

# GENDER VERIFICATION POLICIES IN ELITE SPORTS

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*There have been decades of unsuccessful attempts to develop a fair and adequate gender verification test. The initial test, which used to be accomplished by visual observation, has evolved into a highly sophisticated molecular-level evaluation. Numerous elite-sport athletes exemplify the struggles the testing evolution has caused them. Furthermore, our deeper understanding of the human anatomy reveals an array of intricacies and variations that might nudge us to not only relax the current rigid definitions of “male” and “female,” but also to forgo the efforts of confining it into a single description. Furthermore, while the major sport authorities have been relentlessly chasing this elusive end of establishing the policy, the need for having the test has possibly become moot.*

## I. INTRODUCTION

In all Olympic sports, aside from the co-ed equestrian competitions, male athletes hold an athletic advantage over female athletes based on the records of every Olympic sport.<sup>1</sup> It remains true today.<sup>2</sup> To avoid unfair gains, major sports organizations implemented gender separation for athletes, as well as weight categories in sports where the variance is great enough to be a factor.<sup>3</sup> However, while a reliable scale objectively resolves the equity question in weight, gender is still a highly subjective and complex combination of sex, cognitive self-perception,<sup>4</sup> and social conventions.

The pursuit of a fair and precise gender verification test has been a challenge for at least the last eighty years and remains an elusive goal. The long history of unsuccessful policies and of the many devastated athletes who “failed” the tests begs the question: “Is it even possible to achieve a sound sex/gender verification test?” One possible answer is that perhaps it is not even worth trying to chase such an elusive goal because anti-doping procedures eliminate the danger of male imposters among female athletes and because defining “a female” for purposes of testing is neither possible nor natural.

This article lays out the reasons behind establishing

sex/gender verification policies, as well as different aspects and challenges of the policies since its first implementation. Based on those facts, one logical proposal may be to abolish the testing altogether.

At the outset, it is important to differentiate the terms “sex” and “gender.” “Sex” refers to the cluster of physically and medically verifiable biological indicators with which people are born.<sup>5</sup> In this regard, the majority of the human population can be categorized at birth as either male or female. “Gender,” however, is a complex combination of physical, emotional, and socially constructed behaviors that a given society

<sup>1</sup> COLLINS M. TUCKER, *The Science and Management of Sex Verification in Sport*, 21 S. AFR. J. SPORTS MED. 148 (2009).

<sup>2</sup> Women’s for 100m freestyle time during the 2016 Olympic trials was 56.49 sec, where men’s time was 50.69 sec.; for 100m freestyle, the women’s time was 2:02.39 but men’s 1:51.89. *2016 Olympic Trials Time Standards*, U.S.A. SWIMMING. <https://www.usaswimming.org/docs>

/default-source/mediadocuments/2016-olympic-trials-media-center/2016-olympic-trials-qualifying-times.pdf?sfvrsn=2 [https://perma.cc/4X2C-7XTC]. The men’s world records in running are: 100m- 9.58; 200m – 19.19; 400 meters – 43.03; Women’s records in the same categories are: 100m- 10.49; 200m – 21.34; 400 meters – 47.60. *World Records*. IAAF, <https://www.iaaf.org/records/by->

category/world-records [https://perma.cc/34VK-CKN5], (last visited Nov 15, 2016).

<sup>3</sup> COLLINS *supra* note 1 at 148.

<sup>4</sup> *Id.*

<sup>5</sup> *Gender, Women and Health*, WORLD HEALTH ORGANIZATION (Aug. 2015), <http://apps.who.int/gender/whatisgender/en/> [https://perma.cc/3ZGW-DAUF].

characterizes as, and attributes to, a culturally defined gender,<sup>6</sup> most often using the dichotomous terms “female” or “male” and “feminine” or “masculine.”<sup>7</sup>

Because the initial purpose of sex testing was to discover men acting as women imposters, it was labeled “sex-verification.”<sup>8</sup> However, the implementation of those procedures has created circumstances and conditions that suggest an unfair biological advantage in some female athletes. Thus, the process became known as “gender-verification,” and as the name suggests, it is intended to verify conformity to gender.<sup>9</sup> To encompass both sex- and gender-verification procedures, some have described such testing as “sex/gender verification procedure.”<sup>10</sup> Labels for methods addressed in this article conform with the original label used by each organization discussed and, if used collectively, refer to both processes as sex/gender verification procedure. In addition, the term “transgender” is used following

the meaning defined by the American Psychological Association (APA), which is “an umbrella term for persons whose gender identity, gender expression, or behavior does not conform to that typically associated with the sex to which they were assigned at birth.”<sup>11</sup> Finally, the discussion below involves mostly elite sports and elite athletes. Authors have variably defined “elite.” For the purposes of this article “elite” is defined as national or international level competitors, Olympians, and professional or semi-professional world-class athletes.

## II. REASONING BEHIND ESTABLISHING AND EFFECTIVENESS OF SEX/GENDER VERIFICATION POLICIES

The intention behind establishing such gender/sex verification policies was to ensure fairness in sports by eliminating unfair advantages. Concerns regarding advantage by pretense in competitions are not utterly unfounded. During

the 1936 Berlin Olympics, Nazis allegedly forced Dora Ratjen to disguise himself in order to compete as a female athlete; and he successfully misled his competitors.<sup>12</sup> Although some question the accuracy of this story, the general public’s conviction of unfair advantage has not been disproved.<sup>13</sup> During the 1960 Olympic Games in Rome, the Soviet sisters, Tamara and Irina Press, were practically unbeatable in track and field.<sup>14</sup> Their extraordinary joint collection of twenty-six world records led their competitors to question their legitimacy as female athletes,<sup>15</sup> and although no specific facts ignited the controversy, none were presented to disprove it.<sup>16</sup> The sisters’ retirement within just weeks of International Association of Athletics Federation’s (IAAF) announcement of their mandatory gender verification tests, added fuel to the allegations and has kept the controversy alive.<sup>17</sup> Today, fears of gender-unfairness in worldwide professional and amateur sports remain, alongside a saga of crippled

<sup>6</sup> *Id.*

<sup>7</sup> *Id.*

<sup>8</sup> LINDSAY PARKS PIEPER, *Sex Testing: Gender Policing in Women’s Sports* 3 (2016).

<sup>9</sup> *Id.*

<sup>10</sup> *Id.*

<sup>11</sup> *Transgender People, Gender Identity and Gender Expression*, AMERICAN PSYCHOLOGICAL ASSOCIATION, <http://www.apa.org/topics/lgbt/transgender.aspx>

[<https://perma.cc/5KLT-A366>], (last visited Dec 16, 2016).

<sup>12</sup> “[T]he story though a fascinating one but may not be accurate.” Stefan Berg, *How Dora the Man Competed in the Woman’s High Jump*, SPIEGEL ONLINE (Sept. 15, 2009), <http://www.spiegel.de/international/germany/1936-berlin-olympics-how-dora-the-man-competed-in-the-woman-s-high-jump-a-649104.html> [<https://perma.cc/X6LA-LY63>].

<sup>13</sup> *Id.*

<sup>14</sup> PIEPER, *supra* note 8, at 1.

<sup>15</sup> *Id.*

<sup>16</sup> *Olympic Gender Drama-the Press Sisters*, TRANSGRIOT (Nov. 9, 2011), <http://transgriot.blogspot.com/2011/11/olympic-gender-drama-press-sisters.html>

[<https://perma.cc/GY9R-YMXA>].

<sup>17</sup> *Id.*

and inadequate testing procedures.

Up to the present time, the majority of athletes who have “failed” sex-verification tests have had at least one of various forms of chromosomal conditions, including androgen insensitivity,<sup>18</sup> XY mosaicism,<sup>19</sup> 5- $\alpha$ -reductase-deficiency,<sup>20</sup> or gonadal dysgenesis.<sup>21</sup> To date, none of those alone clearly defines, medically or legally, the sex of an athlete, and the lack of a legally precise sex-verification policy is even more pronounced in the case of transgender athletes. Two specifying traits have surfaced through the implementation of various sports organizations' imperfect sex/verification policies. First, surprisingly, fairness concerns seem to apply

only to the women's sports. Sex verification of male athletes is, apparently, “unnecessary and irrational.”<sup>22</sup> To narrow that notion further, non-Western women have been the primary suspects of sex verification policies.<sup>23</sup> This raises the question of whether the so-called fairness pursued by the major sport organizations is, in any way, actually fair. Second, through their long history of gender-policing, neither of the two major sport organizations, the International Olympic Committee (“IOC”) and the International Association of Athletics Federation (“IAAF”), has yet ever detected even a single male athlete intentionally masquerading as a female.<sup>24</sup> Instead, the saddening multitude of

collateral damage resulting from testing policy implementation has led to the victimization of many gifted athletes who simply “failed” the test.

### III. A PERSPECTIVE OF THE U.S. CULTURE TOWARD FEMININITY IN SPORTS

To understand our society's inconsistent treatment of sportswomen, it is worthwhile to look at the various components that have shaped it. Susan Cahn, the author of “*Coming On Strong: Gender and Sexuality in Women's Sport*,” states that sports in the Western world have been predominantly designed for and

<sup>18</sup> “Androgen Insensitivity Syndrome is a condition that affects sexual development before birth and during puberty. People with this condition are genetically male, with one X chromosome and one Y chromosome in each cell. Because their bodies are unable to respond to certain male sex hormones (called androgens), they may have mostly female external sex characteristics or signs of both male and female sexual development.” *Androgen Insensitivity Syndrome*, U.S. NATIONAL LIBRARY OF MEDICINE: GENETIC HOME REFERENCE, <https://ghr.nlm.nih.gov/condition/androgen-insensitivity-syndrome> [https://perma.cc/4NP9-MS7Y], (last visited Dec. 16, 2016).

<sup>19</sup> Also called 47, XYY. This syndrome is “characterized by an extra copy of the Y chromosome in each of a male's cells. Although males with this condition maybe

taller average, this chromosomal change typically causes no unusual physical features. Most males with 47, XYY syndrome have normal sexual development and are able to father children.” *47, XYY Syndrome*, U.S. NATIONAL LIBRARY OF MEDICINE: GENETIC HOME REFERENCE, <https://ghr.nlm.nih.gov/condition/47xyy-syndrome> [https://perma.cc/LNK8-5WQM], (last visited Dec. 16, 2016).

<sup>20</sup> 5-Alpha-Reductase deficiency is a condition that affects male sexual development before birth and during puberty. People with this condition are genetically male, with one X and Y chromosome in each cell and they have male gonads (testes). Their bodies however, do not produce enough of a hormone called dihydrotestosterone (DHT)... a shortage of this hormone disrupts the formation of the external sex

organs before birth.” *5-Alpha-Reductase Deficiency*, U.S. NATIONAL LIBRARY OF MEDICINE: GENETIC HOME REFERENCE, <https://ghr.nlm.nih.gov/condition/5-alpha-reductase-deficiency> [https://perma.cc/HFS6-JTD7], (last visited Dec. 16, 2016).

<sup>21</sup> Gonadal Dysgenesis is “defective development of the gonads, which may be accompanied by abnormalities of the sex chromosomes.” *Gonadal Dysgenesis*, THE FREE DICTIONARY: DYSGENESIS, <http://medical-dictionary.thefreedictionary.com/dysgenesis> [https://perma.cc/QE8X-L9MR], (last visited Dec. 16, 2016).

<sup>22</sup> PIEPER, *supra* note 8, at 184.

<sup>23</sup> *Id.* at 185-86.

<sup>24</sup> PIEPER, *supra* note 8 at 2.; <http://jrs.sagepub.com/content/101/8/395> [https://perma.cc/RH3Z-8FGK], p. (footnote 11-12).

played by men.<sup>25</sup> She suggests that many attribute characteristics such as “aggression, competitiveness, strength, speed, and powers, and team work” to masculinity.<sup>26</sup> She states that traditionally for “many men sports have provided an arena in which to cultivate masculinity and achieve manhood.”<sup>27</sup> When women began claiming their places in the world of athletics in the early 1900s, however, some wondered whether female athletics would turn women into masculine facsimiles of the ‘opposite’ sex or, instead, “feminize” sports and erode the boundaries between male and female spheres of activity.<sup>28</sup> Eight decades later, such questions have not been put to rest. Therefore, it is only natural that in order for female-athletes to enter predominantly male sports and change societal perspectives regarding women in sports, it would require time, patience, and, unfortunately, humiliation.

In the 1950s the femininity was still a hot topic, and some perceived it as a weakness for female athletes. Ione Muir, the manager of the U.S. women's

swimming team, questioning whether the femininity was an obstacle preventing the team from maintaining the number one world position, remarked that the swimmers on the team “swim like girls” connotes his disassociation of femininity with success in sports.<sup>29</sup> Leaders in the sports industry have also shied away from encouraging female athletes’ participation.<sup>30</sup> When Jacques Rogge, a former IOC president, was highlighting the achievements of his predecessor Juan Antonio Samaranch, he noted that in 1980, the IOC remained a highly conservative organization, a “men-only club.”<sup>31</sup> Among Olympian athletes, only eighteen percent were females.<sup>32</sup> Among IOC members, there were none.<sup>33</sup>

Despite the challenges, women’s successful collective efforts overcame the barriers that prevented females’ participation in public sports.<sup>34</sup> The current challenge is to ensure that *every* woman from any continent on the planet has a right to participate in her sport and to express herself as an athlete.

#### IV. IOC AND IAAF’S SEX/GENDER TESTS AND EXAMPLES OF ATHLETES WHO “FAILED” THEM

##### A. Mid-1960s – 1990. Chromosomal Testing.

Although the subject may still seem relatively new to the general public, the IOC felt the need to establish gender-verification policy decades ago. In 1966, the first and most simplistic and invasive gender verification tests were conducted by visual observation and gynecological examination.<sup>35</sup> In 1968, the IOC mandated that Olympians undergo a different test, less physically intrusive test, Barr Test.<sup>36</sup> A chromosomal analysis based on meaningful distinctions between the chromosomes of males and females, discovered by Murray Barr.<sup>37</sup> Ironically, lab-tested gender-verification, which was meant to circumvent advantageous unfairness, was itself flawed and unfair.<sup>38</sup> Its first victim was Ewa Klobukowska, a Polish sprinter athlete<sup>39</sup> who in 1964, won Olympic gold and bronze medals in the 4x100 meter

<sup>25</sup> SUSAN K. CAHN, COMING ON STRONG GENDER AND SEXUALITY IN TWENTIETH-CENTURY WOMEN’S SPORT 3 (1994).

<sup>26</sup> *Id.*

<sup>27</sup> *Id.*

<sup>28</sup> Dudley Sargent, *Are Athletics Making Girls Masculine*, in WOMEN AND SPORTS IN THE UNITED STATES: A DOCUMENTARY READER 56 (Jean O’Reilly & Susan K. Cahn, ed., 2007).

<sup>29</sup> Muir, “As I See It,” *Amateur Athlete* (February 1956) 22 (note 46, p. 349).

<sup>30</sup> CAHN, *supra* note 25, at 11.

<sup>31</sup> PIEPER, *supra* note 8, at 137.

<sup>32</sup> *Id.*

<sup>33</sup> *Id.*

<sup>34</sup> CAHN, *supra* note 25, at 1.

<sup>35</sup> Robert Ritchie, *Intersex and Olympic Games*, 101 J ROYAL SOC’Y MED. 395-99 (2008).

<sup>36</sup> *Id.*

<sup>37</sup> Murray Barr & Ewart G. Bertram, *A Morphological Distinction between Neurons of the Male and Female, and the Behavior of the Nucleolar Satellite during Accelerated Nucleoprotein Synthesis*. NATURE, Apr. 30, 1949, at 676.

<sup>38</sup> PIEPER, *supra* note 8, at 120.

<sup>39</sup> *Id.* at 121.

relay and 100-meter sprint, respectively.<sup>40</sup> Klobukowska is believed to have had a rare genetic abnormality called chromosomal mosaicism and so possessed, as the IAAF phrased it, “one chromosome too many.”<sup>41</sup> Such abnormalities were unaccounted for by the criteria of the Barr Test; thus, based on test findings, the IOC unceremoniously stripped Klobukowska of her medals and banned her from future competition.<sup>42</sup> Aside from the traumatic disappointment of exile from future events, she endured public humiliation, degradation, and subsequent stigmatization. A possible but unsatisfying silver lining of Klobukowska’s case was that the IOC decided to keep the future test results confidential.<sup>43</sup>

As DNA testing emerged, the Barr test was replaced by polymerase chain reaction (PCR) analysis, another promising but far from the ideal testing method,<sup>44</sup> which purported to distinguish males from females by accurately

identifying the presence and number of X and Y chromosomes and then categorizing an athlete as male or female on that basis.<sup>45</sup> Yet the disqualification of athletes who had lived lifelong as men continued.<sup>46</sup> Similar to its predecessor, this chromosomal test failed women based on various chromosomal abnormalities such as 5- $\alpha$ -reductase-deficiency, gonadal dysgenesis, and androgen insensitivity syndrome (AIS).<sup>47</sup> The last of those was exemplified by Maria Martinez-Patino (Martinez-Patino), a Spanish hurdler who publicly challenged her sex-verification testing. She “failed” the test in 1985 at the University Games in Kobe, Japan, and so was disqualified from future events.<sup>48</sup> The results of IOC testing had declared that Martinez-Patino has 46 chromosomes, but with one X chromosome and one Y chromosome, classifying her, at least on the genetic level, as male.<sup>49</sup> This is precisely the danger of chromosomal testing on women with AIS who

usually exhibit the external characteristics of females and are raised as women. However, their XY chromosomes mean that they do not have uteruses and cannot birth children, the dichotomous gender definition of only two sexes means their chromosomes, not their lives and experiences, define them as males.<sup>50</sup>

The news devastated the athlete but even more created in her a sense of helplessness upon being forced to excuse herself from the competition under the pretense of false injury.<sup>51</sup> The societal tortures continued when she refused to skip the Track and Field Spanish National Games, and as a result, lost her sports scholarship, was banished from the athletes’ residence and saw her running records expunged.<sup>52</sup> Nevertheless, in the true Olympian spirit, she fought back publicly<sup>53</sup> and may have been the tipping point that persuaded the IOC to abolish such humiliating disqualifications solely based on lab tests and subsequently

<sup>40</sup> Guy Adams, *Tarnished Gold: Some of the ‘Great’ Olympics Cheats*. INDEPENDENT. <http://www.independent.co.uk/sport/olympics/tarnished-gold-some-of-the-great-olympics-cheats-7869830.html> [https://perma.cc/PNN9-RGMH], (last visited 2012).

<sup>41</sup> *Id.*

<sup>42</sup> Ritchie, *supra* note 35.

<sup>43</sup> Schultz Jaime, *Disciplining Sex: ‘Gender Verification’ Policies and Women’s Sports*, in THE PALGRAVE HANDBOOK OF OLYMPIC STUDIES

443–60 (Helen Jefferson Lenskyj & Stephen Wagg 2012).

<sup>44</sup> Ritchie, *supra* note 35.

<sup>45</sup> Schultz, *supra* note 43, at 447.

<sup>46</sup> Ritchie, *supra* note 35.

<sup>47</sup> Although females with AIS who possess the “extra chromosome” will physiologically appear as a woman and have phenotype typical to a woman, they do not develop the strength and musculature of a male that is attributable to the testosterone hormones 253 Louis J. Elsas, *Gender Verification of*

*Female Athletes*. NATURE, Aug. 2000.

<sup>48</sup> Schultz, *supra* note 43, at 449.

<sup>49</sup> *Id.*

<sup>50</sup> Schultz, *supra* note 43, at 446–47.

<sup>51</sup> PIEPER, *supra* note 8 at 135; 142 (She described the experience as rape. “I’m sure it’s the same sense of incredible shame and violation. The only difference is that, in my case, the whole world was watching”).

<sup>52</sup> *Id.* at 135–36.

<sup>53</sup> Schultz, *supra* note 43 at 445.

make changes to its gender-verification policy.<sup>54</sup>

**B. 1990 – 2015.  
Abandonment of Mandatory Testing Does Not Mean Giving It Up Altogether.**

Following advice from experts, the IAAF officially abandoned sex verification in 1991,<sup>55</sup> and by 1996, “virtually all major U.S. medical societies” had declared their preference to abolish the Olympic Committee’s gender-verification procedures.<sup>56</sup> Then, the IOC officially suspended its testing policy in 1999,<sup>57</sup> and, in the Millennial Games of 2000 in Sydney, made an even more radical decision to abstain from gender testing of female athletes altogether. That policy shift, however, was a one-time free pass that did not last long.<sup>58</sup> Before the Olympic Games in Athens in 2004, the IOC adopted a new policy that allowed transgender-athletes to compete in the Games under the sex with which they identified.<sup>59</sup> The distinguishing

criteria for the IOC became *when* the sex-reassignment has taken place: if an athlete has undergone the sex reassignment *prior to* his or her puberty, he or she is acknowledged as of that assigned sex.<sup>60</sup> However, the assignment process became a little more intricate when the athlete had undergone the transgender process *after* puberty. Eligibility depended on the athlete meeting the following conditions:

1) Surgical anatomical changes must have been completed, including external genitalia changes and gonadectomy; 2) legal recognition of assigned sex must be conferred by appropriate official authorities; and 3) hormonal therapy appropriate for the assigned sex must be administered in a verifiable manner and for a period sufficient to minimize gender-related advantages in sport competitions.<sup>61</sup>

Moreover, the IOC also agreed that at least two years

must have passed before the athlete is eligible to compete<sup>62</sup> and reserves a right to “take appropriate measures” if an athlete’s sex is questioned.<sup>63</sup> Needless to say, many other sport organizations followed the IOC’s lead. Although also well-established and influential, the IAAF relied on the IOC’s policies for guidance in creating its own policy on gender verification.<sup>64</sup> Consequently, the IAAF’s 2006 gender verification policy closely echoes the IOC’s.<sup>65</sup>

Aside from outlining its requirements, the IAAF document also explicitly specifies for track and field competitors the chromosomal conditions under which no advantage over a fellow competitor exists and are thus allowable: (1) androgen insensitivity syndrome, whether complete or almost complete; (2) gonadal dysgenesis; and (3) Turner’s syndrome.<sup>66</sup> A list of some conditions that award slight advantage but are still deemed

<sup>54</sup> Anna Peterson, *But She Doesn’t Run Like A Girl . . . The Ethic of Fair Play and the Flexibility of the Binary Conception of Sex*, 19 Tul. J. Int’l & Comp. L. 315 (2010).

<sup>55</sup> *IAAF Policy on Gender Verification 2006*, INTERNATIONAL ASSOCIATION OF ATHLETICS FEDERATIONS (2006).

<sup>56</sup> Elsas, *supra* note 47, at 253.

<sup>57</sup> *Id.*

<sup>58</sup> *Id.* (explains that the suspension of the policy was limited to the games in Sydney).

<sup>59</sup> *IOC Approves Consensus with Regard to Athletes Who Have Changed Sex*, IOC. <https://www.olympic.org/news/ioc->

[approves-consensus-with-regard-to-athletes-who-have-changed-sex \[https://perma.cc/MA4X-GWNN\]](https://perma.cc/MA4X-GWNN), (last visited Dec 16, 2016).

<sup>60</sup> *Id.*

<sup>61</sup> *Id.*

<sup>62</sup> *Id.*

<sup>63</sup> *Id.*

<sup>64</sup> *IAAF Regulation Governing Eligibility of Athletes Who Have Undergone Sex Reassignment to Compete in Women’s Competitions*, IAAF. <https://www.iaaf.org/about-iaaf/documents/medical> [https://perma.cc/UXP8-EVZ7], (last visited Dec 16, 2016).

<sup>65</sup> *Id.* (1) “If sex change operations as well as appropriate hormone replacement therapy are performed before puberty, then the athlete is allowed to compete as a female. 2) If sex change and hormone therapy is done after puberty, then the athlete has to wait two years after gonadectomy before a physical and endocrinological evaluation is conducted. The crux of the matter is that the ‘female’ athlete should not be enjoying the benefits of the natural testosterone predominance usually present in a male.”)

<sup>66</sup> *Id.*

acceptable by the IAAF include (1) congenital adrenal hyperplasia; (2) androgen producing tumors; (3) anovulatory androgen excess.<sup>67</sup> Similarly to the IOC, the IAAF relaxed the mandatory testing but reserved the right to ask athletes to be medically evaluated if the athlete's gender is under "suspicion" or has been "challenged."<sup>68</sup>

An athlete's gender can still be tested, as evident in 2006 at the Asian Games, the second largest multi-discipline, international athletic competition which is organized by the Olympic Council of Asia (OCA).<sup>69</sup> There, Santhi Soundarajan earned a silver medal in the women's 800-meter race.<sup>70</sup> After a thirty-minute examination, the IAAF doctors let Soundarajan go<sup>71</sup> but left her clueless as to the results. To her dismay and shock, she, along with the rest of the world, learned of her test results from the evening news.<sup>72</sup> She had failed.<sup>73</sup> She was then stripped of her silver medal and publicly humiliated, which she said made her feel,

"physically and mentally totally broken."<sup>74</sup> The world-class champion slipped into depression.<sup>75</sup>

Caster Semenya, an eighteen-year-old track and field athlete from South Africa, found herself in a similar situation at the 2009 World Athletics Championship in Berlin where she won a gold medal.<sup>76</sup> Her case was especially delicate for several reasons. First, she was young, only 18 years old when she entered. Second, she is an African female, thus has a body type deemed atypical by Western society and which has led to an "utter disregard for *her* humanity" (emphasis added).<sup>77</sup> The author of "Caster Semenya: Twenty-First Century 'Hottentot Venus'?" draws parallels between Europeans' unceremonious fascination with African women's physiques in the early 1800s and the agitated media and public attention drawn by Semenya's frame.<sup>78</sup> She was directed to undergo gender testing before she could return to competing.<sup>79</sup> Semenya came

back winning a silver medal at the 2012 London Olympics and, later, a gold medal at the Rio 2016 Olympics, both in the women's 800-meters.<sup>80</sup> (Years later, as a result of disqualification of Mariya Savinova, the gold medalist at the 2012 London Olympics in the 800-meter race, Semenya's silver was upgraded to gold making her a double Olympic champion.)<sup>81</sup> However, Semenya's naturally high levels of testosterone spurred the next generation of testing.<sup>82</sup>

In April 2011, the struggle to achieve advantage-free competition continued. This time, excess levels of androgens became the main suspect of the unfair advantage scare.<sup>83</sup> In the preface of its hyperandrogenism regulations, the IAAF states, "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."<sup>84</sup> That conclusion was a result of a

<sup>67</sup> *Id.*

<sup>68</sup> *Id.*

<sup>69</sup> Olympic Council of Asia <http://www.ocasia.org/Index.aspx> [<https://perma.cc/7Y3H-TRAU>], (last visited Dec 16, 2016).

<sup>70</sup> PIEPER, *supra* note 8 at 179.

<sup>71</sup> *Id.*

<sup>72</sup> *Id.*

<sup>73</sup> *Id.*

<sup>74</sup> *Id.*

<sup>75</sup> *Id.*

<sup>76</sup> *Id.* at 181.

<sup>77</sup> Carina Ray, *Caster Semenya: Twenty-First Century 'Hottentot Venus'?* 489 *NEW AFRICAN* (2009) + <sup>78</sup> *Id.*

<sup>79</sup> Jeré Longman, *Understanding the Controversy Over Caster Semenya*, *N. Y. TIMES: RIO 2016* (Aug. 18, 2016), <https://www.nytimes.com/2016/08/20/sports/caster-semenya-800-meters.html>. [<https://perma.cc/KJ32-QQEM>]

<sup>80</sup> *Caster Semenya Given London 2012 Gold Medal After Rival is Stripped of the Title*,

THEGUARDIAN.COM: CASTER SEMENYA (Feb. 2017, 07:58PM), <https://www.theguardian.com/sport/2017/feb/10/caster-semenya-given-london-2012-gold-after-rival-is-stripped-title-mariya-savinova-farnosova>. [<https://perma.cc/D6Q9-LUK4>]

<sup>81</sup> *Id.*

<sup>82</sup> Longman, *supra* note 79.

<sup>83</sup> PIEPER, *supra* note 8, at 182.

<sup>84</sup> IAAF regulations 2011. Preface. Page 1 [<https://perma.cc/CR6Z-ZKSG>].

series of discussions sponsored collectively by IOC and IAAF<sup>85</sup> during which invited experts in sports and medicine worked together to produce adequate guidelines;<sup>86</sup> both organizations adopted similar policies encapsulating the notion of “advantageous excess androgens.”<sup>87</sup> At the 2012 London Olympics, four elite athletes were subsequently disqualified for hyperandrogenism and were recommended to undergo hormonal therapy if they wished to continue their sport careers.<sup>88</sup>

However, major differences did exist between those athletes’ physiques and that of the usual female athlete. First and most observable, each was described as “tall, slim, muscular woman with a male bone morphotype, no breast development, clitoromegaly (larger than a typical clitoris), partial or complete labial fusion, and inguinal/intralabial testes.”<sup>89</sup> Second, the athletes, who were then ages 18, 20, 20, and 21, were all amenorrheic and had never had a menstrual period.<sup>90</sup> However, they had all

experienced “unexpected” virilization<sup>91</sup> (characteristics associated with androgens) at puberty, whereas a male newborn expresses traits due to androgen exposure at birth.<sup>92</sup> Furthermore, they displayed “strong motivation and high tolerance to intensive daily training, which made them good candidates for elite sports competition.”<sup>93</sup> Nonetheless, the athletes had never exhibited “male sex behavior,”<sup>94</sup> all came “from rural or mountainous regions of developing countries,” and their tests confirmed that at least three of them, and very possibly the fourth, shared a kinship.<sup>95</sup> Those cases were very rare. The diagnosis of one of them having had no known precedent,<sup>96</sup> and since all four desired to remain female and continue their careers in elite sports, they chose to follow the medical experts’ advice and undergo “partial clitoridectomy with bilateral gonadectomy, followed by a differed feminizing vaginoplasty and estrogen replacement.”<sup>97</sup> Those procedures almost definitely will decrease the athletes’

performance and were unnecessary for their health, yet they returned to competition as females one year after surgery.<sup>98</sup>

A struggle to establish a sensible gender verification policy continued, and so did the contests by the “failed” athletes. In 2014, a 19-year-old athlete from India publicly challenged the validity of the IAAF’s hyperandrogenism regulations.<sup>99</sup> Dutee Chand won several medals, including gold, in the women’s 200-meter sprint and 400-meter sprint relay at national junior athletic events, Asian Championships, and World Youth Championships.<sup>100</sup> Then, the Athletic Federation of India (AFI), an IAAF’s member Federation for India, disqualified her from 2014 Commonwealth Games in Glasgow after her test results revealed that her “male hormones levels were too high.”<sup>101</sup> Supported by the Sport Authority of India (SAI), Dutee appealed the decision in the Court of Arbitration for Sports (CAS), an independent authority established to resolve

<sup>85</sup> PIEPER, *supra* note 8 at 181.

<sup>86</sup> *Id.*

<sup>87</sup> *Id.* at 182.

<sup>88</sup> *Id.* at 183.

<sup>89</sup> Patrick Fènichel et al., *Molecular Diagnosis of 5- $\alpha$ -Reductase Deficiency in 4 Elite Young Female Athletes Through Hormonal Screening for Hyperandrogenism*, 1055 THE ENDOCRINE SOCIETY (June 2013), [http://www.bennington.edu/sites/default/files/sources/docs/Sherman\\_Betsy\\_Molecular%20diagnosis%20-](http://www.bennington.edu/sites/default/files/sources/docs/Sherman_Betsy_Molecular%20diagnosis%20-%20female%20athletes.pdf)

[%20female%20athletes.pdf](http://www.bennington.edu/sites/default/files/sources/docs/Sherman_Betsy_Molecular%20diagnosis%20-%20female%20athletes.pdf) [https://perma.cc/9Z3C-KLR9].

<sup>90</sup> *Id.* at 1056.

<sup>91</sup> *Id.*

<sup>92</sup> *Virilization*, U.S. NATIONAL LIBRARY OF MEDICINE: GENETIC HOME REFERENCE <https://medlineplus.gov/ency/article/002339.htm> (last visited Dec 17, 2016) [https://perma.cc/B4GA-J9JF].

<sup>93</sup> Fènichel et al., *supra* note 89 at 1056.

<sup>94</sup> *Id.*

<sup>95</sup> *Id.*

<sup>96</sup> *Id.* at 1057.

<sup>97</sup> *Id.*

<sup>98</sup> *Id.*

<sup>99</sup> Dutee Chand v. Athletic Federation of India (AFI) & The International Ass’n of Athletics Federations (IAAF), CAS 2014/A/3759, Interim Arbitral Award at 2 (2014) [https://perma.cc/MB8D-E2DF].

<sup>100</sup> *Id.*

<sup>101</sup> *Id.* at 5.

sport-related disputes.<sup>102</sup> She fought to invalidate the hyperandrogenism regulations on the grounds that:

(a) they discriminate unlawfully against female athletes who possess a particular natural physical characteristic; (b) they are based on flawed factual assumption about the relationship between testosterone and athletic performance; (c) they are disproportionate to any legitimate objective; and (d) they are unauthorized form or doping control.<sup>103</sup>

On July 2015, after hearing arguments on both sides, the CAS had decided that the IAAF failed to substantiate the link between hyperandrogenism and significant advantageous athletic performance.<sup>104</sup> The Panel suspended the regulation for a two-year period.<sup>105</sup> During this window, the IAAF has an opportunity to submit evidence that shows that “the quantitative relationship between enhanced testosterone levels and improved athletic performance in hyperandrogenic athletes.”<sup>106</sup>

In case the evidence is not provided or insufficient in CAS’ opinion, the regulations will be declared void.<sup>107</sup> Furthermore, during the period, Ms. Dutee is eligible to participate in national and international level sport events.<sup>108</sup>

In November 2015, the IOC released a revised policy of its “Sex Reassignment and Hyperandrogenism Policies.”<sup>109</sup> In response to the interim award, it urged other International Federations and Olympic Committees to submit supportive evidence and arguments to sustain the Hyperandrogenism Regulations in the name of fairness.<sup>110</sup> The policy proposed that as an alternative option for those deemed to be ineligible to compete as females, the athletes should compete as males.<sup>111</sup> A key change included in that policy related to the transgender athletes—the IOC abolished its surgical requirement,<sup>112</sup> so that any such restrictions do not limit those who had transitioned from female to male.<sup>113</sup> For males transitioning to females, however, the rule is as follows:

2.1 The athlete has declared that her gender identity is female. The declaration cannot be changed, for sporting purposes, for a minimum of four years.

2.2 The athlete must demonstrate that her total testosterone level in serum has been below 10 nmol/L for at least 12 months prior to her first competition (with the requirement for any longer period to be based on a confidential case-by-case evaluation, considering whether or not 12 months is a sufficient length of time to minimize any advantage in women’s competition).

2.3 The athlete’s total testosterone level in serum must remain below 10 nmol/L through the period of desired eligibility to compete in the female category.

2.4 Compliance with these conditions may be monitored by testing. In the event of non-compliance, the athlete’s eligibility for female competition will be suspended for 12 months.<sup>114</sup>

## V. THE HURDLES FOR TRANSGENDER ATHLETES IN VARIOUS

<sup>102</sup> History of the CAS: *Origins*, COURT OF ARBITRATION FOR SPORT, <http://www.tas-cas.org/en/general-information/history-of-the-cas.html> (last visited Dec 17, 2016) [<https://perma.cc/2QKB-C3VN>]

<sup>103</sup> Interim Arbitral Award, *supra* note 98 at 2.

<sup>104</sup> *Id.* at 158.

<sup>105</sup> *Id.*

<sup>106</sup> *Id.*

<sup>107</sup> *Id.*

<sup>108</sup> Nihal Koshie, *Dutee Chand Wins the Right to Compete*, EXPRESS SPORTS (July 29, 2015), <http://indianexpress.com/article/sports/sport-others/sprinter-dutee-chand-wins-right-to-compete/>

<sup>109</sup> *IOC Consensus Meeting on Sex Reassignment and Hyperandrogenism Nov 2015*, INTERNATIONAL OLYMPIC COMMITTEE,

[http://www.triathlon.org/uploads/docs/6.b\\_2015.11\\_IOC\\_consensus\\_meeting\\_on\\_sex\\_reassignment\\_and\\_hyperandrogenism-ENG.pdf](http://www.triathlon.org/uploads/docs/6.b_2015.11_IOC_consensus_meeting_on_sex_reassignment_and_hyperandrogenism-ENG.pdf) [<https://perma.cc/E52F-W3TX>].

<sup>110</sup> *Id.* at 3.

<sup>111</sup> *Id.*

<sup>112</sup> *Id.* at 2.

<sup>113</sup> *Id.*

<sup>114</sup> *Id.* at 2-3.

## SPORTS UNDERLINE THE COMPLEXITY OF GENDER/SEX TESTING

### A. Tennis.

Perhaps one of the most well-known transgender athletes is Dr. Renee Richards. Dr. Richards was born Richard Raskind in 1934.<sup>115</sup> Already in her childhood, she sensed the divisiveness of genders within herself.<sup>116</sup> At the age of 40, Dr. Richards decided to undergo gender reassignment.<sup>117</sup> Before the main change, Dr. Richards had become one of the leading ophthalmologist surgeons in the country,<sup>118</sup> was married and had a child and, of course, passionately played tennis.<sup>119</sup> After the transition, it was not long before her past surfaced. Upon winning a local tournament, she was urged by others to play in the U.S. Open.<sup>120</sup> She applied but was denied entry in the women's competition.<sup>121</sup> Even though Dr. Richards admitted that she never intended to play in the U.S. Open, the rejection enticed her to fight back.<sup>122</sup> She

said, "You can't tell me what I can or cannot do – I'm a woman and if [I] want to play in the U.S. Open as a woman I'm going to do it."<sup>123</sup>

Dr. Richards sued the United States Tennis Association (USTA) seeking an injunction on the usage of a sex-chromatin test.<sup>124</sup> Although Dr. Richards in her interview with BBC admitted that men are stronger and can hit harder, she insisted that it is not the only factor to consider.<sup>125</sup> The court's view aligns with Dr. Richards', but it refused to strike the Barr test altogether and reasoned that each case should be evaluated as a whole, including all its variables and circumstances.<sup>126</sup> In this case, the court viewed Richards as an individual with a successful career and a family but who found it "necessary for her own mental sanity to undergo a sex reassignment."<sup>127</sup> So, the court granted the injunction in all respects.<sup>128</sup> Subsequently, in the 1977 U.S. Open, Dr. Richards became the first transgender woman ever to

play in a professional tennis tournament. For that, an author for BBC neatly bestowed upon Dr. Richards the title of "Tennis's reluctant transgender pioneer."<sup>129</sup>

### B. Golf.

An amateur golfer, Bobbi Lancaster, drew controversy by deciding to try her skills professionally.<sup>130</sup> The 65-year-old golfer underwent her surgical transition in 2010 at the age of 59.<sup>131</sup> She had been born Robert Lancaster.<sup>132</sup> She married her first wife during medical school.<sup>133</sup> They had one child and adopted two others.<sup>134</sup> Even though she suppressed her urge to dress in women's clothes around her children to avoid perplexing their perceptions, the unsettling confusion between her sex and gender-identity made her feel "sinful and defective."<sup>135</sup> Moreover, this confusion – which is called *gender dysphoria* – was further tainted with suicidal thoughts.<sup>136</sup> Eventually, Lancaster divorced her first wife and married

<sup>115</sup> Sara Lentati, *Tennis's Reluctant Transgender Pioneer*, BBC NEWS (June 26, 2015), <http://www.bbc.com/news/magazine-33062241> [<https://perma.cc/9NLQ-RT5K>].

<sup>116</sup> *Id.*

<sup>117</sup> *Id.*

<sup>118</sup> Michael Hainey, *The Woman Who Paved the Way for Men to Become Women*, GQ MAGAZINE (May 26, 2015), <http://www.gq.com/story/renee-richards-interview> [<https://perma.cc/TB2L-RYKX>].

<sup>119</sup> Lentati, *supra* note 115.

<sup>120</sup> Hainey, *supra* note 118.

<sup>121</sup> *Id.*

<sup>122</sup> Lentati, *supra* note 115.

<sup>123</sup> *Id.*

<sup>124</sup> See generally Richards v. U.S. Tennis Ass'n, 400 N.Y.S.2d 267 (N.Y. Sup.Ct. 1977).

<sup>125</sup> Lentati, *supra* note 115.

<sup>126</sup> *Supra* note 124 at 272.

<sup>127</sup> *Id.*

<sup>128</sup> *Id.* at 273.

<sup>129</sup> Lentati, *supra* note 115.

<sup>130</sup> Paola Boivin, *Transgender Golfer Bobbi Lancaster Aims for LPGA Tour in 2014*, USA TODAY (Dec. 30, 2013),

<http://www.usatoday.com/story/sports/golf/2013/12/30/lpga-2014-bobbi-lancaster-transgender-golfer/4247307/> [<https://perma.cc/7LTZ-6X2E>].

<sup>131</sup> *Id.*

<sup>132</sup> *Id.*

<sup>133</sup> Paola Boivin, *Transgender Golfer Dreams of Playing in LPGA*, AZ CENTRAL (Mar. 11, 2013), <http://archive.azcentral.com/sports/golf/articles/20130307transgender-golfer-dreams-play-lpga.html> [<https://perma.cc/9NNA-CGSD>].

<sup>134</sup> *Id.*

<sup>135</sup> *Id.*

<sup>136</sup> *Id.*

again.<sup>137</sup> A heart attack became the pivotal point after which she sought for a way to embrace her nature, which led her to gender-reassignment surgery.<sup>138</sup> Lancaster also pursued to fulfill her dream to play on the Ladies Professional Golf Association Tour (LPGA). However, when Lancaster was asked whether she had some advantage over her competitors, she replied:

“In my own humble opinion, I think it's very fair that I'm playing against the caliber of players I'm trying to play against, because I have no advantage there. But for me to be allowed to play against women my age, I have a huge advantage. It's not fair. And that's why I'm probably not playing against them, because I just feel like I have undue advantage with my length. [A]nd I was a male, exposed to testosterone most of my life. I've got longer arms, bigger

build. I've got leverage they don't have. It's not fair.”<sup>139</sup>

### C. *Mixed Martial Arts (M.M.A.)*

The debates about whether transgender athletes have a rightful place in the women's division reached Martial Art when Fallon Fox's success created fans and defeated opponents questioned her legitimacy as a woman. Fallon Fox, born Boyd Burton on November 29, 1975,<sup>140</sup> felt a gravitation to femininity, much like Bobbi Lancaster.<sup>141</sup> By adolescence, those feelings had intensified, but she tried to conform herself to the male body in which she was born.<sup>142</sup> At the age of twenty-eight, she told her family, to which she received an unsupportive backlash.<sup>143</sup> After unsuccessfully completing “gay-conversion therapy” required by her father, Fox initiated her sexual transformation, starting with

hormonal therapy, and then in 2006, sex-reassignment surgery.<sup>144</sup> Rejected by her mother, Fox moved to Chicago and found some solace and support at her M.M.A. gym.<sup>145</sup> She quickly rose to the highest level in the sport, turning pro in 2011.<sup>146</sup> In her athletic world, Fox was viewed and accepted solely as a female fighter. However, Fox felt hunted, fearing that someone would discover her past.<sup>147</sup> Once the news broke, so did Fox's life. She was humiliated and degraded by having been called “a sociopathic” and “disgusting freak.”<sup>148</sup> Unbeatable in her last ten consecutive fights, M.M.A.'s star Ronda Rousey refused to fight Fox,<sup>149</sup> and Joe Rogan, the Ultimate Fighting Championship's (U.F.C.) commentator, blatantly stated his disbelief that even after a decade of hormonal therapy and a complete surgical transition, Fox could be called a woman.<sup>150</sup>

<sup>137</sup> *Id.*

<sup>138</sup> *Id.*

<sup>139</sup> Cyd Zeigler, *Trans Golfer Bobbi Lancaster: 'I Shouldn't Compete Against Women My Age*, SB NATION (Mar. 11 2013), <http://www.outsports.com/2013/3/11/4090230/trans-golfer-bobbi-lancaster-i-shouldnt-compete-against-women-my-age> [<https://perma.cc/A5UZ-673G>].

<sup>140</sup> *Fallon Fox*, WIKIPEDIA, [https://en.wikipedia.org/wiki/Fallon\\_Fox](https://en.wikipedia.org/wiki/Fallon_Fox) (last visited Dec 16, 2016), [<https://perma.cc/Y52W-5AEQ>].

<sup>141</sup> Loretta Hunt, *How Fallon Fox Became the First Known Transgender Athlete in MMA*, SPORTS ILLUSTRATED (Mar. 7, 2013),

<http://www.si.com/mma/2013/03/07/fallon-fox-profile> [<http://perma.cc/SU3R-WYC>].

<sup>142</sup> *Id.*

<sup>143</sup> Cyd Zeigler, *Fallon Fox Comes Out as Trans Pro MMA Fighter*, SB NATION (Mar. 5, 2013), <http://www.outsports.com/2013/3/5/4068840/fallon-fox-trans-pro-mma-fighter> [<https://perma.cc/3LAY-XLRU>].

<sup>144</sup> *Id.*

<sup>145</sup> Greg Bishop, *A Pioneer, Reluctantly*, N.Y. TIMES (May 10, 2013), <http://www.nytimes.com/2013/05/13/sports/for-transgender-fighter-fallon-fox-there-is-solace-in-the-cage.html>; see also Hunt *supra* note 139.

<sup>146</sup> *Id.*

<sup>147</sup> Hunt, *supra* note 141 (“It’s not something I like to discuss with people, but I’ve been bracing for this for years, thinking when was the phone call going to come?”).

<sup>148</sup> Bishop, *supra* note 145.

<sup>149</sup> Mitch Kellaway, *UFC Women's Champ Refuses to Fight Trans Athlete Fallon Fox*, ADVOCATE (Sep. 14, 2014), <http://www.advocate.com/sports/2014/09/22/ufc-womens-champ-refuses-fight-trans-athlete-fallon-fox> [<https://perma.cc/AVR4-KMCH>].

<sup>150</sup> Hunter Felt, *Transgender MMA Fighter Fallon Fox Faces Toughest Opponent Yet: Prejudice*, THE GUARDIAN (Nov. 14, 2014),

**VI. PROVIDED THAT THE MAIN REASON BEHIND ESTABLISHING THE POLICY HAS BECOME MOOT AND INABILITY TO DEFINE “A FEMALE” DUE TO DEFICIENCY IN SCIENTIFIC UNDERSTANDING OF HUMAN SEX, THE SEX/GENDER VERIFICATION SHOULD BE ABOLISHED**

**A. *The issue of detecting male imposters is moot.***

Because all athletes in the elite sports are subject to anti-doping requirements, the issue of detecting male imposters by visual examination is unnecessary. The anti-doping agents (or shepherds who travel with the agents) must be present in the athlete’s immediate presence during the urine collection procedure for testing purposes.<sup>151</sup> Therefore, any inconsistencies with the athlete’s marked sex would be detected at that time.

**B. *We may be not literate enough to be able to define “a female.”***

One theory is that lack of full understanding of gender leads to the inability to define gender which ultimately leads to failure to shape a valid sex/gender verification test. Contrary to general belief, some suggest that like everything else in nature, sex and gender are not fixed but rather fluid and ever changing notions.<sup>152</sup> Many animals do not conform to the rigid gender roles assigned by humans, some species of fishes display hermaphroditism, and the fluidity of sex is also not uncommon in the botanical world.<sup>153</sup> Another commonly believed rare occurrence – intersex births – are not as rare as they thought to be.<sup>154</sup> (Interestingly, South Africa, the birthplace of Caster Semenya, has an unusually high level of intersex births.)<sup>155</sup> By the same token, the definition of sex for humans ought to encompass the fluidity and uncertainty. This is contrary to efforts of sport authorities to confine the

definition of a woman to a particular type and number of chromosomes, hormonal levels, and perhaps even appearances.

Besides, if a stringent definition of a female should exclude natural variations of female bodies, such as elevated levels of testosterone, should other naturally occurring peculiarities be deemed abnormal? For example, Eero Mantyranta, a Finnish cross-country skier who won in the 1960s seven Olympic medals, including three gold, had a genetic mutation that awarded him up to 50 percent more oxygen in his blood.<sup>156</sup> More recently, Michael Phelps, the Olympic swimmer, allegedly has double-jointed ankles and unusually long arms and large hands which help him to swim faster.<sup>157</sup> It is undecided whether such attributes are merely natural variances of human bodies or abnormalities. It is even less certain whether such competitive advantages should prevent the athletes to compete.<sup>158</sup> Most would say they are just variations. Thus, a level playing field is probably

<https://www.theguardian.com/sport/2014/nov/14/transgender-mma-fighter-fallon-fox-joe-rogan> [https://perma.cc/H6YL-TU9H].

<sup>151</sup> *Sample Collection Process*, U.S. ANTI-DOPING AGENCY, <http://www.usada.org/testing/sample-collection-process/> (last visited Dec 16, 2016) [https://perma.cc/6CT8-MRVJ].

<sup>152</sup> FRANK BROWNING, *THE FATE OF GENDER: NATURE, NURTURE, AND THE HUMAN FUTURE* 56 (2016).

<sup>153</sup> “Male rams hump each other. Adult bulls demonstrate a variety of ‘sexual’ gestures toward both

male and female offspring... The California sheephead, a bright blue, green, and yellow fish... starts her life as a female bearing eggs; then after four years her gonads atrophy and she becomes a fertilizing male.... the ginkgo [tree], fairly frequently changes its sex.” *Id.* at 67-69.

<sup>154</sup> “One in every 1,500 children is born whether with ambiguous genitalia or with other less visible sexual characteristics.” *Id.* at 70.

<sup>155</sup> Ariel Levy, *Either/Or: Sport Sex, and the Case of Caster Semenya*, *THE NEW YORKER* (Nov. 30,

2009), <https://www.newyorker.com/magazine/2009/11/30/eitheror>.

<sup>156</sup> Longman, *supra* note 79.

<sup>157</sup> Valerie Siebert, *Michael Phelps: The Man Who Was Built to be a Swimmer*, *THE TELEGRAPH* (Apr. 25, 2014), <https://www.telegraph.co.uk/sport/olympics/swimming/10768083/Michael-Phelps-The-man-who-was-built-to-be-a-swimmer.html>

<sup>158</sup> Jesse Ellison, *Caster Semenya And The IOC’s Olympics Gender Bender*, *THE DAILY BEAST* (July 26, 2012),

unattainable because “[a]ll Olympians have some exceptional traits. That is why they are elite athletes.”<sup>159</sup>

## VII. CONCLUSION

The two main reasons for the policy were to level the field to ensure fairness and to impede male imposters. The issue of male imposters turned out to be an easy one. Today, the anti-doping agency performs the visual check with its procedures, and because, especially in this day and age, it is highly unlikely that a male will disguise as a female to compete in elite sports. Hence, the fear of imposters should fade away, leaving the fear of fairness as the only justification for sex/gender policies.

For decades, the sex/gender verification remains a highly complicated and controversial subject. However, the question of what is considered “a female,” for purposes of a sport competition remains unanswered. To answer this question, another question must be answered first: “is it even possible for us to define ‘a female?’” Some voiced an opinion that it is not feasible to reach the set goal due to the natural variety of variables in human bodies. Others questioned whether we

“genetically literate enough” to come up with a proper test to verify gender.<sup>160</sup> The fundamental theory of a binary division into males and females continues to be scientifically unsubstantiated.<sup>161</sup> Many have discussed what the procedure ought to be.<sup>162</sup>

To date, all of the attempted policies have not only failed to provide a definite answer but raised more questions. Evidently, the more effort is put toward defining “a female,” the more naturally occurring variations are discovered. It leads to an appropriate but hopeless debate on whether the naturally occurring abnormalities ought to be accepted as variations within a certain gender or abnormalities such as a form of deficiency or mutation. Sport authorities are diligent in their efforts to prevent athletes to enhance their abilities by use of science. However, many feel infuriated even when such enhancements occur naturally in an athlete’s body. Conversely, it is our current social aim to promote tolerance, acceptance, and all-inclusiveness of individuals’ diversity. It would be contrary to that view establishing limitations on the genetically enhanced athletes.

One thing is clear: the current policy has to change or

be abolished. The decades of unsuccessful attempts to define an ideal policy may be a clear sign that such policy, at least at this time, is not achievable. It may be wise to stop trying and allow all women athletes to participate in sport competitions. Perhaps not forever. If at a later time, a legitimate need arises, this issue could be revisited with a clear goal of addressing that particular need. The gender policies as they are today neither valid, fair, nor needed.

<https://www.thedailybeast.com/articles/2012/07/26/caster-semenya-and-the-ioc-s-olympics-gender-bender.html>

[<https://perma.cc/R9BG-B869>].

<sup>159</sup> Longman, *supra* note 79.

<sup>160</sup> Ambroise Wonkam et al., *Beyond the Caster Semenya Controversy: The Case of the Use of Genetics for Gender Testing in Sport*, RESEARCH GATE (Dec. 2010), <http://iddrc.wustl.edu/Portals/12/Wonkam-JOGC-2010.pdf>

<sup>161</sup> *Id.*

<sup>162</sup> M.A. Ferguson-Smith & Elizabeth A. Ferris, *Gender Verification in sport: The Need for Change?* BRITISH J. OF SPORTS MED. (1991).