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Hormone Check: Critique of Olympic Rules on Sex and Gender

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HORMONE CHECK: CRITIQUE OF OLYMPIC RULES ON SEX AND GENDER

Erin Buzuvis

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INTRODUCTION

For good and for bad, most sports, including all Olympic sports, are divided into two categories, men’s and women’s. In some ways, this division makes good sense. It ensures that female athletes have opportunities to compete which might not exist if competitive sports were open on a gender-blind basis.¹ But at the same time, it is problematic to impose a binary division

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1. See *infra* Part IV.B. Women are not categorically athletically inferior, but there are both socially constructed as well as biological differences between men and women that influence athletic outcomes. Women’s historical exclusion from sport and the strained relationship between athleticism and femininity have and continue to suppress women’s athletic interests and abilities. In addition, women are generally (though not categorically)

on human beings who are far more diverse than the assumptions behind the labels “male” and “female”.² Some who self-identify as female have, as a result of an intersex condition, chromosomal and hormone characteristics that are not typical of most women. Some (transgender women) who self-identify as female were born with bodies that society regards as male, which they may or may not have elected to modify in a gender-conforming way. Some (transgender men and other transgender individuals) self-identify as something other than female, but claim eligibility in women’s sports by virtue of having been born into a typical female body. For decades, sport organizers have struggled to include intersex and transgender athletes within the binary structure of sport.³ Exclusion of athletes who in some way lack gender-typical characteristics has not only been painful for the affected athletes, but has served to erase and symbolically marginalize all individuals who are different by virtue of their intersex or transgender status.

The International Olympic Committee (IOC), often in concert with the international federation for track and field, has experimented with various criteria for determining eligibility for women’s sports, including physical appearance and chromosome testing.⁴ Separately, the IOC had endorsed a separate policy for transgender athletes that allowed transgender women to compete upon completion of a three prong transition that included surgery, hormone treatment, and legal recognition of the athlete’s female status.⁵ But when these efforts failed to produce fair and satisfying results for both intersex and transgender athletes, the IOC and IAAF endorsed a hormone test for women, one that first applied to women with hyperandrogenism, a characteristic of some intersex conditions that results in the body’s natural production of testosterone at levels higher than that of typical women. Even as this rule was challenged and temporarily suspended, the IOC recently endorsed applying the same hormone level cutoff to determining the eligibility of transgender women. In other words, the IOC is pushing for a hormone rule that is uniform, in the sense that the same testosterone criterion would apply to both intersex and transgender women.

This Article will first present a concise history of gender testing in Olympic and international sport to illustrate why past attempts to define eligibility for women’s sports have proven unfair to women with intersex conditions.⁶ It will then describe the shortcomings in the IOC’s first effort in 2003 to articulate standard of eligibility for transgender athletes. In its second Part, this Article will explain the IOC and IAAF’s more recent efforts to define

disadvantaged in terms of the physical characteristics we associate with athleticism (and have constructed concept of athleticism to showcase).

2. ANNE FAUSTO-STERLING, *SEXING THE BODY: GENDER POLITICS AND THE CONSTRUCTION OF SEXUALITY* 3 (2000) (“The body’s sex is simply too complex. There is no either/or. Rather, there are shades of difference”).

3. See *infra* Part I.

4. See *infra* Part I.A.

5. See *infra* Part I.B.

6. See *infra* Part I.

eligibility for women's sports solely on the basis of testosterone. As applied to hyperandrogenism, that effort has been temporarily suspended by the Court of Arbitration for Sport, but, as Part III explains, on grounds that could permit the rule's reinstatement if a stronger justification is presented by the IAAF. Finally, this Article will critically evaluate the concept of a unified hormone rule that the IOC appears to propose. After considering the strengths and weakness of alternatives to such a rule—including genderless sports and a uniform gender identity rule—this Article proposes a hybrid rule that applies a hormone standard to transgender athletes but a gender identity standard for women.⁷ Importantly, this final Part seeks to rationalize the different treatment of transgender and intersex women in ways that minimize the potential for such a rule to contribute negatively to society's understanding of both gender and athletic fairness.⁸

I. WHO IS FEMALE IN OLYMPIC AND INTERNATIONAL SPORT? A BRIEF HISTORICAL OVERVIEW

Women could not attend, let alone participate, in the ancient Olympic Games.⁹ According to mythology, one woman named Kallipatiera, defied the ban and risked punishment of death by disguising herself as a male trainer in order to watch her son compete.¹⁰ But when she lost her disguise, her identity was revealed. Only goodwill for her family, which had produced many Olympic champions, prevented her from being executed. So instead, from then on, all trainers had to attend in the nude. Some have called the fallout from Kallipatiera's transgression the first Olympic policy of sex verification.¹¹

In modern times, women are no longer categorically excluded from participation in the Olympic Games. But like their ancient counterparts, contemporary sport organizations have struggled to identify who is female. This Part will first examine the historic sex-verification practices that, while attempting to address the Kallipatiera problem in reverse, i.e., men masquerading as women in order to participate in women's events, ended up causing unwarranted exclusion of women with atypical gender characteristics. This Part will next describe the IOC's first effort to determine criteria to govern participation by transgender athletes in sports consistent with their gender identities.

A. A History of Sex Verification Testing

For the modern Olympic Games, sex verification was first proposed at the 1936 Olympics by United States coach and future IOC president Avery Brundage, who urged Olympic organizers to systematically test the sex of

7. See *infra* Part IV.

8. See *infra* Part V.B-D.

9. Laura A. Wackwitz, *Verifying the Myth: Olympic Sex Testing and the Category "Woman"*, 26 INT'L WOMEN'S STUDIES FORUM, 553, 553 (2003).

10. *Id.*; see also JAIME SCHULTZ, *QUALIFYING TIMES: POINTS OF CHANGE IN WOMEN'S SPORTS* 104 (2014).

11. Wackwitz, *supra* note 9, at 553.

female athletes in order to root out gender fraud.¹² Brundage's concern was based on two examples of former athletes who had competed as women before physically and socially transitioning to male, Mark (born Mary) Weston, a British shotputter, and Zdenek Koubkov (born Zdenka Koubkova) a Czech runner.¹³ We now understand these athletes likely had an intersex condition that caused them to have been initially been assigned female sex based on ambiguous genitalia or misleading genitalia.¹⁴ But Brundage considered these now-male athletes' past participation as women as evidence of a threat of fraud.

Separately from Brundage's proposal, the same 1936 Olympics also gave rise to other incidents that have been interpreted (or misinterpreted) as gender fraud. One involved "Dora" Ratjen, who placed fourth in the women's shotput. Later, Ratjen revealed that he was actually a former Hitler Youth member named Herman who disguised himself as a female to compete "for the honor and glory of Germany"¹⁵—though there is some evidence to suggest it was "gender confusion" rather than fraud that caused Ratjen to be misclassified.¹⁶ A second incident involved American runner Helen Stephens, gold medalist in the 100 meter event, who was accused of gender fraud by silver medalist Stella Walsh or someone else from the Polish delegation acting on Walsh's behalf. Rumors that Stephens was "really a man" resulted in Olympic organizers subjecting Stephens to visual inspection to verify her femininity. While Stephens passed the inspection, it was Walsh who would eventually "join Ratjen in the canon of gender frauds"¹⁷ as it was revealed after her death in 1980 that the majority of her body's cells had the XY chromosome pattern typical of men.¹⁸

Brundage did eventually get his way, as sex verification became routine for the Olympics and other international competitions.¹⁹ For a brief time, sport federations sought to verify the sex of female competitors by the same method that the Ancient Greeks used—nudity. But the so-called "nude

12. SCHULTZ, *supra* note 10, at 106.

13. Vanessa Heggie, *Testing Sex and Gender in Sports: Reinventing, Reimagining and Reconstructing Histories*, 34 *Endeavor* 157, 158–59 (2010).

14. The examples of these athletes remind us that it is possible for an individual to be both transgender and intersex. Just like anyone else, an intersex person has a gender identity, and if this gender identity does not match the sex assigned at birth, they may undergo a physical transition utilizing hormones or surgery to harmonize their bodies with their gender identities. The fact of these intersex individuals' transition, however, may have contributed to the misperception that an intersex woman is not really a woman. Conflation of transgender and intersex also may explain the retrospective scrutiny of transgender athletes' participation in their birth-sex category prior to transition, such as misguided claims that Caitlyn Jenner should be stripped of gold medals she won as Bruce.

15. SHULTZ, *supra* note 10, at 107.

16. Heggie, *supra* note 13, at 157, 163.

17. *Id.* at 157–58.

18. Mosaicism is when cells in the same body have different genotypes. Walsh apparently had a XY/XO mosaicism.

19. Heggie, *supra* note 13; SCHULTZ, *supra* note 10, at 108–18.

parades” of the Cold War era²⁰ gave way to a seemingly more scientific method, the Barr body test.²¹ The Barr body is the inactive, second X chromosome found in the cells of women with the typical female XX genotype. From 1968 until 1998, Olympic organizers and other international sport bodies required all female competitors to submit a cell sample that could be inspected for presence of the Barr body.

Typical males have an XY genotype and thus no second, inactive X. Therefore, a Barr body test would theoretically be effective at screening men seeking to masquerade as women, though no such men were ever caught this way. On the other hand, a Barr body test was completely ineffective at screening for what was then a genuine threat in women’s sports: illegal doping with anabolic steroids and exogenous testosterone as practiced by East Germany and other Communist-bloc countries.²² Instead, the Barr body test caused problems for women with intersex conditions. Intersex, also known as differences of sexual development (DSDs), categorically refers to a range of conditions in which a body’s reproductive or sexual anatomy is not typically male or female.²³ For example, individuals with Androgen Insensitivity Syndrome have XY chromosomes and consequently, bodies that produce male hormones (androgens). But due to a chromosomal anomaly that prevents or limits the body’s ability to use these hormones, individuals with AIS are physiologically female.²⁴ In 1986, Spanish hurdler Maria Jose Martinez Patino was excluded from international competition after she failed a Barr body test.²⁵ Officials suggested that she fake an injury to avoid the embarrassing disclosure of the real reason or her disqualification.²⁶ But Martinez Patino did not leave sport quietly; instead, she publically challenged her disqualification and eventually succeeded when the IAAF admitted that her condition resulted

20. SCHULTZ, *supra* note 10, at 108 (noting speculation that the certain Soviet and Romanian female athletes opted out of the 1966 World Championships out of fear that they would not have “passed” a visual inspection); Robert Ritchie et al., *Intersex and the Olympic Games*, 101 J. OF THE ROYAL SOC’Y OF MED. 395, 396-97 (2008).

21. Ritchie et al., *supra* note 21.

22. Werner W. Franke & Brigitte Berendonk, *Hormonal Doping and Androgenization of Athletes: A Secret Program of the German Democratic Republic Government*, 43 CLINICAL CHEMISTRY 1262, 1265 (1997).

23. Intersex Society of North America, *What Is Intersex?*, http://www.isna.org/faq/what_is_intersex (last visited June 22, 2016).

24. Alice Dreger, *Sex Typing for Sport*, 40 HASTINGS CTR. REP. 22, 23 (2010) (Specifically, an individual with AIS starts to develop as a typical male fetus, and thus lack a uterus, fallopian tubes, cervix, and the upper part of the vagina. However, because cells fail to respond to testosterone, the body does not create male genitalia, so external genitalia is female by default. AIS women’s body continue to feminize during puberty (though they do not menstruate); see Intersex Society of North America, *supra* note 23 (“AIS individuals are clearly women”).

25. SCHULTZ, *supra* note 10, at 113.

26. *Id.*

in no competitive advantage.²⁷ By then, however, she was past her athletic prime and failed to qualify for the next Olympic games.²⁸

Individuals with other chromosomal differences could also confound the Barr body test. A woman with Turner's syndrome who is missing a second X chromosome would be excluded, while a man with Klinefelter's syndrome, who is XXY, would not be.²⁹ Mosaicism complicates matters even further.³⁰ For example, a Polish sprinter named Ewa Klobukowska was eventually excluded from women's sports after some other method of chromosome test revealed her to have some cells that are XX and others that are XXY.³¹ Notably, however, she initially passed the Barr body test since all of her cells have a second X chromosome.³²

In 1992, the IAAF decided to end its practice of systematic sex testing³³ while still affirming its right to disqualify female athletes in cases where "suspicion is raised." The IOC eventually followed suit in 1999 after its failed attempt to improve the method of sex testing by replacing Barr body test with a test that identified the presence of a second Y chromosome.³⁴ Eight women who failed this test in 1996 were initially excluded from the Atlanta games.³⁵ However, they were all reinstated upon further examination. After that, the IOC abandoned systematic testing and moved to a suspicion-based model.³⁶

B. The Stockholm Consensus: IOC's First Transgender Policy

As the history of sex verification testing suggests, the IOC and international sport federations have struggled to impose a binary classification system against the reality that human beings are more diverse than male and female categories can attest. Eventually, they would attempt to address a second challenge to the binary system in sport, one that is posed by transgender athletes. Unlike intersex individuals,³⁷ transgender individuals are born with typical male or female physical characteristics. Yet their internal sense of being male or female, that is, their gender identity, does not match those physical traits. Some transgender individuals do not identify as either

27. *Id.*

28. *Id.*

29. Katrina Karkazis et al., *Out of Bounds: A Critique of the New Policies on Hyperandrogenism in Elite Female Athletes*, 12 AM. J. OF BIOETHICS 3, 7 (2012).

30. *Id.* at 5-6.

31. EILEEN McDONAGH AND LAURA PAPPANO, *PLAYING WITH THE BOYS: WHY SEPARATE IS NOT EQUAL IN SPORTS* 42 (2008)..

32. *Id.* at 42.

33. ANAIS BOUHON & EVA RODRIGUEZ, *GENDER TESTING IN SPORT: ETHICS, CASES AND CONTROVERSIES* 27, 30 (Sandy Montanola & Aurelie Olivesi eds., 2016).

34. *Id.*

35. Myron Genel, *Gender Verification No More*, 5 OB/GYN & WOMEN'S HEALTH 3 (2000), <http://www.medscape.com/viewarticle/408918>.

36. Sheila L. Cavanagh & Heather Sykes, *Transsexual Bodies at the Olympics: The International Olympic Committee's Policy on Transsexual Athletes at the 2004 Athens Summer Games*, 12 BODY & SOCIETY 75, 76 (2006).

37. (Unless they are also intersex)

male or female, while others identify with the gender category other than the one they were assigned at birth. 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.

In 2003, a committee of the International Olympic Committee's Medical Commission meeting in Stockholm, adopted a statement governing athletic participation by transgender athletes.³⁸ The so-called Stockholm Consensus, which was adopted by the IOC in 2004, recognized that a transgender athlete wishing to compete according to their gender identity rather than their birth sex could do so as long as they had transitioned physically and legally. Specifically, the IOC imposed three requirements. First, the athlete must have completed "surgical anatomical changes" including "external genital changes and gonadectomy."³⁹ Second, the athlete's gender must be legally recognized by "appropriate official authorities."⁴⁰ Third, the athlete must have received hormone therapy "for a sufficient length of time to minimize gender-related advantages in sports competition," which the committee recognized as a minimum of two years.⁴¹

The Stockholm Consensus was groundbreaking in its recognition of transgender athletes and validation of their right to compete according to their gender identities. Yet, the specific requirements and limitations it imposed have been criticized on two main grounds. First, the policy seems to be concerned only about the transition of transgender women, as there is no discernable reason to require a transgender man to have "genital surgery, including gonadectomy" in order to fairly compete as a man. Nor does it make sense to require that they "minimize gender-related advantages" with cross-sex hormones (i.e., testosterone) given the perception of testosterone's contribution to athletic advantage.⁴² The fact that this purportedly general policy only makes sense when applied to transgender women belies its drafters' biased assumption of the athletic inferiority of natal females. Such a bias would explain why the policy in practice only regulated transgender athletes in women's sports, and why drafters seemingly ignored the possibility of a transitioned natal women seeking to compete in men's sports.⁴³

A second criticism of the Stockholm Consensus is that it imposes transition requirements on transgender women that are devoid of athletic

38. International Olympic Committee, Final Statement on the Stockholm Consensus on Sex Reassignment in Sports, (Oct. 28, 2003), https://stillmed.olympic.org/media/Document%20Library/OlympicOrg/News/20040517_IO_C_Approves_Consensus_With_Regard_To_Athletes_Who_Have_Changed_Sex/EN_report_905.pdf#_ga=1.73057811.1205785059.1466649418.

39. *Id.*

40. *Id.*

41. *Id.*

42. Claire F. Sullivan, *Gender Verification and Gender Policies in Elite Sport: Eligibility and "Fair Play,"* 35 J. OF SPORT AND SOC. ISSUES 400, 409 (2011).

43. Cavanagh & Sykes, *supra* note 36, at 78.

rationale, and that appear to exist more for purpose of catching imaginary masqueraders. Genital surgery does not cause any physical changes to the body that cannot be achieved by hormone requirements alone.⁴⁴ Because of this redundancy, the 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. In similar vein, the requirement to legally change one's sex bears no relation to athletic ability. With little evidence to suggest that masquerading men pose a threat to women's sports, the only real effect of these requirements is to exclude potential transgender competitors who hail from countries that refuse to legally recognize their affirmed genders and those who cannot access or do not desire surgical intervention.⁴⁵ These unnecessary restrictions may contribute to the fact that despite the adoption of the Stockholm Consensus by many international sport federations and the passage of more than ten years, no transgender athletes have competed in the Olympics pursuant to this policy.

II. IOC'S TURN TOWARD HORMONE-BASED ELIGIBILITY

The most recent gender-related policies of the IOC and the IAAF no longer target the imaginary problem of men pretending to be women, but purportedly impose fairness in women's sports by excluding athletes whose status as female is not in question, but who are by virtue of their intersex or transgender status believed to compete with athletic advantage. Specifically, the IOC is urging sport federations to adopt a hormone-based rule that will define eligibility for women's sport. Transgender and intersex women alike would be excluded from participation on the basis of elevated levels of endogenous testosterone.

A. Hyperandrogenism Rule for Intersex Athletes

In 2013, the IOC adopted the Hyperandrogenism Rule, which excludes women from participation if suspicion-based testing reveals endogenous testosterone levels of 10 nanomols per liter of serum, a number associated with the "normal male range."⁴⁶ The IOC based its policy on that of the IAAF, which had adopted the same cutoff in 2011⁴⁷ in response to public criticism of its handling of questions of eligibility surrounding South African runner Caster

44. Pat Griffin & Helen Carroll, *On the Team: Equal Opportunities for Transgender Student Athletes*, NATIONAL CENTER FOR LESBIAN RIGHTS AND WOMEN'S SPORTS FOUNDATION (2010), <http://www.wiaa.com/ConDocs/Con550/TransgenderStudentAthleteReport.pdf>.

45. Sullivan, *supra* note 42, at 408-09.

46. IOC Regulations on Female Hyperandrogenism (2012), http://www.olympic.org/Documents/Commissions_PDFfiles/Medical_commission/2012-06-22-IOC-Regulations-on-Female-Hyperandrogenism-eng.pdf.

47. IAAF Regulations Governing Eligibility of Female Athletes with Hyperandrogenism to Compete in Women's Competition (Apr. 12, 2011), <http://tinyurl.com/IAAF-HA-reg>.

Semenya. In response to rumors of gender fraud that plagued Semenya following her victory in the in the 800 meter event at the 2009 World Championships in Berlin, the IAAF subjected her to a gender-verification process conducted by an expert panel.⁴⁸ Though the results of the testing were not officially disclosed, the media reported that Semenya's blood "had three times the normal female level of testosterone,"⁴⁹ evidence of a possible intersex condition such as (perhaps) AIS that results in hyperandrogenism (high levels of male sex hormones, androgens) in women. Unfortunately, this disclosure provoked ugly public criticism of Semenya that persisted even as the IAAF refused to revoke her gold medal and cleared her to run in future events.⁵⁰ The story also called to mind the plight of a similarly-situated runner, Indian Santhi Soundarajan, whom the IAAF disqualified from women's sport in 2006 after a similar, suspicion-based gender inquest revealed her hyperandrogenism. This discovery had deleterious effects on Soundarajan's life that extended far beyond sport; she was shunned as an outcast and even attempted suicide.⁵¹

Soundarajan and Semenya's cases revealed that the IAAF's then-extant policy of allowing an expert committee to verify a female athlete's gender without articulating criteria for that committee to apply, was not only cruel to the athletes who were scrutinized this way, but also undermined confidence in the fairness of women's events governed by the IAAF. So in 2011, the IAAF responded to these events by supplying a hyperandrogenism rule, which provided a bright-line test for eligibility in cases where a female athlete's gender was called into question.⁵² The IAAF insists that its new rule does not determine who counts as female, but simply operates as a rule of eligibility for women's sports. Nevertheless, the federation chose as its eligibility criterion a natural testosterone level below 10 nmol/L—a cutoff that defines female athletes' eligibility in contrast to "the normal male range."⁵³

Under the IAAF's hyperandrogenism rule (which was adopted by the IOC in 2012)⁵⁴ a female athlete whose testosterone level is higher than 10 nmol/L

48. 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. OF SPORT AND SOC. ISSUES 31, 39 (2013).

49. Simon Hart, *World Athletics: Caster Semenya tests 'Show High Testosterone Levels,'* TELEGRAPH (Aug. 24, 2009), <http://www.telegraph.co.uk/sport/othersports/athletics/6078171/World-Athletics-Caster-Semenya-tests-show-high-testosterone-levels.html>.

50. Cooky et al., *supra* note 48, at 38-40.

51. *Semenya 'Must Not be Humiliated,'* BBC Sports (Sept. 11, 2009), <http://news.bbc.co.uk/sport2/hi/athletics/8250469.stm>.

52. Francisco J. Sanchez et al., *The New Policy on Hyperandrogenism in Elite Female Athletes is not about "Sex Testing,"* 50 J. OF SEX RES. 112 (2013), <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3554857/>.

53. International Association of Athletic Federations, *IAAF Regulations Governing Eligibility of Female Athletes with Hyperandrogenism to Compete in Women's Competition* (Apr. 12, 2011), <http://tinyurl.com/IAAF-HA-reg> [hereinafter IAAF Regulations].

54. International Olympic Committee, *IOC Regulations on Female Hyperandrogenism* (June 22, 2012),

may only compete if she undertakes medical treatment to suppress the effect of testosterone in her body⁵⁵, or if she proves that her body is insensitive to androgen.⁵⁶ This exception for insensitivity recognizes the reality that many women's hyperandrogenism is, like in the case of Maria Patino-Martinez, the result of androgen insensitivity syndrome, which produces male hormones that the body is fully or at least partially incapable of using. (Interestingly, Patino-Martinez, now a professor, helped develop the hyperandrogenism rule and would later help defend it against the legal challenge that is discussed in the next Part).⁵⁷

B. New Hormone-Based Guidelines for Transgender Athletes

Notwithstanding an athlete's partially successful challenge to the hyperandrogenism rule (which is discussed more fully in the next part), the IOC recently expanded the potential scope of this hormone-based rule to govern transgender women as well.⁵⁸ In 2015 the IOC updated its earlier Stockholm Consensus with new guidelines urging sport federations to permit transgender women to compete in female categories as long as they have satisfied two conditions:⁵⁹ First, she must declare that her gender identity is female, a declaration that must remain consistent for at least four years. Second, she must demonstrate that her testosterone level has been below 10 nmol/L for at least twelve months prior to competition and that her testosterone level remains below that threshold throughout the period of her desired eligibility. The first requirement, that the athlete self-declare her female gender identity, signals the IOC's understanding that gender identity is an important factor in determining one's eligibility for women's sports. Moreover, the fact that the new policy requires her to self-declare her gender identity (rather than have it "verified" through surgery or a legal change) replaces the earlier policy's presumption of fraud with a presumption of legitimacy. The second requirement, to reduce one's testosterone levels to below the normal male range, apparently seeks to impose a consistent eligibility requirement within women's sports. The IOC's new transgender

http://www.olympic.org/Documents/Commissions_PDFfiles/Medical_commission/2012-06-22-IOC-Regulations-on-Female-Hyperandrogenism-eng.pdf.

55. IAAF Regulations, *supra* note 53, at 13 (permitting an athlete to return to competition if she satisfies the eligibility panel's requirements for medical treatment); Silvia Camporesi & Paolo Maugeri, *Unfair Advantage and the Myth of the Level Playing Field in IAAF and IC Policies on Hyperandrogenism*, GENDER TESTING IN SPORT, 46, 48 (referring to such medical treatment as "androgen-suppressive therapy").

56. IAAF Regulations, *supra* note 53, at 12.

57. See Sanchez et al., *supra* note 52 (noting that Patino-Martinez is a co-author); *Chand v. Athletics Fed'n of India & Int'l Ass'n of Athletics Fed'ns*, CAS 2014/A/3759 ¶¶ 319-325 (CAS July 24, 2015).

58. International Olympic Committee, *IOC Consensus Meeting on Sex Reassignment and Hyperandrogenism* (Nov. 2015), http://www.olympic.org/Documents/Commissions_PDFfiles/Medical_commission/2015-11_ioc_consensus_meeting_on_sex_reassignment_and_hyperandrogenism-en.pdf.

59. *Id.*

policy endorses the hyperandrogenism rule and expands its application so that all women (both transgender women and non-transgender women) are eligible as long as they do not have testosterone levels above 10 nmol/L.

Additionally, the new guidelines expressly recognize transgender men, affirming that there are no restrictions on transgender men seeking to compete in men's sports.⁶⁰

III. CHALLENGING THE HYPERANDROGENISM RULE: CHAND V. IAAF

According to the IAAF, its hyperandrogenism rule sets a generous upper limit for women's natural testosterone levels, since the cutoff of 10 nmol/L of testosterone is more than three standard deviations from the mean natural levels of women's testosterone.⁶¹ Theoretically, therefore, the rule would rarely operate to exclude female athletes, since less than 0.01 percent of the female population would be affected by such a rule. Nevertheless, several reported exclusions occurred during the first three years of the policy's effect.⁶² In 2014, the IAAF excluded an Indian sprinter named Dutee Chand when her testosterone levels (unreported) apparently exceeded the rule. Chand, in turn, chose to challenge the rule in the Court of Arbitration for Sport, the tribunal with jurisdiction to settle disputes involving international sport federations. Last summer, the CAS announced its decision in Chand's case, delivering a partial victory by temporarily suspending the IAAF's hyperandrogenism rule. This Part will first describe the CAS's decision, including the narrow grounds on which the court suspended the rule, while leaving open the possibility of its reinstatement. It then presents criticism of CAS's endorsement of the IAAF's strained and understandings of gender, athleticism, and fairness.

A. CAS Ruling in *Chand v. IAAF*

In *Chand v. IAAF*, the Court of Arbitration for Sport suspended the IAAF's hyperandrogenism rule, but did so on narrow grounds that permit IAAF to demonstrate a stronger scientific basis to support the premise that hyperandrogenic women have a competitive advantage over non-hyperandrogenic women. If the federation can make this showing in two years, CAS will reinstate the rule.

Under the legal standard that the CAS employed, the fact that the hyperandrogenism rule is discriminatory on its face – because it does not impose an upper limit on men's testosterone – shifted the burden to the IAAF to show that the exclusion of HA women is “necessary, reasonable and proportionate for the purposes of establishing a level playing field for female

60. *Id.*

61. Sanchez et al., *supra* note 52; Chand, 2014/A/357 ¶ 308.

62. Silvia Camporesi & Paolo Maugeri, *supra* note 55, at 46, 55 (noting that, besides Dutee Chand, four other female athletes with testosterone levels higher than 10 nmol/L were targeted by the policy).

athletes.”⁶³ The CAS determined that IAAF had not met its scientific burden of proof on this issue. While it was convinced that hyperandrogenic women have a competitive advantage of some kind,⁶⁴ the IAAF did not meet its burden of establishing that such competitive advantage was of sufficient degree to warrant the exclusion of women with testosterone levels higher than 10 nmol/L.⁶⁵

In contrast, CAS reasoned that the justification for having separate male and female categories in the first place is justified by evidence of a purported “10-12% difference in athletic performances between elite male and elite female athletes,” a finding that was not in dispute in the Chand case.⁶⁶ Yet, CAS noted that there was no evidence to suggest that hyperandrogenic woman’s advantage over typical female athletes is of a similar magnitude. After all, testosterone is just one piece of a “complex neuroendocrine feedback system” that affects a body’s athletic capability.⁶⁷ So there is no basis to assume that a testosterone level of 10nmol/L affects women in the same way it affects men – in fact, this seems unlikely as we already know that hyperandrogenic women vary in their response to testosterone that their bodies produce.⁶⁸ While the CAS did not tell IAAF what percentage difference in athletic performance between hyperandrogenic women excluded by the rule and other female athletes would be acceptable, 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.”⁶⁹ With that, the CAS suspended the rules for two years, permitting the IAAF to seek the rule’s reinstatement within that time frame by supplementing the evidence about hyperandrogenic women’s competitive advantage. Meanwhile, Dutee Chand is eligible to compete in women’s track events.

B. CAS Endorses Testosterone-Based Boundaries In Women’s Sports

While the decision serves as a short-term victory for Dutee Chand, it is important to note that the CAS disagreed with most of her case. Centrally, the CAS endorsed, in principle, that the IAAF may use endogenous testosterone as the means of policing the boundaries of women’s sport. In so doing, it

63. *Chand*, 2014/A/3759 ¶¶ 118, 450.

64. Hyperandrogenic women are overrepresented among elite female athletes, a fact the CAS was willing to credit as indirect evidence of an advantage. *Chand*, 2014/A/3759, ¶¶ 523, 524. *But see*, Karkazis, *supra* note 29; *Chand*, 2014/A/3759 ¶ 123 (noting that hyperandrogenic women who are insensitive to testosterone are overrepresented among athletes, casting doubt on the causal relationship between testosterone and competitive advantage).

65. *Chand*, 2014/A/3759, ¶¶ 522, 524.

66. *Id.* ¶ 522.

67. Karkazis, *supra* note 29, at 8. This occurs specifically, by promoting lean body mass, a physical characteristic demonstrably associated with athleticism.

68. Karkazis, *supra* note 29.

69. *Chand*, 2014/A/3759 ¶ 527.

rejected two arguments presented by Chand's experts: (1) that endogenous testosterone does not explain the difference between male and female athletic performance; and (2) that there is no convincing evidence that endogenous testosterone enhances athletic performance in female athletes. The experts pointed out that the high variability among women's endogenous testosterone levels does not correspond to a similar degree of variability in athletic performance. Testosterone levels among women in the "normal" female range vary widely, including for example, both .1 nmol/L and 3 nmol/L.⁷⁰ That is a 30-fold difference, yet the difference does not translate to 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.⁷¹ The presumed correlation between women's testosterone levels and athletic performance is also challenged by fact that female athletes who use hormonal contraceptives, which lower the body's androgen levels, do so without measured effect on athletic performance.⁷² Additionally, women whose bodies are completely insensitive to testosterone (complete androgen insensitivity syndrome, an intersex condition) are actually *overrepresented* among elite female athletes, a fact that further confounds the perceived correlation between testosterone and athletic ability.⁷³ 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.

The CAS, however, was persuaded that endogenous testosterone is a material contributing factor to athletic performance, basing this on observations stemming from male puberty and from doping.⁷⁴ Male puberty produces an increase in endogenous testosterone, which contributes to the development of lean body mass, a known correlate to athletic strength (Relatedly, surgically or pharmacologically curtailing a male body's natural testosterone will reduce lean body mass).⁷⁵ Doping with exogenous testosterone is also well known to enhance athletes' athletic performance.

70. Karkazis, *supra* note 29, at 4.

71. Karkazis, *supra* note 29 at 8. Testosterone levels are not only highly variable among individuals, but within individuals as well. Participating in and even watching athletic events can elevate an individual's endogenous testosterone. Athleticism may to some extent be the cause of high testosterone levels instead as much the result. *Chand*, 2014/A/3759 ¶ 165; Karkazis, *supra* note 29, at 8.

72. *Chand*, 2014/A/3759 ¶ 123.

73. *Id.* Similarly counterintuitive is the fact that, women with Congenital Adrenal Hyperplasia (a condition that produces high levels of usable endogenous testosterone) are long-shots for athletic success. Karkazis, *supra* note 29, at 8.

74. *Chand*, 2014/A/3759 ¶ 454-499.

75. *Id.* ¶ 133.

However, CAS seemed willing to accept, without proof, that female bodies and male bodies respond to testosterone the same way, and that a body's natural levels of testosterone will have the same or similar effect as hormone that is introduced into the body. To that last point, 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.⁷⁶ 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.⁷⁷

The CAS not only accepted the IAAF's scientific rationale for pursuing a testosterone-based rule, it also failed to scrutinize the federation's singling out women for its application. 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 CAS more skeptical about it in the first place.

D. CAS Endorses Suspicion-Based Testing

When the IAAF and IOC curtailed the practice of routine sex verification testing for female athletes in the 1990s, they permitted testing to occur on the suspicion of gender fraud. The IAAF codified the practice of suspicion-based testing in its hyperandrogenism regulations by empowering IAAF medical officials to investigate an athlete's possible hyperandrogenism on the basis of "reasonable grounds for believing" that the athlete has the condition.⁷⁸ Such grounds may include the athlete's own report, the results of other medical evaluations of the athlete, a doping control result or anti-doping test, or "information received" by the IAAF or other responsible medical officials. The broad final category does not preclude an athlete's opponents from raising or contributing to gender-based suspicion, as Caster Semenya's defeated opponents did in the wake of her gold medal victory at the 2009 World Championships.⁷⁹ The CAS decision in Chand's case neither criticizes the practice of suspicion-based testing nor cites it as grounds for suspending the rule, even as Chand's experts pointed out the bias that results when the

76. *Id.* ¶ 124.

77. *Id.* ¶¶ 162, 171.

78. IAAF Regulation, *supra* note 53, at 2.2 ; *Chand*, 2014/A/3759 ¶ 46.

79. While it is not known whether competitors or others originally reported suspicion that resulted in Semenya's gender test, her competitors certainly contributed to the suspicion as they spoke to the media immediately after the championship. See Cooky et al., *supra* note 48, at 39 ("Elisa Cusma, an Italian runner who finished sixth in the race said, 'These kind of people should not run with us. For me, she is not a woman. She is a man'. Russian athlete, Mariya Savinova, who finished fifth, told Russian journalists that she did not think Semenya would pass the gender-verification test stating, 'Just look at her.'").

dominant culture measures athletes against “subjective and stereotypical notions of White femininity.”⁸⁰

Suspicion-based testing also magnifies the dignity-harm that the hyperandrogenism rule causes to athletes who are targeted under the rule. It is difficult to accept the rule’s purported objective of determining eligibility rather than verifying gender, when the rule itself permits scrutiny of an athlete on the basis of perceived noncompliance with gender norms. In this way, the rule undermines athletes’ dignity and self-determination by subjecting to the scrutiny of others one of the most personal and deeply held beliefs about oneself, the definition of one’s own gender.

E. CAS Mythologizes the “Level Playing Field”

The CAS’s decision in Chand’s case, while temporarily suspending the specific rule proposed by IAAF, endorsed the concept of a hyperandrogenism rule for women’s sports when it permitted the IAAF to justify the rule with scientific evidence of hyperandrogenic women’s competitive advantage over other women. In so ruling, the CAS validates the questionable belief that excluding gender outliers will, and is necessary, to make women’s sports “fair” for other competitors.

Chand and her experts tried to expose the illusory nature of the so-called level playing field by pointing out numerous naturally-occurring physical traits for which athletes are neither tested nor excluded, despite their association with athletic advantage in various sports, including: increased hemoglobin levels caused by defective EPO receptors, tallness (in some sports), shortness (in others), 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.⁸¹ The self-sorting nature of the elite athlete population increases the likelihood that physical advantages like these are present in various combinations. Yet despite the sporting world’s tolerance for other aspects of physical diversity, only women’s endogenous testosterone is singled out as the basis for exclusion. CAS’s opinion provides no satisfying response to questions its conclusion raises about how level the playing field is, hyperandrogens notwithstanding.

Moreover, sport federations have made no effort to level the playing field based on other, non-biological factors that contribute athletic advantage. For instance, the IOC does not separate Olympic events based on the size of the country’s population. Even the “medal count” is reported without regard for inherent advantages that inure to countries with larger populations from which to draw athletic talent.⁸² Financial resources and training conditions

80. *Chand*, 2014/A/3759, ¶ 225.

81. *Id.* ¶¶ 149, 260.

82. Matthew O’Brien, *Medal-Count Economics: What Factors Explain the Olympics’ Biggest Winners?*, THE ATLANTIC, Aug. 10, 2012,

contribute hugely to an individual athlete's ability, yet "level playing field" arguments are never waged against a field of competition that includes athletes with varying degree of access to resources and opportunity. Moreover, sports for which the level playing myth has been destroyed by doping scandals continue to thrive. And while doping is surely distinguishable from the natural sources of athletic advantage discussed here, it is hard to insist that the level playing field is an essential attribute of sport when there are still corporations willing to sponsor riders in the Tour de France and broadcasters who find it profitable to cover.⁸³

In failing to push back on the IAAF's "level playing field" rationale for its hyperandrogenism rule, CAS's opinion misses an opportunity to admit that that the playing field in sport is inherently unequal, and moreover, that society finds this acceptable.⁸⁴ The court failed to call out the IAAF for its singular focus on a single source of perceived competitive advantage, that of endogenous women's testosterone, to the exclusion of other factors. The court failed to acknowledge that taken to its logical end, the pursuit of a level playing field would produce a homogenous field of competitors and homogenous performances.

In summary, the CAS decision should have demonstrated more skepticism at the concept of a hyperandrogenism rule, rather than just the narrow issue of whether science can support the degree of advantage necessary to justify exclusion of women with testosterone higher than 10nmol/L. The decision fails to disturb two key myths—the myth of a testosterone-based binary and the myth of a level playing field—which operate at the heart of the hyperandrogenism rule. At the same time, it leaves untouched the problematic practice of suspicion-based testing and the rules harmful undermining of an athlete's autonomy around the very personal matter of determining one's own gender.

<http://www.theatlantic.com/business/archive/2012/08/medal-count-economics-what-factors-explain-the-olympics-biggest-winners/260951/>.

83. Wladimir Andreff, *The Tour de France: A Success Story in Spite of Competitive Imbalance and Doping*, in *THE ECONOMICS OF PROFESSIONAL ROAD CYCLING* 233, 234 (Daam van Reeth & Daniel Joseph Larson, eds. 2016) ("Tour de France attendance and TV audience do not seem to be seriously threatened and sure not definitely affected by doping scandals either."). See also Jeffrey Cisyk & Pascal Courty, *Do Fans Care About Compliance to Doping Regulations in Sports? The Impact of PED Suspension in Baseball*, *J. OF SPORTS ECON.* (2015) (finding that reports of doping violations in professional baseball produce only a small and temporary effect on home game attendance).

84. Cooky et al., *supra* note 48, at 51 ("Thus, rather than attempt to maintain the myth of a level-playing field by sex testing athletes to ensure no one has an "unfair" sex/gender "advantage," there should be a clear recognition and acceptance that sport is not a level-playing field. This effectively eliminates the need to sex test athletes, male or female, in the first place. This may be an effective route through which to begin to transform sport and to assist with the eradication of sex, gender, race, and sexuality injustice.").

IV. MOVING FORWARD: RECONCILING OBJECTIONS TO HYPERANDROGENISM RULE WITH IOC'S NEW HORMONE-BASED RECOMMENDATIONS FOR TRANSGENDER WOMEN

In the wake of CAS's decision, there is some uncertainty about the approach IOC and international governing bodies like the IAAF will take to regulating eligibility for women's sports. Presently, the hyperandrogenism rule is temporarily suspended, and will not be reinstated unless the IAAF can satisfy the court's requirement for more scientific evidence on the relationship between testosterone and athletic advantage.⁸⁵ For its part, the IOC has encouraged the IAAF to keep fighting for its hyperandrogenism rule.⁸⁶ Presumably, if the IAAF prevails, then the IOC's proposal to use the same testosterone standard to determine the eligibility of transgender women as well⁸⁷ will also have more traction.

This Part will examine the relative advantages and disadvantages of applying the same hormone standard for determining the eligibility of transgender and nontransgender women alike. It will then consider and compare two alternatives: a gender identity rule and a hybrid rule that applies a hormone standard to transgender women and gender identity standard to non-transgender women.

A. Advantages and Disadvantages of a Uniform Hormone Rule

The combination of a reinstated hyperandrogenism rule and the IOC's proposed rule for transgender women amounts to a uniform hormone rule for women's athletics: that any woman—transgender or cisgender—is eligible for participation in women's sports as long as she has less than 10 nanomols of testosterone in 1 liter of serum.

In some ways, what this article refers to as a "uniform" hormone rule (meaning that it imposes the same eligibility requirements both on transgender women and on cisgender women who may have hyperandrogenism resulting from an intersex condition) would constitute a progressive step. First, the uniformity of the rule imparts equal treatment on transgender women by subjecting them to the exact same rules as other women, which could signal sport's acceptance of them as "real" women. Second, the unified hormone rule consistently maintains the focus on eligibility and fairness and minimizes⁸⁸ the focus on fraud and verification that

85. See Part III.A, *supra*.

86. In a statement accompanying the new recommendations for transgender women, the IOC expressly encourages the IAAF to "revert to CAS with arguments and evidence to support the reinstatement of its hyperandrogenism rules." IOC Consensus Meeting, *supra* note 59.

87. See Part II.B *supra*.

88. I deliberate say "minimize" rather than "eliminate" because the IOC's requirement that a transgender woman consistently assert a female gender identity for four years prior to competition is probably a requirement intended to suppress fraud. But assuming that a policy *must* contain a provision to address the perceived threat of non-female identified women self-selecting into women's sport, I think that a continuity requirement is far less objectionable than requiring external validation from medical or

operated at the root of past policies around sex verification and transgender participation. *If* women are to be subject to disqualification (a premise I will later challenge), it is better that the reason be rooted in concerns about fairness than because the athlete has not successfully proven that she is female. This is because the latter rationale compounds the injury of being excluded by additionally denying her the autonomous right to assert her own gender. Third, the uniform hormone rule also represents a progressive step in its removal of overly restrictive requirements for transgender athletes to obtain surgery and to obtain legal recognition of their affirmed gender.

On the other hand, the inconsistent treatment of male-bodied people proves to be a downside of the uniform hormone rule. As CAS noted in the Chand decision, 16.5% of elite male athletes have endogenous testosterone levels below 8 nmol/L.⁸⁹ Having endorsed testosterone levels and a 10 nmol/L cutoff as a determinant for eligibility for women's sport, the IOC and IAAF may have difficulty persuading athletes and other stakeholders of the fairness of exclude those men from the women's category. To be clear, the IOC's proposed transgender policy does in fact distinguish transgender women from men with low testosterone on entirely valid grounds given that the former but not the latter have a female gender identity. Yet it is harder to argue for the relevancy of gender identity when the policy (by excluding female identified with testosterone higher than 10 nmol/L) permits testosterone levels to trump gender identity.

An additional drawback of the uniform hormone rule results from its contribution to the stereotype of female athletic inferiority. Only female athletes are protected against the alleged threat of testosterone-induced advantage, and neither the IOC nor IAAF have even considered, let alone proposed, a testosterone-based rule of exclusion for men's sport. Furthermore, they fail to offer any explanation for why high-testosterone women, but not men, pose a fairness threat to their respective competitors. The rule's limited application to women's sports not only reduces the credibility of the IOC and IAAF's claim that high levels of endogenous testosterone is a threat to the fundamental fairness of sport,⁹⁰ it also sends a message that women are differently situated from men in terms of needing protection from threat posed by the hormone associated with strength and power. In this way, the rule puts female athletes in a double bind: the professed justification for the rule is that testosterone is associated with athleticism, yet testosterone is grounds for excluding the female athlete. By

legal sources. While the four-year continuity requirement would operate to exclude those transgender women who have only recently come out, it may also provide reassurance to younger athletes that they are not sacrificing Olympic dreams by coming out early in their athletic careers.

89. *Chand*, 2014/A/3759, at ¶ 143, http://www.tas-cas.org/fileadmin/user_upload/award_internet.pdf.

90. CAMPORESI & MAUGERI, *supra* note 55, at 53; *see also* Heggie, *supra* note 13 ("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' athlete a distinct advantage over the merely very athletic 'normal' male.").

insisting on both, the rule constructs “female” and “athlete” as mutually exclusive terms.⁹¹ Incidentally, U.S. courts would recognize this double bind as a clear example of sex discrimination that is prohibited by law: An employer who expects all employees to be aggressive in order to be promoted, but who denies promotion to a female employee because aggressiveness in women is transgressive, “places women in an intolerable and impermissible Catch-22” that is actionable sex discrimination under U.S. law.⁹² Of course U.S. law does not constrain the IOC or IAAF, but it does provide an illustrative example of how to conceptualize the relationship between sex discrimination and gender stereotypes in ways that illustrate the discriminatory nature of the uniform hormone rule.

Another downside to the uniform gender rule is the exclusion from women’s sports of some athletes whose undisputed gender identity is female. Because a unified hormone rule still elevates another classification marker (testosterone at higher or lower than 10 nmol/L) above gender identity, it misses an opportunity to validate gender identity and to endorse the diversity among those who are female by virtue of their female gender identity. Human beings do not fall neatly into male and female categories that can be objectively and conclusively determined by hormones or any other physiological characteristic. Accordingly, the best and only fair way to determine if someone is male or female is to ask them. Some governments have adopted this approach,⁹³ and some sport organizers have as well.⁹⁴ A uniform hormone rule misses an opportunity to adopt a policy that provides stronger support to the concept of gender self-determination.

Relatedly, as long as the categories for participation are still called “men’s” and “women’s,” (rather than “above” and “below” 10 nmol/L) the hormone standard will likely be interpreted as a proxy for sex verification. The IOC may genuinely disavow the rule’s application to determine who is really female, but the public’s and the athletes’ perception will likely be otherwise. After all, the classification marker at the heart of the uniform rule, testosterone, is one that connotes “deeply entrenched social beliefs” about gender.⁹⁵

91. PHILIPPE LIOTARD, *From Apartheid to Segregation in Sports*, in GENDER TESTING IN SPORT, *supra* note 33, at 13, 23. The rule’s endorsement of suspicion-based testing creates other versions of the double bind as well. (Recall that Semenya’s gender was called into question in the first place, in part, because she ran too fast. *Id.*, at 15.) Athletes are measured by their success, but for women, success can lead to exclusion. Ergo, women can’t be athletes.

92. *Price Waterhouse v. Hopkins*, 490 U.S. 228, 1791 (1989).

93. LAURENCE BRUNET & MURIEL SALLE, *Categorizing and Attributing the Sex of Individuals*, in GENDER TESTING IN SPORT, *supra* note 33 at 60, 76 (noting that Denmark and Malta will change an applicant’s legal gender upon the submission of simple written request).

94. Erin Buzuvis, *As Who They Really Are*, LAW & INEQ. (forthcoming Dec. 2016) (discussing gender-identity based policies in state high school athletic associations); see *also id.* (discussing gender-identity based policy of the U.S Soccer Federation).

95. CAMPORESI & MAUGERI, *supra* note 55, at 53.

Presumably, a unified hormone rule will only come to pass if the IAAF's policy is reinstated by the CAS, upon a stronger scientific demonstration of the relationship between testosterone and athletic ability. But even with this potentially stronger scientific rationale, a unified hormone rule still participates in the arbitrary selection of testosterone as the only natural physical characteristic that justifies an advantage-based exclusion. It facilitates the myth that a level playing field is something that sport can and should construct, instead of acknowledging the reality that the diverse distribution of physical characteristics (not to mention psychological, environmental, and social ones) are essential to sport. That diversity is what makes sport outcomes unpredictable and the contest itself worthwhile.

B. An End to Gender Categories?

In light of the above criticism, it makes sense to consider whether any alternative rule could minimize reliance on gender stereotypes, maximize inclusion, promote dignity and self-determination, and create realistic expectations about playing-field fairness. Should we seek to eliminate gender categories in sport? Or should we retain the separation with a dividing line based on something other than hormones?

A suggestion to eliminate gender categories altogether is certainly responsive to criticism that sorting individuals by hormone levels is an imperfect proxy for gender and arbitrary criterion for leveling the playing field. It also preempts arguments that athletes with natural athletic advantages (such as high testosterone or a male body) must be excluded for the sake of a "level playing field." The approach of eliminating gender categories would also be inclusive of those individuals whose gender-identities are non-binary or fluid.

Moreover, the separation of men's and women's sport itself contributes to the stereotype of female athletic inferiority, since it denies women the opportunity to compete and prove themselves in the presumably more legitimate category.⁹⁶ Dismantling gender categories could address this concern and permit female athletes to claim some of that legitimacy for themselves.

But if eliminating the binary in sport is a strategy for challenging gender stereotypes, it is one with great potential to backfire. A gender-neutral approach to the Olympics would have a disparate impact on female athletes, since it would reduce the number of women who make the national team or qualify for events in individual sports and the number of female athletes who win gold medals.⁹⁷ Lacking critical mass, female athletes who do succeed on

96. See McDONAGH & PAPPANO, *supra* note 31, at 15, 19-20, 23.

97. Compared to women, men tend to have more lean body mass, which contributes to athletic performance. Men also have higher average weight and height, which are advantageous in many sports. McDONAGH & PAPPANO, *supra* note 31 at 52, 53. Female athletes also tend to be disadvantaged by a society that does not assign as high a value to their endeavors as it does to their male counterparts. This is not to say that women can never compete successfully with men. See, e.g., Karkazis, *supra* note 29, at 8 (noting the

gender-neutral terrain may be perceived as exceptional outliers whose success does nothing to challenge stereotypes of women's athletic inferiority.⁹⁸ Too few female champions may be interpreted not as an indictment society's suppression of female athleticism—such as by limiting women's opportunities and resources—but as evidence that women don't belong in sport. For these reasons, a gender-less approach to sport may invite more problems for female athletes than it solves.

C. A Uniform Gender Identity Rule

In light of the practical and pragmatic reasons for retaining gender categories in sport, the IOC and sport federations should instead seek to address criticism of the hormone rule by not by removing gender categories but instead attempting to make the definitions of those categories as fair and inclusive as possible. If (part of) the problem with a hormone rule is that testosterone levels are an imperfect proxy for gender categories, one arguable solution is to replace a uniform hormone rule with a uniform gender identity rule. Under such an approach, all women—transgender women and cisgender women, including those who are intersex—would be eligible for women's sport so long as their gender identity is female, no exceptions. A gender identity rule would permit intersex athletes like Dutee Chand, who would otherwise be excluded under a hormone based rule, to participate in women's sports based simply on the fact that their gender identity is incontrovertibly female. Additionally, transgender women would be allowed to compete in women's sports on the same grounds, and without any requirement to modify their bodies.

The primary advantage of such a rule arises from its more realistic treatment of gender. Instead of relying on a single determinant such as hormones, a gender identity rule recognizes the reality that human beings' gender is far too complex to be sorted on the basis of any physical characteristic,⁹⁹ as the history of the IOC's failed gender verification efforts has shown.¹⁰⁰ The rule recognizes that gender identity is the most accurate indicator of whether an individual is male or female, and validates the gender identities of intersex and transgender women by providing for their inclusion in women's sports.¹⁰¹ In this way, a gender-identity rule recognizes the fundamental right to self-determination, dignity and freedom endorsed by the

overlap in men's and women's times in seven of eight races at the 2009 World Championships). But if these examples will be comparatively few, at least at the start, it is realistic to consider the effect this will have on gender stereotypes about athleticism.

98. DEBORAH BRAKE, *GETTING IN THE GAME: TITLE IX AND THE WOMEN'S SPORTS REVOLUTION* 26 (2010).

99. FAUSTO-STERLING, *supra* note 2.

100. *See* Part I.A *supra*.

101. Dreger, *supra* note 24, at 24 (endorsing a gender identity approach while noting that "we'd just learn to live with inevitable physiological variations among people raised as girls.").

international human rights community.¹⁰² A policy of gender self-declaration in sport is consistent with the approach some countries like Argentina and Malta are taking to classify their citizens' gender for legal purposes.¹⁰³ It is, moreover, consistent with the emerging definition of sex discrimination increasingly asserted by the U.S. federal government; for example, the Department of Education has concluded that singling out a transgender girl from exclusion from facilities and activities that are open to other girls is a violation of Title IX.¹⁰⁴ In a recent guidance letter, the Department of Education and the Department of Justice jointly made clear schools receiving federal funding must permit students to participate in sex-segregated programs (including athletics) according to their gender identities even where that gender identity conflicts with the sex designation on their birth certificates or other records.¹⁰⁵ The only requirement a transgender student must satisfy to trigger the schools' obligation to classify them according to their gender identity rather than their birth-assigned sex is to provide notice to school officials. No formal medical diagnosis or objective test is required.¹⁰⁶

But while a uniform gender identity rule offers certain advantages over a uniform hormone rule, it suffers from some drawbacks as well. For one, it will have to overcome the criticism that such a rule invites gender fraud because it is easy in theory for a male athlete to gain access to women's sports cheat by falsely asserting a female gender identity. To be clear, a gender identity rule does not *permit* men who falsely assert that they are female to participate in women's sport. It may, however, make it more difficult to detect such men. Even a continuity requirement (i.e., requiring that the athlete has declared a female identity consistently for the last four years, as IOC does now for transgender women¹⁰⁷) does little to stop the unlikely man who is determined, or whose government is determined, to exploit a gender identity rule. Still, however, sport federations would not be powerless to investigate and adjudicate such fraud in a hearing to determine the credibility of the athlete's disputed gender identity determination. Rather than medical evidence, the

102. *E.g.*, Yogyakarta Principles, available at http://www.yogyakartaprinciples.org/backgrounder_en.pdf.

103. Brunet & Salle, *supra* note 93, at 76.

104. Letter from Dep't of Ed. Office for Civil Rights Reg'l Dir. Adele Rapport to Robert Cates, OCR 05-14-1055 (Nov. 2, 2015), <http://www2.ed.gov/documents/press-releases/township-high-211-letter.pdf>

105. U.S. DEP'T OF JUSTICE & U.S. DEP'T OF EDUC., DEAR COLLEAGUE LETTER ON TRANSGENDER STUDENTS, (May 13, 2016), available at <http://www2.ed.gov/about/offices/list/ocr/letters/colleague-201605-title-ix-transgender.pdf>.

106. *Id.* Because the guidance is directed at the rights of students, it contemplates such notice being provided by the student's parents.

107. Erin Buzuvis, *Caster Semenya and the Myth of the Level Playing Field*, 6 THE MODERN AMERICAN 36 (2010) ; Jennifer Finney Boylan, *The XY Games*, NEW YORK TIMES, Aug. 3, 2008 (The best judge of a person's gender is not a degrading, questionable examination. The best judge of a person's gender is what lies within his, or her heart. . . . A quick look at the reality of an athlete's life ought to settle the question.").

adjudicator would rely on testimony from the athlete and those vouching for the athlete's credibility, as well as testimony from witnesses to any Herman Ratjen¹⁰⁸-like conspiracy.

Critics will also likely attack a uniform gender identity rule by arguing that transgender women and hyperandrogenic women upset the level playing field in women's sports. Many female athletes, for example, vocally criticize the participation by intersex athletes like Dutee Chand and Caster Semenya,¹⁰⁹ as well as transgender female athletes whose bodies suppress or no longer produce testosterone as a result of pharmacological or surgical transition.¹¹⁰ Given that a theoretical gender identity rule would permit transgender women to compete even without having physically transitioned—e.g., it would permit Caitlyn Jenner to compete in women's sports while she still has the body and physique of Bruce—one would anticipate female athletes' objections to a theoretical gender identity rule to be even stronger.

Anticipated criticism notwithstanding, the IOC and sport federations could choose to lead, rather than follow, public opinion on transgender and intersex athletes. The prevailing belief that participation in women's sport must be regulated in the name of fairness exists *because* sport organizers have always regulated women's sports in the name of fairness. If sport organizers endorsed a different fairness paradigm that was more tolerant of diversity within gender categories, public opinion could shift as a result. After all, there is no denying the powerful influence of sport on cultural values.¹¹¹ That said, there is little evidence to suggest that the IOC and other sport federations are motivated to lead a shift in cultural paradigms of fairness and gender. For this reason, a gender identity rule may not be realistically achievable, and advocates for an alternative to the hormone rule might be better served advancing some other approach instead.

Finally, while a uniform gender identity rule would permit transgender women to compete as women, it could likely limit the participation of pre-transition transgender men who wish to participate in women's sports consistent with their birth-assigned sex.¹¹² While there are certainly examples

108. See *infra* Part I.A.

109. E.g., Chand, 2014/A/3759, 334-340 (noting athletes' support for IAAF's exclusion of Chand and disappointment in the IAAF's decision permitting Semenya to compete).

110. Cavanagh & Sykes, *supra* note at __, at 76 (noting female cyclists objection and protest to the participation of transgender female competitor Michelle Dumaresq); UFC Women's Champ Refuses to Fight Trans Athlete Fallon Fox, Advocate, Nov. 22, 2014, available at <http://www.advocate.com/sports/2014/09/22/ufc-womens-champ-refuses-fight-trans-athlete-fallon-fox> (noting a female athlete's objection to fighting a transgender woman at mixed-martial arts).

111. E.g., McDonagh & Papano, *supra* note 31, at 1-3 ("sports matter").

112. Some transgender men have decided not to transition with cross-sex hormones and have continued to participate in women's sports while using male name and pronouns and adopting other aspects of masculine expression. See Sam Borden, *Trans Athlete Fails to Qualify*, June 21, 2012, available at http://london2012.blogs.nytimes.com/2012/06/21/transgender-athlete-fails-to-qualify/?_r=0 (describing transgender male Keelin Godsey's efforts to qualify for women's

of transgender men who seek to participate in men's sports,¹¹³ there are compelling reasons to respect the preference of other transgender men to compete with women. For example, a transgender man may by virtue of his female body and birth assignment have been raised as female, a designation that influenced – and likely limited – his athletic opportunities. Certain cultures channel female athleticism into different sports (softball versus baseball, for example) or suppress it altogether by prioritizing men's sports.¹¹⁴ These differences contribute to the generalized gender differences in athleticism,¹¹⁵ especially for aspects of athleticism which research suggests are learned skills, not innate talents, such as motor skills, coordination, and form.¹¹⁶ For these reasons, it is unfair to exclude a transgender man from women's sports simply because his gender identity is not female. This conclusion is notably reflected in the policy of the NCAA, which permits transgender men to participate in women's sports as long as they have not started taking testosterone.¹¹⁷

A uniform gender-identity policy would put transgender men at risk of exclusion from women's sports, or suppress their expressions of masculinity that could invoke a challenge to their gender identity. To transgender men, a gender-identity rule would arguably be more restrictive than the IOC's proposed transgender policy, which does not address (and given a default

hammer throw); Katie Thomas, *Transgender Man Is on Women's Team*, NY TIMES, Nov. 10, 2010, available at <http://www.nytimes.com/2010/11/02/sports/ncaabasketball/02gender.html>.

113. See Cyd Zeigler, *Exclusive: Read the Olympics' New Transgender Policy That Will Not Mandate Surgery*, at OUTSPORTS, Jan. 21, 2016, available at <http://www.outsports.com/2016/1/21/10812404/transgender-ioc-policy-new-olympics> (describing the efforts of transgender male athlete Chris Mosier to qualify for men's duathlon); see also <http://www.cbsnews.com/news/transgender-harvard-swimmer-says-he-made-the-right-choice/> (describing NCAA transgender male swimmer who competes on men's team).

114. DON SABO, PHIL VELIZ, WOMEN'S SPORTS FOUND'N, GO OUT AND PLAY: YOUTH SPORTS IN AMERICA 70–71 (2008), <http://files.eric.ed.gov/fulltext/ED539976.pdf>; see also Buzuvis, *supra* note 107 at 38 (“When it comes to sport, men and boys have enjoyed centuries of preferential treatment, including encouragement, validation, opportunity, and incentive, not to mention the tailoring of sport to suit men's physical and socially-constructed characteristics.”).

115. Buzuvis, *supra* note 107 at 37–38.

116. COLLETTE DOWLING, FRAILTY MYTH: REDEFINING THE PHYSICAL POTENTIAL OF WOMEN AND GIRLS 62 (Random House 2001). For example, according to one study, second-grade boys and girls threw at the same speed with their nondominant arms, suggesting that practice, rather than innate biological traits, produced boys' superior speed in dominant-arm throws. *Id.* at 65 ((citing Kathleen Williams et al., *Environmental Versus Biological Influences on Gender Differences in Overarm Throw for Force: Dominant and Nondominant Arm Throws*, 5 WOMEN SPORT & PHYSICAL ACTIVITY J. 29, 42 (1996)).

117. NAT'L COLLEGIATE ATHLETIC ASS'N, NCAA INCLUSION OF TRANSGENDER STUDENT-ATHLETES 8 (2011), <http://www.ncaapublications.com/productdownloads/11INCL.pdf>.

presumption of birth-sex eligibility, appears to permit) whether transgender men may compete in women's sports prior to transition.¹¹⁸

D. A Hybrid Approach

Another alternative to a uniform hormone rule is a hybrid approach that subjects only transgender athletes to a hormone rule, and imposes a gender identity rule on nontransgender athletes whose gender may be challenged for reasons (such as hyperandrogenism) related to an intersex condition. Such a rule would permit the participation in women's sports of athletes like Dutee Chand (by virtue of their gender identity), but would exclude transgender women who have not undergone hormone treatment to bring their testosterone level below the "normal male range" cutoff of 10 nmol/L. A hybrid rule that imposes a hormone rule on transgender athletes moreover provides a basis for permitting non-transitioned transgender (i.e., those who have not elevated their testosterone levels to the "normal male range") to continue to compete in women's sports.

The obvious downside to such a rule is its admitted internal inconsistency.¹¹⁹ A hybrid rule says to intersex women, "your gender identity matters more than your hormones," but says to transgender women, "your hormones matter more than your gender identity." Rationalizing this inconsistency risks undermining transgender women by opening the door to arguments that the reason to treat them differently arises from the fact that they are not real women, or that they are not "female from birth" (as hyperandrogenic women are). The hybrid rule is unable to account for the fact that a transgender woman is a real woman, even "from birth" by virtue of having been "born with" a female gender identity.¹²⁰

Additionally, rationalizing a hybrid rule could generate support for the mythologized "level playing field" criticized earlier in this Article. For instance,

118. IOC Policy, *supra* note 46. Under a theoretical gender-identity rule, anti-doping rules could still restrict transgender men from receiving hormone treatments while participating in women's sports. Such a policy would be a natural extension of therapeutic use exception for testosterone that applies to men's and not women's sports. The World Anti-Doping Agency considers transgender men eligible for a testosterone TUE because the exception is available to other men with low testosterone. See WORLD ANTI-DOPING AGENCY, TUE PHYSICIANS GUIDELINES: FEMALE-TO-MALE TRANSEXUAL ATHLETES (Mar. 2016), available at <https://www.usada.org/wp-content/uploads/TUE-guidance-female-to-male-transsexual-athletes.pdf>. There is no existing rationale for extending the TUE to transgender men who want to continue to compete in women's sports.

119. To the extent the downside of the hybrid rule is internal inconsistency, it is no more internally inconsistent than the unified hormone rule as presently contemplated by the IOC and IAAF, which singles out men with testosterone levels below 10 nmols/L to be governed by their gender identity, when everyone else is classified according to their hormone levels. This demonstrates that the apparently-consistent rule IOC/IAAF advances is actually already a hybrid rule.

120. See, e.g., M. Dru Levasseur, Esq., *Gender Identity Defines Sex: Updating the Law to Reflect Modern Medical Science Is Key to Transgender Rights*, 39 VT. L. REV. 943, 951 (2015) (explaining and providing medical support for gender identity's "strong biological and genetic component").

one could rationalize excluding transgender women from the gender-identity rule with evidence (if such evidence existed) that the athletic advantage of a non-transitioned transgender woman over other women is greater than the athletic advantage of a hyperandrogenic woman over other women. However, advancing this theoretical finding as a basis for different treatment encourages the fictionalized notion that fairness requires attention to isolated and arbitrary gender-based differences.

Yet it may be possible to support the hybrid rule in a way that avoids undermining transgender women and trading in the discourse of “level playing field.” A viable explanation for the different treatment between non-transitioned transgender women and all other women under the proposed hybrid rule is rooted in reliance theory. Reliance is the legal principle that says in some circumstances, one’s rights are determined by the fact that one has been exercising those rights for a long time on the reasonable assumption that those rights were secure.¹²¹ When this principle applies,¹²² courts allow one party’s reliance interest to tip the scale in their favor out of concern that the degree of loss is higher for the party being asked to give up existing rights than for the party foreclosed from accessing new rights.¹²³ Under this theory, some may argue that non-transitioned transgender women have maintained a weaker reliance interest in participating in women’s sports relative to the women who are included under the rule. Further, a hybrid rule that excludes participation of non-transitioned transgender women while permitting the participation of hyperandrogenic women may be justified on the grounds that hyperandrogenic women have a stronger reliance interest in participating as women because they already do so, usually under circumstances that have not called that right into question. Dutee Chand, for example, has participated in women’s sports all her life. She had never doubted her eligibility for women’s sports, and did not learn that she was hyperandrogenic until she was tested by her NGB. A decision to exclude Dutee Chand from sport at this point would be very costly to her because she has devoted her life to a career with the expectation that this right, her eligibility, will continue. As illustrated by Dutee Chand, hyperandrogenic women are differently situated than non-transitioned transgender women since non-transitioned transgender women are more likely to have invested their athletic talent in men’s sports in the absence of available opportunities to compete as women. Intersex women’s particularly strong reliance interest in being categorized as a woman justifies applying a

121. For example, in property law, the doctrine of adverse possession operates to award title to someone who has been in mistaken (or even intentional) possession of property that they do not truly own, out of recognition for the possessing party’s expectation in continued possession, an expectation that strengthens over time. Joseph William Singer, *The Reliance Interest in Property*, 40 STAN. L. REV. 611, 666 (1988).

122. *Id.* at 666-67.

123. Assigning higher value to one person’s continued exercise an existing right than to another equally worthy person’s newly-granted right is consistent with, and perhaps explained by an observation by behavioral economists that people prefer to forego gain than to sustain equivalent losses (loss aversion theory). Jeffrey Evans Stake, *The Uneasy Case for Adverse Possession*, 89 GEO. L.J. 2419, 2460 (2001).

gender identity rule to them even if a uniform gender identity rule proves unacceptable.

Additionally, considering reliance interest provides a justification for refraining from using gender identity as criteria to exclude genderqueer and non-transitioned transgender men from women's sports. These athletes, like hyperandrogenic women (and unlike non-transitioned transgender men) have relied on sport's classification of them as female and have cultivated their athletic interests and talents accordingly.

To be clear, this explanation assumes that the IOC is unlikely to adopt a rule that would be inclusive of a transgender woman who has not transitioned with hormones. It is important that a second-best scenario not contribute to the further marginalization of those who are excluded. The reliance distinction proposed here is operating to prevent a more harmful rationalization—namely, a rationalization that casts transgender women as less female— from taking its place.

A hybrid rule maximizes inclusion while maintaining realistic expectations of what may be achieved at Olympic and world-class levels of sport. When the rationale for excluding non-transitioned transgender women is carefully explained, the rule minimizes the extent to which eligibility requirements for women's sport contributes to harmful gender stereotypes, and avoids conceding to the fiction that a level playing field can be constructed by excluding some who self-identify as women. If the CAS were to decide not to reinstate the hyperandrogenism rule, the rationale provided here helps explain why sport federations should still adopt the IOC's proposed hormone rule for transgender athletes.

CONCLUSION

In modern times, sport has struggled to impose a binary division on human beings who are not so easily sorted. The IOC and IAAF have attempted to determine who is eligible for women's sports by visual inspection, by chromosome testing, by standardless suspicion-based testing, and by a hyperandrogenism rule—efforts that have humiliated and undermined female athletes, strengthened stereotypes of female athleticism, and perpetuated the myth of the level playing field. At the same time, they have subjected transgender athletes to a triad of requirements that failed to contemplate transgender men, and that operated to exclude more transgender women than is supported by rule's purported rationale.

If the hyperandrogenism rule clears the hurdle erected by the Court of Arbitration for sport, the IOC will have a clearer path to promote the extension of a hormone-based rule to govern transgender athletes as well as intersex women. While a uniform hormone rule offers certain advantages, especially as compared to past efforts, the rule promises to exclude from women sports some transgender and nontransgender women whose status as female is beyond dispute. Such exclusion is unnecessary to maintain fairness in women's sport, as women come in diverse shapes and sizes with diverse combinations of natural advantages. Instead, the IOC should promote gender-identity based participation for nontransgender women. In explaining

why transgender athletes should instead be governed by a hormone standard that excludes nontransitioned transgender women from women's sports (but permits untransitioned transgender men and transitioned transgender women), it should articulate a rationale (such as reliance) that minimizes the potential of a hybrid rule to undermine the gender identities of transgender women and set unrealistic expectations about a level playing field.