and female performance levels often overlap Additionally, women whose bodies are completely insensitive to testosterone . . . are actually overrepresented among elite female athletes, a fact that further confounds the perceived correlation between testosterone and athletic ability. Moreover, the fact that 16.5% of elite male athletes are competitive in their sports despite having endogenous testosterone levels below 8 nmol/L (i.e., within the permissible range for female athletes competing in women’s sports) casts even more doubt on the relationship between endogenous testosterone and athletic performance.” (emphasis added) (citing *Chand*, CAS 2014/A/3759 ¶¶ 123, 165)).

¹⁶⁸ Karkazis et al., *supra* note 1, at 8. “This fact cannot be readily reconciled with a theory that suggests testosterone is the main source of athletic ability. Moreover, the relationship between testosterone and physique is extremely complex even beyond the

ver, evidence indicates that female and male bodies do not respond to testosterone in the same way,¹⁶⁹ and that endogenous and exogenous (externally introduced) testosterone do not have the same effect on the body.¹⁷⁰

Overall, there is a paucity of scientific evidence to show conclusively whether transgender, intersex, or hyperandrogenic female athletes have or retain meaningful competitive advantages over cisgender women due to the presence of testosterone.¹⁷¹ Most of the studies and endocrinology literature linking higher amounts of endogenous testosterone with better athletic performance have been small and focused on men,¹⁷² leaving testosterone's value to female athletes unclear.¹⁷³ And, some scientists have argued that the research used specifically to support the current DSD regulations—research which was funded and conducted by the IAAF—is based on deeply flawed data, “uncorrected even after the errors were called to the attention of the IAAF and the scientific journal which published them . . . , rais[ing] important questions of scientific integrity.”¹⁷⁴

issue of receptor variability. Relying on testosterone levels suggests far more certainty than current scientific knowledge allows.” *Id.*

¹⁶⁹ *Id.*

¹⁷⁰ See, e.g., Buzuvis, *Hormone Check*, *supra* note 42, at 42 (citing Chand, CAS 2014/A/3759 ¶¶ 124, 162, 171) (“Chand’s experts argued that doping with exogenous testosterone introduces a new biochemical agent that upsets the body’s equilibrium and natural stasis, while endogenous testosterone does not. For this reason, exogenous testosterone may trigger the body’s production of more androgen receptors (i.e., the body’s ability to use testosterone) in ways that endogenous testosterone may not.”).

¹⁷¹ See, e.g., Xavier & McGill, *supra* note 119, at 3905–06 (“It is unknown, given both the myriad complex sex traits and the number of sports involved, whether hyperandrogenism influences cardiovascular function, musculoskeletal structure, coordination and control, and the psychological aspects that relate to excellence in athleticism, either positively or negatively.”).

¹⁷² “One of the biggest gaps in current data is that nearly all research on testosterone and athletics has been conducted in men. Direct evidence of the relationship between testosterone and athletic ability in women is limited both by the small number of studies that include women, and by the narrow focus of these studies: The few placebo controlled studies of how testosterone affects muscle in women include only severely hypogonadal women with very low estrogen and androgen levels.” Karkazis et al., *supra* note 1, at 8.

¹⁷³ For instance, “[w]hat researchers know with certainty is the role testosterone plays in the development of secondary sex characteristics in males, and the promotion of protein biosynthesis that aids in building muscle mass, promoting healing and burning fat, which contribute to the muscular, lean physique associated with male athletes.” Teetzel, *supra* note 18, at 234. However, its effects on female athletes in this context exists only in theory: “Due to a complete lack of studies conducted using subjects who were transgendered and trained intensively both before and after their sex-reassignment surgeries, the effects of hormone therapy, particularly the effects of oestrogen and testosterone, on athletic performance in elite athletes are often only purported, and not supported by reputable scientific research studies.” *Id.* at 233.

¹⁷⁴ Roger Pielke et al., *Scientific Integrity and the IAAF Testosterone Regulations*, 19 INT’L SPORTS L.J. 18, 19, 21 (2019). The IAAF’s research has been critiqued by a number of scientists and scholars. See *id.* at 19 (collecting articles). Pielke et al. found significant anomalies and errors underlying the data, including duplicated athletes, duplicated times, and phantom times. *Id.* at 21. Importantly, “[s]port regulation should be held to the same high standards that we expect of researchers in other settings where science informs regulation and policy.” *Id.* at 25–26.

In short, and most pertinently, *direct causal associations* between testosterone levels in non-binary female athletes and winning remain unproven.¹⁷⁵ The minimal research that has been done suggests that we tend to place far too great a value on the effects of testosterone—effects which remain largely unstudied in the context of elite non-binary females competing against cisgender females—to justify the barriers to entry for the former.¹⁷⁶ Thus, fundamental assumptions that permeate elite sport are at best inconsistently supported by scientific evidence.¹⁷⁷ Notwithstanding this, such assumptions continue to be some of the most meaningful drivers in excluding non-binary athletes from elite competitions.¹⁷⁸ When the IOC and IAAF create rules specifically targeting testosterone levels, they send an incorrect message to society; namely, that it is scientifically proven that testosterone in non-binary female athletes creates unfair advantages which must be addressed through either exclusion or forced androgen inhibition.¹⁷⁹ Additionally, such rules implicitly perpetuate gender stereotypes by placing a spotlight on characteristics traditionally associated with men and masculinity, and by allowing challenges to be brought against women who may represent some of those qualities.¹⁸⁰

The purpose of this Part was to demonstrate that one of the most heavily relied upon justifications given in favor of finding that a non-binary athlete is not woman enough to compete purports to be scientifically backed by hard evidence, when in reality it rests on shaky ground. This lack of consistent and clear scientific evidence, taken in conjunction with the inequitable way in which “fairness” arguments are applied in this context, considered below, further illustrates that the exclusion of non-binary athletes who chal-

¹⁷⁵ See e.g., Karkazis et al., *supra* note 1, at 8 (“Because it goes against common wisdom, it is worth repeating that it has not been shown that athletes with higher endogenous testosterone perform better than athletes with lower levels.”); Karkazis & Carpenter, *supra* note 110, at 579 (“Both the 2018 and 2011 regulations rest on the IAAF’s claim that higher natural testosterone levels give some women an unfair competitive advantage over their peers and thus women’s testosterone levels should be regulated. There is no scientific consensus that this is the case.”).

¹⁷⁶ “Current science suggests that any advantage that might be conferred by hyperandrogenism is so complex that testosterone levels alone are a nearly useless indicator of advantage, and certainly not an appropriate measure for determining eligibility.” Karkazis et al., *supra* note 1, at 11.

¹⁷⁷ See generally Knox et al., *supra* note 28 (evaluating each of these assumptions in turn).

¹⁷⁸ See, e.g., CAS Executive Summary, *supra* note 132 ¶ 21 (“On the basis of the scientific evidence presented by the parties, the Panel unanimously finds that endogenous testosterone is the primary driver of the sex difference in sports performance between males and females.”).

¹⁷⁹ See Karkazis & Carpenter, *supra* note 110, at 583–85 (listing the options athletes have if their testosterone is too high to compete in the female category, including: lowering testosterone surgically or pharmacologically, competing with men or in an intersex category, competing in an unrestricted event, quitting the sport, or challenging the regulation, and arguing that these are impossible choices).

¹⁸⁰ See *id.* at 582 (noting that the IAAF regulations encourage “continuing surveillance of athlete’s bodies for what may be perceived as signs of high testosterone”).

lenge traditional notions of femininity rests more on stereotype and misunderstanding than on fact.

B. *The Inconsistent Application of “Unfair Advantage” Claims*

Sports organizations and the public respond to the differences non-binary athletes represent by pointing to some paramount need to protect cisgender female competitors from genetic outliers that will presumably render sport unfair.¹⁸¹ As seen in the testosterone debate, such a proposition is typically accepted without pause or critical evaluation, playing a central role in the paternalistic oversight of who is sufficiently female, while only marginally improving cisgender females’ opportunities to win.¹⁸² Consequently, the individual athletes who challenge and transcend socially constructed gender roles and categorical norms are inappropriately targeted, under an assumption of unfairness, which receives priority over the discrimination that results from their exclusion. This Part calls attention to the unequal application of fairness arguments made in this context and emphasizes the inconsistency between condemning some genetic and physical differences, while praising others.

1. *What Does Competitive Equity Mean in this Context?*

Fairness and protection are common tropes in this setting. The IOC’s stated role is to “encourage and support the promotion of ethics in sport . . . and to dedicate its efforts to ensuring that, in sport, *the spirit of fair play prevails*,”¹⁸³ and the IAAF has reasoned that “men have significant advantages in size, strength and power over women,” such that “it is generally accepted that competition between male and female athletes *would not be fair and meaningful*. . . .”¹⁸⁴ Repeatedly, policies are said to assure that only

¹⁸¹ See, e.g., Cooky et al., *What Makes a Woman a Woman?*, *supra* note 3, at 33 (“Ostensibly for athletes, spectators, and citizens from the Global North, common sense understandings of gender-verification testing posit testing as an objective, scientific process that ensures a level-playing field and thus, ‘fairness’ in sport competition.”).

¹⁸² In other words, gender discrimination is seen in the creation of sex-segregated categories and then in the policing of precisely who can and cannot be admitted. “[I]t is the need for sex segregation, and the belief in female physical inferiority and male superiority, that legitimates policing of the boundaries of sex/gender in women’s competitions. By accepting the premise that sex segregation in sport ensures ‘fairness,’ [society] inadvertently support[s] the discriminatory and gender-biased ideological foundations for both sex testing and sex segregation.” Dworkin & Cooky, *Critical Reflections*, *supra* note 55, at 22.

¹⁸³ *Olympic Charter: Mission and Role of the IOC*, INT’L OLYMPIC COMM. 16 (July 17, 2020) (emphasis added), <https://stillmed.olympic.org/media/Document%20Library/OlympicOrg/General/EN-Olympic-Charter.pdf> [<https://perma.cc/6D5D-HRHG>].

¹⁸⁴ *Explanatory Notes: Eligibility Regulations for the Female Classification (Athletes with Differences of Sex Development)*, INT’L ASSOC. OF ATHLETICS FED’NS (May 01, 2019) (emphasis added), <https://www.worldathletics.org/about-iaaf/documents/health-science> [<https://perma.cc/PYK4-FZUN>].

“true” (cisgender) female athletes are competing in the female category,¹⁸⁵ as this is the singular way of ensuring fairness. Additionally, the CAS stated that “[t]he purpose of having separate categories is to *protect* a class of individuals who lack certain insuperable performance advantages from having to compete against individuals who possess those insuperable advantages.”¹⁸⁶

However, excluding non-binary athletes in the name of fairness is based on little more than stereotypes that harm all female athletes. For example, as raised in the discussion of women in sports and the implementation of sex-verification testing, binary gender policies were created in part to “manage the inconsistency between female athletic achievement and dominant societal beliefs about female bodies and athletic abilities,”¹⁸⁷ particularly surrounding successful athletes with perceived male-like characteristics. Additionally, sex segregation in sports became “the foundation upon which competitive fairness is judged,” based on paternalistic views that female competitors need protection.¹⁸⁸ Here, then, “protection” seems to correspond to the idea that cisgender females (and cisgender females only) should remain competitively unchallenged—at least, with respect to one class of athletes—even if it means perpetuating the harms that come with stigmatizing non-binary females.¹⁸⁹

When sports authorities and society consider fairness as applied to cisgender females as superior to fairness as applied to their non-binary female competitors, competitive equity is rendered one-sided. “Pragmatically speaking, what constitutes fairness in sport is what we decide we want fairness to include.”¹⁹⁰ In this case, sports officials use fairness to look at a myriad of advantages and single out for exclusion only non-binary female athletes, in exchange for cisgender females having more opportunities to win via the elimination of a competitor.¹⁹¹

¹⁸⁵ See, e.g., Dworkin et al., *Injustice in Sport*, *supra* note 65, at 60 (“The possibility of Semenya’s intersexuality was cast as inconsistent with her ‘true’ African femininity in South African print media coverage, while comments featured from European competitors situated her as abnormal and incapable of competing in sports as an ‘authentic’ woman.”); Cooky & Dworkin, *Policing the Boundaries of Sex*, *supra* note 12, at 109 (“We have drawn upon available empirical research to challenge the notion that ‘real’ (or ‘unaffected’ or ‘normal’) female athletes are categorically disadvantaged relative to male athletes and intersex female athletes.”).

¹⁸⁶ CAS Executive Summary, *supra* note 132 ¶ 18 (emphasis added).

¹⁸⁷ Sullivan, *supra* note 7, at 415.

¹⁸⁸ See, e.g., Mia Fischer & Jennifer McClearn, *Transgender Athletes and the Queer Art of Athletic Failure*, 8 COMM. & SPORT 1, 4 (2019) (“Most of the sporting world assumes that trans women have physiological and biological advantages over cis women; hence, paternalistic and sexist views often see women’s sports in need of protection.”).

¹⁸⁹ And, the paternalistic view that women’s sports need protection at any level has been described as “the mantle under which all kinds of discriminatory and sexist ideas enter.” Longman, *supra* note 119.

¹⁹⁰ Teetzel, *supra* note 18, at 245.

¹⁹¹ See, e.g., CAS Executive Summary, *supra* note 132 ¶ 24 (noting again that the IAAF “discharged its burden of establishing that regulations governing the ability of female athletes with 46XY DSD to participate in certain events are necessary to maintain

2. *Sex Testing Only Applies to Women, But Not All Women*

Crucially, sex testing is only carried out on female athletes, and physiological advantages are typically decried only when they give women male-like athletic qualities.¹⁹² If a female athlete's gender is questioned, sports officials must determine whether "genetics or biology have conferred an advantage upon the competitor that other[] [cisgender females] lack or could not obtain through training and practice."¹⁹³ There are no parallel tests performed in the male realm. That is, no male athletes are sex tested to ensure they are "true" males (and not females in disguise); the IOC's policy allows FTM transgender athletes to compete without restriction in the male category; and officials are not concerned with men having any feminine competitive advantages over other men.¹⁹⁴ Neither are sports authorities troubled by females competing against males and having any "real" competitive advantages; it is simply presumed that the former will always be at a disadvantage.¹⁹⁵ There is also no clear answer as to why the male category does not have a testosterone ceiling, when such hormones determine whether some women can compete at all.¹⁹⁶

fair competition in female athletics by ensuring that female athletes who do not enjoy the significant performance advantage caused by exposure to levels of circulating testosterone in the adult male range do not have to compete against female athletes who do enjoy that performance advantage").

¹⁹² "[The] linkage between athleticism and masculinity becomes institutionalized through the gender verification policies of international and national governing bodies of sport, given that sex testing is only carried out on female athletes." Dworkin et al., *Injustice in Sport*, *supra* note 65, at 43.

¹⁹³ Arthur Caplan, *Fairer Sex: The Ethics of Determining Gender for Athletic Eligibility: Commentary on "Beyond the Caster Semenya Controversy: The Case of the Use of Genetics for Gender Testing in Sport,"* 19 J. GENETIC COUNSELING 549, 550 (2010).

¹⁹⁴ "For men there is no equivalent upper *physiological* limit—no kind of genetic, or hormonal, or physiological advantage is tested for, even if these would give a 'super masculine' athletes a distinct advantage over the merely very athletic 'normal' male." Heggie, *supra* note 58, at 158.

¹⁹⁵ Again, per the IOC and IAAF, top female athletes are at a 10% to 12% competitive disadvantage to top male athletes. *Chand*, CAS 2014/A/3759 ¶ 522. "One oft-repeated justification for gender verification testing, as well as for sex segregation more generally, is that these practices are necessary to enforce a level playing field. Yet this view is inherently premised on the idea that males are 'faster, stronger, and better' at athletics than females. As a result, the same system that supposedly guarantees a space for women to compete simultaneously communicates women's 'competitive inferiority.'" Leong, *supra* note 6, at 1264.

¹⁹⁶ "If the need for sex testing resides in ensuring a level playing field, as sport-governing bodies and organizations claim, then why is there no inquiry or test to determine whether some men have testosterone that exceeds the normal male range? . . . Should male athletes with elevated levels of androgens be forced to take androgen inhibitors?" Cooky & Dworkin, *Policing the Boundaries of Sex*, *supra* note 12, at 108. *See also* Buzuvis, *Hormone Check*, *supra* note 42, at 42 ("If athletes with higher than average levels of testosterone compete at an advantage over other members of their sex, then the resulting fairness problem would need to be addressed in men's athletics as well as women's. Yet no such rule has ever been proposed or even studied. The fact that the IAAF does not take its own argument to its logical end should have made [the] CAS more skeptical about it in the first place.").

Additionally, only certain non-binary athletes face resistance. The public pushback against MTF transgender athletes and intersex athletes with hyperandrogenism attempting to compete in the female category underscores society's fixation on sex and gender, particularly with respect to females that fall outside cultural gender norms. Such treatment is only ostensibly in response to fears of males perpetrating gender fraud. Indeed, it seems highly unlikely that even the most motivated male athlete will falsely self-identify as a female, convince sports psychologists and physicians of this, suppress his testosterone and undergo hormone therapy, compete for years, and then—after he wins a few gold medals—proclaim that it is time to return to being a man.¹⁹⁷

Is it that certain genetic advantages are only considered unfair when female athletes are winning too often and on too big a stage? The reception of non-binary athletes competing in recreational leagues, when “compared to the controversies that erupt when a transgendered athlete excels at a sport and gains a world ranking, qualifies to represent his or her country, or competes in international athletic competitions,” underscores the notion that fairness is primarily a concern when winning is important.¹⁹⁸ Of course, as this next Part illustrates, those who win typically have the most impressive advantages—ones that are celebrated rather than condemned. Thus, it is not winning alone that makes a competitor's traits unfair.

3. *Society Tolerates Other Advantages*

The world of sport already tolerates a wide variety of competitive advantages, coming from a litany of sources. Marginalizing a transgender or intersex athlete based upon a concern that she might be taller, stronger, or faster does not make sense when cisgender girls who are taller, stronger, or faster than the average girl are included and celebrated. Many factors contribute to athletic talent and success. If it were a foregone conclusion that the Phoenix Mercury—the team with 6'9" Brittney Griner, one of the tallest players in the Women's National Basketball Association and a dominant

¹⁹⁷ Evidently, some people do believe such a non-existent cisgender man is out there, contemplating this. Former tennis star Martina Navratilova said: “A man can decide to be female, take hormones if required by whatever sporting organization is concerned, win everything in sight and perhaps earn a small fortune, and then reverse his decision and go back to making babies if he so desires . . . It's insane and it's cheating.” Ellis Cashmore, *Should Sport Let Go of the Idea of Binary Sexes?*, FAIR OBSERVER (Mar. 04, 2019), <https://www.fairobserver.com/culture/sport-transgender-athletes-martina-navratilova-caster-semenya-binary-sex-news-17716/> [<https://perma.cc/48WR-CDTS>].

¹⁹⁸ Teetzel, *supra* note 18, at 228. See also Talya Minsberg, *Trans Athlete Chris Mosier on Qualifying for the Olympic Trials*, N.Y. TIMES (Jan. 28, 2020), <https://www.nytimes.com/2020/01/28/sports/chris-mosier-trans-athlete-olympic-trials.html> [<https://perma.cc/Z84Y-R2LM>] (interviewing FTM transgender athlete Chris Mosier on his acceptance and support by the running community throughout his transition).

force on the court¹⁹⁹—always wins the game, no one would play. However, we know that training, talent, attitude, teamwork, coaching, genetics, luck, and other factors all contribute as much—if not more—to player performances.²⁰⁰ In fact, there are more studies to back this up than there are to support the proposition that testosterone is the be-all-end-all for athletic success.²⁰¹

As above, complaints about other numerous, naturally occurring physical traits do not arise in the male sport arena, despite the fact that some men clearly have a competitive advantage over other men. Consider Michael Phelps: his long torso, broad shoulders, short legs, six-foot-seven-inch arm span, size fourteen feet, and beyond average flexibility confer a huge advantage for him in the pool.²⁰² “Nature has blessed Phelps with a body that is meant to swim,” and yet, most people would attribute his unparalleled success to hard work, strict training, and raw talent.²⁰³ Phelps’s advantage in the water has gone unchallenged by other male athletes, and the IOC has never considered whether his genetic differences give him an unfair edge over his competitors.²⁰⁴

¹⁹⁹ Griner is the fourth player in WNBA history to average more than twenty points per game in three consecutive seasons, ranks second on the Mercury’s all-time double-double list, and holds a record amount of career rebounds. *Brittney Griner*, WNBA, <https://www.wnba.com/player/brittney-griner> [<https://perma.cc/7CRW-RTVX>].

²⁰⁰ The CAS noted as much in the *Chand* case: “[W]hile the evidence indicates that higher levels of naturally occurring testosterone may increase athletic performance, the Panel is not satisfied that the degree of that advantage is more significant than the advantage derived from the numerous other variables which the parties acknowledge also affect female athletic performance: for example, nutrition, access to specialist training facilities and coaching, and other genetic and biological variations.” *Chand*, CAS 2014/A/3759 ¶ 532. The CAS in Semenya’s case did not contest this, but rather noted that the only difference between these factors and testosterone is that the former are equally available to men and women, whereas heightened levels of endogenous testosterone are *only* available to men. CAS Executive Summary, *supra* note 132 ¶ 22. Evidently, the CAS did not consider the availability of endogenous testosterone to intersex or hyperandrogenic women.

²⁰¹ See generally, e.g., Susan Rankin et al., *The Influence of Climate on the Academic and Athletic Success of Student-Athletes: Results from a Multi-Institutional National Study*, 87 J. HIGHER ED. 701 (2016) (detailing the effect of campus climate on NCAA student-athlete success); Marko Spieler et al., *Predicting Athletic Success: Factors Contributing to the Success of NCAA Division I AA Collegiate Football Players*, 9 J. SPORT PSYCH. 22 (2007) (exploring the relationship between demographic and psychological factors and the starting status of collegiate football players); John Raglin, *Psychological Factors in Sport Performance: The Mental Health Model Revisited*, 31 SPORTS MED. 875 (2001) (summarizing the Mental Health Model, which details the inverse relationship between athletic success and psychopathology); Darhl Pedersen, *Perceived Relative Importance of Psychological and Physical Factors in Successful Athletic Performance*, 90 PERCEPTUAL & MOTOR SKILLS 283 (2000) (detailing the relationship between psychological factors and athletic performance).

²⁰² Cooper, *supra* note 7, at 233.

²⁰³ *Id.*

²⁰⁴ See *id.* at 234; Olga Khazan, *Why Hyper-Masculine Women Are Scary, but Fish-Like Men Aren’t*, ATLANTIC (Aug. 20, 2016), <https://www.theatlantic.com/health/archive/2016/08/caster-semenya-and-the-abnormal-olympic-body/496724/> [<https://perma.cc/BMW6-KBY2>] (detailing the countless ways in which “Olympians are celebrated for

Similarly, many top Kenyan marathoners have long, thin legs suitable for energy-efficient running²⁰⁵ and impressive aerobic capacities;²⁰⁶ Shaquille O'Neal is considered one of the greatest centers in National Basketball Association history, in part because he is over seven feet tall and weighs more than 300 pounds;²⁰⁷ and Eero Mäntyranta, a Finnish cross-country skier with seven Olympic medals, had a genetic mutation that increased his hemoglobin levels to nearly 50% higher than the average man's, providing him with incredible endurance.²⁰⁸ However, elevated levels of naturally produced hemoglobin, tallness, and aerobic capacity are not grounds for disqualification, despite the fact that there is no fundamental difference between these traits and elevated testosterone levels.²⁰⁹ Olympians have extraordinary traits—that is what makes them elite, and that is (usually) what we love about them.

Of course, male athletes are not the only ones who are praised for their formidable skills and unique physical attributes. Simone Biles is the most

unorthodox features that give them an edge in their sports"). Other genetic mutations that contribute to athletic success also include "low body mass index, unusually high lung capacity, mitochondrial conditions that increase aerobic capacity, acromegaly (i.e. large hands and feet), perfect vision, and unusually efficient systems for muscle growth and blood flow." Buzuvis, *Hormone Check*, *supra* note 42, at 43.

²⁰⁵ See, e.g., Max Fisher, *Why Kenyans Make Such Great Runners: A Story of Genes and Cultures*, ATLANTIC (Apr. 17, 2012), <https://www.theatlantic.com/international/archive/2012/04/why-kenyans-make-such-great-runners-a-story-of-genes-and-cultures/256015/> [<https://perma.cc/3UKB-XP5Z>] (discussing two separate, European-led studies in western Kenya that "found significant differences in body mass index and bone structure between the Western pros and the Kenyan amateurs who had bested them. The studied Kenyans had less mass for their height, longer legs, shorter torsos, and more slender limbs . . . , [and the researchers] not[ed] that these traits would make them more efficient runners, especially over long distances").

²⁰⁶ See, e.g., Beat Knechtle et al., *Male and Female Ethiopian and Kenyan Runners are the Fastest and the Youngest in Both Half and Full Marathon*, 5 SPRINGERPLUS 1, 18–22 (2016) (discussing factors that contribute to the dominance of East-African runners, including maximal sustainable oxygen uptake (VO₂max) and running economy).

²⁰⁷ See, e.g., Amaar Abdul-Nasir, *5 Reasons Why Shaquille O'Neal is the Greatest NBA Center of All Time*, BLEACHER REPORT (June 12, 2011), <https://bleacherreport.com/articles/731943-5-reasons-why-shaquille-oneal-is-the-greatest-nba-center-of-all-time#:~:text=HE%20made%20movies%20and%20TV,behind%20Kobe%20Bryant%20and%20LeBron> [<https://perma.cc/WV4G-VY2H>] (discussing Shaquille's ability to "slip his 7-foot-1, 300-something pound frame into the lane for hooks and bankers," while noting that size was not the only key to his success).

²⁰⁸ See generally David Epstein, *Magic Blood and Carbon-Fiber Legs at the Brave New Olympics*, SCI. AM. (Aug. 05, 2016), <https://www.scientificamerican.com/article/magic-blood-and-carbon-fiber-legs-at-the-brave-new-olympics/> [<https://perma.cc/G7F5-8BP7>] (explaining that Mäntyranta's genetic mutation caused his bone marrow to over-produce red blood cells which convey oxygen to the muscles and increase endurance).

²⁰⁹ See, e.g., Myron Genel et al., *The Olympic Games and Athletic Sex Assignment*, JAMA (Oct. 04, 2016), <https://jamanetwork.com/journals/jama/fullarticle/2542968> [<https://perma.cc/B2UA-5LBM>] ("There is no fundamental difference between congenital disorders leading to elevated testosterone levels, functional or not, and an erythropoietin receptor mutation leading to high hemoglobin."); Buzuvis, *Transsexual and Intersex Athletes*, *supra* note 29, at 69 ("As medical experts have said, even any potential advantages one might have by virtue of being intersex or transgender are no different from other naturally occurring physical advantages like being taller or having more balance." (internal citation omitted)).

decorated gymnast in history, boasting twenty-five world championship medals and four original, never-before-done skills named after her.²¹⁰ Her dominance is due, in part, to an ideal strength-to-weight ratio: her small, 4'8" stature and incredible strength allows her to maximize her time in the air.²¹¹ Katie Ledecky similarly holds the most gold medals in history for a female swimmer, as well as the fastest-ever times in three of her events.²¹² Part of what makes her so successful is her technique: "common among male swimmers but almost unheard of among women, [and] often described as a 'gallop' or a 'giddy-up' stroke," she uses an uncommon amount of core strength, hip rotation, and hip power to augment her mechanics.²¹³ Finally, in addition to unmatched work ethic and fitness, Kerri Walsh Jennings possesses a killer combination: height and speed, making her a "deadly competitive" sand volleyball player and one of the greatest of all time.²¹⁴ These women, along with many others, have redefined their sports and are celebrated, rather than questioned, for their unmatched performances and impressive characteristics.

Caster Semenya, on the other hand, has been subjected to sex-verification tests, accused of not being female, and dragged through the headlines for more than a decade because of her extraordinary traits.²¹⁵ While not the

²¹⁰ D'Arcy Maine & Amy Van Deusen, *How Does Simone Biles Do What Seems Impossible?*, ESPN (Oct. 13, 2019), https://www.espn.com/olympics/gymnastics/story/_id/27800411/how-does-simone-biles-do-gymnastics-skills-seem-impossible [https://perma.cc/982Y-L983]. "She is, without question, the most dominant gymnast in the history of the sport . . . She's doing the most difficult gymnastics ever attempted, and she does it effortlessly. She's the perfect gymnast for the perfect time." *Id.*

²¹¹ "Much like Michael Phelps is often considered to have the perfect build for swimming due to his long torso and wingspan, the 4-foot-8 Biles could have the perfect body for high-difficulty skills in her sport. With her small stature, she is able to do more in the same amount of time as others who might be taller or with a lower strength-to-weight ratio." *Id.*

²¹² *Katie Ledecky*, OLYMPIC CHANNEL, <https://www.olympicchannel.com/en/athletes/detail/katie-ledecky/> [https://perma.cc/V5J4-TXQX]. Her win count makes her one of the most dominant athletes in sport, "as measured by the gap between her and everyone else in her discipline . . . She's dominating by the widest margin in international sport, winning by 1 or 2 percent. If a runner won the 10,000 meters by that wide a margin, they'd win by 100 meters. One or 2 percent in the Tour de France, over about 80 hours of racing, would be 30 or 40 minutes. It's just absolutely remarkable." Dave Sheinin, *How Katie Ledecky Became Better at Swimming than Anyone is at Anything*, WASH. POST (June 24, 2016), https://www.washingtonpost.com/sports/olympics/how-katie-ledecky-became-better-at-swimming-than-anyone-is-at-anything/2016/06/23/01933534-2f31-11e6-9b37-42985f6a265c_story.html [https://perma.cc/5DP8-2HHZ].

²¹³ Sheinin, *supra* note 212. Interestingly, her man-like style of swimming is considered a positive, unlike Semenya's man-like style of running. *See id.* ("Her stroke is like a man's stroke . . . I mean that in a positive way. She swims like a man.")

²¹⁴ Aimee Berg, *What Makes Kerri Walsh the Best Beach Volleyball Player in the World?*, VICE (Aug. 06, 2016), <https://www.vice.com/en/article/yp8p7j/what-makes-kerri-walsh-the-best-beach-volleyball-player-in-the-world> [https://perma.cc/4XAM-96KK]. "[Historically,] you didn't make people 6-3 who had quick feet, too; slow feet was the great equalizer." *Id.*

²¹⁵ *See, e.g.,* Anna North, "I am a Woman and I am Fast": What Caster Semenya's Story Says About Gender and Race in Sports, VOX (May 03, 2019), <https://www.vox.com/identities/2019/5/3/18526723/caster-semenya-800-gender-race-intersex->

main focus of this Article, it is important to acknowledge that race is undoubtedly a factor in raising challenges about an athlete's gender.²¹⁶ Specifically, female athletes are generally subjected to a higher degree of criticism when they both fail to conform to traditional Western expectations of femininity and are Black.²¹⁷ Consider Serena Williams, a twenty-three time Grand Slam champion.²¹⁸ Each time she takes the court, "she puts on a masterful display of tennis skills combined with unmatched strength, power, agility and quickness—sometimes all in one rally."²¹⁹ While her skills are praised, she has also had her gender questioned, been subjected to constant attack for being too "manly," "animalistic," and "aggressive" as a way of downplaying her achievements, and taken the brunt of media coverage that focuses on her outfits, sexuality, and the size and shape of her body, rather than her performance on the court.²²⁰ As a number of feminist sport scholars

athletes [<https://perma.cc/NZ3P-6BCY>] ("[S]ince [Semenya] arrived on the global scene a decade ago, she's been subject to constant scrutiny, as the media, the public, and her fellow athletes speculated about her anatomy, misgendered her, and argued that she shouldn't be allowed to race against other women. Her career is a reminder that when people challenge perceived ideas about masculinity and femininity, their bodies can become fodder for public discussion—often against their will.").

²¹⁶ The co-constitution of gender, sex, and race in sport is an important one to consider in this context. *See generally, e.g.*, Dworkin et al., *Injustice in Sport*, *supra* note 65 (conducting a media analysis of the treatment of Caster Semenya, and discussing the role of race and nationality); Cooky et al., *What Makes a Woman a Woman?*, *supra* note 3 (detailing how differing cultural contexts produce contradictory understandings of sex/gender, of gender verification testing, and of notions of fairness in sport); Ramona Bell, *Competing Identities: Representations of the Black Female Sporting Body from 1960 to the Present* (2008) (unpublished Ph.D. dissertation, Bowling Green University) (analyzing mainstream America's attitudes regarding the Black female athletic form); Cahn, *supra* note 73 (detailing the successes of Black female athletes and demonstrating how such athletes are subjected to increased scrutiny); Patricia Vertinsky & Gwendolyn Captain, *More Myth than History: American Culture and Representations of the Black Female's Athletic Ability*, 25 J. SPORT HIST. 532, 532 (1998) (exploring "a complex series of discourses that have developed around the black sporting female and her athletic abilities in the context of American culture, and trac[ing] the complex construction and perpetuation of damaging myths of racial and sexual difference").

²¹⁷ *See, e.g.*, Crincoli, *supra* note 46, at 164–65 (underscoring that cultural standards of beauty and feminine appearances are fraught with racial-based judgments and describing the magazine makeover of Semenya, which was designed to make her look "very much the [like] girl that she was accused of not being").

²¹⁸ *Serena Williams*, WTA TENNIS, <https://www.wtatennis.com/players/230234/serena-williams/grand-slams> [<https://perma.cc/K7K8-RB8U>].

²¹⁹ *Meet the Women*, SPORTS ILLUSTRATED: FITTEST 50, https://www.si.com/specials/fittest50/women.html#sally_fitzgibbons [<https://perma.cc/5F49-VAWV>].

²²⁰ *See, e.g.*, Erika Kendall, *Female Athletes Often Face the Femininity Police – Especially Serena Williams*, GUARDIAN (July 14, 2015), <https://www.theguardian.com/commentisfree/2015/jul/14/serena-williams-female-athletes-femininity-police> [<https://perma.cc/EN7R-PH65>] (detailing how Williams' deep brown skin, cheekbones, and muscular physique "are all used as grounds to question the sex she was born at birth or whether she came by her athleticism naturally" and describing how elite women in sport fear looking unfeminine to the public); Jenée Desmond-Harris, *Serena Williams is Constantly the Target of Disgusting Racist and Sexist Attacks*, VOX (Sept. 07, 2016), <https://www.vox.com/2015/3/11/8189679/serena-williams-indian-wells-racism> [<https://perma.cc/VD5M-ZGB9>] (detailing the litany of ways in which Williams has been "compared to an animal, likened to a man, and deemed frightening and horribly unattractive,"

have argued, “female athletic bodies from certain regions of the world [and of certain races] disproportionately have their sex questioned, while others do not elicit such surveillance.”²²¹

Bearing racial considerations in mind, the differences in treatment between athletes like Phelps and Semenya seem to rest on little more than the fact that the latter is dominating the female category with a perceived advantage (and appearance) that is typically attributed to males. To her challengers, it does not matter that Semenya was raised as a woman, socialized as a woman, and legally recognized as a woman for her entire life.²²² After being subjected to sex-verification tests by the IOC and IAAF, and having her testosterone levels leaked to the world, her races are now constantly mired by resentment of her talent and confusion from people trying to place her in a gender box.²²³ Semenya’s womanhood is insufficient for the cisgender female athletes who feel they are being cheated by her. She is a woman who does not present as feminine (at least, per the patriarchal Western version of the term), and sports officials, competitors, and spectators have trouble accepting this—particularly when she wins.

Should the right to compete be contingent on not winning, then? To be sure, non-binary athletes frequently lose.²²⁴ For instance, Chand did not advance past the first round of the Olympic 100 meters,²²⁵ and women with “normal” levels of testosterone are capable of running faster than Semenya, but her gender was questioned only after she won the 800 meter race in 2009 and attention was called to her male-like attributes.²²⁶ Paula Radcliffe, a retired world record holder in the women’s marathon, argued that when a vic-

as well as described with racist and misogynistic language by the public and media, and underscoring the intense (and disturbing) fascination with her body). “[E]ven so-called complimentary commentary about William’s athleticism is often grounded in stereotypes about Black people (animalistic and aggressive) and Black women specifically (masculine, unattractive, and overly sexual at once).” *Id.*

²²¹ Dworkin et al., *Injustice in Sport*, *supra* note 65, at 43.

²²² “Semenya identifies as a woman. Family members, friends, South African stakeholders, and leaders in both sport and government have insisted that Semenya is indeed a woman, regardless of what scientific testing may determine.” Cooky & Dworkin, *Policing the Boundaries of Sex*, *supra* note 12, at 103. See also Cooky et al., *What Makes a Woman a Woman?*, *supra* note 3, at 43 (reporting that those who raised her in South Africa never doubted her gender).

²²³ See, e.g., Ambrose Wonkam et al., *Beyond the Caster Semenya Controversy: The Case of the Use of Genetics for Gender Testing in Sport*, 19 J. GENETIC COUNS. 545, 547 (2010) (detailing the critiques of the IAAF’s public handling of Semenya’s case and noting that it will likely subject her to “unfair prejudice the rest of her life”).

²²⁴ For an interesting discussion on how often Rachel McKinnon, a transgender MTF master’s level cyclist does not win against her cisgender female competitors, see Rachel McKinnon, *I Won a World Championship. Some People Aren’t Happy*, N.Y. TIMES (Dec. 05, 2019), <https://www.nytimes.com/2019/12/05/opinion/i-won-a-world-championship-some-people-arent-happy.html> [<https://perma.cc/N7X9-HVRK>].

²²⁵ “If you believe [testosterone] is jet fuel, then what’s going on?” Longman, *supra* note 119.

²²⁶ Suspicions were raised because of her “rapid performance improvements,” “masculine build,” “deep voice,” and “man-like style of running.” Dworkin et al., *Injustice in Sport*, *supra* note 65, at 40.

tory is seemingly assured as in Semenya's case, it is "no longer sport," and suggested that some countries may actively recruit non-binary athletes to increase their medal count.²²⁷ Interestingly,

Radcliffe is more of an outlier than Semenya. Radcliffe's marathon record of 2 hours 15 minutes 25 seconds is about 10 percent slower than the fastest men's time of 2:02:57. Meanwhile, Semenya's best performance at 800 meters of 1 minute 55.33 seconds, *which is not the world record*, is about 12 percent slower than the men's record of 1:40.91. Radcliffe and gold medal athletes . . . , like the American gymnast Simone Biles and the swimmer Katie Ledecky, *have been as dominant as Semenya or more dominant, but their gender has not been openly questioned* When we look at it objectively, Caster Semenya is no more exceptional than they are So why do we celebrate them while persecuting Semenya?²²⁸

The IOC and IAAF are attempting to do the impossible: isolate testosterone from other biological variances to determine the impact that it alone has on competitive advantage.²²⁹ But, if elite sport policies set the bar for eligibility at the exact point where non-binary athletes are guaranteed to lose to cisgender athletes, it effectively precludes the former's meaningful participation in sport.²³⁰ Genetic differences like Semenya's are reflective of the natural variation of the human species; however, she has been deemed unnatural and abnormal, by virtue of a test that arbitrarily places her outside the bounds of being a "real" woman. Interestingly, the current emphasis on hormonal variations in the IOC and IAAF's policies has not opened the floodgate for opposition to all other physiological variations, including high respiratory capacities, increased lactic acid thresholds, and efficient systems for blood flow.²³¹ Notably, disallowing athletes like Semenya to compete, while still racing against other athletes who have hit the genetic jackpot, like

²²⁷ Longman, *supra* note 119.

²²⁸ *Id.* (emphasis added) (internal quotation marks omitted).

²²⁹ Karkazis et al., *supra* note 1, at 11–12.

²³⁰ Crincoli, *supra* note 46, at 133.

²³¹ See, e.g., Buzuvis, *Hormone Check*, *supra* note 42, at 43–44 (discussing other naturally occurring physical traits for which athletes are not tested nor excluded, including increased hemoglobin levels, height, low body mass index, high lung capacity, mitochondrial conditions that increase aerobic capacity, perfect vision, and unusually efficient systems for muscle growth and blood flow); Cooky & Dworkin, *Policing the Boundaries of Sex*, *supra* note 12, at 107 ("If monitoring genetically conferred advantage to ensure a level playing field was the primary basis for ensuring fair play . . . sports organizations would also test for performance enhancing genes that predispose them to be athletically superior by improving muscle growth and efficiency as well as blood flow to skeletal muscles." (internal citation and quotation marks omitted)).

Ajee Wilson²³² and Allyson Felix,²³³ hardly improves cisgender female athletes' chances of winning.²³⁴

In addition to the diverse range of body types, physiological gifts, and athletic talent accepted by society, the sporting world also tolerates *external* advantages conferred only on a lucky few. For instance, the IOC does not consider the fact that the United States has a greater population than Saudi Arabia²³⁵ from which to draw female athletic talent when listing the medal count or organizing the events, and financial resources and access to world-class training centers are not considered to confer unfair advantages.²³⁶ Other external factors that bestow huge athletic advantages on some, but not all, athletes include: money, budgets, scholarships, staff, physicians, trainers, coaches, facilities, equipment, reputation, networking, prestige, and access to competitions.²³⁷ Nevertheless, society does not try to level the playing field with respect to these advantages, either.

In sum, sport organizations make no effort to ensure competitive equity based on other biological and non-biological factors that clearly contribute to athletic advantage. This, taken in conjunction with the weaknesses of tes-

²³² Wilson is an American runner currently ranked number one in the world in the 800 meters with a personal best of 1:55.61. *Ajee Wilson*, WORLD ATHLETICS, <https://worldathletics.org/athletes/united-states/ajee-wilson-14411176> [https://perma.cc/EP8M-T4R2]. Wilson's personal best is just 1.36 seconds behind Semenya's personal best. *Caster Semenya*, WORLD ATHLETICS, <https://worldathletics.org/athletes/south-africa/caster-semenya-14330057> [https://perma.cc/62B3-UHKU].

²³³ Felix is an American 100, 200, and 400-meter runner, and the most decorated track and field athlete in history. *Allyson Felix Breaks Usain Bolt Record for World Titles, Gets First Gold as a Mom*, NBC SPORTS (Sept. 29, 2019), <https://olympics.nbcsports.com/2019/09/29/allyson-felix-usain-bolt-world-championships-record/> [https://perma.cc/475D-NUJD].

²³⁴ Of course, this Article recognizes that the removal of Semenya from the field improves Wilson's chances of winning gold in the 800 meters, at least. The point here is that taking one elite athlete off the field does little to ensure all other cisgender female athletes are "competitively protected" from challenge, especially when the competition is still made up of unbelievably dominant women. Additionally, some athletes have historically run faster than Semenya, and yet were not precluded from sport. *See 800 Metres Women*, WORLD ATHLETICS, <https://www.worldathletics.org/records/all-time-toplists/middlelong/800-metres/outdoor/women/senior> [https://perma.cc/QU28-GXK5].

²³⁵ This Article recognizes that in addition to population differences, Saudi Arabia only recently began allowing female athletes to compete. Sarah Attar, a Pepperdine University graduate, ran the 800 meters in the 2012 Olympics, becoming one of the first two female athletes to represent Saudi Arabia. *See Michelle Hamilton, Two Female Runners to Compete in the Olympics for Saudi Arabia*, RUNNERS WORLD (Aug. 02, 2016), <https://www.runnersworld.com/news/a20813494/two-female-runners-to-compete-in-the-olympics-for-saudi-arabia/> [https://perma.cc/ST9Z-C548].

²³⁶ *See, e.g.,* Buzuvis, *Hormone Check*, *supra* note 42, at 43–44 (discussing non-biological factors that contribute to athletic advantage and the fact that "level playing field" arguments are never waged against such factors).

²³⁷ *See generally, e.g.,* Rachel Arnold et al., *Leadership and Management in Elite Sport: Factors Perceived to Influence Performance*, 10 INT'L J. SPORTS SCI. & COACHING 285 (2015) (examining environmental factors related to Olympic performance); Joseph Baker et al., *Nurturing Sport Expertise: Factors Influencing the Development of Elite Athletes*, 2 J. SPORTS SCI. MED. 1 (2003) (asserting the importance of environmental factors in the development of sport expertise).

tosterone-based arguments and the inconsistent application of “unfair advantage” concerns, gives us reason to question the legitimacy of the IOC and IAAF’s exclusionary policies. This next Part therefore asks: why are a select few traits treated differently, if not to maintain traditional norms of how female athletes should look, act, and compete?

C. Policing Femininity at the Margins

Fairness, as it is described above, is not the guiding principle behind limiting non-binary female participation in elite sport. Considering the context in which sex testing policies arose, the reasons given for their maintenance, and their questionable impact on competitive equity, this Part draws from various arguments presented throughout the paper to more explicitly unmask sport’s justifications for the exclusion of non-binary female athletes. Namely, this includes the reification of traditional gender norms and the paternalistic oversight of what it means to be a woman.

To begin, “[t]he policing of groups on the periphery of society articulates social norms intended to govern the majority.”²³⁸ Here, this means that when we police women who fall outside traditional gender boundaries (i.e., non-binary women), we articulate views about womanhood and femininity intended to govern those who are safely within those boundaries (i.e., cis-gender women). Sport acts as a way of defining the feminine ideal. To be sure, this ideal has changed from the passive, weak, delicate understanding of women that was prevalent when they first made their entry into sports.²³⁹ The modern sportswoman is expected to be independent, strong, competitive, and physical.²⁴⁰ However, she is still expected to be feminine and even “sexy.”²⁴¹

²³⁸ Kaiponanea T. Matsumura, *Public Policing of Intimate Agreements*, 25 YALE J.L. & FEMINISM 159, 188 (2013). For two examples of this phenomenon, in which regulating those on the border sends a message to the majority about what the standard should be, see *id.* at 188–89 (arguing that “[e]fforts by those outside the nuclear family to achieve genetic parenthood through contract have provided the courts with opportunities to articulate public policies emphasizing the specialness of the genetic relationship between parent and child”) and Courtney Megan Cahill, *Regulating at the Margins: Non-Traditional Kinship and the Legal Regulation of Intimate and Family Life*, 54 ARIZ. L. REV. 43, 54–60 (2012) (arguing that “the law is trying to ‘regulate’ . . . forms of intimate and family life that it cannot directly reach when it regulates those who exist at the margins”).

²³⁹ See *supra* § I.B.

²⁴⁰ See, e.g., Shari L. Dworkin, “ *Holding Back* ”: *Negotiating a Glass Ceiling on Women’s Muscular Strength*, 44 SOC. PERSP. 333, 334 (2001) (“An analysis of women’s participation in sport and fitness reveals a highly politicized terrain of gender relations. Contemporary United States culture tends increasingly to applaud and embrace athletic, powerfully strong women Thus, many view today’s fit woman as embodying power and agency in a manner that challenges definitions of women as weak, passive, or docile.”) [hereinafter, Dworkin, *Holding Back*].

²⁴¹ See, e.g., Karkazis et al., *supra* note 1, at 6 (“Anxiety about women competitors’ femininity has plagued [international sporting] events almost from the beginning.”).

Indeed, we tend to valorize athletes who both excel at their craft and adhere to traditional aesthetics of femininity, while punishing those who trigger questions about perceived masculinity.²⁴² “Cultural tensions between athleticism and femininity have long been managed by social control or strong encouragement for women athletes to attend charm schools, to wear long hair, painted nails, or other markers of emphasized femininity, and to emphasize their abilities and willingness to be mothers.”²⁴³ Ideologies of femininity are used to set boundaries on women’s strength, musculature, athletic techniques, looks, and competitive dominance.²⁴⁴

Accordingly, when female athletes possess traits typically associated with men, or otherwise transcend narrow constructs of masculinity and femininity through athletic prowess, it makes society uneasy.²⁴⁵ To quell anxieties about such “suspicious” female athletes, sport’s governing entities take the opportunity to regulate those at the margins through sex testing and sex-centric policies.²⁴⁶ To illustrate, the IAAF and IOC, in relying on suspicion

²⁴² See *id.* at 7 (“Except for the period when routine biological testing was the policy, perceived gender nonconformity has always played an important role in triggering questions about an athlete’s ‘biological’ masculinity. Women athletes are already under a great deal of pressure to appear ‘feminine’ and even ‘sexy.’”); Dworkin, *Holding Back*, *supra* note 240, at 335 (“[W]omen’s bodybuilding both challenges and reproduces ideals of emphasized femininity because the increasing size of the female bodybuilder is only acceptable once ‘tamed’ by beauty. It is for this reason that judges of bodybuilding contests have been found to institutionally reward women for various ‘feminine’ physical markers (e.g., breast implants, painted nails, dyed hair) even when the goal of the sport is to display muscle mass, size, symmetry, and density. And, of course, commercialization is integrally linked to the kinds of femininity that are displayed and rewarded by and in the media.”).

²⁴³ Shari L. Dworkin & Michael A. Messner, *Gender Relations in Sport*, 45 Soc. PERSP. 347, 349 (2002).

²⁴⁴ See Dworkin, *Holding Back*, *supra* note 240, at 337 (arguing that women in fitness “may find their bodily agency and empowerment limited not by biology but by ideologies of emphasized femininity that structure the upper limit on women’s bodily strength and musculature” (internal citation omitted)); Dworkin & Messner, *supra* note 243, at 348 (“[W]hile dominant meanings associated with sport are now more contested than ever, much cultural energy is still expended to reify female athletes as unequivocally heterosexual, as more suited to motherhood and nurturance ‘off the court,’ and as the categorically inferior athletes.”).

²⁴⁵ “Strength, speed, and athletic ability are not traits typically associated with women. So, when women athletes display these traits, it makes society uneasy. Sex testing provides society and athletic organizations a way to regulate those women who become so strong that they break the mold of what is acceptable for a female athlete.” Cooper, *supra* note 7, at 256–57. “[W]hile men’s participation in many sport and fitness activities has historically been consistent with dominant conceptions of masculinity as well as heterosexuality, women’s participation has tended to bring their femininity and heterosexuality into question. Thus, not only do women challenge narrow constructs of masculinity and femininity through being active, fit agents, but they are also subject to narrow conceptions of womanhood that often become conflated with heterosexual attractiveness.” Dworkin, *Holding Back*, *supra* note 240, at 335 (internal citations omitted).

²⁴⁶ “One thing is apparent: when ‘suspicious’ female athletes are sex tested, the ambiguities of sex as a dichotomous category—and the real social processes involved in constituting and reconstituting what sex is—become exposed. Rather than leveling the playing field, sex testing in sport offers us the biological reality of a continuum of sex. Simultaneously, sex testing illustrates how sport organizations, scientists, athletes, and

as a basis for challenging an athlete's gender "effectively legitimize[] widespread surveillance of all women athletes by instructing national federations as well as doctors, doping officials, and other official personnel to scrutinize women athletes' perceived femininity. This can include appearance, gender expression, and sexuality."²⁴⁷ Through subjective cultural expectations, sport authorities attempt to determine which bodies are "appropriately feminine," and which bodies should be called into question.²⁴⁸ The IOC and IAAF therefore take what is otherwise a "neutral bodily fact of higher testosterone levels," mediate it through "culturally-coded ideas about gender expression and gender stereotypes," and communicate a circumscribed perception of what the broader group of cisgender female athletes should be.²⁴⁹

Female athletes are not challenged when they dominate their sport alone; rather, they are challenged if they are not "feminine" enough when they do it.²⁵⁰ "The fact that people are alarmed about the masculinity of athletes like Semenya, but not the myriad other ways Olympians deviate from the norm, suggests that our anxieties about her might be rooted in something *other than a love of fairness*."²⁵¹ Female athletes are celebrated until they are deemed too masculine, at which point they are heavily criticized. Policing those who fall outside the boundaries of traditional gender norms with an intent to govern the majority should concern all female athletes.

* * *

Sports regulatory entities have yet to provide an intellectually honest and durable justification for such a disparate treatment of non-binary athletes, reflecting an untenable fixation on the gender binary and resistance to those who challenge it. A careful review of the above shows that non-binary exclusionary policies can be more aptly explained by the regulation of femininity that has permeated the history of women's sport. The next Part demonstrates that the same ill-founded logic is being replicated at the high school and collegiate levels, and the manner in which these questions are being

broader society adhere to notions of categorical difference and efforts to maintain sex dichotomies and sex segregation in sport. Such a policy not only interferes with the right to participate in sport but also bolsters the inequitable treatment of intersex and female athletes in sport." Cooky & Dworkin, *Policing the Boundaries of Sex*, *supra* note 12, at 110.

²⁴⁷ Karkazis & Carpenter, *supra* note 110, at 582.

²⁴⁸ *See id.*

²⁴⁹ *See id.*

²⁵⁰ "Despite the fact that sport requires powerful physical prowess, women are sex tested when they carry out an explosive athletic performance, have a high degree of musculature, or are perceived to be 'too male.'" Cooky & Dworkin, *Policing the Boundaries of Sex*, *supra* note 12, at 108.

²⁵¹ Khazan, *supra* note 204 (emphasis added).

handled on a global stage has the potential to broadly affect society's views of people who are different.

D. Sport Spillover

How women are treated in sports is a catalyst for how society responds to non-binary individuals. Importantly, elite athletes are not the only ones on the frontlines of the battle to expand our understanding of women and gender; these issues permeate the bathrooms of North Carolina,²⁵² the courtrooms of Connecticut,²⁵³ the House floors of Arizona,²⁵⁴ and beyond. This Part first underscores the influence of the same flawed fairness arguments in contexts beyond elite sports, particularly in high school and collegiate athletics. The purpose here is not to argue for a proper interpretation of Title IX,²⁵⁵ rather, it is simply to show that the same gender-policing arguments are playing a heavy-handed role in schools. Then, this Part argues that professional sports have the potential to sway public opinion by encouraging society to more carefully consider its treatment of non-binary athletes. The purpose of this Part is to suggest that we, as a society, should resist the urge to accept the unsupported assumptions on which strict binary policies rest.²⁵⁶

²⁵² North Carolina passed the Public Facilities Privacy & Security Act, commonly known as House Bill 2, in March 2016. Avianne Tan, *North Carolina's Controversial Anti-LGBT Bill Explained*, ABC NEWS (Mar. 24, 2016), <https://abcnews.go.com/US/north-carolinas-controversial-anti-lgbt-bill-explained/story?id=37898153> [https://perma.cc/8QJ9-V9PV]. The bill amended state law to preempt local anti-discrimination ordinances and compelled schools and public facilities to prevent transgender people from using the restroom consistent with their gender identity. *Id.*

²⁵³ A federal lawsuit in Connecticut challenged an interscholastic policy allowing transgender MTF athletes to compete in high school athletics. See Roman Stubbs, *Connecticut High School Girls File Federal Suit to Prevent Transgender Athletes from Competing*, WASH. POST (Feb. 12, 2020), <https://www.washingtonpost.com/sports/2020/02/12/conn-high-school-girls-file-federal-suit-prevent-transgender-athletes-competing/> [https://perma.cc/TNX3-4BB4].

²⁵⁴ The Arizona House Rules Committee is considering the Save Women's Sports Act, which restricts public and private schools, including community colleges and universities, from allowing teams or sports designated as "female" to allow "students of the male sex" to compete. H.B. 2706, 54th Leg., 2d Reg. Sess. (Ariz. 2020). Other states that have introduced bills governing transgender athletic policies include West Virginia, Washington, Iowa, New Hampshire, Tennessee, and South Carolina. Stubbs, *supra* note 253.

²⁵⁵ Title IX provides: "No person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any educational program or activity receiving Federal financial assistance . . ." 20 U.S.C. § 1681 (1972). Title IX requires equal opportunity to play sports and is broadly the foundation under which interscholastic and collegiate athletic gender policies are challenged. See Diane Heckman, *Women & Athletics: A Twenty Year Retrospective on Title IX*, 9 U. MIAMI ENT. & SPORTS L. REV. 1, 2 (1992) ("[Title IX] is the cornerstone of federal statutory protection for female athletes and prospective female athletes in the United States."). See also 34 C.F.R. § 106.41(b) (1975) (listing Title IX contact sport examples that justify sex-segregated events).

²⁵⁶ "Humans display a great deal of biological variation. Sex is no exception. Thus, we should look at this biological diversity as an opportunity rather than a threat. After all,

1. *Influencing Interscholastic and Collegiate Sports*

Young non-binary athletes in schools are similarly being vilified through claims of “unfair advantages” and appeals to “protect cisgender females.”²⁵⁷ For example, three cisgender female athletes filed a federal lawsuit challenging a Connecticut Interscholastic Athletic Conference (CIAC) rule that allows high school athletes to compete in sports corresponding with their gender identity.²⁵⁸ Like the targeting of Caster Semenya, the Connecticut lawsuit centers on transgender MTF runners Andraya Yearwood and Terry Miller, who made headlines after their first and second place finishes in the 100 meters at the State Open Finals in 2018.²⁵⁹

The plaintiffs argue that the current CIAC rule deprives girls of honors and opportunities to compete at elite levels; forcing girls to compete against “boys” is unfair and shatters their dreams; sports has always been sex-segregated because of biological differences, “not what people believe about their gender;” and allowing non-binary athletes to compete forces girls to be “spectators in their own sports.”²⁶⁰ The plaintiffs also repeatedly refer to Yearwood and Miller as “boys” or “males” who were permitted to compete against girls,²⁶¹ disregarding their gender identities and the fact that both athletes are receiving hormone therapy and have testosterone levels that are typical for cisgender girls, according to their lawyers.²⁶² Claims like these indicate that the femaleness of non-binary athletes is again being disregarded in favor of slippery slope arguments, such as that of a feared “gender apocalypse”—where cisgender males will fraudulently declare a female identity to effectively shut out all cisgender females in high school and college.²⁶³ Of course, these fears arise notwithstanding the fact that “masquerading” seems

every athlete who performs outstandingly is exceptional, in one way or another.” Camporesi & Maugeri, *supra* note 25, at 379.

²⁵⁷ For a list of inclusive and exclusionary high school policies, see *K-12 Policies*, TRANSATHLETE (2020), [transathlete.com/k-12](https://perma.cc/9DY5-TLLW) [https://perma.cc/9DY5-TLLW]. Additionally, for a comparison between the IOC, NCAA, and some inclusive interscholastic policies, see Erin Buzuvis, *Including Transgender Athletes in Sex-Segregated Sport, in SEXUAL ORIENTATION AND GENDER IDENTITY IN SPORT: ESSAYS FROM ACTIVISTS, COACHES, AND SCHOLARS* 27–30 (G.B. Cunningham ed., 2012).

²⁵⁸ See generally Complaint, Soule et al. v. Conn. Ass’n of Schools et al., No. 3:20-cv-00201 (D. Conn. Feb. 12, 2020) [hereinafter Soule Complaint].

²⁵⁹ See Catherine Thorbecke, *Transgender Athletes Speak Out as Parents Petition to Change Policy that Allows them to Compete as Girls*, ABC NEWS (June 22, 2018), <https://abcnews.go.com/GMA/News/transgender-athletes-speak-parents-petition-change-policy-compete/story?id=56071191> [https://perma.cc/8KD3-5JXU].

²⁶⁰ *High-School Athletes File Suit to Protect Fairness in Girls’ Sports*, ALLIANCE DEFENDING FREEDOM (Feb. 12, 2020), <https://www.adflegal.org/press-release/high-school-athletes-file-suit-protect-fairness-girls-sports> [https://perma.cc/6N2H-ABUE] [hereinafter ADF]. Accord Soule Complaint, *supra* note 258.

²⁶¹ See generally ADF, *supra* note 260; Soule Complaint, *supra* note 258.

²⁶² Associated Press, *Transgender Athletes Seek to Become Defendants in Lawsuit*, NBC NEWS (Feb. 19, 2020), <https://www.nbcnews.com/feature/nbc-out/transgender-athletes-seek-become-defendants-lawsuit-n1138616> [https://perma.cc/494B-Z24Y].

²⁶³ For example, Dr. Eric Vilain, a medical geneticist from UCLA, has stated: “if we push this argument, anyone declaring a female gender can compete as a woman” and

just as unlikely as it did at the elite level and despite the low incidence of non-binary girls competing in school sports.²⁶⁴

Ironically, Chelsea Mitchell, one of the cisgender female plaintiffs, beat Terry Miller for the fifty-five-meter state indoor title on February 14, 2020, two days after the suit was filed.²⁶⁵ Mitchell stated that her win would not cut against her case, because “there’s still tons of girls that lose on a daily basis.”²⁶⁶ Mitchell’s attorneys further stated that “if [Mitchell] beat Miller by a hair in a particular race, Miller nevertheless deprived one girl of the second-place title . . . , and pushed the third-fastest girl off the victory podium entirely.”²⁶⁷ As in Semenya’s case, cisgender females at the high school level are capable of beating their non-binary counterparts. This again raises the question: how many cisgender females need to beat a non-binary female, before the latter can compete? Three, so the podium is filled with only cisgender women? Ten? All of them? The argument is that cisgender women need competitive protection, allowing them more opportunities to win, but even when some cisgender women do win, it is still not enough.

Similarly, Idaho became the first state to categorically bar transgender MTF²⁶⁸ athletes from participating in women’s sports and legalized sex-verification testing—despite the fact that there were no transgender athletes competing in the state at the time.²⁶⁹ Titled “The Fairness in Women’s Sports

“[w]e’re moving toward one big competition, and the very predictable result of that competition is that there will be no women winners.” Longman, *supra* note 119.

²⁶⁴ “A recent survey found that 12 percent of transgender girls and 14 percent of transgender boys play team sports compared with the national average of 68 percent of all youth. When states enact policies that create barriers for transgender athletes, the number of all L.G.B.T.Q. athletes in youth sports further declines.” Talya Minsberg, *Boys Are Boys and Girls Are Girls: Idaho Is First State to Bar Some Transgender Athletes*, N.Y. TIMES (Apr. 01, 2020), <https://www.nytimes.com/2020/04/01/sports/transgender-idaho-ban-sports.html> [https://perma.cc/8L7L-MPHU] [hereinafter Minsberg, *Boys are Boys*]. See also *Play to Win: Improving the Lives of LGBTQ in Sports*, HUMAN RIGHTS CAMPAIGN, https://assets2.hrc.org/files/assets/resources/PlayToWin-FINAL.pdf?_ga=2.28099006.300407420.1582836585-1986322191.1582510625 [https://perma.cc/3YR5-XYJJ].

²⁶⁵ *Teen Beats Transgender Competitor Amid Sports Participation Lawsuit*, NBC CONNECTICUT (Feb. 14, 2020), <https://www.nbcconnecticut.com/news/local/teen-involved-in-lawsuit-to-block-transgender-athletes-beats-competitor-targeted-in-case/2223944/> [https://perma.cc/97RZ-756M].

²⁶⁶ *Id.*

²⁶⁷ *Lawyer: Win Over Transgender Runner Shouldn’t Affect Suit*, ASSOCIATED PRESS (Feb. 27, 2020), <https://apnews.com/article/2971ae35e140d17482d0a355627bd34a> [https://perma.cc/AUH4-PYS6].

²⁶⁸ The statute also sweeps up some intersex athletes. See *Hecox v. Little*, 2020 WL 4760138 at *2 (D. Idaho Aug. 17, 2020).

²⁶⁹ Katelyn Burns, *While the Country Deals with the Coronavirus, Idaho State Legislators Prioritize Banning Trans Athletes*, VOX (Mar. 17, 2020), <https://www.vox.com/identities/2020/3/17/21183305/idaho-legislature-bans-trans-athletes> [https://perma.cc/XF4T-72Y3]. While other states have introduced bills restricting transgender athlete participation, Idaho was the first to pass such legislation into law. Minsberg, *Boys are Boys*, *supra* note 264. Idaho’s Governor also signed a bill prohibiting transgender individuals from changing their birth certificates in accordance with their gender identities. *Id.* Lindsay Hecox, a transgender female runner, is seeking to become eligible for the women’s cross-country team at Boise State University. Gillian R. Brassil & Jeré Longman, *Who*

Act,” Idaho’s policies mirror (and even go beyond) those of the IOC and IAAF, precluding non-binary athlete participation in the female category and allowing a currently undefined class of individuals to challenge a female competitor’s sex.²⁷⁰ The law establishes a “dispute” process, in which an athlete must prove her sex by presenting “a signed physician’s statement that shall indicate the student’s sex based solely on: (a) the student’s internal and external reproductive anatomy; (b) the student’s normal endogenously produced levels of testosterone; and (c) an analysis of the student’s genetic makeup.”²⁷¹ Finally, the law creates a private cause of action against a “school or institution of higher education” for any student “who is deprived of an athletic opportunity” or suffers any harm, direct or indirect, due to the participation of a non-binary woman on a women’s team.²⁷² The Act was temporarily enjoined in federal court, pending trial on the merits.²⁷³ In reviewing the Act’s justifications, the Idaho District Court judge wrote:

[T]he legislative record reveals no history of transgender athletes ever competing in sports in Idaho, no evidence that Idaho female athletes have been displaced by Idaho transgender female athletes, and no evidence to suggest a categorical bar against transgender female athlete’s participation in sports is required in order to promote “sex equality” or to “protect athletic opportunities for females” in Idaho.²⁷⁴

Additionally, the judge looked at the context in which the Act was passed, noting that it appeared to be “motivated by a desire for transgender exclusion, rather than equality for women athletes . . . ,”²⁷⁵ and that the “Act’s dispute process also creates a means that could be used to bully girls perceived as less feminine or unpopular and prevent them from participating in sports.”²⁷⁶ As these cases illustrate, non-binary athletes are being excluded, for reasons other than a love of fairness, at more than just the elite level.

In states like Connecticut and Idaho, supporters of a ban on non-binary athlete participation rely on the same arguments discussed above, pointing primarily to testosterone’s “unassailable” impact on athleticism and the need

Should Compete in Women’s Sports? There Are “Two Almost Irreconcilable Positions”, N.Y. TIMES (Aug. 19, 2020), <https://www.nytimes.com/2020/08/18/sports/transgender-athletes-womens-sports-idaho.html> [<https://perma.cc/DZN7-DVMH>].

²⁷⁰ Idaho Code § 33-6203(3).

²⁷¹ *Id.*

²⁷² *Id.* at § 33-6205(1).

²⁷³ *Hecox*, 2020 WL 4760138 at *87.

²⁷⁴ *Id.* at *67. Notably, the judge also noted that the defendants do not address how transgender girls who never undergo male puberty can have “an absolute advantage” over cisgender girls. *Id.* at *71.

²⁷⁵ *Id.* at *78.

²⁷⁶ *Id.* at *80.

to ensure cisgender competitive success, no matter the cost.²⁷⁷ Elite sport is thus sending a signal to states to follow suit in enacting exclusionary policies using unsatisfying arguments, and this process of uninformed discourse will likely continue to be replicated at the high school and collegiate levels until proper attention is paid to these issues.²⁷⁸

2. *Influencing Society at Large*

The effects of gender policing in professional sports have a trickle-down effect, influencing the creation of unyielding binary conceptions of gender and perpetuating stereotypes. Consider the testosterone argument again: the overestimated role of endogenous testosterone on non-binary female athletic performance is not limited to international sports governing bodies.²⁷⁹ All too often, individuals opt to embrace a simplified narrative of testosterone, arguing that they *know* it affects athletic performance and “collaps[ing] the distinction between endogenous and exogenous forms of testosterone to claim the performance-enhancing effects of the latter as evidence for their convictions.”²⁸⁰ Though it is possible to know differently—that is, to become informed about the lack of scientific proof regarding testosterone’s effects on non-binary females’ athletic success—the public generally turns away, leaving non-binary athletes as the only group without protection in sports at all levels.²⁸¹ “At the same time that experts know and

²⁷⁷ Supporters of the Idaho law also emphasized that women “physically cannot compete against biological boys” and allowing transgender athletes to compete could “tear teams and communities apart.” Minsberg, *Boys are Boys*, *supra* note 264.

²⁷⁸ Indeed, “[f]rom South Dakota to Tennessee to Connecticut, transgender athletes in recent years have fought against legislation aimed at limiting their participation due to their gender identity. Many argue such policies violate Title IX, the federal anti-discrimination law in education credited with leveling the playing field for women in sports.” Madeline Holcombe & Andy Rose, *Federal Judge Says Idaho Cannot Ban Transgender Athletes from Women’s Sports Teams*, CNN (Aug. 18, 2020), <https://www.cnn.com/2020/08/18/us/idaho-transgender-athletes-ban-blocked/index.html> [<https://perma.cc/BQR4-54TC>].

²⁷⁹ For an interesting discussion on willful ignorance of this topic, see Madeleine Pape, *Ignorance and the Gender Binary: Resisting Complex Epistemologies of Sex and Testosterone*, in *SPORTS, SOC’Y, & TECHNOLOGY: BODIES, PRACTICES, & KNOWLEDGE PRODUCTION* 219, 222 (2019) (“[B]inary and biological accounts of sex difference appear to prevail *in spite of* scientific evidence (and political efforts) to the contrary. Turning to the concept of ignorance, I develop a conceptualization in which ignorance is understood not only as an outcome . . . , but also as a *process*: as an act of turning away in a given moment *when it was possible to know differently*”).

²⁸⁰ *Id.* at 232.

²⁸¹ “Given the history of discrimination against the rights of the disabled, intersexual, or transgender, it is important to scrutinize distinctions that seem to place the greater burden for inclusion on the individual instead of the organization to be accommodating and understanding. In tough cases, where legitimate concerns may exist on both sides, the risk of a mistake with regard to inclusiveness ought to be borne by the sports organizations and the field (the pool of competing athletes), not by the individual.” Crincoli, *supra* note 46, at 140. “[F]emale athletes have always been under suspicion, and women with intersex traits have often been scapegoats for broad anxiety about the gender contra-

can do so much, the public still understands atypical athletes so little. Falling back on a hard-wired reaction to difference, the public instinct is to question, stare, and, often, mock that which is less understood.”²⁸²

The institution of sport is deeply invested in certain gender constructs, and because sport regulatory authorities do not operate in a vacuum, their efforts at regulating what it means to be a woman influence the public’s views on issues of testosterone, masculinity, and gender norms.²⁸³ If attention is drawn to the needlessly disparate treatment of athletes at the elite level, it could ultimately impact burgeoning controversies surrounding non-binary women. For instance, elite sport could emphasize the fact that non-binary athletes are not competing out of spite, nor for the sole purpose of stripping their cisgender counterparts of medals or scholarships—thereby challenging the feelings that some cisgender female athletes have about their non-binary competitors—and educate society on the science behind the complexities of the human body.²⁸⁴

Again, various gender policies in sports facilitate gender stereotyping in society at large, as deciding who can compete and what female athletes are capable of is embedded in society’s communicative structure.²⁸⁵ For example, some rules—such as those in lacrosse requiring men to wear helmets, arm pads, and heavy gloves while women must wear goggles and skirts, or those allowing men to body check and play aggressively while providing that women must “stick check” because body contact is illegal—communicate that female athletes should display stereotypically feminine qualities and that women are physically weaker than men.²⁸⁶ Additionally, critiques that often

diction inherent in the very concept of an elite female athlete.” Karkazis et al., *supra* note 1, at 7.

²⁸² Crincoli, *supra* note 46, at 186–87 (emphasis omitted).

²⁸³ “We all have a stake in Caster Semenya’s ongoing treatment. That suspicions about how she looks can lead to having her identity as a ‘real’ woman publicly revoked communicates a clear message to all of us who consider ourselves female: Don’t talk too loud, don’t throw a ball too well, and don’t look too comfortable in pants or walk with a ‘masculine [gait].’ And whatever you do, don’t look too triumphant when you run really fast. The gender police are out there looking for you.” Katherine Franke, “*Gender Verification Tests*” in *Sports – We All Have a Stake in Caster Semenya’s Medal*, GENDER & SEXUALITY L. BLOG (Sept. 11, 2009), <http://blogs.law.columbia.edu/genderandsexuality-lawblog/2009/09/11/gender-verification-tests-in-sports-we-all-have-a-stake-in-caster-semenyas-medal/> [<https://perma.cc/8DQJ-KDD3>].

²⁸⁴ For example, in creating a policy to address transgender athletes in ultramarathon races, the Western States racing committee “looked at existing guidelines from other organizations and races [(including the IOC and IAAF)], and spoke to leading figures in transgender sports The guidelines they came up with . . . are being viewed as a model for other participatory running events.” John Hanc, *New Racing Rules Remove Some Barriers for Transgender Runners*, N.Y. TIMES (June 06, 2019), <https://www.nytimes.com/2019/06/06/sports/western-states-transgender-runners.html> [<https://perma.cc/RNL5-W83K>].

²⁸⁵ See Sullivan, *supra* note 7, at 415 (“How gender policies are written, implemented, protested, and mediated all involve a network of communicative acts.”).

²⁸⁶ Tayler Brooke Wiese, *Women’s Lacrosse Players Must Adhere to Traditional Gender Roles*, BEACON (Apr. 13, 2016), <http://www.theonlinebeacon.com/womens-lacrosse-players-must-adhere-to-traditional-gender-roles/> [<https://perma.cc/3A2U-49AT>]. See

plague non-binary athletes—such as repeated discussions about how transgender or intersex women are not “real” women because they have a deep voice, masculine build, or do not act in a “feminine” manner—communicate that female athletes should still be soft spoken and dainty to some degree.²⁸⁷ These types of rules and comments “undermine one important justification for women’s sports in the first instance: to communicate that women should be valued for the things that they can do, not only for the way that they look.”²⁸⁸

Although the acceptance of transgender and intersex individuals is slowly advancing in areas like the employment and social spheres,²⁸⁹ sport remains one of the few realms pushing back on non-binary integration. Ideally, sports help to inspire athletes to be better by promoting life skills, communication, tolerance, and teamwork. However, the IOC and IAAF’s policies cut against these goals, and the increasingly open-minded attitudes held by the public, altogether challenging the progress society has made in accepting those who are different.²⁹⁰

Further, the IOC and IAAF promote policies that target transgender and intersex athletes for naturally occurring, sex-related characteristics as a basis for exclusion, maintaining that competitive equity must be strictly enforced

also Leong, *supra* note 6, at 1277–78 (discussing differences in rules allowing men to play five sets in tennis versus women playing three; or women being judged on grace and flexibility—all while wearing tight leotards and heavy makeup—versus men being judged on strength and power—while wearing sweatpants—in gymnastics); Dworkin, *Holding Back*, *supra* note 240, at 335 (“Research on media, women, and sport and fitness has shown that women are not presented solely as resistant and powerful athletes but rather are framed ambivalently through sexualizing and trivializing their athletic performances.” (internal citations omitted)).

²⁸⁷ For example, a *New York Times* article discussed Serena Williams’s muscular frame, noting that “[h]er rivals could try to emulate her physique, but most of them choose not to.” Ben Rothenberg, *Tennis’s Top Women Balance Body Image with Ambition*, N.Y. TIMES (July 10, 2015), <https://www.nytimes.com/2015/07/11/sports/tennis/tennis-top-women-balance-body-image-with-quest-for-success.html> [<https://perma.cc/23W4-YN5S>]. Tomasz Wiktorowski, coach of tennis player Agnieszka Radwanska, was quoted as saying: “It’s our decision to keep her as the smallest player in the top 10 . . . , [b]ecause, first of all she’s a woman, and she wants to be a woman.” *Id.* Other female tennis athletes in the article indicated that they tend to feel unfeminine and recognize that their athletic builds go “against . . . what society thinks that [women] should be doing.” *Id.*

²⁸⁸ Leong, *supra* note 6, at 1278.

²⁸⁹ See, e.g., Jessica Holland, *How to Be Truly Inclusive of Non-binary Genders at Work*, BBC (Aug. 30, 2017), <https://www.bbc.com/worklife/article/20170829-how-to-be-truly-inclusive-of-non-binary-genders-at-work> [<https://perma.cc/QXR9-XVCN>] (“In the past few years, there has been growing recognition of people who fall outside traditional gender definitions. Facebook extended its list of gender options . . . , [m]any countries have also begun to formally recognise non-binary genders . . . [and] 50% of millennials believe gender is a spectrum according to a 2015 [poll] . . .”).

²⁹⁰ See Teetzel, *supra* note 18, at 228 (“[W]hile sport, and particularly the Olympic movement, is often credited with bridging the gap between nations and promoting harmony among people of different nationalities, races, religious beliefs and so on, the acceptance of athletes who self-identify with a gender other than male, female or the one they were assigned at birth, is one area of discrimination that sport has yet to fully conquer.”).

only in women's sport and emphasizing the one-sided nature of fairness in this context. This also contributes to society's broader unease regarding women who transcend expectations. The sporting world is hyper-focused on "redefin[ing] the category of 'woman' in a way that reinforces a normal definition of female (not transgender, not intersex, not masculine) against which all women will be measured, possibly scrutinized, and in some cases excluded."²⁹¹

Accordingly, if the IOC and IAAF were to call for compassionate, informed treatment of diverse athletes, this could sway public opinion.²⁹² Sport's relinquishment of practices that control what it means to be a woman would promote tolerance, understanding, and communication, thereby reducing misinformation and stigmatization. Elite athletes also have a huge platform for publicly challenging inapposite views of gender and femininity, female athletic inferiority, and the belief that cisgender women must be competitively protected from non-binary women. If these athletes would lead, others would follow.²⁹³ The international sporting world should focus on adequately informing athletes, sports officials, the media, and fans about the complexities of classifying athletes based on sex and gender and identifying the range of factors that contribute to athletic success. Only then can we have a more satisfying conversation about fairness.

CONCLUSION

Caster Semenya has been told that she cannot run her favored event, the 800 meters, because of the way she was born.²⁹⁴ Fairness, as applied in this

²⁹¹ Buzuvis, *Transsexual and Intersex Athletes*, *supra* note 29, at 70.

²⁹² See, e.g., Dworkin & Messner, *supra* note 243, at 349 ("The growth of quantitative studies of gender and sport can also be used fruitfully in public policy advocacy work for gender equity . . .").

²⁹³ "Historically, many women athletes have reflexively supported sex/gender verification policy as a good faith effort to prevent unfair competition. Many initially welcomed it as a reaffirmation of their femininity at a time when cultural biases existed against and certain stigmas were attached to becoming a successful, top-flight woman athlete. As sociocultural constructs of femininity have changed, so have attitudes toward the need for gender verification. As athletes are educated about the complexities of sex differentiation, the functional and ethical inconsistencies of genetic based screens, and the misconception of unfair advantage underlying the IOC mandate for gender testing, they begin to understand why blanket genetic screening is discriminatory, unnecessary and medically unsound. Because there is consistent anxiety about the potential for cheaters in sports, there are frequent expressions of nervousness among women athletes about the idea of abandoning per se gender verification." Elsas et al., *supra* note 86, at 252–53 (emphasis omitted).

²⁹⁴ See Jeré Longman, *Caster Semenya Barred from 800 Meters at World Championships*, N.Y. TIMES (July 30, 2019), <https://www.nytimes.com/2019/07/30/sports/caster-semenya-world-championships.html> [<https://perma.cc/K5BY-F6JZ>] (discussing the Swiss tribunal's decision to enforce the IAAF hormone restrictions in women's events from the 400 meters to the mile, blocking Semenya from competing in the 800 meters, her signature event). Semenya is not alone: 800-meter runners Francine Niyonsaba of Burundi and Margaret Wambui of Kenya are two other hyperandrogenic female athletes

context, has served to prevent non-binary athletes—specifically, those deemed not “woman” enough—from competing because society fears what is different and is quick to make judgments based on misunderstanding and stereotype. In this way, sport has demonstrated a deeply embedded commitment to reifying an inflexible and outdated gender binary. This commitment is pervasive, though the reasons supporting it are weak. A close examination of the histories of women in sports and sex testing, and the reasons given to support current hormone-based rules, reveal the inadequacy and oppressiveness of a strict adherence to binary definitions of “female.” At the heart of the IOC and IAAF’s exclusionary policies lie traditional gender roles that *all* women, cisgender and non-cisgender, must overcome.

Elite sport organizations can be a catalyst for change, helping to support every athlete without forcing any woman onto the sidelines. The IOC and IAAF should challenge inapposite notions of femininity and protect those who are commonly forced to conform physically and psychologically to the standards of an “acceptable” sex. It is hardly noble to sacrifice individuals for the sake of preserving an artificial conceptual simplicity.

Similarly, as a society, we must deconstruct the myth that competitive equity is being met in these cases, if we want to address gender injustices aimed at non-binary and cisgender female athletes.²⁹⁵ More research on the effects of testosterone on non-binary females’ athletic performance may help convince doubtful critics that non-binary athletes do not have a clear competitive edge due to androgen levels. More importantly, an emphasis must be placed on the fact that whatever advantages these athletes may have are not unlike other genetic and external advantages tolerated by society, and certainly do not warrant their expulsion from sport. Additionally, increased attention must be paid to the context in which these strict binary policies have traditionally arisen, to call awareness to the stereotypes these arguments stand on. The meaning of what it is to be a woman is being scrutinized—and that is not something to be taken lightly.

To be sure, success comes at the expense of one’s competitors. The chances of winning depend on whom the athlete must compete against; the more advantaged she is, or the more disadvantaged her competitors are, the stronger her chances of winning.²⁹⁶ The question is: Can sports accept the advantages, if any, that non-binary athletes have, without it destroying the meaning of elite competition in the female category? This Article suggests that the answer is yes. The rights of all athletes can only be protected by

affected by the IAAF regulations. ZK Goh et al., *DSD Athletes: What Does it Mean to be DSD and How Gender and Sex are the Big Issues in Athletics*, OLYMPIC CHANNEL (Sept. 25, 2019), <https://www.olympicchannel.com/en/stories/news/detail/semeyna-niyonsabawambui-what-is-dsd-iaaf-regulations/> [<https://perma.cc/5SUH-PZN3>].

²⁹⁵ “This transformative change has the potential to extend beyond the sex/gender binary in sport to address other inequalities. This is because the myth of sport as a level-playing field reproduces other forms of inequalities, such as racism, classism, ableism, and others.” Cooky et al., *What Makes a Woman a Woman?*, *supra* note 3, at 50.

²⁹⁶ Devine, *supra* note 19, at 161.

becoming more informed about policies that do nothing more than reify unnecessary gender dichotomies and flawed notions of femininity.