

INTERSEX ATHLETES: DO WE NEED A GENDER POLICE IN PROFESSIONAL SPORTS?

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During last year's Athletics World Championships in Berlin, two athletes absorbed most of the public attention: Usain Bolt and Caster Semenya. Bolt was celebrated for his world records in the men's 100m and the 200m dash. Semenya, whose performance in the women's 800m run was as dominating as Bolt's, was facing allegations that she was not really a woman but a hermaphrodite.

The focus on Semenya, from both the International Association of Athletics Federations (IAAF) and the mainstream media, had begun only a few weeks before the world championship when she clocked 1:56.72 at the African Junior Championships in Mauritius, setting a new national record and making her the world's leading athlete in the 800m. At the World Championship, she beat this time—and the competition—by almost 1.5 seconds, pushing her personal best to 1:55.45. A media frenzy ensued when news leaked during the competition that the IAAF had ordered Semenya to undergo a gender verification test. Her “male appearance” and the fact that she had developed from a promising junior athlete into a world-class middle distance runner in less than a year fueled the suspicions about her sexual identity.

The allegations against Semenya triggered strongly-worded denials from South African officials, outrage from intersex groups concerning her treatment by the media and the sports associations, and, predictably, complaints from her opponents. When news leaked to the media in September 2009 that tests showed that Semenya was intersex,¹ neither the IAAF nor Athletics South Africa (ASA) officially commented on the

¹ Mike Hurst, “Caster Semenya has male sex organs and no womb or ovaries” in *The Daily Telegraph*, 11 September 2009; accessed at <http://www.dailytelegraph.com.au/sport/semenya-has-no-womb-or-ovaries/story-e6frefxni-1225771672245>.

issue, although the IAAF announced that Semenya would be able to keep her world title and the prize money. On 6 July 2010, eleven months after the World Championship, the IAAF finally decided that Semenya was eligible to compete in women's events. There were unconfirmed rumors, however, that she had been forced to undergo hormone treatment during her suspension.²

Based on the Semenya case, I argue in this paper that the practice of Gender Verification Testing (GVT) in professional sports is unethical and pointless. The presumed benefit of GVT—ensuring fair competition for female athletes—is virtually nonexistent compared to its potential harms, in particular the exposure of individual athletes to a largely interphobic public. GVTs constitute a serious incursion on the athlete's dignity, autonomy, and privacy; an incursion that cannot be justified by the appeal to fairness.

My argument will proceed in four steps. In sections 1-5, I provide background information on the definition of intersexuality, the history and methods of Gender Verification Testing, and the performance gap between men and women in professional athletics. In sections 6 and 7, I develop my main argument against GVT. In section 8, I offer a supplementary argument against GVT from the history of "gender engineering" in professional sports in the 1970s and 1980s. In section 9, I briefly consider the suggestion that the presence of intersex athletes in professional sports would force us to abandon gender segregation.

1. WHAT IS INTERSEX?

Intersexuality can be defined broadly as the presence of ambiguous markers of sexual identity. While intersex individuals are often referred to as "hermaphrodites" in

² Anna Kessel, "Caster Semenya may return to track this month after IAAF clearance" in *The Guardian*, 6 July 2009; accessed at <http://www.guardian.co.uk/sport/2010/jul/06/caster-semenya-iaaf-clearance>.

colloquial language, the two terms do not designate the same thing.³ The term “true hermaphroditism” designates the presence of male as well as female gonads;⁴ true hermaphroditism is, in fact, one of a number of intersex conditions. The term “intersex”, a sort of umbrella concept,⁵ itself covers a variety of conditions. It can refer to the presence of ambiguously shaped genitals (micropenises and large clitorises, bifid scrota and fused labia); to the presence of two differently “gendered” chromosome sets in the cells of one body (a condition called *mosaicism* – an XX/XY mosaic, for instance, would have XX as well as XY cells in his/her body); to irregularities in the hormonal and enzymatic processes that are thought to govern the development of primary and secondary sexual features; and—in “true hermaphrodites”—to the presence of ambiguous gonadal tissue.

Intersexed persons challenge traditional biological and medical notions about sexual identity—in particular the notion that scientists can unequivocally define sexual identity. According to traditional medical and biological categories of sex, intersexes may exhibit a number of different sexual identities. Their chromosomal sex, gonadal sex, and hormonal sex may differ from their morphologic sex (the appearance of their

³ Nevertheless, intersex activists and support groups have appropriated the term “hermaphrodite” in order to draw attention to their plight.

⁴ True hermaphroditism can imply the presence of one testis and one ovary, or it can imply the presence of a single gonad with both male and female gonadal tissue, a so-called *ovotestis*.

⁵ There are different opinions in the medical community about which conditions should be included in the term, and about how common (or rare) these conditions are. Anne Fausto-Sterling has estimated that more than 1.5% of all live births are intersex, assuming a rather large figure for cases of late-onset Congenital Adrenal Hyperplasia (LOCAH); this figure, as well as Fausto-Sterling’s definition of intersex, have been challenged. See Fausto-Sterling, *Sexing the Body*, p. 53 (New York 2000: Basic Books); for a challenge to Fausto-Sterling’s numbers see Leonard Sax, “How Common Is Intersex? A Response to Anne Fausto-Sterling” in *The Journal of Sex Research* 39/3 (August 2002), pp. 174-8. Sax wants to restrict the term “intersex” to cases “in which chromosomal sex is inconsistent with phenotypic sex, or in which the phenotype is not classifiable as either male or female,” excluding conditions such as LOCAH, Klinefelter’s syndrome (an additional X-chromosome in 47, XXY males), and Turner’s syndrome (a missing second X-chromosome in 45, X females). Under Sax’s narrow definition of “true intersexuality” the frequency of intersex births drops to less than 0.02%. In 2006, the American Pediatric Association adopted a new term for intersexuality: Development of Sex Disorders (DSD). DSD covers “congenital conditions in which development of chromosomal, gonadal, or anatomical sex is atypical” and is thus much broader than Sax’s narrow definition. See Lee, Houk et al., “Consensus Statement on the Management of Intersex Disorders,” in *Pediatrics* 118/2 (2006), pp. e488-e500, here p. e488.

genitals and their body shape) and the psycho-social sexual identity they adopt in their adult lives.⁶ Nevertheless, medical practitioners have insisted on being able to identify the “true” sexual identity of intersex children, and it is common today to assign a “sex of rearing” to intersex infants at or shortly after birth, often followed up by surgical and/or pharmaceutical interventions to ensure that their appearance matches their assigned gender identity.⁷

2. A VERY BRIEF HISTORY OF GENDER VERIFICATION TESTING

Gender Verification Testing was introduced at the 1966 European Athletics Championship in response to rumors that men posing as women were competing against female athletes.⁸ Initially, female athletes were required to parade naked in front of officials, that is, the officials simply assessed the *morphological sex* of athletes. As athletes complained about the humiliating nature of the procedure, this practice was soon abandoned in favor of supposedly less invasive *chromosomal* analysis. At the 1968 Summer Olympics, compulsory laboratory-based GVT was introduced for all female athletes.

⁶ Intersexuality is not the same as transsexuality. Intersex individuals are defined by their anatomical and genetic “abnormalities,” while pre-operative and non-operative transsexuals need not exhibit any deviation from the anatomical norm. In transsexual individuals, the psycho-social gender identity differs from the sexual (anatomical) identity. In intersexual individuals, the sexual identity itself cannot be defined according to the traditional male-female divide.

Though the divide would be somewhat simplistic, we could in principle distinguish transsexual from cissexual intersexes. Cissexual intersexes would be those who as adults are comfortable with their assigned gender identity and accept their “abnormal” bodies as conforming to this gender identity—or those that embrace their intersexuality as a third gender identity that is neither male nor female. Transsexual intersexes would be those who become uncomfortable with their assigned gender identity and seek to anatomically transition to the other sex.

⁷ See, for instance, *Sexual Signatures* by John Money (one of the pioneers in the study of human intersexuality) and Patricia Tucker (Boston 1975: Little, Brown, and Co.) where Money lists ten “road signs” for the development towards a male or female sexual identity. For a critique of Money’s claims, which shaped the medical treatment of intersexes well into the 1990s, see chapter 3 of Fausto-Sterling, *Sexing the Body*.

⁸ These rumors were directed particularly at the Soviet sisters Tamara and Irina Press, who had dominated several track and field events in the 1950s and 1960s. When mandatory GVT was announced, the Press sisters withdrew from competition, seemingly confirming the rumors that they were male or intersex.

The IAAF abandoned compulsory GVT in 1991, partly in response to the case concerning the Spanish hurdler Maria José Martínez Patiño (discussed below). The International Olympic Committee (IOC) followed in 1999. Both organizations, however, reserved the right to order individual GVTs where there exist strong doubts about or challenges to a female athlete’s sexual identity—as occurred in the case of Caster Semenya. When the IAAF orders a GVT, a panel of experts is assembled comprising of a gynecologist, an endocrinologist, a psychologist, an internal medicine specialist, and an expert on gender/transgender issues.⁹

The ostensible goal of GVT is to expose male or intersex athletes who deliberately pose as women in order to gain a competitive advantage.¹⁰ During the history of compulsory GVT, no such case was ever discovered.¹¹ Instead, GVTs have usually exposed female-identifying intersex athletes who are often not aware that they have an intersex condition, and who enjoy no competitive advantage over their opponents.

3. HOW DOES GVT WORK?

Let us imagine that we are the doctors in charge of a female athlete’s GVT.¹² First, we would perform a physical exam. Suppose that we find nothing extraordinary: her labia and clitoris look normal and she has no chest or facial hair. Her entire phenotype is clearly female. However, the athlete tells us that she has never had a period. This might point to some kind of intersex condition—but it might also be the result of her

⁹ See the IAAF Policy on Gender Verification, accessed at <http://www.iaaf.org/medical/policy/index.html>.

¹⁰ See Simpson, Ljungqvist et al., “Gender Verification in the Olympics” in the *Journal of the American Medical Association* 284 (September 2000) pp. 1568-9.

¹¹ The most famous case of a male impostor occurred at the Summer Olympics in 1936—long before the introduction of GVT—when the German Hermann Ratjen participated in the women’s high jump under the name of Dora Ratjen. Apparently Ratjen was pressured into posing as a woman by German officials. His competitive advantage turned out to be negligible, he finished fourth.

¹² This passage is modeled after an interactive segment on the website of the Howard Hughes Medical Institute (<http://www.hhmi.org/biointeractive/gendertest/gendertest.html>) where users are guided through the steps of a GVT and learn about its medical and genetic backgrounds.

strenuous training regimen. We cannot draw any definite conclusion from the physical exam, but the evidence seems to point towards a female sexual identity.

Next we order a karyotype test, a “snapshot” of the athlete’s 23 pairs of chromosomes. The karyotype test reveals that she has a Y-chromosome where we expected a second X-chromosome. The athlete is thus chromosomally male—but how does this result square with the seemingly normal female genitalia and her female body shape? We need to take a closer look at the genes on the Y-chromosome. During the first seven weeks after fertilization, a human embryo has the potential to become either male or female. The sexual organs have not developed yet, and the bipotential gonadal tissue is waiting for “signals” from the chromosomes to start development into testes or ovaries. One such “signal” is the gene SRY (sex-determining region Y) which is located on the Y-chromosome and triggers the development of the gonadal tissue into testes. We might suppose that in our hypothetical athlete, SRY was either not present or dysfunctional and the gonadal tissue never developed into testes. SRY is not by itself responsible for the full development of the embryo into a male infant; in order for this development to be completed, the testes must discharge sex hormones, i.e., testosterone and other androgens. If SRY is inactive, fewer “male” hormones will be discharged, leaving the body to take on a feminine shape.

A closer examination of the Y-chromosome, however, using a test called Polymerase Chain Reaction which scans for a certain enzyme expressed by SRY, shows that SRY is present and fully functional. Furthermore, we discover that the athlete’s gonads have male characteristics: she has undescended testes which indeed discharge testosterone. The athlete should have developed a masculine body and male external genitalia. So what has happened?

It turns out that the athlete has Complete Androgen Insensitivity Syndrome (CAIS). After embryonal differentiation, her testes worked normally, but the rest of her body could not absorb any of the testosterone and other androgens that they discharged. For this reason, her body, with the exception of the gonads, did not develop male characteristics.

This is, it should be noted, a simplified case and one which should not imply that GVTs are always unambiguous. As I will discuss later in the paper, this is not the case. Different GVTs can sometimes lead to contradictory results, whilst other intersex conditions can be so complex that doctors simply do not know what caused them or how they should classify them. Androgen insensitivity, for example, can come in varying degrees, and persons with androgen insensitivity do not always have an unambiguously female phenotype.

4. UNFAIR ADVANTAGES?

So, having now diagnosed the athlete, we must decide whether to ban her from competition: we have to determine whether she enjoys an unfair competitive advantage. As is expected in individuals with CAIS, her testosterone levels are unusually high. If she were a 46, XX woman, this finding would point to doping practices.¹³ Consumption of artificial testosterone would allow a “normal” woman to quickly build up more muscle mass, giving her an advantage in terms of power and speed.

But remember that our hypothetical athlete has CAIS. Her body cannot use the extra testosterone that her testes produce as a growth hormone, which implies that her

¹³ Using artificial testosterone and other androgens in order to gain a competitive advantage is a rather common doping practice for female as well as male athletes. After the collapse of the communist bloc, female athletes from the GDR revealed that they were pressured or deceived into taking high levels of anabolic steroids and other performance-enhancing substances by their coaches and physicians (see also the section “Gender Engineering” below). In 2006, Floyd Landis was found guilty of using synthetic testosterone after he had won the Tour de France in an improbable fashion, gaining more than nine minutes on the previous leader in a start-to-finish solo ride on the last mountain stage. Landis fought a long and expensive battle in the media and in the courts to prove his innocence, until he finally admitted to drug use in 2010.

condition does not confer a competitive advantage. In fact, IAAF regulations stipulate that 46, XY women with CAIS are allowed to compete in women's competitions.¹⁴

I have already mentioned the case of Maria José Martínez Patiño.¹⁵ Patiño was a Spanish hurdler and was relatively successful in the mid-1980s. Having forgotten her "certificate of feminity" at home in Spain, Patiño was subjected to a GVT at the University Games in Japan in 1985. The GVT revealed an XY-chromosome constitution and hidden testes. Patiño was chromosomally and gonadally male – but she had androgen insensitivity which made her hormonally and morphologically female.

Patiño was left in the dark about her test results for months, after which she was told to feign an injury and withdraw from competition permanently. When she refused, her story was leaked to the press. Patiño lost friends, her fiancé, and all her support from the Spanish Athletics Association. She fought a legal battle that lasted for two years until she was allowed to run again in 1988. After her suspension, however, Patiño failed to qualify for a big sporting event. Even more dramatic is the story of Indian middle-distance runner Santhi Soundarajan. Soundarajan was disqualified after "failing" a GVT at the 2006 Asian Games in Doha, where she had won the silver medal in the women's 800m. The news wrecked her personal and professional life, leading her to attempt suicide.¹⁶

In some respects, Caster Semanya's story is eerily similar to Patiño's. Like Patiño, Semanya was allegedly told to feign an injury before the World Championships in Berlin in order to avoid the media spotlight. Semanya had to endure a long hiatus from competition, and her times in her two comeback races in Finland in July 2010 did not

¹⁴ IAAF Policy on Gender Verification, prepared by the IAAF Medical and Anti-Doping Condition 2006; accessed at <http://www.iaaf.org/medical/policy/index.html>.

¹⁵ See Patiño's own account "A Woman Tried and Tested" in *The Lancet* 366 (2005) p. 38; and Anne Fausto-Sterling's summary of the case in *Sexing the Body*, pp. 1-2. In some details, Fausto-Sterling's account seems to differ from Patiño's own account.

¹⁶ See Sanjay Rajan, "Santhi turns to coaching after suicide bid," Reuters India, 9 June 2009, accessed at: <http://in.reuters.com/article/idINIndia-40197820090609?pageNumber=1>.

come anywhere near her personal best, leaving doubts that she can return to the performance level she had in the summer of 2009.

Patiño's struggle helped to end the practice of compulsory GVT, and to introduce refined rules and guidelines for intersex and transgendered athletes. In particular, her case disrupted the notion that chromosomal analysis is sufficient to determine an athlete's sex – a notion which implied that any woman with an XY-chromosome constitution was ineligible to compete. The IAAF's current practice of assembling a panel of medical as well as non-medical experts is evidence that the concept of sexual identity in sports has become more nuanced since the introduction of GVT in the 1960s. As we have seen though, despite this more nuanced perspective a GVT still has the potential to wreck lives and careers. This should lead us to ask whether there are any good reasons *for* GVT that would outweigh the potential harms caused by it. The IAAF and other sports federations would maintain that a GVT is necessary in order to determine an athlete's eligibility for women's competitions in specific ambiguous cases – such as Semenya's. The presumed benefit of GVTs would be that they ensure fair competition among female athletes. I will make my case against GVT by arguing that the potential harm done by exposing intersex athletes outweighs any feasible interest in ruling out "tough cases". To make this argument, it is helpful to locate gender segregation in sports in a wider perspective.

5. GENDER SEGREGATION IN SPORTS AND THE PERFORMANCE GAP

BETWEEN MEN AND WOMEN

Undoubtedly, there is a difference in the average athletic capabilities between women and men. Because of their additional muscle mass, different bone structure, and higher blood volume and heart size, men are—on average—stronger and faster than women.¹⁷

¹⁷ See Rosalyn Carbon, "Female Athletes" in the *British Medical Journal* 309 (July 1994), pp. 254-8. Women appear to enjoy an advantage over men in ultra-endurance events, e.g., long-distance swimming. There

Thus men—on average—enjoy a significant advantage in all disciplines which primarily require speed and strength (all track and field disciplines, for instance).¹⁸ Considering this significant athletic advantage, gender segregation makes sense: if women are to participate in professional athletic sports at all, they need their own competitions—otherwise they would tend to be outcompeted by male athletes and thus effectively excluded from these sports.¹⁹

Caster Semenya clearly had an advantage over her opponents in the 800m run, seeing as how she dominated the event. But was it an unfair advantage? And if it was, did it relate to any intersex condition she might have? The first question was answered in the negative by the “experts” conducting her GVT; the second question cannot be answered, at least not from official sources. However, one thing is very clear: Semenya could not compete with male middle-distance runners on a professional, world-class level. Her time at the world championships was roughly ten seconds slower than her compatriot Mbulaeni Mulaudzi’s winning time in the men’s 800m, and more than 14 seconds slower than the World Record in the men’s 800m. Semenya’s 1:55.45 would have seen her eliminated in the first of three rounds of the men’s competition in Berlin; she would have finished third-to-last in the final classification, just ahead of two runners from Vanuatu and Samoa.

When we compare Semenya’s performance with that of other female athletes, we find that her time is still more than two seconds above the current world record

seems to be no generally accepted explanation for this phenomenon.

¹⁸ As should be clear from the structure of the paper, and my choice of examples, I focus entirely on athletics. Most sports are segregated by gender, even disciplines where we would not expect significant differences in the average performance of men and women—e.g. shooting, archery, and curling. The only Olympic disciplines that are not segregated by gender are the equestrian disciplines.

¹⁹ In this paper I will not go into the question of why it is desirable that women compete in top-level professional sporting events. I will assume for the sake of the argument that we can give at least a conditional justification for women’s competition: if there are good reasons for maintaining professional sporting events, then there is no good reason for excluding women (explicitly or implicitly) from these events. I think that a promising route for justifying women’s events would be to focus on the potential for female athletes to serve as role-models. I suggest that the normative force of this potential actually increases in the case of lesbian and female-identifying intersex athletes.

(1:53.28), more than one second above the current African record (1:54.01), and almost a second above the winning time at the 2008 Summer Olympics (1:54.78). If she is able to overcome the competitive disadvantage caused by her 11-month suspension, Semenya may eventually break the world record (the oldest world record in athletics, dating from 1983; I will come back to the topic of “ancient” world records below, in the section on “Gender Engineering”). Even if she is still able, however, to increase her potential, it seems obvious that Semenya belongs in the women’s competition. She may have run in a league of her own in Berlin, but that league was not in between male and female athletes. She was quite simply much faster than other female athletes.

6. THE CASE AGAINST GVT

My case against GVT will take for granted traditional segregation between men’s and women’s competitions in the athletic disciplines. I will touch on the topic of abolishing gender segregation in sports below; in this section, I make the more modest claim that we do not need a “gender police” in order to maintain fair competitions for women.

Caster Semenya’s story exemplifies the prevailing homo-, trans-, and interphobia in women’s sports and professional sports more generally.²⁰ (These phobias, when they occur in the context of professional sports, are likely to be a mirror image of general societal attitudes.) Female athletes have been and still are subject to mockery by the audience as well as by their opponents when they do not conform to gender stereotypes, e.g., when they are openly gay and/or appear with a butch attitude. Lesbian tennis player Martina Navratilova (one of the first openly gay sportswomen) is just one of a number of female athletes who were ridiculed and rejected because of their actual or suspected homosexuality. If, in addition to her actual or suspected homosexuality, the

²⁰ Homo-, trans-, and interphobia is, of course, not just an issue in women’s sports. Men’s soccer is a paradigmatic example, with homophobic slurs being part of the “cheering” repertoire of most fans and overt hostility shown towards the idea of openly gay players.

athlete does not conform to the biological norm—i.e. if an intersex athlete appears with a butch attitude –homo-, trans-, and interphobic expressions rise to a fever pitch. Much of the controversy between ASA and the IAAF in fact revolved around the notion of “defending Caster’s femininity” and issues of racism. Little effort was spent on protecting Semenya’s privacy and dignity: she was lied to,²¹ put on the world stage despite the rumors circulating about her, harassed by the media, and mocked by her opponents.²²

In light of such events, which are quite typical for athletes who have undergone and “failed” GVTs, there are strong ethical reasons to abandon GVT altogether. Singling out an athlete for a GVT will almost certainly make the news and, subsequently, it will become virtually impossible to protect the athlete from the public attention. Under the current policy of “selective” Gender Verification Testing, merely being subject to a test without “failing” it can have devastating consequences for an athlete’s life and career. Furthermore, Semenya’s case exemplifies how an athlete can become entangled in a dispute between two sports associations that do not seem primarily interested in the athlete’s well-being. ASA claimed to be on Semenya’s side all along, but the decision to let her start in Berlin may have had more to do with an interest in winning medals for South Africa (a country that is not an athletics powerhouse) than with any genuine concern for an athlete who does not conform to gender stereotypes. The IAAF, on the other hand, might have done more to protect Semenya’s privacy and dignity after ASA had decided to let her compete.

²¹ The president of ASA, Leopold Chuene, stepped down after he admitted that ASA had conducted their own GVT on Semenya before the IAAF ordered it, and that Semenya had been deceived about the purpose of this test (she thought it was an anti-doping control); see Serena Chaudry, “South Africa athletics chief admits lying about Semenya tests”, *Reuters* 19 September 2009, accessed at <http://www.reuters.com/article/idUSTRE58I0N320090919>.

²² See Jennifer Meadows’ account of how her opponents reacted to Semenya at the World Championship in Berlin, in Anna Kessel, “Rivals ‘laughed and stared at’ Caster Semenya, says Jenny Meadows” in *The Guardian*, 21 July 2010, accessed at: <http://www.guardian.co.uk/sport/2010/jul/21/caster-semenya-jenny-meadows>. Meadows won bronze in the 800 m at the 2009 World Championships.

The guidelines of the IAAF state that “gender issues” are “likely to arise as a result of:

- a) ‘challenge’ by another athlete or team [...];
- b) ‘suspicion’ raised as to an athlete’s gender as witnessed during an anti-doping control specimen collection;
- c) an approach made to the IAAF/regional AAA or National federation by an athlete or his representative for advice and clarification.”²³

The first point in particular seems to foster homo-, trans-, and interphobic attitudes by allowing athletes and sports officials to utter a suspicion simply based on the appearance and the performance of an athlete. Athletes can be accused of enjoying an unfair advantage, and of not conforming to the biological norm, when they are very good in their discipline and do not conform to stereotypical images of femininity. Furthermore, athletes asked to attend a medical evaluation before a panel of experts are likely to find this to be a humiliating experience, even regardless of the potentially devastating effects on their personal and professional lives.²⁴ Thus, in my view, the best way of preserving the dignity, privacy, and autonomy of intersex athletes is to simply abandon the practice of Gender Verification Testing altogether. One might object at this point: what about those tough cases? I suggest that there is little room for “tough cases” in professional athletics—not enough room, in any case, to warrant GVTs.

The IAAF’s policy list three intersex conditions which “should be allowed” because “they accord no advantages over other females” and three further conditions

²³ IAAF Policy on Gender Verification, section B.: Process for Handling Cases of Gender Ambiguity.

²⁴ Several athletes, Semenya among them, have reported humiliating treatment by these experts. Admittedly, even common anti-doping measures can seem quite invasive: athletes have to urinate under supervision, they have to give blood samples regularly, and, in many sports, they have to report their whereabouts for almost every day of the year so that they can be reached for unannounced anti-doping controls. Many athletes have indeed complained about this last point, arguing that they were stripped of their privacy by these requirements. I suggest, however, that while these anti-doping requirements may be invasive and annoying, they do not compare to the harmful potential of a GVT, in which an athlete finds her sexual identity subjected to public scrutiny.

which “may accord some advantage, but [are] nevertheless acceptable.” Presumably this implies that none of these six conditions (CAIS, gonadal dysgenesis, Turner’s syndrome, CAH, androgen producing tumors, polycystic ovary syndrome) requires any surgical or pharmaceutical intervention in order to make the athlete eligible to compete in women’s competitions. In cases of gonadal dysgenesis (a condition in which the gonads do not develop properly and generally produce fewer hormones), the athlete is likely to have undergone a gonadectomy early in life, due to an increased cancer risk associated with the underdeveloped gonads. In cases of CAH, the athlete is likely to have undergone hormonal therapy, due to the sometimes life-threatening health risks associated with the condition. In general, many intersexed persons with athletic potential will have been subjected to surgical and pharmaceutical interventions early in their lives in order to ensure that their phenotype conforms to the medical norm.²⁵

Intersexed persons with athletic potential are also likely to be deterred from competing precisely because of the prevailing gender stereotypes in professional sports: because they fear mockery from their opponents and their audience. What is more, the IAAF’s general policy on GVT states that since male impostors in women’s sports are very likely to be detected during anti-doping controls—where athletes need to provide a sample of urine in front of an official—there is no need for compulsory gender verification. However, the prospect of having to urinate under supervision will presumably also deter intersex athletes with visible anomalies on their external genitalia, regardless of whether or not these athletes would enjoy a competitive advantage.

²⁵ I am aware, of course, that this claim is unlikely to be true for all parts of the world. Someone like Semenya, who comes from a small town in a remote corner of South Africa, is less likely to have been subjected to medical interventions than someone born in a large city in the U.S., for instance.

At the 1996 Summer Olympics in Atlanta—the last Summer Olympic Games at which GVT was mandatory for every female athlete—eight out of 3387 female athletes tested SRY-positive (*vulgo*: they “failed” the sex test). Seven of these eight had androgen insensitivity; the eighth athlete “was a gonadectomized women who probably had 5 α -reductase deficiency.”²⁶ This eighth athlete might have been the Brazilian judoka Edinanci Silva, the only intersex athlete known to have undergone surgery in order to become eligible for women’s competitions. *All eight athletes* were subsequently cleared to compete.

Medical experts have called GVTs “difficult, expensive, and potentially inaccurate,” and they have argued that these tests “fail to exclude all potential impostors (e.g., some 46, XX males), [and] are discriminatory against women with disorders of sexual development [...]”²⁷ Both Maria José Martínez Patiño and Santhi Soundarajan, whose cases I referred to above, had “passed” gender verification processes before an intersex condition was discovered in another GVT. The fact that the IAAF assembles a number of experts in order to conduct a GVT—and that GVTs seem to take a long time—indicates that even these experts have difficulties determining an athlete’s sex, giving a correct diagnosis of her condition, and assessing any potential advantages she might have.

In light of these problems, I conclude that GVTs are not just morally problematic, but also impractical. Given that, under current circumstances, the majority of intersexed persons with athletic potential will be deterred from competing at the professional level even without the prospect of undergoing a GVT, and given that, of those who have been exposed in the past, no one seemed to enjoy a significant competitive advantage, GVTs

²⁶ Simpson, Ljungqvist et al., “Gender Verification in the Olympics”, p. 1569; see also Elsas, Hays, Muralidharan, “Gender Verification at the Centennial Olympic Games” in the *Journal of the Medical Association of Georgia* 86 (1997), pp. 50-4.

²⁷ Simpson, Ljungqvist et al., “Gender Verification in the Olympics”, p. 1568.

are pointless. Thus, I suggest that currently an athlete's psycho-social sex is sufficient for determining her eligibility, i.e. if she identifies as female, she should be able to compete with other female athletes.

7. CONGENITAL VS. ACQUIRED ADVANTAGES

Criticism of the participation of intersex athletes in women's sports sometimes focuses on the idea that because of their congenital differences, they have to work less than "normal" women to achieve athletic success: an intersex athlete would breeze to victory where other women need to invest enormous effort.

On the one hand, this criticism disregards the sheer amount of devotion that *any* professional athlete, no matter what congenital advantages she might have, has to put into her career. Professional sport requires enormous sacrifices from athletes, sacrifices that we seldom see or emphasize. David Foster Wallace has made this point very eloquently in his essay about the tennis player Michael Joyce:

[We] prefer not to countenance the kinds of sacrifices the professional-grade athlete has made to get so good at one particular thing. Oh, we'll pay lip service to these sacrifices – we'll invoke lush clichés about the lonely heroism of Olympic athletes, the pain and analgesia of football, the early rising and hours of practice and restricted diets, the privations, the prefight celibacy, etc. But the actual facts of the sacrifices repel us when we see them: basketball geniuses who cannot read, sprinters who dope themselves, defensive tackles who shoot up bovine hormones until they collapse or explode. We prefer not to consider the shockingly vapid and primitive comments uttered by athletes in postcontest interviews, or to imagine what impoverishments in one's mental life would allow people actually to think in the simplistic way great athletes seem to think. Note the way "up-close and personal profiles" of professional athletes strain so hard to find evidence of a rounded human life – outside interests and activities,

charities, values beyond the sport. We ignore the obvious, that most of this straining is farce. It's farce because the realities of top-level athletics today require an early and total commitment to one pursuit. An almost ascetic focus. A subsumption of almost all other features of human life to their one chosen talent and pursuit.²⁸

On the other hand, *all* athletes exploit their congenital advantages. Michael Phelps is an excellent swimmer partly because of his high lactate tolerance which allows him to keep going when other athletes would have begun to suffer from muscular acidosis; Blanka Vlasic is an excellent high jumper partly because of her exceptionally tall and slender build; Neil Robertson is an excellent snooker player partly because of his outstanding hand-eye-coordination, and so on.

Success in professional sports requires just the right balance between congenital potential and acquired skills (and of course, sufficient funding and high-quality training facilities and other external commodities). Lack of congenital potential cannot be fully compensated for by arduous training; vast congenital potential is of no avail without the right set of acquired skills. Consider a discus thrower: she needs both strength and speed, her discipline favors stout but flexible women with lots of momentum in their arms. Yet the possession of these characteristics would still be quite useless without the correct technique of throwing a discus, and learning the correct technique would not make her into a world-class athlete without full dedication to an arduous training regimen.

Excluding intersex athletes on the basis of their perceived congenital advantages seems arbitrary when we consider the role that congenital advantages play in all

²⁸ David Foster Wallace, "Tennis Player Michael Joyce's Professional Artistry as a Paradigm of Certain Stuff about Choice, Freedom, Discipline, Joy, Grotesquerie, and Human Completeness" in *A Supposedly Fun Thing I'll Never Do Again* (Boston 1997: Little, Brown, and Co.) pp. 213-55, here p. 237.

athletic disciplines.²⁹ Would we exclude Michael Phelps or Blanka Vlasic for their exceptional physiques? Surely not. So why does the attention focus on deviations from the *sexual* norm, especially if these deviations do not seem to impart a significant advantage? I have suggested that, in light of her results so far, the proper competition for Semenya is the women's 800m and it seems to me that the outrage about and interest in this case has more to do with prevailing homo-, trans-, and interphobia in professional sports than with any justifiable concern about unfair advantages. *If* Semenya indeed has an intersex condition, and *if* it accords her a slight competitive advantage—an advantage which is negligible compared to the average advantage of world-class male over world-class female athletes—then this advantage should be considered on the same level as Phelps' high lactate tolerance and Vlasic' tall and slender build: a gift that she is at liberty to exploit in professional sports.

8. GENDER ENGINEERING

In the year 2000, ten years after the dissolution of the German Democratic Republic, a German court found Manfred Ewald and Manfred Höppner guilty of aiding and abetting bodily injury in 20 cases. Ewald and Höppner had been high-ranking sports officials in the GDR; Ewald, who was president of the National Olympic Committee of the GDR from 1973 until 1990, had prided himself on being responsible for the extraordinary success of GDR athletes during the late 1970s and the 1980s.³⁰ In their respective functions, Ewald and Höppner had overseen the systematic doping of female athletes with synthetic hormones.

One of the 142 plaintiffs in the trial was Andreas Krieger, born as Heidi Krieger in East Berlin in 1965. Without his knowledge, Krieger—who became European

²⁹ See Carole Cadwalladr, "Gender has no place on the sporting agenda" in *The Guardian*, 23 August 2009, accessed at: <http://www.guardian.co.uk/commentisfree/2009/aug/23/womens-athletics-caster-semenya>.

³⁰ Ewald's autobiography, released in 1994, was entitled *Ich war der Sport* (I Was Athletics).

champion in the shot put in 1986—had been given high doses of anabolic steroids³¹ between 1982 and 1984, causing excessive muscle growth, and virilization of his entire body. In 1997, unable to come to terms with a female gender role, he underwent gender reassignment surgery. Krieger has stated that the steroid “treatment” he was subjected to contributed to his transition. He suffers from severe health problems as a consequence of the doping.

Krieger is only the most prominent of many victims of state-sponsored doping during the 1980s, and the GDR was not the only culprit. The Soviet Union and other communist countries probably had similar programs, and they may still continue today, in China, Russia, Belarus and other countries. Even though it seems unlikely that central agencies in “Western” countries organized and oversaw doping, athletes and their coaches do seem to have availed themselves of the services of synthetic hormones. Florence Griffith-Joyner, triple gold medalist for the U.S. at the 1988 Olympic Summer Games in Seoul, was surrounded by rumors of massive steroid use. She died under mysterious circumstances in 1998, at the age of just 38, while her world records in the 100m and 200m dash still stand today and are considered unattainable by the best contemporary athletes.

During the heyday of steroid use in the 1970s and 1980s, few athletes were actually convicted of doping offences and, even today, many aspects of state-sponsored doping remain unclear. There is, however, strong indirect evidence that doping practices were significant. Of the 23 world records in the Olympic disciplines in

³¹ The GDR’s performance-enhancing drug of choice was *Oral-Turinabol*, a synthetic variant of testosterone. Physicians administered the drug according to an exact schedule so that there would be no detectable traces of it left during big sporting events. The athletes were told that they were being given “vitamins” or were simply pressured into taking the drug. Sometimes the “treatment” with *Oral-Turinabol* started when girls were just 13 years old. For an overview of the trial against Ewald and Höppner and the doping practices in the GDR see Luke Harding, “Forgotten victims of East German doping take their battle to court” in *The Guardian* 1 November 2005, accessed at <http://www.guardian.co.uk/sport/2005/nov/01/athletics.gdnsport3>.

women's athletics, 12 are more than 20 years old, and 15 are more than 15 years old. Of the remaining eight disciplines, five have become Olympic disciplines less than 15 years ago (5000m, 3000m steeplechase, pole vault, hammer throw, and 20km race walk); in one discipline (the javelin throw), the equipment was modified in 1999 and the old world record erased; and, for another discipline (the marathon), the IAAF did not record official world records until 2003. It is curious, to say the least, to have this many "ancient" world records, most of which far exceed the abilities of today's best athletes. In comparison, of the 24 world records in the Olympic disciplines in men's athletics, 15 are *less* than 15 years old, and only three are more than 20 years old.

There is, therefore, some good reason to suspect that a large number of world-class female athletes were gender-engineered during the 1970s, 1980s, and into the 1990s—treated, that is, with excessive doses of synthetic "male" hormones. When the IAAF and other sports federations introduced stricter anti-doping controls in the 1990s, performance levels stagnated or dropped significantly. Because of progress in technique, training methods, sports equipment, sports facilities, etc., one would expect a slow but steady progression of the world records. This is not, however, the case for most disciplines in women's athletics. Caster Semenya's own discipline, the 800m, is an exemplar: the Czech Jarmila Kratochvilova set the current world record of 1:53.28 in 1983;³² since then, *only one* athlete has come within less than one second of this time, the Kenyan Pamela Jelimo in 2008.³³

³² In the same year, Kratochvilova also set a new world record in the 400m, running a time of 47.99. She lost this world record to Marita Koch (GDR) in 1985. Koch's time of 47.60 still stands as a world record today; Kratochvilova and Koch are still the only two women to ever run the 400m under 48 seconds; and only four athletes have run the 400m under 49 seconds since 1985. The World Leading Time for 2010 (as of 1 August 2010) is 49.64.

³³ Another cross-gender comparison that hints at the extensive use of "male" hormones" in women's athletics: In the 27 years since Kratochvilova's world record run, four women have come within two seconds of her time. In the 13 years in which Wilson Kipketer held his world record in the men's 800m, five men have come within two seconds of his time. Kenyan David Rudisha beat Kipketer's time of 1:41.11 twice in August 2010; the new world record, set in Rieti (Italy) on 29 August 2010 stands at 1:41.01.

Despite evidence of gender-engineering in women's athletics, the IAAF has not seriously considered erasing the world records from the 1980s. In light of this refusal to acknowledge that these records may have been achieved by athletes who had been subjected to treatments that transformed them into hormonal (if not morphological and psycho-social) intersexes, it is inconsistent—not to mention, hypocritical—to attempt to regulate natural intersex women in sports.

One might suggest that intersex athletes should be required to undergo treatment similar to that prescribed for MTF-transsexuals who want to compete in women's competitions. A post-operative MTF-transsexual has to wait two years after her gonadectomy before she is eligible to compete, she has to produce proof of adequate hormone treatment, and she has to have her new identity legally recognized.³⁴ An MTF-transsexual athlete must be, so to speak, reverse gender-engineered before she is eligible to compete. So why should we not apply the same standard to intersex athletes?

I will not go into the particular case of transsexual athletes here, because I think that we cannot meaningfully compare the two categories. I have suggested that most if not all intersex athletes who dare to make their way into professional sports will have no discernible advantage over other women, and many will have undergone medical procedures regardless of any possible sports career. MTF-transsexuals who transition after puberty, however, may have been exposed to high testosterone levels during puberty, so that a concern with fair competition appears warranted.

But there is a more general worry regarding the notions of gender-engineering and fairness—a worry that applies to transsexuals and intersexes as well as “normal” athletes. The eligibility of transsexual and intersex athletes is in part determined by their body chemistry, in particular their hormone levels. But hormone levels vary

³⁴ See the Statement of the Stockholm Consensus on Sex Reassignment in Sports, which is part of the IAAF's policy on gender verification.

naturally among “normal” athletes. The World Anti-Doping Agency (WADA) has introduced an “Athlete’s Biological Passport”, in order to monitor athletes’ blood-cell count and other blood-related variables over time, in order to be better able to detect blood doping with EPO and similar substances. We could imagine a similar “passport” that would document the mean natural concentration of potentially performance-enhancing hormones. We could even imagine the introduction of guidelines that determine “acceptable” hormone levels in all professional athletes—and not just in transsexuals and intersexes.³⁵ We could, in short, envision the creation of a standardized, gender-engineered athlete. If this vision makes you uncomfortable, then I suggest you have a good reason to reject a proposal for “reverse-engineered” intersex athletes. If you consider gender-engineering intersex athletes’ according to their body chemistry, then you have no good reason to oppose applying the same standards to “normal” athletes and to canceling out natural variation among them.

9. LEVELING THE PLAYING FIELD

Some commentators have suggested that the Semenya case does not just provide an incentive to end GVT, but that it also forces us to reconsider gender segregation in sport.³⁶ The presumed rationale for gender segregation is to “level the playing field”, to allow women to compete in professional sports on their own terms. Could we “level the playing field” and let women compete against men? We cannot simply ignore the average athletic disadvantage that women would have, but we could employ a method being used in Paralympic sports: handicap points.

³⁵ We tend to think of testosterone and related substances as “male hormones” and estrogen and related substances as “female hormones”—yet testosterone and estrogen occur naturally in both men and women. Anne Fausto-Sterling has criticized the labels “male” and “female” hormones and suggested that we should just neutrally label them as growth hormones, in relation to the specific functions they are serving; see *Sexing the Body*, chapters 6-8.

³⁶ See, for instance, Dave Zirin and Sherry Wolf, “The Idiocy of Sex Testing” in *The Nation*, 31 August 2009; accessible at: <http://www.thenation.com/article/caster-semenya-idiocy-sex-testing>.

In the Paralympic Games, athletes with different disabilities—for instance, differently handicapped amputees—can compete in the same events. The severity of their disability is reflected by a factor which goes into the calculation of their end result, e.g. in skiing events, the clock would run slower for the athletes with the more severe disabilities, or in the discus throw, the actual performance would be converted into points, allowing the athlete with the more severe disability to win even if she does not have the longest throw.

There are, however, two weighty reasons not to transpose this system onto able-bodied athletics. First, it appears sexist in effectively classifying femininity as a handicap. Second, there is again no good reason to stop at eradicating the gender divide. Why should we not also “level the playing field” with regard to other congenital advantages, e.g. letting the clock run faster for Michael Phelps or setting the bar higher for Blanka Vlasic? Apart from the intractable practical difficulties of differentiating between congenital advantages and acquired skills and relating them to each discipline (something which may sound easy in theory, but should prove extremely hard in practice), such a proposal would seem to undermine the very logic of competitive sports. Rather than competing against each other, and being compared on an even scale, athletes would compete against their own physical limitations.³⁷ Their prowess would be determined primarily in relation to their own physique, and not in relation to the achievements of their opponents. This is incompatible with the notion of competition in modern sports. Professional sport thrives on the antagonisms it creates; it is founded on the idea that some athletes are better than others, by virtue of their “natural talents” and their hard work. There may be good ethical reasons to reject this mindset, and I am not going to defend it here. My point is that this logic of antagonism, which is at the

³⁷ Many personal profiles of professional athletes revolve around the trope of “overcoming adversity”. But this trope is quite simply standard when disabled athletes receive any media attention at all.

heart of modern professional sports, will be effectively undermined if an athlete's performance is measured primarily in relation to their own physiological constitution.

Another possible way of ending gender segregation would be to introduce classes of competitors arranged by skill level rather than by sex—but we would face similar problems. How would we measure skill level? How would we resist the sexist implications of letting the best women compete against “weak men”? And finally, how many skill-level classes would we need to create? It seems to me that we could have an infinite number of skill levels. Thus, should the traditional gender divide seem arbitrary to you—due to, for example, the presence of intersex athletes who do not fall neatly into the traditional categories of sex—then the alternative must be recognized as equally arbitrary.

10. CONCLUSION: THE END OF GENDER SEGREGATION?

I have made two claims in this paper. First, I have argued that the practice of Gender Verification Testing should be abandoned completely because its potential harms far outweigh its potential utility, which appears to be virtually nonexistent. I suggested that we can maintain fair competitions for women without policing gender at the individual level. Second, I suggested that while the presence of intersex athletes forces us to rethink traditional notions of sex and gender, it does not force us to abandon gender segregation in sports—not because gender-segregated sport is a good thing *in se*, but because the alternatives seem equally problematic.

Certainly my argument in this paper is limited in its scope. It applies to a world in which homo-, trans-, and interphobia are still prevalent in virtually all societies, and perhaps especially so among sports audiences. It applies to a world in which coming out or being outed as intersex bears heavy personal and professional risks. It applies to a world in which professional sports is based on an absolute notion of “being the best.”

This is our world, but admittedly, things may change. It is not unfeasible to imagine that we may have proud and out intersex athletes in 20, 50, or 100 years; nor is it unfeasible to imagine that professional sports could shift from an absolute notion of “being the best” to a relative one. If these changes were to happen, then we would indeed need to reconsider and perhaps entirely abandon gender segregation in sports.