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Caster Semenya and the Policing of Competitive Athletic Advantage

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Note

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TAYLOR VANN

In recent years, transgender and intersex athletes competing in track and field have come under intense scrutiny. The most notable of these athletes at the elite level is Caster Semenya of South Africa. Semenya has been accused of benefiting from an unfair competitive advantage due to her natural biological makeup. In response, international track and field's governing body has promulgated multiple regulations to address athletes like Semenya. This article examines these regulations and their impact on transgender and intersex athletes at multiple levels of competition. It argues that these regulations and similar attempts under Title IX in the United States are fundamentally flawed because they attempt to create a level playing field when, in reality, success in track and field, like most other sports, is and always has been dependent on differences in natural abilities. These regulations and policies are revealed to be inadequate because they proceed based on a flawed perception of what is considered a fair competitive advantage.

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Caster Semenya and the Policing of Competitive Athletic Advantage

TAYLOR VANN*

INTRODUCTION

When Caster Semenya stepped onto the track in Berlin, Germany at the 2009 International Association of Athletics Federations (“IAAF”) World Championships, she may very well have known that in less than two minutes, her life was about to change forever. From the moment the starting gun was fired, there was no doubt who would stand atop the podium. Semenya finished in first place in a world-leading time of 1 minute, 55.45 seconds, more than two seconds ahead of the second-place finisher.¹ Even before the race began, however, there was controversy surrounding Semenya’s presence at the year’s most competitive track and field competition.

On the day of the 800-meter final, the IAAF confirmed that it had required Semenya to submit to sex determination testing.² When asked why, Pierre Weiss, the general secretary of the IAAF, stated that the testing was due to “ambiguity, not because we believe she is cheating.”³ That initial testing because of “ambiguity” resulted in nearly one year of review by a medical panel convened by the IAAF, during which time Semenya was barred from competing in international competitions.⁴ The panel ultimately determined that Semenya had a condition called hyperandrogenism, which naturally caused her to have elevated levels of testosterone in her body.⁵ She was nonetheless permitted to compete in the 800-meter final⁶ and cement herself as a world class middle-distance athlete.

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¹ *800 Metres Result, 12th IAAF World Championships in Athletics*, IAAF, <https://www.worldathletics.org/results/iaaf-world-championships-in-athletics/2009/12th-iaaf-world-championships-in-athletics-3658/women/800-metres/final/result> (last visited Jan. 7, 2021).

² Christopher Clarey, *Gender Test After a Gold-Medal Finish*, N.Y. TIMES (Aug. 19, 2009), <https://www.nytimes.com/2009/08/20/sports/20runner.html>.

³ *Id.*

⁴ Anna Kessel, *Caster Semenya May Return to Track this Month After IAAF Clearance*, GUARDIAN (July 6, 2010, 2:03 PM), <https://www.theguardian.com/sport/2010/jul/06/caster-semenya-iaaf-clearance>.

⁵ *Id.*; *What Are the Issues Behind the Court of Arbitration for Sport Ruling in Caster Semenya Case?*, WASH. POST (May 1, 2019, 6:37 AM), <https://www.washingtonpost.com/sports/2019/05/01/wh-are-issues-behind-cas-ruling-caster-semenya-case/>.

⁶ Clarey, *supra* note 2.

Immediately following the 2009 IAAF final, Semenya was not allowed to participate in the customary press conference following her world championship victory, as officials deemed it “too much to ask” for an eighteen-year-old to be peppered with questions from reporters regarding the complex issue of gender and participation in professional athletics.⁷ However, Semenya likely would have been able to field these questions ably if she had been allowed to do so. The 2009 World Championships were not the first time her presence in women’s track and field generated controversy.⁸ Since she first began competing in track and field as a child growing up in rural South Africa, her success on the track generated controversy.⁹ She faced years of scrutiny from competition officials, as well as discriminatory and hostile statements from her fellow competitors.¹⁰ Thus, when she burst onto the international scene in 2009, questions regarding her gender were not unexpected.

In the ensuing years since Semenya first became a world champion, she has asserted herself as one of the most dominant middle-distance runners in history. She went on to win gold in the 800 meters at both the 2011 and 2017 World Championships, as well as in the 2012 and 2016 Olympic Games.¹¹ Concurrent with Semenya’s unrivaled success, the IAAF has repeatedly attempted to develop regulations to prevent Semenya and others with hyperandrogenism from benefitting from what it deemed to be an unfair competitive advantage.¹² However, the IAAF repeatedly failed to develop workable regulations that are suitable to all parties involved.¹³ This process of trial and error in regulating the participation of intersex athletes has been to the direct detriment of Semenya. At present, she is currently barred from competing in IAAF events after having lost the final appeal of her challenge to the IAAF’s most recent intersex athlete policy in 2020.¹⁴ Caster Semenya

⁷ *Id.*

⁸ Anna Kessel, *Caster Semenya Wins 800m Gold but Cannot Escape Gender Controversy*, GUARDIAN (Aug. 19, 2009, 6:11 PM), <https://www.theguardian.com/sport/2009/aug/19/caster-semenya-800m-world-athletics-championships-gender>.

⁹ Christopher Clarey, *As Semenya Returns, So Do Questions*, N.Y. TIMES (Aug. 22, 2010), <https://nytimes.com/2010/08/23/sports/23iht-TRACK.html>.

¹⁰ *Id.*

¹¹ *Athlete Profile: Caster Semenya*, WORLD ATHLETICS, <http://worldathletics.org/athletes/south-africa/caster-semenya-242560> (last visited Jan. 7, 2021).

¹² See *How the Caster Semenya Controversy Has Unfolded Since 2009—A Timeline*, GUARDIAN (May 1, 2019, 6:06 AM), <https://www.theguardian.com/sport/2019/may/01/how-caster-semenya-controversy-unfolded-since-2009-timeline> (providing a timeline of Semenya’s case and resulting IAAF hyperandrogenism regulations).

¹³ See Int’l Ass’n of Athletics Fed’ns, *IAAF Regulations Governing Eligibility of Females with Hyperandrogenism to Compete in Women’s Competition* § 1.1 (May 1, 2011) [hereinafter *Hyperandrogenism Regulations*] (regulating the participation of intersex females beginning in 2011); Int’l Ass’n of Athletics Fed’ns, *Eligibility Regulations for the Female Classification (Athletes with Differences of Sex Development)* §§ 1.1(a)–(c) (Nov. 1, 2018) [hereinafter *DSD Regulations*] (regulating the participation of intersex females from 2018 to present day).

¹⁴ *Semenya v. Int’l Ass’n of Athletics Fed’ns*, CAS 2018/O/5794, paras. 620, 626 (Court of Arbitration for Sport, 2018); Jeré Longman, *Track’s Caster Semenya Loses Appeal to Defend 800-Meter*

provides a valuable case study of the law and ethics surrounding elite athletes who have intersex conditions. Her pursuit of inclusion and equality has raised a question that goes to the heart of competitive athletics: Why are some natural competitive advantages permissible when others are not?

A. *History of Athletes Whose Genetic Backgrounds Provided Competitive Advantages*

The history of international and Olympic sports is replete with athletes who succeeded in large part because they had genetic gifts that made them perfectly suited for their chosen sport. Take, for example, Eero Mäntyranta of Finland, who won seven medals in cross-country skiing, including three gold, at the Winter Olympic Games in 1960, 1964, and 1968.¹⁵ It was not until after his illustrious career concluded that Mäntyranta discovered he had a rare genetic condition that caused his body to produce 65% more red blood cells than the average male adult.¹⁶ For an endurance athlete, increased blood oxygen levels makes all the difference. Consider also Donald Thomas, who cleared 7' 3.25" in the high jump on only the seventh attempt of his life.¹⁷ Less than a year later, Thomas became a world champion high jumper.¹⁸ His competitive advantage was also genetic—his legs and, in particular, his Achilles tendons, were abnormally long for his body.¹⁹ These genetic gifts instantly made him a world class high jumper, despite having virtually no prior training.²⁰

An assessment of genetically gifted athletes would not be complete without mention of Michael Phelps, the most decorated Olympian of all time. Phelps has double-jointed ankles that allow for a greater range on his kicks, a disproportionately large wingspan, and a metabolic system that produces half the lactic acid of a typical elite swimmer.²¹ Low lactic acid production is especially advantageous for endurance athletes, similar to the high oxygen levels from which Mäntyranta benefited.²² All of these genetic gifts combined to give Phelps the perfect body for swimming. Phelps retired

Title, N.Y. TIMES (Sep. 8, 2020), <https://www.nytimes.com/2020/09/08/sports/olympics/caster-semenya-a-court-ruling.html>.

¹⁵ Malcolm Gladwell, *Man and Superman: In Athletic Competitions, What Qualifies as a Sporting Chance?*, NEW YORKER (Sept. 2, 2013), <https://www.newyorker.com/magazine/2013/09/09/man-and-superman>.

¹⁶ *Id.*

¹⁷ *Id.*

¹⁸ *Id.*; Donald Thomas, ESPN, <http://www.espn.com/olympics/summer08/fanguide/athlete?athlete=97487> (last visited Jan 3, 2021).

¹⁹ Gladwell, *supra* note 15.

²⁰ *Id.*

²¹ Monica Hesse, *We Celebrated Michael Phelps's Genetic Differences. Why Punish Caster Semenya for Hers?*, WASH. POST (May 2, 2019, 10:23 AM), https://www.washingtonpost.com/lifestyle/style/we-celebrated-michael-phelps-genetic-differences-why-punish-caster-semenya-for-hers/2019/05/02/93d08c8c-6c2b-11e9-be3a-33217240a539_story.html.

²² *Id.*; Gladwell, *supra* note 15.

from swimming after the 2016 Olympics in Rio De Janeiro, after having won twenty-three gold medals, three silvers, and two bronzes.²³

What is noteworthy about these athletes and many like them is that their success on the international stage was met with virtually no opposition.²⁴ They were not targeted by claims that they had unfair competitive advantages. What, then, is the difference between athletes like Michael Phelps and Caster Semenya?²⁵

Semenya's hyperandrogenism gives her a competitive advantage because increased testosterone levels promote greater muscle growth²⁶—which is certainly advantageous for a middle-distance runner trying to build lean muscle in her legs, just like low lactic acid production is advantageous for a swimmer. The end result for both Semenya and Phelps is that their bodies enable them to outrace and outlast their competitors. However, the governing body of Semenya's sport has determined that she has an unfair competitive advantage.

The difference between Caster Semenya and athletes like Michael Phelps, this Note argues, is that her particular competitive advantage brings her into conflict with part of the fundamental structure of her sport: that men and women must compete separate from one another in order for there to be fair competition. Different testosterone levels are considered a main differentiator between biological males and females writ large, whereas lactic acid production or blood oxygen retention is not. Therefore, Semenya stands alone in that her particular natural advantage conflicts with the fundamental male-female division of most competitive sports. As such, the IAAF has deemed it necessary to prevent Semenya and those like her from competing, as a means of preserving the overall integrity of the sport.

This Note discusses the history of attempts by professional track and field's regulatory body to prevent Caster Semenya and intersex athletes like her from competing.²⁷ It then juxtaposes the legal analysis used in her

²³ *Michael Phelps*, OLYMPICS, <https://www.olympic.org/michael-phelps> (last visited Jan. 8, 2021).

²⁴ Emily J. Cooper, *Gender Testing in Athletic Competitions—Human Rights Violations: Why Michael Phelps Is Praised and Caster Semenya Is Chastised*, 14 J. GENDER, RACE & JUST. 233, 233–35 (2010).

²⁵ *Id.* at 235; see also Shawn M. Crincoli, *You Can Only Race If You Can't Win? The Curious Cases of Oscar Pistorius & Caster Semenya*, 12 TEX. REV. ENT. & SPORTS L. 133, 139–40 (2011) (juxtaposing the different treatment of Caster Semenya and Oscar Pistorius, a South African double-amputee sprinter who, before being imprisoned for the murder of his girlfriend, was permitted to compete in regular competitions despite using prosthetic legs that likely gave him a competitive advantage).

²⁶ *Testosterone—What It Does and Doesn't Do*, HARV. MED. SCH. (Aug. 29, 2019), <https://www.health.harvard.edu/drugs-and-medications/testosterone--what-it-does-and-doesnt-do>.

²⁷ See JOANNA HARPER, *SPORTING GENDER: THE HISTORY, SCIENCE, AND STORIES OF TRANSGENDER AND INTERSEX ATHLETES* 2, 6–8 (2020), for a detailed historical account of female athletics in the time of the ancient Greek Olympic Games, up through and including the advent of the modern Olympics at the turn of the nineteenth century. Indeed, when the slate of female-contested events at the Olympics were expanded beyond a few, short-distance races, there was speculation regarding the gender identity of some of the athletes competing in those events: “The 1930s would include substantial

challenges thus far with American equal protection jurisprudence in order to demonstrate the unique challenge of ensuring that intersex, transgender, and other gender nonconforming athletes are given equal opportunities to compete at the highest levels of athletics.

I. BACKGROUND

A. *Intersex Athletes*

The term “intersex” broadly describes a variety of conditions relating to a person’s reproductive or sexual anatomy.²⁸ One “working” definition of intersexuality is as follows: “a physical and/or chromosomal set of possibilities in which the features usually understood as belonging distinctly to either the male or female sex are combined in a single body.”²⁹ As a general matter, these conditions are such that the individual no longer fits clearly within the traditional definitions of female or male.³⁰ For example, Caster Semenya’s specific condition has not been disclosed, but the results of her testing indicate that she has hyperandrogenism, meaning she has heightened testosterone levels that place her in the lower end of the average range for males.³¹ Aside from hyperandrogenism, there are numerous other conditions that would cause a person to be considered intersex.³² Regardless of the specific physiological characteristics of the individual, being intersex, like gender identity, is largely a socially constructed category that brings with it stereotypes and difficulties assimilating into society.³³

Aside from Caster Semenya, other intersex athletes have competed and will continue to compete in professional sports.³⁴ Most notable in track and field is Dutee Chand, who, like Semenya, has hyperandrogenism.³⁵ Chand

growth of women’s sport; however, that decade would also be the first in which the femininity of many women competitors would be called into question . . .” *Id.* at 8.

²⁸ *What is Intersex?*, INTERSEX SOC’Y OF N. AM., https://isna.org/faq/what_is_intersex/ (last visited Jan. 6, 2021).

²⁹ Ilana Gelfman, *Because of Intersex: Intersexuality, Title VII, and the Reality of Discrimination “Because of . . . [Perceived] Sex”*, 34 N.Y.U. REV. L. & SOC. CHANGE 55, 57 (2010) (emphasis omitted) (quoting MORGAN HOLMES, *INTERSEX: A PERILOUS DIFFERENCE* 32 (2008)).

³⁰ Cooper, *supra* note 24, at 238–39.

³¹ Jeré Longman, *Understanding the Controversy over Caster Semenya*, N.Y. TIMES (Aug. 18, 2016), <https://www.nytimes.com/2016/08/20/sports/caster-semenya-800-meters.html>. Since Semenya first came onto the international scene in 2009, there have been unverified reports that she was afflicted with other conditions, such as possessing internal testes and having testosterone levels three times that of average women. *Id.*

³² See Gelfman, *supra* note 29, at 56–57 (discussing other intersex conditions, such as Partial Androgen Insensitivity Syndrome, Congenital Adrenal Hyperplasia, and Klinefelter’s Syndrome).

³³ Cooper, *supra* note 24, at 237–39.

³⁴ Jessica L. Adair, *In a League of Their Own: The Case for Intersex Athletes*, 18 SPORTS LAWS J. 121, 135–36 (2011) (discussing the careers of Polish sprinter Eva Klobukowska and Spanish hurdler María José Martínez-Patiño).

³⁵ Juliet Macur, *Fighting for the Body She Was Born With*, N.Y. TIMES (Oct. 6, 2014), <https://www.nytimes.com/2014/10/07/sports/sprinter-dutee-chand-fights-ban-over-her-testosterone-level.html>.

played a central role in the IAAF's development of its hyperandrogenism regulations that Semenya would eventually challenge in 2018. With her diminutive stature (four feet and eleven inches tall)³⁶ and impoverished upbringing as the child of parents who made "less than \$8 a week as weavers" in Odisha, India,³⁷ Chand would not have been expected to become India's most promising young sprinter. Nonetheless, she gained recognition as a teenager when she won multiple national titles while competing in the junior division.³⁸ Her unexpected success continued on the international stage, where she won gold in both the 200 meters and as a member of the 4x400 meter sprint relay at the 2014 Asian Junior Track and Field Championships.³⁹

Similar to Semenya, Chand's success brought increased attention from the IAAF. During the 2014 season, she was asked by representatives from the Athletics Federation of India (AFI) to submit to a "routine doping test," so the AFI could create a "high performance profile" for her.⁴⁰ Unbeknownst to Chand, the real reason for this testing was to investigate claims that cast into doubt her biological gender.⁴¹ In August of that same year, Chand was notified by the AFI that her androgen levels exceeded the allowable limit established by the IAAF's then-existing regulations relating to athletes with hyperandrogenism, the IAAF Regulations Governing Eligibility of Females with Hyperandrogenism to Compete in Women's Competition (Hyperandrogenism Regulations).⁴² Chand would successfully challenge those regulations in 2014 in *Chand v. AFI & IAAF*, as discussed in Section C below.⁴³

B. Hyperandrogenism

The term "hyperandrogenism" denotes a person who has excessive levels of androgens.⁴⁴ Androgens are a broad category of hormones that trigger and control muscle development and sexual development.⁴⁵

³⁶ Susan Ninan, *Dutee Chand, the Dreamer Who Fought the Good Fight*, ESPN (Dec. 27, 2019), https://www.espn.com/athletics/story/_/id/28371078/dutee-chand-dreamer-fought-good-fight.

³⁷ Mike Ives, *Sprinter Dutee Chand Becomes India's First Openly Gay Athlete*, N.Y. TIMES (May 20, 2019), <https://www.nytimes.com/2019/05/20/world/asia/india-dutee-chand-gay.html>; Amrit Dhillon, *'No One Can Live Without Love': Athlete Dutee Chand, India's LGBT Trailblazer*, GUARDIAN (June 10, 2019, 12:08 AM), <https://www.theguardian.com/world/2019/jun/10/no-one-can-live-without-love-athlete-dutee-chand-indias-lgbt-trailblazer>.

³⁸ *Chand v. Athletics Fed'n of India (AFI) & The Int'l Ass'n of Athletics Fed'ns (IAAF)*, CAS 2014/A/3759, para. 1 (Court of Arbitration for Sport, 2015); see also Ninan, *supra* note 36 (discussing Chand's gold medal sweep in the 100m, 200m, and 400m at the 2013 Indian National School Games).

³⁹ *Chand*, CAS 2014/A/3759 para. 1.

⁴⁰ *Id.* para. 11.

⁴¹ *Id.* para. 13. In a letter from the AFI to the SAI, the Secretary of the AFI stated, "[i]t has been brought to the notice of the undersigned that there are definite doubts regarding the gender of an Athlete Ms. Dutee Chand." *Id.*

⁴² *Id.* paras. 4, 16.

⁴³ *Id.* paras. 547–48.

⁴⁴ Bulent O. Yildiz, *Diagnosis of Hyperandrogenism: Clinical Criteria*, 20 BEST PRAC. & RSCH. CLINICAL ENDOCRINOLOGY & METABOLISM 167, 167 (2006).

⁴⁵ Carrie J. Bagatelli & William J. Bremner, *Androgens in Men – Uses and Abuses*, 334 DRUG THERAPY 707, 707–08 (1996).

Testosterone is just one kind of androgen.⁴⁶ Thus, a woman with hyperandrogenism produces more androgens, usually testosterone, than other women.⁴⁷ In some situations, hyperandrogenism can be present from birth, since “[a] few women are born with differences (or disorders) of sex development (DSD) in which the development of chromosomal, gonadal, and anatomic sex is atypical.”⁴⁸ In other cases, hyperandrogenism can be caused by the interaction of genetic and environmental factors.⁴⁹

The most common medical condition that causes hyperandrogenism is polycystic ovary syndrome (“PCOS”), a hormonal disorder that may cause a woman’s ovaries to accumulate fluid and release eggs irregularly.⁵⁰ PCOS affects between five and ten percent of women worldwide, meaning that a considerable portion of all women could be classified as having hyperandrogenism, like Semenya and Chand, were they to be subjected to the same scrutiny.⁵¹ In addition to PCOS, a wide variety of medical conditions can result in hyperandrogenism, such as congenital adrenal hyperplasia and partial androgen insensitivity syndrome.⁵²

Rather than distinguishing between the different specific causes of hyperandrogenism, the IAAF’s regulations take a more straightforward approach and establish maximum testosterone levels that female athletes cannot exceed. The first iteration of the regulations, the Hyperandrogenism Regulations, set a threshold of ten nanomoles of testosterone per liter of blood (“nmol/L”).⁵³ The most recent version of the regulations, the 2018 Eligibility Regulations for the Female Classification (Athletes with Differences of Sex Development) (the “DSD Regulations”), lowered that threshold to five nmol/L.⁵⁴ “Most women,” in contrast, “including elite female athletes, have natural testosterone levels of 0.12 to 1.79 nanomoles per liter.”⁵⁵ Chand and Semenya’s respective testosterone levels have not been publicly disclosed, due in large part to efforts by the athletes to preserve

⁴⁶ *Id.*

⁴⁷ Rebecca M. Jordan-Young, Peter H. Sönksen & Katrina Karkazis, *Sex, Health, and Athletes*, 348 *BMJ* 1, 1–2 (2014).

⁴⁸ Angelica Lindén Hirschberg, *Hyperandrogenism in Female Athletes*, 104 *J. CLINICAL ENDOCRINOLOGY & METABOLISM* 503, 503 (2019).

⁴⁹ Jordan-Young et al., *supra* note 47, at 1–2.

⁵⁰ Robert L. Barbieri & David A. Ehrmann, *Diagnosis of Polycystic Ovary Syndrome in Adults*, UPTODATE (Aug. 25, 2020), <https://www.uptodate.com/contents/diagnosis-of-polycystic-ovary-syndrome-in-adults>; *Polycystic Ovary Syndrome (PCOS)*, MAYO CLINIC, <https://www.mayoclinic.org/diseases-conditions/pcos/symptoms-causes/syc-20353439> (last visited Feb. 18, 2021).

⁵¹ Barbieri & Ehrmann, *supra* note 50.

⁵² See *DSD Regulations*, *supra* note 13, § 2.2(a) (listing various sexual development disorders that can lead to hyperandrogenism).

⁵³ *Hyperandrogenism Regulations*, *supra* note 13, § 6.5.

⁵⁴ *DSD Regulations*, *supra* note 13, § 2.2(a)(iii).

⁵⁵ Jeré Longman & Juliet Macur, *Caster Semenya Loses Case to Compete as a Woman in All Races*, *N.Y. Times* (May 1, 2019), <https://www.nytimes.com/2019/05/01/sports/caster-semenya-loses.html>.

their privacy, although the IAAF has made clear that they have exceeded the allowable limits.⁵⁶

Many of the aforementioned medical conditions that cause hyperandrogenism can pose serious health risks to those afflicted. For example, polycystic ovary syndrome can lead to infertility, miscarriage, diabetes, or cardiovascular risks.⁵⁷ Despite these types of serious health effects, the IAAF considers hyperandrogenism to offer a competitive advantage: “The difference in athletic performance between males and females is known to be predominantly due to higher levels of androgenic hormones in males resulting in increased strength and muscle development.”⁵⁸

C. *Hyperandrogenism & Anti-Doping Regulations*

Since the initial controversy over Semenya’s presence in IAAF events in 2009, the IAAF has gone through several iterations of rules and regulations that dictate the ways by which intersex athletes can compete in IAAF-sanctioned events. The two most recent iterations of those regulations will be analyzed here. They are the aforementioned Hyperandrogenism Regulations, which were enacted in 2011,⁵⁹ and the 2018 DSD Regulations.⁶⁰ Both were the central focus in the cases brought before the Court of Arbitration for Sport by Semenya and Chand.⁶¹

1. *Anti-Doping Regulations*

Regulation of athletes with hyperandrogenism is closely related to anti-doping regulations, which have already been in place for many years. In contrast to hyperandrogenism, which is a category of genetic conditions that the athletes are born with, there is a litany of performance-enhancing drugs that athletes can voluntarily ingest in order to gain a competitive

⁵⁶ See Chand v. Athletics Fed’n of India (AFI) & The Int’l Ass’n of Athletics Fed’ns (IAAF), CAS 2014/A/3759, paras. 341–43 (Court of Arbitration for Sport, 2015) (recounting testimony by Nick Davies, IAAF Communications Director, in which he explained why he chose to leak to the press news of Semenya’s gender verification testing prior to the 800m final at the 2009 world championships); see also Raheel Saleem, *The Olympic Meddle: The International Olympic Committee’s Intrusion of Athletes’ Privacy Through the Discriminatory Practice of Gender Verification Testing*, 28 J. MARSHALL J. COMPUT. & INFO. L. 49, 50–51 (2010) (critiquing the use of gender verification testing by the IAAF and the International Olympic Committee due to invasiveness and lack of scientific reliability); Annie Bach Yen Nguyen, *Fairness at a Price: Protecting the Integrity of Athletic Competitions at the Expense of Female Athletes*, 8 NOTRE DAME J. INT’L & COMP. L. 54, 56 (2018) (discussing gender verification testing, in particular the justification for its use to ensure fair competition).

⁵⁷ Barbieri & Ehrmann, *supra* note 50.

⁵⁸ *Hyperandrogenism Regulations*, *supra* note 13, at 1.

⁵⁹ Francisco J. Sánchez, María José Martínez-Patiño & Eric Vilain, *The New Policy on Hyperandrogenism in Elite Female Athletes Is Not About “Sex Testing”*, 50 J. SEX RES. 112, 112–13 (2013).

⁶⁰ *DSD Regulations*, *supra* note 13, § 1.1.

⁶¹ *Chand*, CAS 2014/A/3759 para. 4 (Court of Arbitration for Sport, 2015); *Semenya v. Int’l Ass’n of Athletics Fed’ns*, CAS 2018/O/5794 paras. 1–2 (Court of Arbitration for Sport, 2018).

advantage.⁶² The IAAF, like virtually all professional sporting bodies, has strict rules prohibiting performance-enhancing drugs.⁶³ In addition, the World Anti-Doping Agency (“WADA”) oversees and coordinates international anti-doping efforts under the World Anti-Doping Program (“WADP”).⁶⁴ The WADP makes clear that its purpose is to preserve the integrity of the sport and prevent cheating through the use of performance-enhancing drugs. “The purposes of the WADP are: [t]o protect the Athletes’ fundamental right to participate in doping-free sport and thus promote health, fairness and equality for Athletes worldwide. . . .”⁶⁵ Hyperandrogenism is related to performance-enhancing drugs in that both result in athletes competing with higher levels of hormones that can lead to greater muscle development and other such competitive advantages. As such, it comes as no surprise that the following regulations the IAAF enacted in the past decade were structured similarly to anti-doping regulations.

2. *Hyperandrogenism Regulations*

After Semenya’s controversial success at the 2009 World Championships, the IAAF set out to regulate the participation of female athletes with hyperandrogenism in track and field events.⁶⁶ A committee was convened in 2010, and by 2011 it published the Hyperandrogenism Regulations. These regulations “establish[ed] a framework for the determination of the eligibility of females with hyperandrogenism to participate in International Competitions.”⁶⁷ The regulations had a three-tier structure with varying degrees of testing and examination of the particular athlete, ranging from an “Initial Clinical Examination,” to a “Preliminary Endocrine Assessment,” and a full examination.⁶⁸

⁶² Maureen A. Weston, *Doping Control, Mandatory Arbitration, and Process Dangers for Accused Athletes in International Sports*, 10 PEPP. DISP. RESOL. L.J. 5, 6–7 (2009).

⁶³ Ulrik Wagner, *Towards the Construction of the World Anti-Doping Agency: Analyzing the Approaches of FIFA and the IAAF to Doping in Sport*, 11 EUR. SPORT MGMT. Q. 445, 455 (2011); see also *Book of Rules*, WORLD ATHLETICS, <https://www.worldathletics.org/about-iaaf/documents/book-of-rules> (last visited Jan. 6, 2021) (containing the IAAF’s anti-doping rules and regulations).

⁶⁴ Weston, *supra* note 62, at 24.

⁶⁵ *Id.* (quoting WORLD ANTI-DOPING AGENCY, WORLD ANTI-DOPING CODE 11 (2009), https://www.wada-ama.org/sites/default/files/resources/files/wada_anti-doping_code_2009_en_0.pdf); see also Michael S. Straubel, *Doping Due Process: A Critique of the Doping Control Process in International Sport*, 106 DICK. L. REV. 523, 531 (2002) (raising due process concerns regarding anti-doping policies that can be detrimental to athletes’ careers if they have a false positive and are unable to effectively appeal any punishment they receive).

⁶⁶ Press Association, *IAAF Approves New Rules on Hyperandrogenism*, GUARDIAN (Apr. 12, 2011, 7:43 AM), <https://www.theguardian.com/sport/2011/apr/12/iaaf-athletics-rules-hyperandrogenism-caster-semenya>.

⁶⁷ *Hyperandrogenism Regulations*, *supra* note 13, § 1.1.

⁶⁸ *Id.* § 5.1. The IAAF and IOC have been roundly criticized for the invasiveness of gender verification testing involved in these recent regulations, as well as over many decades. For a historical perspective on gender verification testing in athletics, see Adair, *supra* note 34, at 132–35. See also Cooper, *supra* note 24, at 252–56 (criticizing current IAAF gender testing policies as human rights violations).

The initial investigatory process could be initiated in two ways. First, a female athlete who was already aware that she had hyperandrogenism was required to notify the IAAF of her status.⁶⁹ In the alternative, an IAAF official known as the Medical Manager was vested with the power to investigate athletes suspected of having hyperandrogenism, by “initiat[ing] a confidential investigation of any female athlete if he has reasonable grounds for believing that a case of hyperandrogenism may exist.”⁷⁰ The “reasonable grounds” by which this investigation could be initiated were far-ranging. They could include the results of a previous anti-doping test, or, much more broadly, a confidential tip from any source, “*information* received by the IAAF . . . or other responsible medical official at a competition.”⁷¹ In either case, the three-tier testing procedures would follow.

Depending on the particular facts of the athlete’s case, either Level 1 or Level 2 testing would begin. Level 1 testing involved a basic medical examination of the athlete known as an “Initial Clinical Examination.”⁷² In almost all cases, a Level 1 examination would occur prior to a Level 2 Preliminary Endocrine Assessment.⁷³ If the athlete was asked to undergo Level 2 testing, then they would provide urine and blood samples for testing.⁷⁴

Following testing under either Level 1 or 2, the IAAF Medical Manager would review the results and determine whether the athlete’s case should be referred to an Expert Medical Panel.⁷⁵ In that case, the Expert Medical Panel, which was comprised of experienced medical professionals within the IAAF, would review all medical results and determine if “a full examination and diagnosis [was] required under Level 3.”⁷⁶ If Level 3 testing was ordered, then the athlete would “submit to a full examination at an IAAF-approved specialist reference centre so that a final and precise diagnosis of the athlete whenever possible [could] be carried out.”⁷⁷ These results were then transmitted back to the Expert Medical Panel for a final determination of the athlete’s eligibility to compete.⁷⁸ The Expert Medical Panel’s final determination would be based almost entirely on a determination of whether or not the athlete’s testosterone levels exceeded the maximum range established by the regulations.⁷⁹ That threshold was ten nanomoles per liter of blood.⁸⁰ The language of the regulations was such that the Panel had little discretion to permit an athlete to compete if she exceeded

⁶⁹ *Hyperandrogenism Regulations*, *supra* note 13, § 2.1.

⁷⁰ *Id.* § 2.2.

⁷¹ *Id.* § 2.2.1–.5 (emphasis added).

⁷² *Id.* § 5.2–.6.

⁷³ *Id.* § 5.9.

⁷⁴ *Id.* § 5.8.

⁷⁵ *Id.* § 5.13.

⁷⁶ *Id.* § 5.22.

⁷⁷ *Id.* § 5.26.

⁷⁸ *Id.* § 6.4–.5.

⁷⁹ *Id.* § 6.5.

⁸⁰ *Id.*

that level, stating that “[t]he Expert Medical Panel *shall* recommend that the athlete is eligible to compete in women’s competition if . . . she has androgen levels below the normal male range.”⁸¹ In the case that the athlete exceeded that level, the Panel was directed to describe conditions under which the athlete could return to competition after undergoing hormone suppression treatment.⁸² These Hyperandrogenism Regulations were eventually struck down in *Chand v. IAAF* due to a lack of scientific evidentiary support to establish the ten nanomole per liter threshold,⁸³ as discussed in Part II.

3. DSD Regulations

In November 2018, the IAAF enacted the DSD Regulations.⁸⁴ These largely mimic the Hyperandrogenism Regulations in terms of the process for IAAF officials initiating an investigation and the resulting testing procedures of athletes suspected to have excessive testosterone levels.⁸⁵ However, the DSD Regulations differ from the Hyperandrogenism Regulations in several important ways. Furthermore, these differences reflect the arbitration panel’s criticism of the Hyperandrogenism Regulations (to be discussed in Section II).

First and foremost, the DSD Regulations are more targeted both in terms of the athletes and the events that are impacted. In recognition of the wide range of conditions that can lead to hyperandrogenism, the regulations affect only those athletes with differences of sexual development (“DSD”). This term refers to “congenital conditions that cause atypical development of [the athlete’s] chromosomal, gonadal, and/or anatomic sex.”⁸⁶ Thus, the new regulations exclude other conditions, such as PCOS, that can also cause hyperandrogenism.⁸⁷ Those athletes with a DSD are considered “Relevant Athlete[s],” as determined by criteria laid out in section 2.2(a).⁸⁸

In addition to applying only to athletes with a DSD, these new regulations also only apply to certain “Restricted Events.”⁸⁹ That term covers the events ranging in distance from 400 meters to one mile.⁹⁰ If a Relevant Athlete wishes to compete in a Restricted Event, then she is subject to the “Eligibility Conditions” set forth in section 2.3.⁹¹ The most important

⁸¹ *Id.* (emphasis added).

⁸² *Id.* § 6.8.

⁸³ *Chand v. Athletics Fed’n of India & The Int’l Ass’n of Athletics Fed’ns (IAAF)*, CAS 2014/A/3759 para. 547–48 (Court of Arbitration for Sport, 2015).

⁸⁴ *DSD Regulations*, *supra* note 13, § 1.4.

⁸⁵ *Id.* § 3A–3C.

⁸⁶ *Id.* § 1.1(b)(ii).

⁸⁷ IAAF HEALTH & SCI. DEP’T, ELIGIBILITY REGULATIONS FOR THE FEMALE CLASSIFICATION (ATHLETES WITH DIFFERENCES OF SEX DEVELOPMENT): EXPLANATORY NOTES/Q&A 5 (2019) [hereinafter *DSD REGULATIONS EXPLANATORY NOTES*].

⁸⁸ *DSD Regulations*, *supra* note 13, at § 2.2(a).

⁸⁹ *Id.* § 2.2(b).

⁹⁰ *Id.*

⁹¹ *Id.* § 2.3.

of these conditions is that the athlete must have a blood testosterone level below five nanomoles per liter.⁹² If she exceeds that amount, then she must reduce and maintain her blood testosterone level below that threshold for a period of six months before returning to competition and in perpetuity thereafter.⁹³ Those athletes who choose not to take medication to reduce their testosterone levels will still be eligible to compete in non-international competitions or in international IAAF-sanctioned competitions, but not in the Restricted Events.⁹⁴ Semenya, like Chand, challenged the validity of these regulations.⁹⁵ However, the DSD Regulations were upheld⁹⁶ for reasons discussed in Part II.

D. *Court of Arbitration for Sport*

Chand and Semenya's respective challenges to the Hyperandrogenism and DSD Regulations were heard by the Court of Arbitration for Sport ("CAS"). The CAS provides various dispute resolution services, such as arbitration panels that "facilitate the settlement of sports-related disputes through arbitration or mediation by means of procedural rules adapted to the specific needs of the sports world."⁹⁷ The CAS was originally established by the International Olympic Committee ("IOC") in 1984, but has since become the venue for dispute resolution for a wide range of international sports and issues that transcend individual sports, such as the use of performance-enhancing drugs.⁹⁸ The work of the CAS is "divided into Ordinary and Appellate divisions."⁹⁹ Regardless of the division, matters before the CAS are heard by a panel of members selected to serve as independent arbitrators.¹⁰⁰ The parties to the matter are permitted to select the arbitrators that will hear their case from a list provided by CAS.¹⁰¹ Additionally, the parties can select the substantive law that will be applied

⁹² DSD REGULATIONS EXPLANATORY NOTES, *supra* note 87, at 3–6.

⁹³ *DSD Regulations*, *supra* note 13, § 2.3(b)–(c).

⁹⁴ IAAF Introduces New Eligibility Regulations for Female Classification, WORLD ATHLETICS (Apr. 26, 2018), <https://www.worldathletics.org/news/press-release/eligibility-regulations-for-female-classifica>.

⁹⁵ Laine Higgins, *Caster Semenya Loses Challenge to Rule on Testosterone Levels*, WALL ST. J. (May 1, 2019, 2:19 PM), <https://www.wsj.com/articles/caster-semenya-loses-challenge-to-rule-on-testosterone-levels-11556734768>.

⁹⁶ *Id.*

⁹⁷ *Frequently Asked Questions*, CT. ARB. FOR SPORT, <https://www.tas-cas.org/en/general-information/frequently-asked-questions.html> (last visited Jan. 6, 2021).

⁹⁸ Eric T. Gilson, *Exploring the Court of Arbitration for Sport*, 98 L. LIBR. J. 503, 504–06 (2006). For in-depth discussion of the benefits and drawbacks of the CAS, particularly in the context of anti-doping efforts, see Melissa Hewitt, *An Unbalanced Act: A Criticism of How the Court of Arbitration for Sport Issues Unjustly Harsh Sanctions by Attempting to Regulate Doping in Sport*, 22 IND. J. GLOB. LEGAL STUD. 769, 777–83 (2015).

⁹⁹ Gilson, *supra* note 98, at 505.

¹⁰⁰ *Id.*

¹⁰¹ *Id.*

to their case, although the procedure of the arbitration follows CAS code.¹⁰² The Ordinary Division acts as a trial court and hears matters that have initially been filed with the CAS.¹⁰³ The Appellate Division, in contrast, serves an appellate function similar to that of the circuit courts in the United States. This division “handle[s] appeals from the decisions of sports federations, associations, or sports-related bodies.”¹⁰⁴

II. ANALYSIS

A. *Deficiencies of IAAF Policies for Intersex Athletes*

Prior to assessing the reasons for the different outcomes in the cases brought by Chand and Semenya, it is necessary to interrogate the justifications the IAAF has provided for all of its hyperandrogenism regulations. The IAAF has consistently relied on a two-part justification for its regulations. First, it has claimed they are necessary in order to preserve the fairness and integrity of the sport.¹⁰⁵ Second, it has alleged that there is sufficient scientific evidence indicating that increased testosterone levels confer a competitive advantage.¹⁰⁶ According to the IAAF, the competitive advantage conferred by hyperandrogenism is simply too significant, since “[t]o the best of [the IAAF’s] knowledge, there is no other genetic or biological trait encountered in female athletics that confers such a huge performance advantage.”¹⁰⁷ These justifications both implicitly and explicitly make use of the inherent need to divide competitors based on sex. However, they also have several important shortcomings that can be instructive in formulating new, more inclusive policies.

1. *Claims of the Need to Preserve Fair Competition*

Throughout both the Hyperandrogenism and DSD Regulations, as well as in briefs submitted to the CAS in defense of those regulations, the IAAF repeatedly emphasized the need to uphold the clear distinction between the male and female categories for the sake of preserving the fairness of the sport. The introduction of the DSD Regulations plainly states, “The IAAF wants athletes to be incentivised to make the huge commitment and sacrifice required to excel in the sport It does not want to risk discouraging those aspirations by having unfair competition conditions that deny athletes a fair opportunity to succeed.”¹⁰⁸ The Preface to the Hyperandrogenism Regulations made a similarly explicit reference to the underlying principles

¹⁰² *Id.* at 505–06.

¹⁰³ *Id.* at 506.

¹⁰⁴ *Id.*

¹⁰⁵ DSD REGULATIONS EXPLANATORY NOTES, *supra* note 87, at 1.

¹⁰⁶ *Id.* at 2 n.5.

¹⁰⁷ *Id.* at 7.

¹⁰⁸ *DSD Regulations*, *supra* note 13, § 1.1(a)(i).

of “[a] respect for the very essence of the male and female classifications in Athletics,” as well as “[a] respect for the fundamental notion of fairness of competition in female Athletics.”¹⁰⁹

In light of this need for fairness, the IAAF portrayed hyperandrogenism and related conditions as conferring such a competitive advantage that they threatened to fundamentally undermine the fairness of the sport. This was especially true in the DSD Regulations. In explanatory notes accompanying those regulations when they were released to the public on May 1, 2019, the IAAF stated that female athletes competing with elevated testosterone levels would have a roughly nine percent competitive advantage compared to their competitors that have normal levels of testosterone.¹¹⁰ It is not entirely clear where this degree of a competitive advantage was calculated from. As will be discussed in the next section, even the IAAF’s own study on the competitive advantage conferred by hyperandrogenism did not arrive at this value.¹¹¹

2. *Scientific Justifications for the Regulations*

In its defenses of both the Hyperandrogenism and the DSD Regulations, the IAAF fully acknowledged that it was impossible to pinpoint exactly the degree to which excess testosterone due to hyperandrogenism would provide a competitive advantage.¹¹² Nonetheless, it justified the testosterone thresholds of the respective regulations as being defensible because there was some degree of a competitive advantage, even if that exact degree of advantage was indeterminable.¹¹³

The central number in the Hyperandrogenism Regulations was the ten nmol/L testosterone threshold.¹¹⁴ Rather than conducting its own analysis of elite female athletes to reach that particular number, the IAAF merely referenced the broad scientific consensus of what were considered the permissible ranges for male and female athletes.¹¹⁵ At the time that the Hyperandrogenism Regulations were enacted, the IAAF posited that “established endocrinology textbooks” generally agreed that the lower limit of average testosterone levels in males was 6.9 nmol/L.¹¹⁶ By comparison,

¹⁰⁹ *Hyperandrogenism Regulations*, *supra* note 13, at 2.

¹¹⁰ DSD REGULATIONS EXPLANATORY NOTES, *supra* note 87, at 2.

¹¹¹ See Stéphane Bermon & Pierre-Yves Garnier, *Serum Androgen Levels and Their Relation to Performance in Track and Field: Mass Spectrometry Results from 2127 Observations in Male and Female Elite Athletes*, 51 BRIT. J. SPORTS MED. 1309, 1309–11 (2017) (lacking any discussion, in the study that formed the scientific basis of the DSD regulations, of a nine percent competitive advantage for DSD athletes).

¹¹² DSD REGULATIONS EXPLANATORY NOTES, *supra* note 87, at 1–3, 5.

¹¹³ *Id.*

¹¹⁴ *Hyperandrogenism Regulations*, *supra* note 13, § 6.5.

¹¹⁵ IAAF to Introduce Eligibility Rules for Females with Hyperandrogenism, WORLD ATHLETICS (Apr. 12, 2011), <https://www.worldathletics.org/news/iaaf-news/iaaf-to-introduce-eligibility-rules-for-femal-1>.

¹¹⁶ Sánchez et al., *supra* note 59, at 113.

the ten nmol/L threshold of the Hyperandrogenism Regulations appeared “more liberal” and, thus, more palatable.¹¹⁷

The IAAF made this appeal to having a generally liberal standard because, as it fully acknowledged, it was not possible to determine the precise degree of competitive advantage conferred by hyperandrogenism: “[the IAAF] acknowledged that there may be other contributing factors to the difference in athletic performance between men and women.”¹¹⁸ The scientific evidence was still justifiable, it claimed, because “no other known factors show such a clear-cut difference between women and men,” and “testosterone remains the most suitable differentiating factor.”¹¹⁹ This reasoning is flawed. Determining that testosterone is merely an important factor in athletic performance is not equivalent to determining precisely how much it impacts athletic performance, and whether that impact is impermissibly significant.

Fortunately, the CAS struck down the Hyperandrogenism Regulations largely based on their scientific deficiencies. It found “the IAAF was unable to demonstrate with scientific certainty that there is no difference between the effects of endogenous [internally-produced] and exogenous [externally-provided] testosterone on athletic performance.”¹²⁰ In other words, the panel found “insufficient evidence about the *degree* of the advantage.”¹²¹ The CAS charged the IAAF to gather more evidence to justify this type of discriminatory regulation. Such evidence would more conclusively establish the “quantitative relationship between enhanced testosterone levels and improved athletic performance in hyperandrogenic athletes.”¹²² In the meantime, the CAS panel suspended the testosterone rule for two years.¹²³ The result of that evidence gathering would be the DSD Regulations that Caster Semenya challenged in 2019.

The IAAF responded to the CAS ruling in *Chand* by seeking out more targeted data by looking inward to its own athletes.¹²⁴ With the rise of anti-doping policies over the past decade, the IAAF began drug testing athletes a regular basis.¹²⁵ This enabled the IAAF to compile an extensive

¹¹⁷ *Id.*

¹¹⁸ *Chand v. Athletics Fed’n of India (AFI) & The Int’l Ass’n of Athletics Fed’ns (IAAF)*, CAS 2014/A/3759 para. 469 (Court of Arbitration for Sport, 2014).

¹¹⁹ *Id.* (emphasis omitted).

¹²⁰ *Id.* para. 491.

¹²¹ *Id.* para. 522.

¹²² *Id.* para. 547.

¹²³ *Id.* para. 548.

¹²⁴ *Semenya v. Int’l Ass’n of Athletics Fed’ns*, CAS 2018/O/5794 para. 8–12 (Court of Arbitration for Sport, 2018).

¹²⁵ See Stéphane Bermon & Pierre-Yves Garnier, *Serum Androgen Levels and Their Relation to Performance in Track and Field: Mass Spectrometry Results from 2127 Observations in Male and Female Elite Athletes*, 51 BRITISH J. SPORTS MED. 1309, 1310 (2017) (noting how all competitors at world championship track and field competitions are required to undergo drug testing throughout their time at the competitions and, more specifically, immediately after “intense exercise”).

body of data on virtually all competitors at recent international competitions. It then used this data to conduct a study that would form a stronger scientific basis for revised regulations for intersex athletes.¹²⁶

That study, published in 2017 by Stéphane Bermon and Pierre-Yves Garnier, two medical researchers affiliated with the IAAF, analyzed the androgen levels of a total of 2,127 athletes that competed at the 2011 IAAF World Championships in Daegu, South Korea, and the 2013 IAAF World Championships in Moscow, Russia.¹²⁷ The study grouped the athletes by the event they competed in and their single best performance in that event.¹²⁸ Those performances were then compared to the androgen levels present in the blood samples that they provided at the beginning of the competition.¹²⁹ The study found that twenty-four athletes had testosterone levels above 3.08 nmol/L.¹³⁰ Of those twenty-four, nine were later discovered to be using performance-enhancing drugs, while another nine were diagnosed with having hyperandrogenism.¹³¹ More importantly, the study found that in certain events, female athletes with elevated testosterone levels enjoyed a statistically significant competitive advantage “[i]n female 400 m, 400 m hurdles, 800 m, hammer throw and pole vault, high [testosterone] concentration is associated with a higher (from 1.8% to 4.5%) level of athletic performance when compared with competitors with low [testosterone].”¹³² It was upon the results of this study that the IAAF based the DSD Regulations.

Despite this more targeted basis, the DSD Regulations still cannot establish the precise degree of competitive advantage conferred on athletes with hyperandrogenism. Bermon and Garnier admit as much: “Our study design cannot provide evidence for causality between androgen levels and athletic performance, but can indicate associations between androgen concentrations and athletic performance.”¹³³ Hence, the IAAF responded to the CAS panel’s charge in *Chand* to provide scientific evidence of a stronger link between elevated testosterone levels and athletic performance by constructing a study that, although more targeted and based on data from current elite athletes, was still only able to demonstrate mere “associations” between testosterone levels and athletic performance.¹³⁴ Herein lies the shortcoming of any attempt to justify regulations on athletes with hyperandrogenism through science-based arguments: the process of training to become a world-class athlete involves an incalculable number of different

¹²⁶ *Id.*

¹²⁷ *Id.*

¹²⁸ *Id.*

¹²⁹ *Id.*

¹³⁰ *Id.*

¹³¹ *Id.*

¹³² *Id.* at 1313.

¹³³ *Id.* at 1311.

¹³⁴ *Id.*

factors. Each athlete has a different diet, training plan, injury history, and genetic makeup. Regardless of a respective athlete's testosterone levels, their athletic achievement is dependent on the combination of a host of factors, one of which happens to be their hormonal composition.

Ultimately, the overstated importance of the testosterone threshold is made evident by the fact that both Chand and Semenya were not deemed ineligible because their precise testosterone levels exceeded the allowable limit. Chand only underwent preliminary testing conducted by the AFI, but did not submit to the three-stage process of medical examination dictated by the Hyperandrogenism Regulations.¹³⁵ Based on her refusal, the IAAF and AFI assumed that her testosterone levels exceeded the 10nmol/L threshold without actually testing her.¹³⁶ Similarly, Semenya did not undergo the examination required by the DSD Regulations.¹³⁷ She had already filed her initial challenge of the regulations with the CAS on June 18, 2018, nearly five months before the regulations officially went into effect on November 1, 2018.¹³⁸ Analyzing the scientific underpinnings of the IAAF's various regulations for intersex athletes reveals the inherent impossibility of demonstrating just how much of a competitive advantage hyperandrogenism provides athletes. The fact that hyperandrogenism conflicts with the basic male/female division of the sport consequently leads governing and adjudicatory bodies to uphold the regulations and jeopardize the careers of promising young athletes.

B. *Deficiencies of Legal Reasoning Upholding IAAF Policies*

In spite of the scientific shortcomings of the different iterations of the regulations, the true legal deficiencies of the regulations lay in their discriminatory nature. In both cases brought by Chand and Semenya, the CAS employed a two-part legal analysis. The initial burden was on the athlete to prove that the regulations were discriminatory.¹³⁹ Upon establishing the initial burden, the question then became whether the regulations were necessary, reasonable, and proportionate to justify the discriminatory effect on intersex athletes.¹⁴⁰ At that time, the burden shifted to the IAAF.¹⁴¹ In *Chand*, the IAAF conceded, and the CAS accepted, that the regulations at issue were *prima facie* discriminatory, whereas in *Semenya*, the IAAF defended the DSD regulations as nondiscriminatory but

¹³⁵ Chand v. Athletics Fed'n of India (AFI) & The Int'l Ass'n of Athletics Fed'ns (IAAF), CAS 2014/A/3759 para. 36 (Court of Arbitration for Sport, 2015).

¹³⁶ *Id.*

¹³⁷ Semenya v. Int'l Ass'n of Athletics Fed'ns, CAS 2018/O/5794 para. 13–14 (Court of Arbitration for Sport, 2018).

¹³⁸ *Id.*

¹³⁹ *Chand*, CAS 2014/A/3759 paras. 449–50.

¹⁴⁰ *Id.*

¹⁴¹ *Id.* para. 450.

the CAS nonetheless determined that Semenya had established a case that the regulations were prima facie discriminatory.¹⁴² The more salient issue, particularly in *Semenya*, was whether the regulations were necessary, reasonable, and proportionate and thus justified in their discriminatory impact.

1. *Semenya v. IAAF*

The CAS panel focused primarily on the proportionality of the DSD Regulations to determine whether they were necessary and reasonable, noting that “the criterion for reasonableness is whether the restrictions imposed by the DSD Regulations are rationally connected to their objective of ensuring fair competition for female athletes in elite athletics.”¹⁴³ To prove this rational and proportionate connection, the IAAF once again asserted its obligation to ensure fair competition. It characterized the DSD Regulations as “‘an extremely progressive and fair compromise’ between . . . the right of female athletes to compete separately from men so that they have the same opportunity to excel, and . . . the desire of ‘certain biologically male athletes with female gender identities’ to compete in the female category of competition.”¹⁴⁴ In particular, it pointed to the fact that the DSD Regulations applied only to the Restricted Events. The IAAF claimed that the regulations were targeted to apply only to those events in which there was a statistically demonstrated competitive advantage.¹⁴⁵ Thus, this constituted a rational connection between the threat of athletes with hyperandrogenism having a competitive advantage, and the solution of preventing them from competing in events in which that advantage would be particularly high. The CAS panel agreed with this argument, explaining that “the Regulations do not apply to all events but only to those Restricted Events for which evidence is relied on to demonstrate a practical performance advantage.”¹⁴⁶ Therefore, the panel found the regulations, as applied to Relevant Athletes competing in Restricted Events, to be necessary based on the scientific evidence compiled in the Berman and Garnier study.¹⁴⁷

The CAS panel appears to have upheld the regulations because it implicitly adopted the IAAF’s reasoning that the significant impact on a few athletes, namely Caster Semenya, was justified for the broader purpose of preserving the crucial male-female competition distinction within the sport as a whole. Closer scrutiny of the CAS’s implicitly biased reasoning reveals this balancing decision. For example, the Restricted Events in the DSD Regulations do not perfectly mirror the events that the Berman and Garnier study deemed most apt to provide significant competitive advantages to

¹⁴² *Id.* para. 448; *Semenya*, CAS 2018/O/5794 paras. 546–47.

¹⁴³ *Semenya*, CAS 2018/O/5794 para. 583.

¹⁴⁴ *Id.* para. 285 (emphasis omitted, internal quotations omitted).

¹⁴⁵ *Id.* para. 301.

¹⁴⁶ *Id.* para. 583.

¹⁴⁷ *Id.* paras. 606–09.

athletes with hyperandrogenism. Rather, the Restricted Events appear to specifically target Semenya, in direct contradiction of the study's results.

The Restricted Events range from the 400 meters to the one mile¹⁴⁸—the races in which a middle distance runner like Semenya competes.¹⁴⁹ The Regulations themselves allude to this possible targeting, particularly in § 1.1(d): “These Regulations accordingly permit such [intersex] athletes to compete in the female classification in the events that currently appear to be most clearly affected only if they meet the Eligibility Conditions”¹⁵⁰ The Bermon and Garnier study did not conclude that exact range of events was most prone to providing a competitive advantage to athletes with hyperandrogenism. Rather, it identified other events—hammer throw and pole vault—in which athletes with hyperandrogenism would have a significant competitive advantage.¹⁵¹ The only noticeable difference between events like the 400m and 800m races and field events like hammer throw and pole vault is that those field events were not being dominated by famous (or infamous) hyperandrogenous athletes. Similarly, the CAS expressed misgivings about the inclusion of the mile and the 1500 meter run as Restricted Events due to “a speculative assumption that since female athletes who compete successfully in the 800m often also compete successfully in those longer events . . . [and those] athletes are likely to enjoy a significant performance advantage over other female athletes in those two events.”¹⁵² The Regulations were nonetheless upheld as proportionate “*in toto*.”¹⁵³ Thus, the CAS fully identified that the IAAF had formulated the DSD Regulations specifically for the purpose of preventing Caster Semenya from continuing to compete in IAAF competitions, yet still determined that the regulations were necessary, reasonable, and proportionate. This outcome can be attributed to the structural obstacle with which intersex athletes must contend.

The CAS is an international body of arbitration that focuses broadly on matters affecting entire sporting organizations or even countries. Its focus is thus similar to that of the IAAF: ensure as much inclusiveness as possible while prioritizing the perceived fairness of the sport of track and field so that it can continue in perpetuity. If the CAS ruled that the targeted DSD Regulations were unreasonable, unnecessary, and disproportionate, then that would have created an even greater problem that the IAAF would have had to confront. By ruling as it did, the CAS ensured administrative ease for the IAAF and a just outcome for the majority of athletes, all of whom are not intersex.

¹⁴⁸ *DSD Regulations*, *supra* note 13, at § 2.2(b).

¹⁴⁹ *Athlete Profile: Caster Semenya*, *supra* note 11.

¹⁵⁰ *DSD Regulations*, *supra* note 13, at § 1.1(d).

¹⁵¹ Bermon & Garnier, *supra* note 125, at 1314.

¹⁵² *Semenya v. Int'l Ass'n of Athletics Fed'ns*, CAS 2018/O/5794 para. 609 (Court of Arbitration for Sport, 2018).

¹⁵³ *Id.*

C. *Policy Considerations of the Applicability of American Equal Protection Law*

1. *Title VII*

The fundamental difficulty of enacting regulations that are both inclusive and ensure fairness of the sport is that hyperandrogenism and other such intersex conditions conflict with the fundamental division of the sport: biological males competing against biological males and biological females competing against biological females. This fundamental obstacle for athletes like Semenya implicitly justifies their discriminatory treatment. Even in the context of American equal protection jurisprudence, the same fundamental obstacle would persist.

Semenya's challenge to the DSD Regulations bears many similarities to a discrimination claim that would be filed in an American court. Semenya herself used traditional equal protection language in her arguments against the DSD Regulations: "the DSD Regulations unfairly discriminate against athletes on the basis of sex and/or gender because they only apply (i) to female athletes; and (ii) to female athletes having certain physiological traits."¹⁵⁴ Semenya alleged that the regulations were discriminatory, based on no sound scientific basis, and disproportionate in their impact on certain athletes.¹⁵⁵ According to Semenya, the regulations placed restrictions on athletes who had not undertaken any actions in order to gain a supposed competitive advantage: "The Regulations restrict the ability of some female athletes to compete based solely on a natural or genetic trait which they have possessed since birth and over which they have no control."¹⁵⁶ The regulations were therefore patent sex discrimination: "The Regulations impose thresholds and burdens (such as screening for high testosterone, invasive medical examinations, and eligibility restrictions) on female athletes, while no equivalent requirements are applied to male athletes."¹⁵⁷

Although the claim mirrors a sex discrimination claim, if Semenya filed it under Title VII of the Civil Rights Act of 1964 in an American court,¹⁵⁸ she would still encounter the same structural issue. Title VII applies in the employment context and prohibits disparate treatment and disparate impact on the basis of "race, color, religion, sex, or national origin."¹⁵⁹ The statute is an especially powerful tool in the employment context for preventing sex discrimination.¹⁶⁰ The problem that Semenya would encounter, though, is that Title VII is also structured on the basic distinction between male and

¹⁵⁴ *Id.* para 2.

¹⁵⁵ *Id.*

¹⁵⁶ *Id.* para. 51.

¹⁵⁷ *Id.*

¹⁵⁸ 42 U.S.C. § 2000e-2.

¹⁵⁹ *Id.* at § 2000e-2(a)(1); Gelfman, *supra* note 29, at 61.

¹⁶⁰ Mark E. Berghausen, *Intersex Employment Discrimination: Title VII and Anatomical Sex Nonconformity*, 105 NW. L. REV. 1281, 1282 (2011).

female categories.¹⁶¹ This is because the adjudicatory process for a Title VII claim, under either disparate impact or disparate treatment analysis, is that of comparing the two categories of genders:

Whether the discrimination is demonstrated in the treatment or in its impact, Title VII doctrine requires comparison of groups in order to show discrimination. The intent of the employer is irrelevant; it is the comparison that matters. In sex discrimination cases, this focus on comparison means one thing: the comparison of men and women. In order to determine whether employment discrimination “because of . . . sex” has occurred, courts ask “whether or not men and women were treated differently,” and “whether similarly situated and similarly available men and women have been treated differently from each other.”¹⁶²

A similar logic persists in the CAS analysis. Without a clearly discernible category in which to place intersex individuals, it was not clear which protections, if any, were necessary for people who could not be categorized.¹⁶³ In the face of this ambiguity, the IAAF’s countervailing argument to preserve fair play and equal competition, bolstered by tangentially applicable scientific research, was sufficiently strong to pass judicial muster.¹⁶⁴

In fact, rather than increasing Semenya’s chances of winning her legal claim, American equal protection law would very likely lead to the opposite outcome. The IAAF seemingly emulated American equal protection jurisprudence when it enacted the DSD Regulations by classifying female athletes as “a protected class.”¹⁶⁵ Doing so enabled the IAAF to draw parallels between the need for equal opportunities for female and male athletes.¹⁶⁶ It portrayed the DSD Regulations as “a progressive and fair compromise” between enabling female athletes to “have a separate category of competition from the men so that they have the same chances to excel,” while, at the same time, providing an opportunity for “certain biologically male athletes with female gender identities to compete in the female category of competition” by undergoing hormone therapy.¹⁶⁷

¹⁶¹ Gelfman, *supra* note 29, at 57–58.

¹⁶² *Id.* at 60–61 (footnotes omitted).

¹⁶³ Semenya v. Int’l Ass’n of Athletics Fed’ns, CAS 2018/O/5794 para. 51 (Court of Arbitration for Sport, 2018).

¹⁶⁴ *Id.* paras. 1–4.

¹⁶⁵ *Id.* para. 456 (emphasis omitted).

¹⁶⁶ *Id.*

¹⁶⁷ *Id.* para. 462 (emphasis omitted).

2. Title IX

Semenya would also likely lose if she were to file a Title IX claim.¹⁶⁸ Enacted as part of the Education Amendments of 1972, Title IX was intended to “remedy to some extent sex discrimination in education” by requiring equality of sporting and educational opportunities for male and female students.¹⁶⁹ In the ensuing forty years since its enactment, the law has, among other achievements, led to millions of girls having the opportunity to play competitive sports in both high school and college.¹⁷⁰ In addition, Title IX has increasingly been used to provide transgender student-athletes an equal opportunity to participate in high school sports.¹⁷¹ This was the case for two high school students in Connecticut, Andraya Yearwood of Cromwell High School and Terry Miller of Bloomfield High School.¹⁷² Following a change of policy by the Connecticut Interscholastic Athletic Conference to allow transgender students to immediately begin competing in conformity with their gender identity, Yearwood and Miller began competing as females in the 2016-17 school year.¹⁷³ Since then, the two have won numerous state championships in indoor and outdoor track and field in running events ranging from 55 to 300 meter distances.¹⁷⁴ These athletes, like Caster Semenya, have faced considerable criticism from those who claim that their transgender status gives them a competitive advantage.¹⁷⁵ This criticism culminated in June 2019 when the Alliance Defending Freedom filed a Title IX complaint with the U.S. Department of Education on behalf of three Connecticut high school students.¹⁷⁶ This complaint is noteworthy because it makes virtually the same argument that

¹⁶⁸ 20 U.S.C. § 1681.

¹⁶⁹ Margaret E. Juliano, *Forty Years of Title IX: History and New Applications*, 14 DEL. L. REV. 83, 83 (2013).

¹⁷⁰ See *id.* at 90 (discussing the history of Title IX and critiquing the still-present gender disparity in certain aspects of athletic participation, such as scholarships, equipment, and facilities).

¹⁷¹ Scott Skinner-Thompson & Ilona M. Turner, *Title IX’s Protections for Transgender Student Athletes*, 28 WIS. J.L. GENDER & SOC’Y 271, 279–80 (2013).

¹⁷² Samantha Pell, *Girls Say Connecticut’s Transgender Athlete Policy Violates Title IX, File Federal Complaint*, WASH. POST (June 19, 2019, 7:44 PM), <https://www.washingtonpost.com/sports/2019/06/19/girls-say-connecticuts-transgender-athlete-policy-violates-title-ix-file-federal-complaint/>.

¹⁷³ *Id.*; CONN. INTERSCHOLASTIC ATHLETIC CONF., 2019–2020 HANDBOOK, § 3.0, art. IX, § B (2017), http://www.casciac.org/pdfs/ciachandbook_1920.pdf.

¹⁷⁴ Dan Brechlin, *Connecticut High School Transgender Athletes ‘No Longer Want to Remain Silent’ Following Title IX Complaint*, HARTFORD COURANT (June 20, 2019), <https://www.courant.com/sports/high-schools/hc-sp-transgender-policy-runners-respond-20190619-20190620-5x2c7s2f5jb6dnw2dwpftiw6ru-story.html>; Cam Smith, *Connecticut Transgender Sprinter Andraya Yearwood Wins Two State Titles Amidst Controversy*, USA TODAY (June 7, 2017, 3:33 PM), <https://usatodayhss.com/2017/connecticut-transgender-sprinter-andraya-yearwood-wins-two-state-titles-amidst-controversy>.

¹⁷⁵ See Dave Zirin, *Transphobia’s New Target is the World of Sports*, THE NATION (Mar. 5, 2019), <https://www.thenation.com/article/archive/trans-runner-daily-caller-terry-miller-andraya-yearwood-martina-navratilova/> (recounting criticism of Miller and Yearwood by an article posted to *The Daily Caller* that “advance[d] the idea that young trans-women . . . are invading girls and womens [sic] sports”).

¹⁷⁶ Pell, *supra* note 172; Alliance Defending Freedom, *Title IX Discrimination Complaint on Behalf of Minor Children Selina Soule, [Second Complainant], and Alanna Smith*, ¶¶ 1–5 (June 17, 2019), <http://www.adfmedia.org/files/SouleComplaintOCR.pdf> [hereinafter *ADF Complaint*].

professional athletes such as Semenya and Chand have made, yet it advocates for the opposite outcome.

Each of the three complainants are cis-gendered females who competed against Miller and Yearwood.¹⁷⁷ According to the complaint, their goals for participating in track and field were to experience the joy of success, and to possibly succeed to such an extent that they would receive scholarship offers and compete at the collegiate level.¹⁷⁸ Unfortunately, the complaint continues, the aspirations of these athletes are being jeopardized due to the CIAC's policy that "is permitting boys who are male in every biological and physiological respect—including unaltered male hormone levels and musculature—to compete in girls' athletic competitions if they claim a female gender identity."¹⁷⁹ The complaint goes on, much like the IAAF, to provide ample evidence supporting the basic notion that there are inherent physiological differences between males and females—particularly in high school when individuals are undergoing puberty at varying rates—which leads to competitive advantages.¹⁸⁰ For example, the complaint presented the results of state championship meets during the years Miller and Yearwood were competing. In pointing to the results, it explicitly claimed that the presence of transgender athletes deprived "specific, identifiable girls . . . the recognition of being named state-level first-place champions, and/or . . . the opportunity to advance and participate in higher-level competition."¹⁸¹ This deprivation of opportunity was due entirely to unfair physiological differences. This fact-based argument is the Bermon and Garnier study in microcosm: a large set of results from competition are analyzed in comparison to those few athletes who, for whatever reason, are competing with elevated testosterone levels and could very well be succeeding for reasons only minimally related to their testosterone levels.¹⁸²

The complainants alleged that this policy was in violation of Title IX because it was resulting in more boys than girls "experiencing victory and gaining the advantages that follow," even though competition is supposed to "ensure that equal numbers of boys and girls advance to higher levels of competition."¹⁸³ Citing *McCormick ex rel McCormick v. School District of Mamaroneck*, the complaint alleged that this policy was patently in violation of Title IX: "[t]reating girls differently regarding a matter so fundamental to the experience of sports—the chance to be champions—is inconsistent with Title IX's mandate of equal opportunity for both sexes."¹⁸⁴ Here again, the

¹⁷⁷ *ADF Complaint*, *supra* note 176, ¶ 1.

¹⁷⁸ *Id.*

¹⁷⁹ *Id.* ¶ 2.

¹⁸⁰ *Id.* ¶¶ 14–18.

¹⁸¹ *Id.* ¶ 42.

¹⁸² See *supra* text accompanying notes 124–132.

¹⁸³ *ADF Complaint*, *supra* note 176, at ¶ 4.

¹⁸⁴ *Id.* (quoting *McCormick ex rel McCormick v. Sch. Dist. of Mamaroneck*, 370 F.3d 275, 295 (2d Cir. 2004)).

structural division of track and field is being used to the detriment of certain athletes—in this case, transgender individuals. Thus, if Semenya were to bring suit under Title IX and challenge the DSD Regulations, she would likely face similar counterclaims that, per Title IX, her presence on the track was in fact depriving cis-gendered females of the opportunity to compete and succeed.

CONCLUSION

Track and field is perhaps the purest form of competition—there is never any doubt as to who the victor is. It will be the person who ran the fastest, jumped the highest, or threw the farthest. It therefore comes as no surprise that a sport dealing in such absolutes would have particular difficulty resolving issues that are anything but black and white. Intersex and transgender athletes have every right to compete in the sport, yet they are being prevented from doing so by the inherent nature of a sport that requires a level playing field at all costs. There is evidently no clear solution to this intractable issue at present. Regardless, a complicated issue such as this will require the sport's governing bodies at all levels of competition to reassess how they prioritize certain goals, evaluate the inherent inequities of the system, and challenge policymakers to develop new rules based on sound science.¹⁸⁵

¹⁸⁵ See Erin E. Buzuvis, *Transgender Student-Athletes and Sex-Segregated Sport: Developing Policies of Inclusion for Intercollegiate and Interscholastic Athletics*, 21 SETON HALL J. SPORTS & ENT. L. 1, 28–29 (2011) (describing an effective and inclusive policy for transgender student athletes as one that incorporates law, science, and morality).