

Semenya and ASA v IAAF: Affirming the Lawfulness of a Sex-Based Eligibility Rule for the Women's Category in Elite Sport

Doriane Lambelet Coleman*

☞ Discrimination; Eligibility; Gender; Sports governing bodies; Sportspersons; Women

I. Introduction

Governments and sports organisations support segregated men's and women's events to ensure that women have the same chance as men at making finals and podiums and winning championships. As this year's FIFA Women's World Cup so powerfully demonstrated, these opportunities are not only valuable to the individually featured women; there is also tremendous social value inherent in the competitions more generally. This value flows most obviously to nations, sponsors and fans as they experience strong female athletes competing and winning on the international stage.

It is well-understood that the empowerment effects of these experiences are different from those that result from seeing men compete together, and also different from seeing open competition among men and women. Because athletes whose biological sex is male have an insurmountable competitive advantage over those whose biological sex is female in most sports and events, if an institution like the International Association of Athletics Federations (IAAF) cares about this set of social goods, it needs to protect the women's category with eligibility rules that either exclude biological males, or that at least condition their inclusion on substantially reducing their sex-linked competitive advantages. The performance gap between the sexes makes clear that what matters for sport is male and female sex, not the gender in which individuals are raised or with which they identify.

This last proposition was challenged by the petitioner, Caster Semenya, at the Court of Arbitration for Sport (CAS).¹ Although her biological sex is male for all purposes relevant for sport, Semenya is legally female and was raised and formally identifies as such.

Specifically, from the fact that she has standing to challenge the relevant IAAF regulation, and from the CAS award, it can be inferred that she has XY genetic sex, testes not ovaries, and bioavailable testosterone (T) levels in the normal male range. Competing mostly against genetic females, she has dominated the women's 800 metres globally for the last decade, including at the World Championships and Olympic Games where she has won five gold medals.

At CAS, Semenya did not challenge the premise that sport is properly sex segregated. Rather, she argued that the IAAF should be required to make an exception for her and others similarly situated who attest that they were assigned female at birth, raised consistent with that assignment, and continue legally and publicly to identify as women. In effect, she argued that she and others in her circumstances have an overriding reliance interest in their sex of rearing such that sport should ignore the fact that biologically they are male. In the process, she sought to distinguish her case facts from those of transgender women on the ground that the latter would not have the same longstanding, externally validated reliance interest.

Ruling in the context of a challenge to the most recent iteration of the IAAF eligibility regulation, CAS disagreed. The regulation places restrictions, including hormonal conditions, on genetic males with particular differences of sex development (DSDs) who seek to compete in women's events at the international level (DSD Regulation). Specifically, CAS held that Semenya's proposed exception—for those within this group who were raised as girls—would be category defeating.

The Panel was properly concerned about the DSD Regulation's implications for affected athletes. But the evidence presented in the case made clear that if the IAAF could not restrict their inclusion into women's competition, they would continue to have an outsized effect on opportunities for the females for whom the category was created, and on the IAAF's ability to use that category to promote its broader institutional goals. Ultimately, it was this that tipped the scales in the IAAF's favour.

The result affirmed three essential principles of sport: First, competition is lawfully sex segregated; equality for female-bodied athletes remains a high-value proposition.² Second, eligibility for the women's category has to be based on biology, not identity; a different rule would be category defeating. Third, sports governing bodies properly seek evidence-based solutions to the problem that is including male-bodied athletes who identify or are legally identified as women in the women's category; because it treads on sensitive ground, this work is difficult and often unpopular but it remains the right thing to do.

*Doriane Lambelet Coleman is a Professor of Law at Duke Law School. She served as an expert for the IAAF in *Semenya & Athletics South Africa v IAAF*.

¹*Mokgadi Caster Semenya & Athletics South Africa v International Association of Athletics Federations*, CAS 2018/O/5794.

²Because Semenya and ASA did not challenge the legality of the IAAF's policy choice to segregate competition on the basis of sex, the Panel did not have occasion formally to rule on this threshold point. *Semenya* at 461. Nevertheless, in establishing both the necessity and the proportionality of the DSD Regulation, it effectively affirmed the lawfulness and value of the categories. See, e.g. *Semenya* at 566–568.

The remainder of this article proceeds as follows: Part II provides the context necessary to understand the origins of the case and summarises the essential aspects of the decision. Part III responds to a critique of the decision by Michele Krech which appeared in the last issue of this journal.³ It concludes with some reflections on the broader significance of the case.

II. Background and summary of the case

For decades, the Olympic Movement has segregated most competitions on the basis of sex, and it has monitored eligibility for the women's category to ensure equality for females and to secure the broader social goods that flow from empowering females in sport.⁴ Despite suggestions to the contrary, monitoring is necessary. Although they are relatively few and their goal is rarely if ever to deceive, in fact athletes whose biological sex is male but who present as women have continuously sought to compete in the women's category. When they have done so, consistent with their male biological advantage, they have been overrepresented at the podium level.⁵

In the modern period, the IAAF has been steadfast in its commitment to equality for female athletes,⁶ but its approach to protecting the category has evolved. Originally, the point was simply to exclude athletes whose biological sex was male without regard to how they might personally or legally identify. More recently, it has sought to include athletes whose biological sex is male who identify as women where those athletes demonstrate that they do not have or else have wound down their male-linked advantages.⁷ In addition to its regulations for transgender athletes,⁸ the two most recent iterations of this approach are the 2011 Hyperandrogenism Regulation⁹ and the 2018 DSD Regulation.¹⁰ Where the first focuses on transgender athletes, the second and third focus on genetic males with DSD who were assigned the female sex at birth and whose legal identity is also female. DSDs may be described as intersex conditions and individuals with DSD may be described as intersex.

The 2011 Hyperandrogenism Regulation required genetic males with DSD (46XY DSDs) who presented legally as women to reduce their testosterone (T) levels to below the bottom of the distinct male reference range if they wished to compete in the women's category. Assuming that the bottom of the normal male range was 10 nmol/L, the cut-off chosen at the time for both DSD and transgender athletes was below 10.¹¹ In 2014, Indian sprinter Dutee Chand challenged the regulation at CAS alleging unlawful discrimination on the basis of sex. In 2015, CAS suspended its terms for a two-year period to give the IAAF time to produce evidence confirming that the advantages associated with the affected conditions were sufficient to justify the discrimination at issue in that case.¹² The suspension was effective through the 2015 World Championships in Beijing and the 2016 Olympic Games in Rio.

The 2018 DSD Regulation was developed in that interim period based on the additional evidence adduced in support of the 2011 Regulation, but also on a policy choice to adopt a narrower rule. Unlike the Hyperandrogenism Regulation which applied to more conditions and all events, the DSD Regulation applies only to genetic males with DSD who have full or significant androgen sensitivity and who seek to compete in international events from the 400 metres to the mile. The evidence is especially strong that DSD athletes have an outsized, male-linked performance advantage in these events. They are required to reduce their T levels to within the distinct female range. That range is from 0.06 nmol/L to 1.68 nmol/L, but because some females with polycystic ovaries have—in very rare cases—T levels up to 4.8 nmol/L, the cut-off was set at 5.¹³

Both iterations of the eligibility rule were policy compromises. It is well-understood scientifically that testosterone is the primary but not the only driver of the performance gap between males and females.¹⁴ However, if the goal is to protect the women's category while being as inclusive as possible of males who identify as women, using testosterone as a proxy for the male athletic

³ Michele Krech, "The Misplaced Burdens of 'Gender Equality' in Caster Semenya v IAAF: The Court of Arbitration for Sport Attempts Human Rights Adjudication" [2019] I.S.L.R., Issue 3, p.66.

⁴ For details on the goals of elite sport with respect to the women's category, and on the need for and history of sex testing in this context, see Doriane Lambelet Coleman, "Sex in Sport" (2017) 80 *Law & Contemp. Probs.* 63, 84–124.

⁵ The details, designated as highly confidential, were provided to the CAS Panel and to the parties and their experts who could use this information only in the development of their testimony. But some useful estimates exist in the public record. See, e.g. Joanna Harper, et al., "The Fluidity of Gender and Implications for the Biology of Inclusion for Transgender and Intersex Athletes" [2018] 17(12) *Current Sports Medicine Reports* 468 (providing an estimate of "30 medals [and thus] an overrepresentation of approximately 1700-fold at the podium level" over the past 25 years); see also, e.g. below notes 46–47 and accompanying text (noting that all three medals available in the women's 800 metres at the 2016 Rio Olympics were won by DSD athletes).

⁶ No organisation is perfect in this regard, but the IAAF has embraced the challenge. In addition to an equal number of events in which males and females compete at the same time, in the same arena, in front of the same crowds, the organisation offers equal prize money in the competitions it sponsors, and it has taken a leadership role in promoting gender equity in sports governance. See "IAAF Supports Push for Gender Equity in Leadership Positions", *IAAF News*, 16 July 2018, available at <https://www.iaaf.org/news/iaaf-news/wiwa-2018-gender-equality> [Accessed 1 October 2019].

⁷ "Sex in Sport" (fn.4 above), pp.118–124 (describing the history of sex testing in athletics).

⁸ IAAF Eligibility Regulations for Transgender Athletes, in force from 1 October 2019, available at <https://www.iaaf.org/about-iaaf/documents/health-science> [Accessed 1 October 2019].

⁹ "IAAF to Introduce Eligibility Rules for Females with Hyperandrogenism", *IAAF News*, 12 April 2011, available at <https://www.iaaf.org/news/iaaf-news/iaaf-to-introduce-eligibility-rules-for-femal-1> [Accessed 1 October 2019].

¹⁰ IAAF Rules & Regulations, *Eligibility Regulation for the Female Classification (Athletes with Differences of Sex Development)* (2018) (in force beginning May 2019).

¹¹ For additional explanation of the male and female T ranges, where individuals with the relevant DSDs fit in those ranges, and of the 2010 Hyperandrogenism Regulation, see "Sex in Sport" (fn.4 above), pp.67–84, 122–124.

¹² *Dutee Chand v Athletics Federation India & IAAF*, CAS 2014/A/3759.

¹³ Handelsman et al., "Circulating T as the Hormonal Basis of Sex Differences in Athletic Performance", *Endocrine Reviews*, 13 July, 2018, available at <https://academic.oup.com/edrv/article/39/5/803/5052770> [Accessed 1 October 2019].

¹⁴ See, e.g. "International Experts Statement on the Role of Testosterone in Athletic Performance" (2018) (also submitted as part of the IAAF's evidence in the case).

advantage makes a lot of sense. In addition to its critical role in building and sustaining the male body in the respects that matter for sport,¹⁵ T levels are easy to establish relative to the more comprehensive physical examinations that typically characterise the standard differential diagnosis for sex; and sport already tests for T levels in the context of its doping control efforts.¹⁶

Although they both focused on T levels, the 2018 DSD Regulation was an important improvement on the 2011 Hyperandrogenism Regulation. The premise of the earlier regulation was flawed because the athletes of concern are not “hyperandrogenic females” or, more colloquially, “females with high T”; they are biological males with XY genetic sex, testes and normal male T levels.¹⁷ Moreover, if the goal is to make exceptions that are not category-defeating, requiring male-bodied athletes who identify as women to wind down their T levels to the point where they could be produced by the healthy female body makes a lot more sense than an arbitrary point that is more than three times higher than this. Finally, although it struck many in the sports community as odd because they understand that male T levels have performance-enhancing effects across the board, as a legal matter—because anti-discrimination law requires a close means-ends nexus—narrowly tailoring the rule so that it covers only those events where DSD athletes have been a decades-long issue for the women's category was smart policymaking.¹⁸

Because the Hyperandrogenism Regulation was withdrawn by the IAAF when it introduced the DSD Regulation, and because Dutee Chand is a short sprinter and is not affected by the new policy, her proceedings were terminated.¹⁹ In contrast, as a long sprinter and mid-distance runner, Caster Semenya remained an “affected athlete”.²⁰ Semenya does not want to reduce her T levels from the male to the female range, and so she and her federation, Athletics South Africa (ASA), challenged the DSD Regulation shortly following its publication in spring 2018. Formally, the principal question presented to CAS was whether the regulation governing eligibility for the women's category is unlawfully discriminatory because it treats athletes differently based upon whether they have T levels within or above the top of the female range, and conditions participation by the latter to a potentially harmful and allegedly unwarranted condition. Informally, the question was whether the IAAF can condition the inclusion of biological males into the women's category on their having at least wound down their T levels to within the generously described female range.

Consistent with the law applicable to the IAAF (based in Monaco) and CAS (based in Switzerland), the Panel reviewed the question according to standard anti-discrimination analysis. Because sex-affirmative measures are acceptable when they are designed to empower rather than to subordinate females,²¹ and because Semenya did not challenge the IAAF's policy choice to have a protected category for females, the Panel began from the premise that the category itself is lawful.²² It agreed with Semenya's threshold argument that the DSD Regulation discriminates among athletes who are legally women on the basis of their sex-specific biology,²³ but ultimately it accepted the IAAF's positions that this discrimination is warranted and that the eligibility conditions are acceptable on balance.

Specifically, it agreed with the IAAF that to secure the multiple, valuable goals of the women's category, it is necessary to base eligibility on biology not identity. It agreed with Semenya that requiring the few male-bodied athletes in any given period who identify as women medically to reduce their T levels as a condition for inclusion in certain women's events could cause a range of individual harms, especially if some of these athletes would not otherwise choose to undergo this treatment. However, because their unconditional inclusion has and would continue to be category-defeating for the larger group of female athletes, and for the IAAF more generally, the Panel found that the Regulation's conditions were—on balance—proportional.

In doing so, the Panel rejected Semenya's claim that the IAAF seeks only to protect the goods that flow specifically to the handful of female athletes who do not make the podium when DSD athletes are on the track. (Understandably, although this was not explicit, she and ASA reject the notion that sport properly seeks to celebrate female-bodied champions in the women's category, and to capitalise on the broader expressive effects of that celebration.) The IAAF seeks *not only* to protect the interests of individual female athletes *but also* its ability to use the women's category to accomplish its broader institutional goals. While including DSD athletes without condition would benefit a handful of them disproportionately—that is, they could continue to win medals and championships and to reap the personal and financial rewards from those victories—it would harm the larger group of females in the field *and* make it difficult-to-impossible to continue to sustain the women's category for its intended ends.

The prospect that male-to-female (MTF) transgender athletes could eventually benefit from Semenya's case for unconditional inclusion may also have been a factor

¹⁵ See fn. 14 above.

¹⁶ See “Sex in Sport” (fn. 4 above) at 118–124 (setting the T proxy in historical context).

¹⁷ See “Sex in Sport” (fn. 4 above) at 105 (discussing the claim that DSD athletes are “natural women” who are “gifted with hyperandrogenism”).

¹⁸ See “Sex in Sport” (fn. 4 above) at 67–70 (explaining this legal standard).

¹⁹ For a concise rendition of this history and the difference between the Hyperandrogenism and DSD Regulations, see, e.g. Executive Summary, *Semenya & ASA v IAAF* at [2]–[7] (2019).

²⁰ See DSD Regulation (fn. 10 above).

²¹ “Sex in Sport” (fn. 4 above) at 67–70.

²² *Semenya* at 457, 461, 625.

²³ *Semenya* at 547.

in the Panel's proportionality analysis. Without regard to how sport may eventually evolve, unconditional inclusion of transgender women who are not on hormones would undoubtedly defeat the women's category as currently designed. For this reason, Semenya and ASA sought to distinguish 46,XY DSD athletes from transgender athletes on the basis that the former have a reliance interest in their birth sex assignment and their sex of rearing that the latter cannot claim. Whatever its merits otherwise, for sports purposes the distinction does not hold. The following figure demonstrates this point using 5-alpha reductase deficiency (5-ARD),²⁴ one of the principal DSDs at issue in the Semenya case.

Comparing biological sex traits for purposes of girls' and women's sport

	Typical male	Person with 5-ARD	Transwoman not on hormones	Typical female
<i>Genetic sex</i>	46 XY	46 XY	46 XY	46 XX
<i>Gonads</i>	Testes	Testes	Testes	Ovaries
<i>Endocrine system and sex hormones</i> ²⁵	Androgenic Male T levels	Androgenic Male T levels	Androgenic Male T levels	Estrogenic Female T levels
<i>Primary sex characteristics</i>	Testes, epididymis and vas deferens, prostate	Testes, epididymis and vas deferens (no prostate)	Testes, epididymis and vas deferens, prostate	Ovaries, fallopian tubes, uterus, vagina
<i>Virilisation on puberty</i>	Yes	Yes	Yes	No
<i>Secondary sex characteristics</i>	Male	Male	Male	Female
<i>External genitalia</i> ²⁶	Penis, scrotum	Varies	Penis, scrotum	Clitoris, labia
<i>Legal sex</i> ²⁷	Male	Varies	Varies	Female
<i>Gender identity</i>	Male	Varies	Female	Female

The relevant physical equivalence between transwomen not on hormones and genetic males with DSD not on hormones may have combined with the extraordinary political difficulties that would result from a choice to privilege the latter (who may or may not personally identify as female) over the former (who do identify as female and may have done so since early childhood) to place additional weight on the IAAF's side of the proportionality scales.

Finally, although the harms Semenya alleged were important—to the point that one of the three members of the Panel declined to join in the judgment—it was not clear that they would result from the regulation itself, or that they were always as weighty as described.

For example²⁸: There was extensive testimony about the emotional, familial and reputational harm that resulted from public breaches in the confidentiality of the testing process in the *Semenya* and *Chand* cases. This harm was surely real and also significant, but the IAAF was not responsible for those breaches and it is understood that systems can be put into place to secure this information.

There was also extensive testimony about how difficult it is for a person with a DSD to learn that they have such a condition. Again, there is no doubt that this is a deeply affecting experience. But as Semenya's own circumstances illustrate, not all affected athletes encounter this challenge for the first time as a result of their participation in international sport.²⁹ And even when they do, assuming confidentiality is properly maintained and the conversation proceeds with appropriate consideration and care, it is not clear that it is the disclosure rather than the fact of the condition itself that is primarily distressing. Indeed, where the condition has the potential for serious adverse health effects—as both amenorrhea and undescended testes do—disclosure may be difficult but ultimately valuable.³⁰

Finally, there was extensive testimony that going on birth control pills (BCPs) to bring T levels into the female range, including the trial and error associated with finding the right prescription, can cause serious temporary discomfort and also carries a small risk of serious adverse health effects. But this is the same process and risk that

²⁴ US National Library of Medicine, Genetics Home Reference, 5-alpha reductase deficiency (2019).

²⁵ Circulating testosterone concentration is used here as a marker of hormonal sex. When measured by LCMS, the 95% confidence limits are for the male range 7.7 to 29.4 nmol/L and for the female range (no PCOS) 0.06 to 1.68 nmol/L. Readings for females with PCOS may extend to 4.8 nmol/L (99.99% confidence limits). See Handelsman, et al. (fn.13 above).

²⁶ Phenotype in this respect depends on the degree of alpha reductase deficiency, with the range of presentations from almost fully masculinised to feminised. See Kang et al., "5α-reductase-2 Deficiency's Effect on Human Fertility, Fertility and Sterility", February 2014, available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4031759/> [Accessed 1 October 2019].

²⁷ Some legal systems allow for a change in legal sex before/without transition, while others do not.

²⁸ These examples were chosen because they were the weightiest and so appropriately took the most time. As Krech suggests, arguments were also presented which implied that the DSD Regulation is racist, and primarily affects athletes from the developing world who come from poor rural areas. She suggests that this should have weighed on Semenya's side of the proportionality scales. Krech, supra note 3 at 70. Because neither can be substantiated, however, at the hearing they were merely passing implications, and properly so. For additional development of this point in particular, see Doriane Lambelet Coleman, "A Victory for Female Athletes Everywhere", *Quillette*, 3 May 2019, available at <https://quillette.com/2019/05/03/a-victory-for-female-athletes-everywhere/> [Accessed 1 October 2019].

²⁹ Individuals with 46,XY DSDs who are assigned the female sex at birth and are raised as girls but then virilise at puberty present with male secondary sex characteristics. Unless the virilisation is particularly mild, it is unlikely that this transformation will go entirely unnoticed. See, e.g. Ariel Levy, "Either/Or: Sports, sex, and the case of Caster Semenya", *The New Yorker*, 19 November 2009, available at <https://www.newyorker.com/magazine/2009/11/30/eitheror> [Accessed 1 October 2019].

³⁰ Individuals with 46,XY DSDs do not begin to menstruate at puberty because they are biologically male. As a result, when they have been legally designated as female and have not been diagnosed before puberty, at that point they will appear to present with amenorrhea. Depending on its causes, amenorrhea can involve a range of important adverse health effects, which is why it is the medical standard of care to evaluate girls who have "missed at least three menstrual periods in a row, or [who have] never had a menstrual period [by age] 15". See Mayo Clinic, "Patient Care & Health Information, Diseases & Conditions: Amenorrhea" (2019), available at <https://www.mayoclinic.org/diseases-conditions/amenorrhea/symptoms-causes/syc-20369299> [Accessed 1 October 2019]. Undescended testes similarly risk infertility and malignancy. Because of this, it is also the medical standard of care to address this condition, either physically or through monitoring. See, e.g. Mayo Clinic, "Patient Care & Health Information, Diseases & Conditions: Undescended testicle" (2019), available at <https://www.mayoclinic.org/diseases-conditions/undescended-testicle/doctors-departments/ddc-20352003> [Accessed 1 October 2019].

biological females—including female athletes—regularly undertake, as do individuals with 46,XY DSDs who want to feminise their appearance.³¹ Of course, others with 46,XY DSDs may not want to do this because they are entirely comfortable in their bodies. But these facts give them choices they properly accept or reject based on their individual needs and preferences, as Semenya herself has done. That the choices may be difficult because they involve a cost-benefit analysis involving things physical, medical, and economic does not make them any more unlawful or immoral than other difficult life choices involving these factors.³²

Whether the Panel's decision was right or not similarly depends on one's preferences, not on law. The Panel was comprised of three of CAS's most well-respected jurists. The President of the Panel, The Honorable Dr Annabelle Bennett, is—among other things—a former Judge of the Australian Federal Court and Commissioner of the Australian Human Rights and Equal Opportunities Commission. She also holds a PhD in cell biology. She and her fellow panelists—The Honorable Hugh L. Fraser and Dr Hans Nater—were exhaustive in their review and assessment of the case facts and scientific evidence, and utterly meticulous in their adherence to the applicable law. To the extent there was any room within this law for judicial discretion, it was only in the final balancing of individual harms against institutional ends; and like all balancing tests, this one involved a policy choice based on the evidence presented.

If one places an especially high value on the set of goods that flow from providing equality of opportunity to both males and females, and from isolating and celebrating female champions in particular, an eligibility rule for the women's category that either completely excludes biological males or that conditions their inclusion on winding down the one trait that primarily accounts for the performance gap makes sense. A policy choice that risks some harm, even some relatively significant harm, is not unlawful under any legal regime so long as there is overriding good. To the contrary, cost-benefit analysis (CBA) is the preferred tool of most governments and institutions as they make their policy decisions.

This same sort of eligibility rule might not make as much sense to the person who does not care that much about sport, or about equality for biological females in particular. In such circumstances, one might place a

higher value on the interests of a few individuals in being free from the sorts of personal harm that flow to affected athletes under the DSD Regulation. Understandably, this remains Semenya's own position, and it is shared by Michele Krech, a consultant to Semenya's legal team whose analysis of the decision appeared in the last issue of this journal.

III. A misplaced critique of the Semenya decision

In her essay "The Misplaced Burdens of 'Gender Equality' in Caster Semenya v. IAAF", Michele Krech attempts to disguise her own policy preferences as categorical legal principles. In the process, she argues that the Panel's majority made numerous errors of law. To the contrary, it is Krech's analysis that is wrong on any number of counts. Most importantly, it is wrong about the IAAF's policy objectives; wrong about state of the scientific evidence; wrong about the Panel's analysis, including in particular about the burdens of production and persuasion at issue; and wrong that this was a "failed" human rights case.

Throughout, Krech conflates biological and legal sex. Both biological females and males with DSD who were assigned the female sex at birth are "females" or even "cis-women" in her analysis.³³ As a policy matter, this move is well-regarded in circles where people share her preference for a broadly inclusive conceptualization of the class "women". But as a factual matter, it elides the essential sex-linked differences between the two groups of athletes. This elision is innocuous in many different contexts. However, it is problematic in this one because the women's category exists precisely to provide a space where females can compete only against each other and not also against males.³⁴ Testes and male T levels are not random traits, they are the reason the women's category is set aside for females.³⁵ Taking them into consideration in defining eligibility for women's events does not "magnify ... the burden of longstanding inequality borne by female athletes"³⁶—it allows us to ensure its redress. We have equality in sport only if the protected category is in fact protected.

Krech's description of the original history of the women's category in elite sport is generally accurate. In the first instance, the Olympic Movement was not motivated to create separate opportunities for women as

³¹ Despite claims to the contrary, see, e.g. Sean Ingle, "Caster Semenya accuses IAAF of using her as a 'guinea pig experiment'", *The Guardian*, 18 June 2019, available at <https://www.theguardian.com/sport/2019/jun/18/caster-semenya-iaaf-athletics-guinea-pig> [Accessed 1 October 2019], the DSD Regulation is the evidence-based, medical standard of care; it is not an experiment.

³² As I have written previously, I personally prefer a rule that excludes biological males who have gone through male puberty to a rule that includes them if they identify as women on the condition that they use hormones to drop their T levels into the female range. See "Sex in Sport" (fn.4 above), pp.123–124. I stand by this preference and respect Semenya for hers.

³³ Krech (fn.3 above), p.67.

³⁴ See "Sex in Sport" (fn.4 above), pp.84–102 (detailing this institutional mission). See also, *Semenya* at 558 ("the reason for the separation between male and female categories in competitive athletics is ultimately founded on biology ... The 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").

³⁵ See Coleman, "A Victory for Female Athletes" (fn.28 above) (noting that "Gonadal sex traits define the categories, and then each separate category sets out to isolate and celebrate other characteristics").

³⁶ Krech (fn.3 above), p.66.

a means to establish their equality. (Baron Pierre de Coubertin's sexism has been amply described.³⁷) But it is wrong to move from there to the suggestion that the IAAF has not had a consistent objective in its own sex-testing history.³⁸

For better or worse, the IAAF's goal has long been to protect the women's category from male-bodied entrants. It did not have the same scientific basis for doing this work in earlier periods that it has today, but of course this story is not unique either to the IAAF or to sport. Reliance on secondary sex characteristics, including on descriptions of individuals based on these characteristics as "masculine" or "feminine" are ubiquitous. That these descriptions sometimes reflect stereotypes rather than real sex-linked differences suggests the need for caution and care, not for sacking the enterprise. CAS was right to find that "the reason for the separation between male and female categories in competitive athletics is ultimately founded on biology rather than legal status".³⁹ Indeed, although strong social norms may have provided sufficient legal support for the separation in de Coubertin's time, in the present period there is no viable alternative rationale; the IAAF has to ground its eligibility rule in sex-linked biology.

Nevertheless, Krech suggests that "[t]he lack of scientific integrity in the evidence presented by the IAAF has been well documented"; that at the hearing, the scientific evidence was "highly contested ... deficient ... and defective"; and that there were "substantial and multifarious doubts about the science, [and thus about the] ethics and legality of the IAAF's regulations".⁴⁰ There is no other way to put this: In repeating the false public relations story promulgated by some of Semenya's

supporters, Krech presents a gross mischaracterisation of the state of the scientific evidence and of the related aspects of the proceedings.⁴¹

The critical scientific and evidentiary points were never in real dispute⁴²: that testosterone distributes bimodally, i.e. with exceptions that are inapplicable to the non-doped, elite athlete population, the male and female ranges do not overlap⁴³; that testosterone is the primary driver of the performance gap⁴⁴; and that Semenya and other affected DSD athletes have XY genetic sex, testes, and T levels within the male not the female range, and are at least substantially—if not—fully androgen sensitive.⁴⁵

Because she was there, Krech knows that the public facing challenge to "the scientific integrity" of the IAAF's evidence waged by experts retained by ASA was not had within the closed confines of the hearing. This is because the underlying confidential data showing the decades-long dominance of DSD athletes in women's events were irrefutable and devastating.⁴⁶ Moreover, since the Panel published its Executive Summary, each of the three athletes who stood on the Olympic podium for the women's 800 metres in Rio has publicly acknowledged that they are affected by the DSD Regulation. In the circumstances, Krech's suggestion that it was not established that females are biologically disadvantaged in relation to DSD athletes and thus that the Panel improperly "resolve[d] scientific uncertainty in favour of the IAAF"⁴⁷ would be incomprehensible but for the fact that she was writing here not as an academic, but as an advocate trying to influence a lay public.

Her evaluation of the Panel's proportionality analysis is more complicated. As a matter of evidence law and procedure, she is wrong in her assessment of the burdens

³⁷ See, e.g. Jules Boykoff, "How women overcame more than 100 years of Olympic controversy to take centre stage at Rio", *The Telegraph*, 5 August 2016 (quoting de Coubertin as having said, "Woman's glory rightfully came through the number and quality of children she produced, and that where sports were concerned, her greatest accomplishment was to encourage her sons to excel rather than to seek records for herself").

³⁸ Krech (fn.3 above), pp.68–69.

³⁹ See *Semenya* at para.559 ("On true analysis, therefore, the purpose of the male-female divide in competitive athletics is not to protect athletes with a female legal sex from having to compete against athletes with a male legal sex. Nor is it to protect athletes with a female gender identity from having to compete against athletes with a male gender identity. Rather, it is to protect individuals whose bodies have developed in a certain way following puberty from having to compete against individuals who, by virtue of their bodies having developed in a different way following puberty, possess certain physical traits that create such a significant performance advantage that fair competition between the two groups is not possible").

⁴⁰ Krech (fn.3 above), pp.71, 72.

⁴¹ This false story is prominent on social media, but also beyond. See, e.g. Sarah Laframboise, "In the ruling against Caster Semenya, bogus science is being used to stifle the vulnerable", *Massive Science*, 13 May 2019, available at <https://massivesci.com/articles/caster-semenya-track-field-iaaf-olympics-testosterone-hyperandrogenism/> [Accessed 1 October 2019].

⁴² To be clear, Semenya and ASA did contest aspects of the science, primarily whether testosterone is "the" rather than "a" primary driver of the performance gap, and whether 5-ARD might have more than its currently known genital tissue-specific effects. But these were not weighty matters, because the prepositional argument (in the first instance) and the scientific hypothesis (in the second) were both unsupported and so, consistent with standard evidence law, both were properly dismissed by the Panel. With respect to the prepositional argument in particular, see below note 42. With respect to the ARD hypothesis, see below note 45. With respect to the associated burden of proof issues, see below notes 48–49 and accompanying text.

⁴³ Unlike in Chand, the parties in Semenya did not disagree that testosterone distributes bimodally and that the different male and female T ranges are primarily responsible for the performance gap between male and female athletes. See *Semenya* at 489 (emphasis added) ("It is accepted by all parties that circulating testosterone has an effect from puberty, in increasing bone and muscle size and strength and the levels of haemoglobin in the blood. After puberty, the male testes produce (on average) 7 mg of testosterone per day, while the female testosterone production level stays at about 0.25 mg per day. The normal female range of serum testosterone (excluding cases of PCOS), produced mainly in the ovaries and adrenal glands, is 0.06 to 1.68 nmol/L. The normal male range of serum testosterone concentration, produced mainly in the testes, is 7.7 to 29.4 nmol/L.")

⁴⁴ *Semenya* at 492 and 493 ("... the overwhelming majority view [of the parties' expert witnesses] was that testosterone is the primary driver of the physical advantages and, therefore, of the sex difference in sports performance, between males and females ... Having considered all of the scientific evidence adduced by the parties, the Panel accepts this conclusion").

⁴⁵ Semenya alleged that the deficiency in the enzyme that characterizes 5-ARD might have some post-pubertal muscular and thus adverse performance effects. But her experts produced little scientific evidence to support this hypothesis, and the CAS Panel concluded that "such an effect (if it exists at all) is at most modest compared to the effect of testosterone". *Semenya* at 495.

⁴⁶ See *Semenya* at 537 ("In reaching this conclusion, the majority of the Panel highlights in particular the notable statistical over-representation of female athletes with 5-ARD ... In the majority of the Panel's view, those statistics provide compelling evidence that the physical characteristics associated with 5-ARD give female athletes with that condition a significant and frequently determinative performance advantage over other female athletes who do not have a 46 XY DSD. The contrast between the rare incidence of 5-ARD in the general population and the overwhelming success that women with 5-ARD have achieved ... provides powerful evidential support for the conclusion that female athletes with 5-ARD have a significant performance advantage").

⁴⁷ Krech (fn.3 above), p.71.

of production and persuasion. But her evaluation of the Panel's interests balancing is certainly defensible. I happen to disagree with her conclusions, but as I have already noted, this prong of the analysis was and remains legitimately contested ground.

Krech's essay is titled "The Misplaced Burdens", and throughout the implication is that the Panel either did not know what it was doing or else disregarded the applicable standards.⁴⁸ Although judges can certainly be wrong and called out for their errors, this is simply not the case here. It is universally accepted in law that the burdens in a discrimination case are on the petitioner to prove discrimination and, if she carries her burden, they shift to the respondent to prove justification and proportionality. In each instance, the burden of proof consists of the pleading burden, the production (of evidence) burden, and the burden of persuasion. Where a party has met their prima facie obligation, *in effect*, the burden shifts to the other side.

As set out in Part II, the IAAF properly assumed the burden of proving that its DSD Regulation is justified by necessity and that the risk of harm to affected athletes is acceptable or proportionate. Once it did this, the burden effectively shifted to Semenya to rebut that case. She did not have to accept that burden, but had she declined, the state of the evidence would have been as the IAAF left it, i.e. strongly in organization's favour. She lost because she did not succeed in persuading more than one of the three panelists that she had neutralised the weight of the IAAF's case on proportionality.

Notably, no one—including on the IAAF's side of the case—contested the proposition that the DSD Regulation would have negative effects on affected athletes, including Semenya. Like any rulemaking process, this one involved a cost-benefit analysis, and the nature and extent of the costs are well-understood.⁴⁹ But, as detailed in Part II, Semenya was ultimately unable to persuade the Panel majority that the ways in which she would be affected were weighty enough to override *both* the enormous good that a protected female category produces for sport's various stakeholders, *and* the damage that making exceptions for male-bodied athletes who identify as women does and would continue to do to the category.

In part, this was because the false claims that the IAAF has caused egregious harm that have proliferated in the media were not pressed in the proceedings. (Semenya's legal team, like the IAAF's, is one of the best and most ethical in the business.) Mainly, though, it is because no

small group of individuals has the right to demand a category defeating accommodation in circumstances where that category is understood to be a high value social good.

Krech is one of a number of academics currently working on the development of global governance norms and pushing for their applicability to private organisations, including to private sports organisations.⁵⁰ Their theory is that like public entities and governments, private international organisations and multinational corporations "govern" people's lives and opportunities in ways that ought to be regulated according to civil and human rights principles.⁵¹ Work is also ongoing among academics and advocates to codify human rights protections for people who are intersex and transgender.⁵² Both efforts are intellectually deep and their practical value is enormously promising. As doctrinal claims, however, they are lacking an established foundation. As a result, so does Krech's final argument.

Semenya v IAAF is not a failed human rights case for the same reason that it is not a failed discrimination case.⁵³ Human rights law prohibits discrimination on the same grounds as domestic law; and it requires that sex discrimination be evaluated for lawfulness also on the same grounds. The Panel followed precisely these requirements in reaching its conclusion that the DSD Regulation is "necessary and reflect[s] a rational resolution of conflicting human rights".⁵⁴

Indeed, in so holding, the Panel was generous in its reading of the human rights of affected DSD athletes. Although everyone has the right to participate in sport, no one has the right to compete and to win in elite competition without regard to legitimate eligibility criteria. Although everyone has the right to be free from discrimination, that right is never absolute; it is always subject to well-justified exceptions. The same is true of the rights to personal autonomy, bodily integrity, and economic freedom. No legal system provides for unfettered individual liberty; it is always ordered according to prevailing goals and values.

Most specifically, there is no established human rights law that demands that Member States and organisations disregard biological sex in their efforts to secure equality for the females within their purview. Indeed, the IAAF's policy choice to set aside a protected category for females—as implemented by nations around the world—does not violate established human rights law, it promotes it. Nor is there established human rights law

⁴⁸ Krech (fn.3 above), e.g. pp.66, 68, 70, 71, 75.

⁴⁹ The parties to the case disagreed, of course, over the nature of some and the extent of others. See above notes 28–32 and accompanying text (discussing these points of disagreement).

⁵⁰ Michele Krech, "To Be a Woman in the World of Sport: Global Regulation of the Gender Binary in Elite Athletics" (2017) 35 Berkeley J. Int'l L. 262 (2017). See also, e.g., Mathieu Winand and Christos Anagnostopoulos, Research Handbook on Sport Governance (2019) (noting that "sport governance has developed into a considerable field of research" and providing a basis to understand "different approaches and perspectives, such as good governance principles, systemic governance, political governance and network governance").

⁵¹ See, e.g. below note 56 (citing to the High Commissioner's Guiding Principles on Business and Human Rights).

⁵² See, e.g. ILGA Europe, *Anti-discrimination Law: What is the current situation in Europe?*, available at <https://www.ilga-europe.org/what-we-do/our-advocacy-work/anti-discrimination-law> [Accessed 1 October 2019] (describing the legal situation for LGBTI people in Europe); Morgan Carpenter, "Intersex Variations, Human Rights, and the International Classification of Disease", *Health and Human Rights Journal*, 1 August 2018, available at <https://www.hhrjournal.org/2018/08/intersex-variations-human-rights-and-the-international-classification-of-diseases/> [Accessed 1 October 2019].

⁵³ Krech (fn.3 above), p.66 and passim.

⁵⁴ *Semenya* at 589; see also at 554.

that requires that where the two collide, the interests of people who are intersex or transgender who identify as women supersede the human rights of females. Positions to the contrary are, to date, just advocacy,⁵⁵ and CAS's institutional authority does not include altering or growing the substance of international human rights law.⁵⁶

Consistent with the terms of her engagement with CAS, Semenya has appealed its decision upholding the DSD Regulation to the Swiss Federal Tribunal (SFT), on the ground that its effects would violate the substantive public policy of Switzerland. As I understand it, this public policy includes any *established* international human rights law to which Switzerland adheres. However the case comes out, it is likely the apparent absence of such law—together with the strength of the New York Convention on the Recognition and Enforcement of Foreign Arbitral Awards⁵⁷—that explains the SFT's interim decision in late July to keep the DSD Regulation in place while it is considering the merits of Semenya's appeal.⁵⁸

IV. Conclusion

The answer to the normative question whether international human rights law *should* prohibit any physical conditions on the inclusion of intersex and transgender women in the women's category in elite sport

depends on how one chooses to value that unconditional inclusion in relation to the goal of equality for biological females in this setting. Does it still matter that we see female-bodied champions on the podium—regardless of how they identify, or is it enough (or better) that we see champions who identify as women—regardless of their sex? My own view is that the broader social good that flows from sport's ability to celebrate the former outweighs the harms that result from excluding or conditioning the inclusion of the latter. But I respect that others can and do view this issue differently.

Ultimately, where they are evidence-based, the different positions that have been developed in the context of this case can be helpful beyond sport. The CAS decision in *Semenya & ASA v IAAF* is the first out of a court with a broad international mandate to confront squarely the collision between (on one side) the well-established civil and human rights of females to equality in relation to males—including to the use of sex-affirmative measures to secure that equality, and (on the other) the just-emerging rights of individuals to be classified into and out of sex-segregated spaces and opportunities based on their identity rather than their biology. The answer should not always be the same, but the decision provides a template for other courts as they face variations on this most challenging jurisprudential theme.

⁵⁵ See, e.g. Letter to Sebastian Coe from Human Rights Watch, 24 July 2018, available at https://www.hrw.org/sites/default/files/supporting_resources/hrw_letter_iaaf_femaleclassification_20180724.pdf [Accessed 1 October 2019] (quoting from a letter from UN Special Rapporteurs also to Lord Coe to the same effect); Statement from the World Medical Association, Physician Leaders Reaffirm Opposition to IAAF Rules, 15 May 2019, available at <https://www.wma.net/news-post/physician-leaders-reaffirm-opposition-to-iaaf-rules/> [Accessed 1 October 2019].

⁵⁶ Informal human rights law or norms exist in the pronouncements of the relevant international organisations. But by their own terms, these pronouncements only bind organisations to compliance with *established* principles, not to advocacy about what these principles might be. This includes the UN High Commissioner's Guiding Principles on Business and Human Rights cited by Krech in support of her position. See Guiding Principles at 13, available at https://www.ohchr.org/documents/publications/GuidingprinciplesBusinesshr_eN.pdf [Accessed 1 October 2019] (imposing responsibilities directly on businesses to comply with "internationally recognized human rights"). Within the human rights community and as applied outside of that community, law is different from norms and both are different from advocacy.

⁵⁷ Available at <http://www.newyorkconvention.org> [Accessed 1 October 2019].

⁵⁸ Press Release of the Swiss Federal Supreme Court re: Interlocutory order of 29 July 2019, "The DSD Regulations are, for the time being, again applicable to Caster Semenya", available at https://www.bger.ch/files/live/sites/bger/files/pdf/en/4A_248_2019_yyyy_mm_dd_T_e_09_54_21.pdf [Accessed 1 October 2019].