
WISCONSIN JOURNAL OF LAW, GENDER & SOCIETY

VOL. XXVII, NUMBER 3

FALL 2012

ARTICLES

RESPECT FOR THE FUNDAMENTAL NOTION OF FAIRNESS OF COMPETITION: THE IAAF, HYPERANDROGENISM, AND WOMEN ATHLETES

Erin Elizabeth Berry

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INTRODUCTION

On August 19, 2009, Caster Semenya, a South African runner, competed in the final heat of the 800-meter race at the World Championships in Berlin, Germany.¹ Hours before the final heat, the International Athletic Association Federation (“IAAF”) had disclosed to journalists that medical experts had performed sex-verification tests on Semenya just days before the beginning of the World Championships.² The IAAF was not aware of the results at the beginning of the 800-meter final.³ After winning the gold at the World Championships, the eighteen-year-old Semenya underwent further tests.⁴ Semenya did not compete internationally for eleven months while the IAAF determined her eligibility.⁵ During that time, the controversy surrounding Semenya’s eligibility made international headlines.⁶

The controversy surrounding Caster’s eligibility following the 2009 World Championships drew attention to an issue that has challenged international federations governing women’s athletic competitions for decades.⁷ At one time, sex-verification testing was mandatory for all women athletes competing in the Olympics or other international level competitions.⁸ Historical testing proved to be problematic, however, because the tests implemented were imprecise, insensitive, and, for decades, lagged behind the best scientific practices.⁹ Consequently, at the turn of the century, the International Olympic Committee (“IOC”), as well as majority of the international federations, eliminated mandatory sex-verification testing for all athletes.¹⁰ But they did not eliminate testing completely; instead they continued to employ inexact policies, testing athletes on a case-by-case basis.¹¹ Caster’s participation in Berlin revealed the

1. 12th IAAF World Championships in Athletics, (Aug. 19, 2009, 9:21 PM), <http://berlin.iaaf.org/documents/pdf/3658/AT-800-W-f-1-RS1.pdf>.

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

3. *Id.*

4. *Id.*

5. Aina Hunter, *Caster Semenya Can Run with the Women; It’s Official*, CBS NEWS (Dec. 17, 2011), http://www.cbsnews.com/8301-504763_162-20009781-10391704.html.

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

7. See Gina Kolata, *I.O.C. Panel Calls for Treatment in Sex Ambiguity Cases*, N.Y. TIMES, Jan. 20, 2010, <http://www.nytimes.com/2010/01/21/sports/olympics/21ioc.html>; Meg Handley, *The IOC Grapples with Olympic Sex Testing*, TIME, Feb. 11, 2011, <http://www.time.com/time/world/article/0,8599,1963333,00.html>.

8. Louis J. Elsas, et al., *Gender Verification of Female Athletes*, 2 GENETICS IN MED. 249, 249 (2000), available at <http://www.nature.com/gim/journal/v2/n4/pdf/gim2000258a.pdf>.

9. See *id.* at 251.

10. *Id.* at 253.

11. IAAF Medical and Anti-Doping Commission, *IAAF Policy on Gender Verification*, INTERNATIONAL ASSOCIATION OF ATHLETICS FEDERATIONS (IAAF) (2006), available at <http://www.iaaf.org/mm/Document/imported/36983.pdf>

flaws in the IAAF's policy and caused the IOC and IAAF to revisit the issue of sex-verification testing.¹²

In 2011, the IAAF published the "IAAF Regulations Governing Eligibility of Females with Hyperandrogenism to Compete in Women's Competition."¹³ The policy instituted by the IAAF is a vast improvement over past policies in that it is objective and careful, yet still affords the athlete a degree of control over her eligibility in an international competition. While improvements could be made, for the first time since the implementation of sex-verification testing, the IAAF has adopted a policy which seems to achieve the goal intended by the IAAF: contributing to the integrity of the competition while balancing the rights of athletes.

This paper will focus on the historical problems associated with sex-verification testing and why, despite past problems, a biological screening process is still necessary. This paper will explain why the IAAF's 2011 policy is an improvement over past policies and how the policy comes closer than any previous IAAF policy to achieving its intended goals of respecting the fundamental notion of fairness.¹⁴ Section I will provide a brief history of sex-verification testing and explain the problems that have prevented past tests from being effective. Section II will analyze factors that support implementing a biological testing process that contributes to a level playing field in women's sports. Section III will identify the strengths and weaknesses in the most recently adopted IAAF policy. Section IV will recommend improvements that could be made to the IAAF's 2011 policy to protect the interests of individual athletes and women's sports moving forward.

I. SEX-VERIFICATION TESTING: A BRIEF HISTORY

In 1936, Helen Stephens underwent a "sex check" after winning a gold medal at the Berlin Olympics.¹⁵ In 1957, Herman Ratjen confessed to having competed as a woman in international competitions from 1936-1938 under an order of the Nazi regime.¹⁶ But it was not until the 1960s that a rise in the performance level of elite women athletes caused international federations and the IOC to adopt eligibility standards in advance of competitions.¹⁷

12. Handley, *supra* note 7.

13. *IAAF Regulations Governing Eligibility Of Females With Hyperandrogenism To Compete In Women's Competition*, INTERNATIONAL ASSOCIATION OF ATHLETICS FEDERATIONS (IAAF) (May 1, 2011), available at [http://www.iaaf.org/mm/Document/AboutIAAF/Publications/05/98/78/20110430054216_httppostedfile_HARegulations\(Final\)-Appendices-AMG-30.04.2011_24299.pdf](http://www.iaaf.org/mm/Document/AboutIAAF/Publications/05/98/78/20110430054216_httppostedfile_HARegulations(Final)-Appendices-AMG-30.04.2011_24299.pdf) [hereinafter *IAAF Regulations*]

14. See *id.* for the IAAF's 2001 policy.

15. Elsas et al., *supra* note 8, at 250.

16. *Id.*

17. M.A. Ferguson-Smith & Elizabeth A. Ferris, *Gender Verification in Sport: The Need for a Change?*, 25 BR J. SPORTS MED. 1, 17 (1991).

Initially, athletes were required to produce a doctor's note or a medical certificate to validate the individual's sex in advance of competitions.¹⁸ But after suspicions were raised about the validity of documents, and concerns increased that Soviet Bloc countries had a practice of entering males disguised as females into competitions,¹⁹ sex-verification testing was introduced as a mandatory prerequisite for international competitions at the European Athletics Championships in Budapest in 1966.²⁰ Prior to 1966, individual athletes had undergone sex-verification tests when an athlete's sex was questioned, but never before had a sport's governing body tested the entire pool of athletes before a competition.²¹

At the inception of mandatory testing, the tests were problematic because they were embarrassing for athletes. In 1966, in Budapest, sex testing required all female athletes to remove their clothing and undergo visual genital inspection by a panel of three women doctors to certify that the athletes were women and eligible to participate.²² The 243 athletes inspected in Budapest were pronounced normal by the panel.²³ Later that year, women athletes underwent manual gynecological examinations during the Commonwealth Games in Kingston, Jamaica.²⁴ In 1967, female athletes participating in the Pan-American Games in Winnipeg, Canada, and the European Athletics Championships held in Kiev, Ukraine, underwent visual examinations to be eligible for competitions.²⁵

Despite athletes' resentment over their treatment and early tests, the tests were perceived to be effective by federations because, when testing became mandatory in Budapest, six world record holders did not attend the European Championships.²⁶ For example, two Russian track and field athletes, Tamara and Irina Press, were dominant in international competitions in the early 1960s.²⁷ Tamara competed in the shot put and discus throw, and Irina competed in sprinting events.²⁸ At the 1960 Olympics in Rome, Tamara won a gold medal

18. *Id.*

19. Elsas et al., *supra* note 8. In the 1936 Olympics, Herman 'Dora' Ratjen placed fourth in the high jump and set a world record in 1938. *Id.*

20. Ferguson-Smith & Ferris, *supra* note 17, at 17; Joe Leigh Simpson et al., *Gender Verification in the Olympics*, 284 J. AM. MED. ASS'N 1568, 1568 (2000).

21. Simpson et al., *supra* note 20, at 1568.

22. *Id.*

23. Ferguson-Smith & Ferris, *supra* note 17, at 17.

24. *Id.*

25. Simpson et al., *supra* note 20, at 1568.

26. J.C. Reeser, *Gender Identity and Sport: Is the Playing Field Level?*, 39 BR. J. SPORTS MED. 695, 696 (2005).

27. Ian O'Reilly, *Gender Testing in Sport: A Case for Treatment?*, BRITISH BROADCASTING COMPANY (Feb. 15, 2010), <http://news.bbc.co.uk/2/hi/8511176.stm>

28. OLYMPIC.ORG, <http://www.olympic.org/medallists-results?athletename=press&category=1&games=&sport=&event=&mengender=false&womengender=false&mixedgender=false&teamclassification=false&individualclassification=false&continent=&country=&goldmedal=false&silvermedal=false&bronzedmedal=false&worldrecord=false&olympicrecord=false&targetresults=true> (last visited Oct 1, 2012).

in the shot put and silver medal in the discus throw.²⁹ She won gold in both events in the 1964 Olympics in Tokyo.³⁰ Irina won a gold medal in the 80m hurdles in 1960 and a gold medal in the pentathlon in 1964.³¹ The Press sisters disappeared from international track competitions in 1966, and critics suggested that this was because the two were concerned about the sex-verification testing process that had been adopted on an international level.³² Though neither sister's sex was ever confirmed, the disappearances of the Press sisters from the international competitions has been construed as an indication that they were either men or had differences in sexual development.³³

The IAAF's testing process in 1967 was the first to exclude an athlete from international competitions based on the results of a sex-verification test.³⁴ Ewa Klobukowska, a Polish sprinter who won double medals in the 1964 Olympics in Tokyo, became the first Olympic athlete to fail a sex-verification test during her athletic career.³⁵ A six-person medical panel investigated her case, and her chromosome pattern was determined to be XXY.³⁶ At the time, it was understood that she had had surgery to remove testes.³⁷ After being excluded, Klobukowska allegedly went on to give birth to a child.³⁸ The panel decided to ban her from competing in professional sports, and in 1970, the IAAF removed her name from their record books.³⁹ Today, on the IAAF's website, Klobukowska's profile remains but none of her medals are listed.⁴⁰

In 1968, the IOC followed the IAAF's example and adopted a mandatory sex testing process.⁴¹ In an effort to spare athletes from the embarrassment of earlier tests, the IOC utilized medical genetic technology and adopted the Barr body analysis, which used a buccal or cheek smear to test the sex chromatin of athletes.⁴² The objective of the Barr body analysis was to ensure that athletes competing in international sporting events possessed XX chromosomal

29. *Id.*

30. *Id.*

31. *Id.*

32. O'Reilly, *supra* note 27.

33. *See id.*

34. Ferguson-Smith & Ferris, *supra* note 17, at 18.

35. Elsas, et al., *supra* note 8, at 250.

36. *Id.*; Ferguson-Smith & Ferris, *supra* note 17, at 18.

37. Elsas, et al., *supra* note 8, at 250; Ferguson-Smith & Ferris, *supra* note 17, at 18.

38. Yael Lee Aura Shy, "Like Any Other Girl:" *Male-to-Female Transsexuals and Professional Sports*, 14 *SPORTS LAW J.* 95, 98 (2007).

39. *See* Ferguson-Smith & Ferris, *supra* note 17, at 18.

40. IAAF ATHLETICS, <http://www.iaaf.org/athletes/biographies/letter=k/athcode=178761/index.html> (last visited Oct. 1, 2012).

41. Reeser, *supra* note 26, at 696.

42. Elsas et al., *supra* note 8, at 250. Had Klobukowska been tested with the Barr-body test, which was adopted by the federation a year later, she would have had a positive Barr-body result because she had an XX chromosome pattern and, therefore, would have remained eligible to participate in competition. *See id.*; Ferguson-Smith & Ferris, *supra* note 17, at 18.

patterns.⁴³ The IOC was seemingly well-intentioned in the selection of Barr body analysis because it wanted to employ a more sensitive form of testing.⁴⁴ However, the Barr body analysis also proved to be problematic because the test was so narrow in scope it did not account for any genetic variation.⁴⁵ Thus, the Barr-body analysis excluded athletes that possessed a difference in genetic development but no biological advantage.⁴⁶

As early as the 1970s, geneticists were acknowledging the invalid tests being utilized by the IOC and international federations and the harm created by the use of the tests in assigning sex.⁴⁷ However, it took the international sport governing bodies nearly two decades to make changes to the process of sex-verification⁴⁸, a lag that had a significant impact on many athletes. One of the most infamous cases of an athlete being excluded by the sex-verification process is that of Maria Jose Martinez Patino, a Spanish track athlete.⁴⁹ In 1985, Patino failed a sex-verification test at the World University Games and was disqualified from track for three years.⁵⁰ Patino had passed the sex-verification screening process once prior to the failed test.⁵¹ Patino had complete androgen insensitivity, meaning her cells did not respond to testosterone.⁵² Patino became the first woman to publicly protest her disqualification and be reinstated.⁵³ She decided to fight to re-qualify for international competitions and, after a geneticist proved she had no competitive advantage, she was allowed to compete again in 1988.⁵⁴

In the late 1980s, medical specialists, scientists, and athletes began to coordinate discussions on the ethical and practical problems created by on-site sex-verification testing.⁵⁵ In 1990 and 1992, the IAAF sponsored symposiums in Monte Carlo and London where a working group of medical specialists, sports governing officials, and women athletes discussed the future of sex-verification testing.⁵⁶ The IAAF working group published the following conclusions:

43. See Ferguson-Smith & Ferris, *supra* note 17, at 18.

44. See Elsas et al., *supra* note 8, at 250.

45. Albert de la Chapelle, *The Use and Misuses of Sex Chromatin Screening for 'Gender Identification' of Female Athletes*, 256 J. Am. Med. Ass'n 1920, 1921-23 (1986).

46. *Id.*

47. Elsas et al., *supra* note 8, at 250.

48. See Simpson, *supra* note 20, at 1568.

49. *Id.*; Gina Kolata, *Track Federation Urges End to Gene Test for Femaleness*, N.Y. TIMES, Feb. 12, 1992, <http://www.nytimes.com/1992/02/12/sports/track-federation-urges-end-to-gene-test-for-femaleness>.

50. Kolata, *supra* note 49.

51. Katie Thomas, *A Lab is Set to Test the Gender of Some Females*, N.Y. TIMES, July 30, 2008, <http://www.nytimes.com/2008/07/30/sports/olympics/30gender.html?pagewanted=print>.

52. Elsas et al., *supra* note 8, at 250; Ferguson-Smith & Ferris, *supra* note 17, at 18.

53. Elsas et al., *supra* note 8, at 250.

54. See *id.*; Kolata, *supra* note 49.

55. *Id.*

56. Elsas et al., *supra* note 8, at 250.

- 1) Women with birth defects of the sex chromosome do not possess an unfair advantage and should be permitted to compete as females;
- 2) The only purpose of gender verification was to prevent men from masquerading as females;
- 3) People who have been both legally and psycho-socially female since childhood (including pre-pubertal sex re-assignments) should be eligible for women's competition regardless of their chromosomal pattern;
- 4) Post pubertal sex re-assignments should be handled on a case-by-case basis; and
- 5) Women athletes should undergo pre-participation health examination.⁵⁷

Notwithstanding these published conclusions, the IAAF lacked consensus on an exact approach to sex examinations and thus it abandoned laboratory-based gender-verification tests.⁵⁸ Instead, it adopted a process whereby a medical expert present at the competition would make on-site determinations on an individual basis.⁵⁹

In 1993, the World University Games and the Commonwealth Games suspended blanket chromosome screening at their meets on the advice of the IAAF's working group.⁶⁰ Of the thirty-four international federations existing at that time, only five were utilizing blanket on-site sex testing.⁶¹ Despite the trend of international sports bodies moving away from blanket testing, the IOC continued its use of mandatory sex-verification testing at the 1996 Olympic Games in Atlanta.⁶² However, in 1991, the IOC abandoned the Barr-body test for a test that focused on the presence of a Y chromosome.⁶³

The sex-verification tests administered during the 1996 Olympic Games in Atlanta revealed the shift in attitude of the IOC. The tests were more thorough as they required follow-up examinations and assessment beyond the genetic testing. Moreover, the results were handled in a confidential manner. Close to three thousand athletes were tested in Atlanta, where the presence of an SRY gene was used as a marker of male genetic sex.⁶⁴ Eight athletes failed the verification test, testing positive for the SRY gene.⁶⁵ This means that one in

57. Arne Ljungvist et al., *The History and Current Policies on Gender Testing in Elite Athletes*, 7 INT'L SPORTS MED. J. 225, 229 (2006).

58. *Id.*

59. *Id.*

60. Elsas et al., *supra* note 8, at 251.

61. *Id.*

62. *Id.*

63. *Id.*

64. *Id.* at 252.

65. *Id.* The SRY Gene is the testicular determining gene. Ljungvist, *supra* note 57, at 228 (2006).

every 423 athletes tested as abnormal.⁶⁶ The tests did not reveal any men masquerading as women.⁶⁷ Seven of the eight tested were determined to have Androgen Insensitivity Syndrome (“AIS”),⁶⁸ while two of the eight were found not to have had a gonadectomy.⁶⁹ All of the athletes that failed the test received physical examinations and follow-up care consisting of estrogen replacement and appropriate surgical intervention.⁷⁰ All athletes received sex-verification certificates with their teammates, thereby preserving their anonymity while allowing them to compete.⁷¹ The sex-screening process employed at the Atlanta Olympics cost \$150,000, which did not include the time provided by voluntary professionals who donated between eighteen to ninety days of service.⁷²

In 1999, the IOC Athletes’ Commission, a commission designated by the Olympic Charter to protect athletes’ interests, recommended that the IOC stop blanket sex-verification screening.⁷³ The IOC accepted the recommendation and discontinued the use of blanket sex screening in 1999.⁷⁴ In 2000, only five international federations were still employing the tests (Basketball, Judo, Skiing, Volleyball and Weightlifting).⁷⁵

The steps taken by the IOC, the IAAF, and other international federations in eliminating mandatory testing was applauded by the medical and sports community at the turn of the century.⁷⁶ Genetic-based sex testing was not used as a blanket precondition for women athletes at the following Olympics: Sydney, Australia, in 2000; Athens, Greece, in 2004; and Beijing, China, in 2008.⁷⁷ In Sydney, Athens, and Beijing, the IOC established sex-determination labs or centers to evaluate the external appearances, hormones, genes, and chromosomes of “female athletes suspected to be males.”⁷⁸

The termination of the mandatory genetic sex-verification tests was an improvement for all international sport governing bodies because the tests

66. Elsas et al., *supra* note 8, at 252.

67. *Id.*

68. *Id.* Androgen Insensitivity Syndrome is a difference of sexual development. Individuals with complete AIS are born with XY chromosomes but have a receptor defect, which does not allow the individual to process the androgen produced by testes. Julie Greenberg, *Defining Male and Female Intersexuality and the Collision Between Law and Biology*, 41 ARIZ. L. REV. 265, 286 (1999). Individuals with AIS have XY chromosomes, female external genitalia, and no female internal reproductive organs. *Id.*

69. Elsas et al., *supra* note 8, at 252. A gonadectomy is the surgical removal of the ovary or testes. WEBSTER’S THIRD NEW INTERNATIONAL DICTIONARY 977 (2002).

70. See Elsas et al., *supra* note 8, at 252.

71. *Id.*

72. *Id.*

73. Ljungvist, *supra* note 57, at 229.

74. *Id.*

75. Simpson, *supra* note 20, at 1569.

76. Elsas et al., *supra* note 8, at 254.

77. Ljungvist, *supra* note 57, at 229; see also Thomas, *supra* note 51.

78. Jason Stallman, *Lab Ready for Sex Tests for Female Athletes*, N.Y. TIMES, July 27, 2008, <http://beijing2008.blogs.nytimes.com/2008/07/27/lab-ready-for-sex-tests-for-female-athletes/>.

administered to women athletes were insensitive, inaccurate, and failed to contribute to the fairness and integrity of international sporting competitions. That the majority of international federations and the IOC stopped testing the entire pool of athletes by 2000, however, did not mean that federations had stopped testing athletes for gender verification completely. They had just returned to the pre-1966 policy of testing athletes on an as-needed basis.⁷⁹

In 2006, the IAAF released a “Policy on Gender Verification.”⁸⁰ In the policy, the IAAF stated there would be no standard or mandatory gender verification during IAAF-sanctioned events.⁸¹ However, the policy also outlined a “Process for Handling Cases of Gender Ambiguity.”⁸² Under the policy, the process of evaluating a specific athlete could be initiated by a ‘challenge’ from another athlete or team, a “suspicion” raised during an anti-doping test, or an approach made by an official from a sport federation.⁸³ Once a potential case was identified, the authority determined whether further testing was warranted.⁸⁴ If the authority determined more investigation was needed, then it determined who would investigate and referred the athlete to the investigating body.⁸⁵ The “verdict” was then referred from the investigating body to the national federation with recommendations, which could include surgical measures.⁸⁶ The federation then makes an analysis as to whether the recommendation would comply with the IOC consensus.⁸⁷

The IAAF’s vague 2006 policy provided athletes, teams, and competition organizers with little notice or information about differences in physical development that could lead to an investigation or how exactly an athlete was to be treated. Moreover, the policy did not inform athletes of who the “investigating body” could be or where and when any of the investigations were to occur. The policy was not clear about the potential surgical recommendations the international federations could make after completing the investigation as a condition to an athlete retaining her eligibility. In sum, the IAAF’s 2006 policy provided federations, organizers, and athletes with limited information about the investigation process.

The weaknesses of the 2006 policy were evidenced by investigations of two athletes by international federations. The first flawed examination conducted in accordance with the 2006 policy was completed at the 2006 Asian

79. *See id.*

80. IAAF Medical and Anti-Doping Commission, *supra* note 11.

81. *Id.* The Policy is allegedly based on a position paper issued by the IOC in 2003.

Id.

82. *Id.*

83. *Id.*

84. *Id.*

85. *Id.*

86. IAAF Medical and Anti-Doping Commission, *supra* note 11.

87. *Id.*

Games, an event run by the Olympic Council of Asia.⁸⁸ The IAAF tested Santhi Soundarajan, an Indian runner, who won the silver medal in the 800-meter at the Games.⁸⁹ Following the completion of her race, Soundarajan was asked to undergo a gender test and failed.⁹⁰ She was blindsided by the test results and had limited resources to appeal the outcome.⁹¹ She was stripped of her medal.⁹² The second flawed investigation, which garnered more international media attention, was the Semenya controversy.

The history of sex-verification testing raises significant questions about international federations and the IOC's ability to implement an effective biological screening process. The Semenya controversy that lasted from 2009 to 2010 proved how ill-equipped international sports governing bodies still are in handling the treatment of athletes with differences in sexual development, despite the decades of experience the IOC and other international federations have in administering sex-verification testing. Nevertheless, just because the sports' governing bodies have failed repeatedly in the past does not mean a biological screening process cannot and should not be used in the future.

II. WHY A BIOLOGICAL SCREENING PROCESS IS NECESSARY

A biological screening process is a necessity for international competitions and the Olympic Games because fairness and a level playing field are critical to the integrity of the games and sports in general. The integrity of any international competition is important because reliability encourages countries to submit their top athletes to compete. If fans, athletes, and countries alike were to question the validity or fairness of the Olympic Games or other international competitions, countries might be more reluctant to participate or send their top athletes. This would directly threaten the uniqueness and integrity of international competitions. The strongest arguments in favor of implementing a biological screening process are: 1) women competing internationally favor testing; 2) international sports governing bodies have an interest in maintaining untarnished records; 3) countries could exploit athletes for the individual's unique biology; and 4) women athletes have a significant interest in obtaining monetary prizes.

88. Samantha Shapiro, *Caught in the Middle*, ESPN THE MAGAZINE, Aug. 1, 2012, http://espn.go.com/olympics/story/_/id/8192977/failed-gender-test-forces-olympian-redefine-athletic-career-espn-magazine.

89. *Id.*

90. *Id.*

91. *See id.*; Nilanjana Bhowmick & Jyoti Thottam, *Gender and Athletics: India's Own Caster Semenya*, TIME, Sept. 1, 2009, <http://www.time.com/time/world/article/0,8599,1919562,00.html>.

92. Shapiro, *supra* note 88.

A. *Women Athletes Participating in International Competitions Support Biological Screening*

A strong argument in favor of effectuating a biological screening process is that women athletes who participate in international competitions are in favor of it.⁹³ At the 1996 Summer Olympics, women athletes who were being tested were provided a survey to gauge their position on sex-verification testing.⁹⁴ At the time, 3,387 athletes were tested and 928 responded to the survey.⁹⁵ Of the athletes who responded, 82 percent felt that testing should continue and 94 percent indicated they were not made anxious by the testing.⁹⁶

If women athletes, who have the most invested in the outcome of a competition, support a screening process to ensure fairness, this strongly weighs in favor of implementing such a process. While scholars and scientists can argue the medical and social considerations against such a process, those individuals have no direct interest in the outcome of a competition and their views should not take precedence over the views of the athletes themselves, more of whom support biological screening.

B. *Maintaining Untarnished Records*

International sport governing bodies, the IOC and the IAAF in particular, have a significant interest in maintaining fair record books. A record established by an individual with a significant competitive biological advantage could be a difficult, if not impossible, obstacle for any individual not possessing that biological attribute. An ostensibly artificial record could taint the integrity of the games as well.

The records established by Herman Ratjen and the Press sisters taint the competitions they participated in. Any biological advantage they possessed disadvantaged all of their competitors. These athletes were not the only athletes whose participation disrupted the fairness of a particular competition. Stella Walsh, a Polish-born athlete with US citizenship, was an elite international athlete in the 1930s.⁹⁷ She won the gold medal in the 100-meter sprint at the 1932 Los Angeles Olympics and won the silver medal in the 1936 Berlin Olympics.⁹⁸ In her career, she set six world records.⁹⁹ Walsh died in 1980, when she was shot as the bystander in a robbery.¹⁰⁰ During her autopsy, the

93. Elsas et al., *supra* note 8, at 252.

94. *Id.*

95. *Id.*

96. *Id.*

97. Paul Farhi, *The Runner's Secret*, WASH. POST, Aug. 22, 2008, <http://www.washingtonpost.com/wp-dyn/content/article/2008/08/21/AR2008082103680.html>

98. *Id.*

99. *Id.*

100. *Id.*

coroner discovered that she had XY chromosome makeup and ambiguous genitalia.¹⁰¹ She possessed no internal female sex organs.¹⁰²

Though the records of neither Walsh, the Press sisters, nor Ratjen remain intact as the world's best, their medals and time records arguably taint the record books of the Olympics and women's track and field because the records were set by athletes with alleged biological advantages. Moreover, they displaced other athletes in winning the awards. As such, the IAAF and IOC's desire to maintain the integrity of international competitions, by way of untarnished records, creates a strong argument for the adoption of an effective biological screening process.

C. Potential for Countries to Exploit Athletes

An additional reason for implementing biological tests on an international level is the risk that countries will seek out individuals with differences in sexual development or independently use a verification process of their own to exploit biologically advantaged athletes for the sake of winning international competitions. While the probability of this occurring might seem low, South Africa's role in the Semenya controversy suggests otherwise.

After Semenya competed in the African Junior Championships in July of 2009, the IAAF requested that South Africa perform sex-determination tests on Semenya.¹⁰³ These tests were carried out on August 7, 2009, in a hospital in Pretoria.¹⁰⁴ Though the results of the tests were not known by the beginning of the World Championships, a top South African medical doctor advised Leonard Cheune, the President of Athletics South Africa, South Africa's national federation for track and field, against entering Semenya.¹⁰⁵ Cheune refused to withdraw Semenya and almost two weeks after the tests were initiated, she competed.¹⁰⁶ Later, when questioned, Cheune denied knowledge of the tests.¹⁰⁷ In September 2009, Cheune apologized for this denial, claiming he wanted to protect Semenya's privacy.¹⁰⁸

Then, in November 2009, South African's sports ministry publicly announced that an agreement had been reached between Semenya and the IAAF to allow Semenya to keep her medal and prize money though the South African sports ministry acknowledged her eligibility had yet to be

101. Shy, *supra* note 38, at 98.

102. *See id.*

103. Christopher Clarey and Gina Kolata,, *Gold Awarded Amid Dispute Over Runner's Sex*, N.Y. TIMES, Aug. 20, 2008, <http://www.nytimes.com/2009/08/21/sports/21runner.html?ref=castersemenya>; Jere Longman, *South African Runner's Sex-Verification Result Won't Be Made Public*, N.Y. TIMES, Nov. 19, 2009, http://www.nytimes.com/2009/11/20/sports/20runner.html?_r=1.

104. Longman, *supra*, note 103.

105. *Id.*

106. *See id.*

107. *See id.*

108. *Id.*

determined.¹⁰⁹ The IAAF made no public comment regarding the announcement made by the South African sports ministry.¹¹⁰ In March 2010, Semenya's eligibility still remained unclear, though she attempted to enter a South African running meet.¹¹¹ After being denied entrance, she threatened legal action.¹¹² The head of Athletics South Africa, at the time, encouraged Semenya to be patient.¹¹³ Semenya later agreed to refrain from competing until the results of her gender tests came back.¹¹⁴

The actions of South African officials, taken in their totality, could be interpreted as a national federation and sports ministry eager for an international gold medal. The national federation appeared willing to sacrifice the integrity of an individual athlete and, debatably, the integrity of women's track and field to achieve that goal. South African officials were aware of the first set of sex-determination tests and, over medical advice, entered Semenya into the World Championships, thus exposing her to international media scrutiny.¹¹⁵ Then, instead of defending the decision and Semenya's right to compete regardless of the test results, they denied any knowledge of the tests being performed in South Africa by South African doctors.¹¹⁶ Later, the South African officials made an unconfirmed announcement regarding an agreement reached by Semenya and the IAAF about the outcome of her race at the 2009 World Championships.¹¹⁷ The announcement was problematic because Semenya's eligibility moving forward was not known at the time and the agreement was not verified by the IAAF.¹¹⁸ As a result, the announcement placed Semenya as the subject of international media coverage, once again, with the main question about her eligibility remaining unanswered. The only action taken by the officials involved was to discourage Semenya from attempting to compete in March 2010 before her eligibility had been determined by the IAAF.

South Africa is not the only country that exploited its athlete's biology to advance the country's position in international sporting competitions. In the 1970s and 1980s, East Germany implemented a systematic routine of requiring

109. Longman, *supra* note 103.

110. *Id.*

111. Jere Longman, *South African Runner Plans Return*, N.Y. TIMES, Mar. 30, 2010, <http://www.nytimes.com/2010/03/31/sports/31semenya.html> [hereinafter *South African Runner Plans Return*].

112. Owen Gibson, *Caster Semenya Furious With IAAF After Competitive Return is Blocked*, THE GUARDIAN, Mar. 30, 2010, <http://www.guardian.co.uk/sport/2010/mar/30/caster-semenya-iaaf-return-blocked>.

113. *Id.*; see ATHLETICS S. AFR., <http://www.athletics.org.za/Default.aspx> (last visited Nov. 3, 2012).

114. *Semenya Intends to Return in June*, N.Y. TIMES, April 6, 2010, <http://www.nytimes.com/2010/04/07/sports/07sportsbriefs-semenya.html?ref=castersemenya>.

115. Longman, *supra* note 103.

116. *Id.*

117. *Id.*

118. *Id.*

its athletes to consume powerful anabolic steroids to enhance their performance in international competitions.¹¹⁹ The impact of East Germany's policy has had lasting effects on the physical conditions, sexual development, and psyche of many women athletes who competed for East Germany during that time.¹²⁰ It is possible, if the international federations had not used the narrow screening tool of the Barr-body analysis during the 1970s and 1980s and instead utilized a more complete examination process, that East Germany would have been deterred from administering the state-run steroid program, or the program would have been exposed earlier and fewer athletes' health would have been risked.

When contemplating athlete eligibility and implementation of a biological screening process, the IOC and the IAAF must consider the possibility that countries will seek out individuals with biological advantages and exploit the athletes. By implementing a biological examination process that screens athletes with unique physical differences, individuals will know in advance about the standards they will have to meet, and countries will have to consider whether athletes will be eligible after being screened prior to entering them into competitions.

D. Maintaining a Level Playing Field: Practical Consideration for Elite Women Athletes Earning a Livelihood

The benefits awarded to elite athletes who win international competitions also support the adoption of a biological screening process by international federations and the IOC. A level playing field is important for the integrity of the games as well as all competing individuals because prize money is available to many top athletes.

Many professional athletes, who do not compete in sports where leagues afford them a regular salary, need the monetary prizes for their livelihood as they train for competitions.¹²¹ Some countries afford work programs for athletes training for the Olympics and other international competitions because rigorous preparation schedules maintained by the country's athletes, who do

119. Jere Longman, *East German Steroids' Toll: 'They Killed Heidi'*, N.Y. TIMES, Jan. 26, 2004, <http://www.nytimes.com/2004/01/26/sports/drug-testing-east-german-steroids-toll-they-killed-heidi.html?pagewanted=all&src=pm> [hereinafter *East German Steroids' Toll*]

120. *Id.*

121. For example, at the 2008 Olympics held in Beijing, China offered Chinese athletes winning gold medals 350,000 yuan, which is the equivalent of approximately \$51,000. *China to Reward Top Olympians with US \$51,000 Each*, CHINADAILY (Aug. 28, 2008), http://www.chinadaily.com.cn/olympics/2008-08/26/content_6972363.htm. In 1994, the U.S. Olympic Committee voted to pay athletes earning medals: \$15,000 for gold medals, \$10,000 for silver medals, and \$7,500 for bronze. Larry Siddons, *Olympic Medals Mean Instant Cash*, THE SEATTLE TIMES, Jan. 23, 1994, <http://community.seattletimes.nwsourc.com/archive/?date=19940123&slug=1891039>.

not compete in a league, do not allow for regular work schedules.¹²² To qualify for these monetary prizes or work programs athletes have to rank in the top percentage of athletes in the world.¹²³

An athlete who is displaced from her rank, and therefore denied a monetary prize and perhaps a livelihood, by an athlete with a biological advantage will likely feel wronged and that she is disadvantaged in any competition with that particular athlete. Semenya's management team has stated in interviews that since her eligibility was reinstated and she returned to competition, athletes have been reluctant to enter races where they know she will be competing.¹²⁴ Had the 2011 IAAF policy been in effect and implemented in advance of Semenya's 2009 World Championship participation, it is possible that her competitors would perceive her differently. Without a level playing field, the best athletes may be reluctant to compete and may not be able to maintain their livelihood to continue training for their respective sports. Creating an effective biological screening process could assure athletes that they are not disadvantaged by the presence of a certain athlete, and they have a viable chance to prevail in any given completion.

III. IAAF REGULATIONS GOVERNING ELIGIBILITY OF FEMALES WITH HYPERANDROGENISM TO COMPETE IN WOMEN'S COMPETITIONS.

The most recent policy adopted by the IAAF in 2011 is a departure from its 2006 policy and a dramatic improvement over all biological screening processes of the past. The policy provides athletes with clear notice about physical and biological expectations, explains the examination process, identifies the medical specialists who could perform the athlete's physical exam, creates guidelines for doctors performing preliminary examinations, requires confidentiality through every step of the examination, and affords the athletes' certain safeguards, like the right to appeal the outcome of an eligibility determination to the Court of Arbitration for Sport. Though the policy still could be improved, the IOC and other federations should consider adopting a similar policy, as it provides the framework for a screening process that contributes to the fairness of a competition.

122. In 2010, the U.S. Olympic Committee offered the Team USA career program to Olympic hopefuls. Brian Gomez, *Revamped USOC Program Launches Olympic Athletes*, THE GAZETTE (Colo. Springs), Mar. 30, 2010, <http://www.gazette.com/sports/usoc-96396-athletes-workforce.html> (“[This program is] the new form of the Olympic Job Opportunities Program by The Home Depot, which ended...when the home-improvement chain terminated a 16-year partnership with the USOC.”). This initiative offers Olympic hopefuls entry-level positions with USOC sponsors. *Id.*

123. See, e.g., *China to Reward Top Olympians with US \$51,000 Each*, *supra* note 121; see also *Olympics 2012: Gold Medals Can Give Athletes Midas Touch*, DAILY NEWS & ANALYSIS (July 30, 2012), http://www.dnaindia.com/sport/report_olympics-2012-gold-medals-can-give-athletes-the-midas-touch_1721837.

124. Christopher Clarey, *Semenya is Back, but Acceptance Lags*, N.Y. TIMES, August 23, 2010, <http://www.nytimes.com/2010/08/24/sports/24iht-ARENA.html?ref=castersemeny>.

Under the IAAF's new policy, once an athlete has either self-identified as having hyperandrogenism or is identified by IAAF official as possibly having a difference in sexual development, the athlete is to submit her medical records to the IAAF's medical manager, who is responsible for keeping medical records confidential and destroying them once the review is complete.¹²⁵ The policy outlines three levels of examination to be performed on the athlete.¹²⁶ A "Level 1" examination is a clinical examination.¹²⁷ A "Level 2" examination provides for a preliminary endocrine assessment and lab analysis.¹²⁸ An athlete's Level 1 and 2 examination results are submitted to the IAAF Medical Manager.¹²⁹ The IAAF Medical Manager then determines whether the athlete must submit to the less well-defined "Level 3" examination, which provides for a full examination and possible diagnosis by an expert medical panel.¹³⁰

Once an athlete has undergone the requisite examination, the results, along with the medical panel recommendations, are returned to the IAAF Medical Manager.¹³¹ The IAAF Medical Manager then determines whether the athlete is eligible to compete, a determination which could include an athlete meeting requisite conditions.¹³² If the athlete is given conditions, she is responsible for meeting the prescribed conditions or treatment within a given time frame.¹³³ Once she has complied, she undergoes another assessment before returning to competition.¹³⁴ The IAAF may require the athlete to be monitored throughout her career.¹³⁵ The policy allows an athlete to challenge the IAAF's determination following her examination to the Court of Arbitration for Sport.¹³⁶ The policy also provides a list of approved international experts as well as medical guidelines for medical experts examining athletes.¹³⁷

A. Abandonment of the term "Gender Verification" and "Gender Policy"

The IAAF's 2011 policy is an improvement over past policies because it officially abandons the term "Gender Verification" and "Gender Policy" in favor of "IAAF Regulations Governing Eligibility of Females with Hyperandrogenism to Compete in Women's Competitions."¹³⁸ Though sex-verification testing was initially implemented in the 1960s to prevent men from

125. *IAAF Regulations*, *supra* note 13, § 2.2.-3.6.

126. *Id.* § 5.1.

127. *Id.*

128. *Id.*

129. *Id.* § 5.6, 5.12

130. *Id.* § 5.17.

131. *IAAF Regulations*, *supra* note 13, § 5.17.

132. *Id.* § 7.1, 7.3.

133. *Id.* § 7.3.

134. *Id.* § 7.5, 7.6.

135. *Id.* § 7.7.

136. *Id.* § 7.2.

137. *IAAF Regulations*, *supra* note 13, at app. 1-2.

138. *Id.* § 1.1.

masquerading as women and competing in women's competitions, this is no longer the motivation for the policy.¹³⁹ The last rumored instance of a man intentionally dressing as a woman to compete was at the 1972 Munich Olympics.¹⁴⁰ It was alleged that a member of one of the Asian women's volleyball teams was actually a man.¹⁴¹ The increased media coverage of international athletic events, team training, and modern sports attire make it less likely a man could successfully pose as a woman and compete.¹⁴²

The IAAF's policy new name accurately characterizes the intended goal of the modern screening process. It is no longer implemented to distinguish between men and women but to identify a specific biological difference. The IOC and international federations alike had an understanding of this as early as the 1990s, but the literature produced by the federations did not reflect this.¹⁴³ Even as recently as 2006, the IAAF had misidentified its screening process as its "policy on gender verification."¹⁴⁴ Though it will take more than the renaming of the policy to switch the mindset of the athletic community regarding the screening process, it is a step in the right direction.

B. Requirement for 'Reasonable Grounds' for Testing

Another improvement in the 2011 IAAF policy is the requirement that the examination process begin either by an athlete self-identifying as having hyperandrogenism, or if the IAAF Medical Manager has reasonable grounds for believing that a case of hyperandrogenism might exist.¹⁴⁵ In the past, the IOC and other international federations would initiate an investigation when a suspicion was raised by anyone.¹⁴⁶ This allowed any third-party to raise questions about an athlete after an elite performance and at a minimum, embarrass her or stigmatize her until she underwent the sex-verification process. Helen Stephens underwent a "sex check" at the Berlin Olympics because Polish journalists had questioned her femininity.¹⁴⁷ Moreover, the ability for a team or competitor to raise a "suspicion" about an athlete as the basis for initiating an examination was included in the IAAF's 2006 policy, which further legitimized the practice of stigmatizing women athletes.¹⁴⁸ Although it is unlikely that the IAAF's new policy will end the practice of athletes raising "suspicions" about other athletes' sex completely, the policy's

139. *See id.* § 1.

140. Ferguson-Smith & Ferris, *supra* note 17, at 19-20.

141. *Id.*

142. Elsas et al., *supra* note 8, at 253.

143. *See* IAAF Medical and Anti-Doping Commission, *supra* note 11.

144. *Id.*

145. *IAAF Regulations*, *supra* note 13, § 2.1, 2.2.

146. IAAF Medical and Anti-Doping Commission, *supra* note 11, § B(2).

147. Elsas et al., *supra* note 8, at 250.

148. IAAF Medical and Anti-Doping Commission, *supra* note 11, § B(2)(b).

approach to this issue is better than that in the past.¹⁴⁹ If the IAAF follows through on the policy, refusing to test any athlete whose biology is questioned without reasonable grounds for doing so, it should decrease the practice of competitors raising suspicions over time.

C. IAAF Accountability

The IAAF's new policy is an improvement because the policy incorporates elements that hold the international federation accountable for effectuating the policy. The new policy requires the IAAF to disclose to a physician of the athlete's choice the results at the conclusion of every stage of examination.¹⁵⁰ This allows some transparency in the process, keeps the athlete aware of the status of her eligibility, and allows the athlete to have an expert who represents her interests advising her through the examination process.¹⁵¹ The policy also provides for a system of checks and balances for the IAAF experts in that no expert who participates in the examination process can serve on the Medical Panel that gives its recommendation to the IAAF.¹⁵² This measure allows for the Expert Medical Panel to make an objective recommendation to the IAAF based on the results and not on any opinion formed while examining the athlete.

Finally, the IAAF policy also provides for accountability because the IAAF determination at the end of the examination is immediately appealable to the Court of Arbitration for Sport, pursuant to IAAF Rule 60.23.¹⁵³ A major problem in early sex-verification testing was that there was no official method for an athlete to challenge her results.¹⁵⁴ Patino, the Spanish track and field athlete, was noted as one of the only athletes to fight her eligibility determination and get her eligibility reinstated.¹⁵⁵ Athletes' and teams' willingness to go the Court of Arbitration for Sport to challenge rules and decisions of the IOC and international federations has increased considerably in

149. *Id.* Following Semenya's gold medal win in 2009, Mariya Savinova, the Russian runner, and Elisa Cusma, the Italian runner, who finished fifth and sixth respectively in the 800m World Championship, gave interviews to international media outlets suggesting that Semenya is man who should not be competing with them. Christopher Clarey, *Gender Test After a Gold Medal Finish*, N.Y. TIMES, Aug. 19, 2009, <http://www.nytimes.com/2009/08/20/sports/20runner.html?ref=castersemenya>.

150. *IAAF Regulations*, *supra* note 13, § 5.6.

151. *Id.* § 3.1-3.3, 5.6.

152. *Id.* § 5.19.

153. *Id.* § 7.2; see IAAF Competition Rules 2012-2013, INTERNATIONAL ASSOCIATION OF ATHLETICS FEDERATIONS 1, 108 (Nov. 1, 2011), available at http://www.iaaf.org/mm/Document/06/28/89/62889_PDF_English.pdf. The IAAF's new policy allows an athlete to go directly to the CAS upon receiving the determination as opposed to going before the IAAF again. *Id.*

154. See Marcia B. Nelson, *Stuck Between Interlocking Rings: Efforts to Resolve the Conflicting Demands Placed on Olympic National Governing Bodies*, 26 VAND. J. TRANSNAT'L L. 895 (1993); see also Elsas et al., *supra* note 8.

155. Elsas et al., *supra* note 8, at 253.

the past two decades.¹⁵⁶ In 2008, the sport tribunal presided over 313 disputes, a record number for the Court of Arbitration for Sport.¹⁵⁷ The IAAF will be more likely to adhere to its policy and to more precisely carry out the examination procedure because it knows that any determination it makes could be invalidated by the Court of Arbitration for Sport.

D. Athlete Safeguards and Control

Under the IAAF's 2011 screening process, the athlete being tested is afforded more safeguards. The safeguards provided under the policy provide the athlete with notice about the expectations of the tests and afford her a level of control over the process.¹⁵⁸ The IAAF's policy expressly states the level of androgen or testosterone the athlete must possess in order to compete.¹⁵⁹ The policy also articulates the type of testing she could be required to undergo and the specialists she could be required to see.¹⁶⁰ The policy even provides athletes with the names of medical experts who could potentially examine them or oversee their examination.¹⁶¹ The policy also requires the physician performing the examination to inform the athlete of the purpose of the examination at every stage and obtain informed consent from the athlete in advance of completing a Stage 3 examination.¹⁶²

The policy also affords the athlete safeguards in that she has a level of control over the process. At each stage of the examinations, she arguably has the right to abandon the testing and withdraw.¹⁶³ At the conclusion of the process, she is given a recommended action plan to follow and can choose whether she wants to adhere to the process or not.¹⁶⁴ In the past, a

156. The Court of Arbitration for Sport was created in 1983 as an arm of the IOC. Important Dates in the CAS History, COURT OF ARBITRATION FOR SPORT, <http://www.tas-cas.org/en/infogenerales.asp/4-3-235-1011-4-1-1/5-0-1011-3-0-0/> (last visited Oct. 21, 2012). Initially, the CAS proved to be a less useful tool in settling sport-related disputes because athletes had less confidence in the arbitration process due to the relationship between the CAS and the IOC. Nelson, *supra* note 152, at 922. The CAS underwent considerable reform in 1994, when it developed: the International Council of Arbitration for Sport, a council devoted to keeping the CAS independent; the Code of Sports-related Arbitration, a 70-article code articulating both Procedural Rules and Statutes for sports related disputes; and an official appeals process. Organisation [sic] and Structure of ICAS and CAS, COURT OF ARBITRATION FOR SPORT, <http://www.tas-cas.org/en/infogenerales.asp/4-3-238-1011-4-1-1/5-0-1011-3-0-0/> (last visited Oct. 21, 2012). As the result of the reforms and adaption the CAS has made, more sports governing bodies have relied on it, and athletes have sought remedies before it as well. See Statistics, COURT OF ARBITRATION FOR SPORT, <http://www.tas-cas.org/d2wfiles/document/437/5048/0/statistics202011.pdf> (last visited Nov. 2, 2012).

157. Statistics, *supra* note 154.

158. See *IAAF Regulations*, *supra* note 13, § 5.

159. *Id.* § 6.5.

160. *Id.* § 5.

161. *Id.* at app. 1.

162. *Id.* §§ 5.4, 5.28.

163. See *id.* § 7.8.

164. *Id.* § 7.3-7.4

determination that an athlete failed a sex-verification test meant she was no longer eligible to compete, as in the example of Ewa Klobukowska.¹⁶⁵

The Semenya controversy raised questions about the control she had over her eligibility and athletic future. During the eleven months that she did not compete, the amount of information she had about her examinations or the role she played in deciding whether she wanted to continue is not clear.¹⁶⁶ Because her eligibility had been temporarily suspended after she had competed, and the officials had disclosed that she was undergoing tests, she was arguably under a considerable amount of pressure to do what was necessary to return to competition. If she did not return to competition, it is likely many athletes and the media would have drawn the same conclusions they did when the Press sisters did not return. The IAAF's new policy mandates that athletes, who followed the screening procedure and are determined to be ineligible, be given recommendations on how to regain eligibility.¹⁶⁷ Once provided with the recommendation, the athlete can either choose to comply with the recommendations and be allowed to return to competition or to not comply and to remain ineligible.¹⁶⁸ This affords the athlete some control over her eligibility, especially if the testing is completed in advance of the athletic competition.¹⁶⁹ Further, the IAAF's new policy protects the athlete because she has the right to appeal to the Court of Arbitration for Sport, in the event that she disagrees with the IAAF recommendation.¹⁷⁰

E. Medical Guidelines and Exhaustive Testing

Finally, the IAAF's 2011 policy is an improvement over past policies because it includes a thorough test that requires the examination and assessment of many factors of the athlete's body.¹⁷¹ The policy also tries to standardize certain phases of the process, such as the Level 1 examinations, by including medical guidelines in the policy.¹⁷² The Barr body analysis did not achieve fairness for women athletes because it only tested a small genetic element of every athlete.¹⁷³ Given the complexities of biology, this test fell short of determining whether an athlete actually possesses a biological advantage.¹⁷⁴ The new policy requires an examination of the external physical characteristics as well as internal characteristics.¹⁷⁵ The policy requires the examination of multiple systems within the body of the athlete, which means

165. Elsas et al., *supra* note 8, at 250.

166. *See* Hunter, *supra* note 5.

167. *IAAF Regulations*, *supra* note 13, §§ 7.1-7.4.

168. *Id.* §§ 7.4-7.5.

169. *See id.* § 7.

170. *See id.* § 7.2.

171. *See id.* § 5, app. 2; *see also* Elsas et al., *supra* note 8 (describing past policies).

172. *Id.* at app. 2.

173. *See de la Chapelle*, *supra* note 45, at 1921.

174. *Id.* at 1922-23.

175. *See IAAF Regulations*, *supra* note 13, § 5, app. 2.

officials have a more complete assessment of the impact that any alleged biological advantage has on the athlete's physical development. The policy also provides for a psychological assessment of the athlete reflecting recognition by the IAAF of how sensitive the examination process of the athlete is.¹⁷⁶ The thoroughness of the examination required under the new policy means the Medical Panel and the IAAF are acting with more information when they make the recommendation for the athlete.

IV. RECOMMENDATIONS FOR IMPROVEMENTS.

While the IAAF's new policy is the most effective biological screening process adopted by the IOC or the international federations to date, the process could still be improved. Given the historical inaccuracies of the procedures administered by the IAAF, a better screening procedure would require the IAAF to have two sets of examinations performed by medical specialists and facilities, contemporaneously, to ensure the accuracy of the results.

The process could be further improved by allowing the athlete to choose from a list of medical experts independent of the IOC and IAAF to administer the second examination. Allowing the athlete to choose an independent organization or company to administer the tests would ensure that the process is performed with less political pressure. Then, once both examinations are complete, both sets of test and recommendations could be submitted to the IAAF to determine the athlete's eligibility. This would allow the IAAF to consider two sets of either corroborating or contrasting results and enable the athlete to have a more balanced and prepared record on appeal. This would be important especially if the circumstances necessitated a speedy appeal.

The IAAF policy could also be improved by requiring education about the policy and standards developed. This education should be mandatory for all athletes, both those undergoing the testing and their competitors. Educating athletes on these biological advantages would improve the current policy in two ways. First, under the current policy, the IAAF requires an athlete who knows she has hyperandrogenism to inform officials.¹⁷⁷ In many countries, women have less access to obstetric care and, therefore, have less awareness about the biological composition of their bodies.¹⁷⁸ Consequently when the athletes are identified by the IAAF for testing, it can be shocking and confusing. Providing accessible education for athletes could help mitigate the shock of revealing a biological trait that the athlete did not know she possessed. Second, providing express and clear education to athletes, though imperfect, might work to erode negative stigmatization developed in international women's sports by the

176. *Id.* § 5.29.

177. *Id.* § 2.1.

178. See, e.g., Monir Islam and Sachiyo Yoshida, *Women Are Still Deprived of Access to Lifesaving Essential and Emergency Obstetric Care*, 106 INT'L J. GYNECOLOGY & OBSTETRICS 120, 120-124 (2009), available at <http://download.journals.elsevierhealth.com/pdfs/journals/0020-7292/PIIS0020729209001428.pdf>.

previously adopted policy of accepting accusations from competing athletes as the basis for administering the screening process.¹⁷⁹ The policy should also prohibit athletes from making comments to the press about the sex of other athletes, a practice that arguably compromises the integrity of women's sports more than having women with biological advantages compete.

To further improve the IAAF's policy, the IAAF should reevaluate the policy and prescribe revised standards every two to four years. Prior to adopting and publishing the standards, the IAAF should leave the policy open for comment and suggestion from medical experts. This review process would be the most flexible approach to dealing with the complexities of sexual biology. Furthermore, this process would prevent the IAAF's biological screening process from lagging behind the best medical practices, as it did from 1992, when the IAAF working group announced its recommendations to terminate chromosomal sex-verification testing, until 1999, when the IOC finally stopped utilizing the process.¹⁸⁰

A final improvement to the policy would be to forbid the IAAF from challenging or questioning an individual's sex or biology once an athlete completes the screening process and competes in an international competition. This will ensure that athletes are not humiliated internationally by being stripped of a medal after a competition as a result of an individual's natural biology, as in the case of Soundarajan.¹⁸¹ It will also encourage the IAAF to be systematic in requiring parties to adhere to the biological screening process prior to competing.

CONCLUSION

Caster Semenya's unique biology exposed flaws in the sex-verification process used by many international sports governing bodies, including the IAAF. The controversy surrounding her eligibility raised new concerns for international sports governing bodies and women athletes seeking to compete in international competitions. In response, the IAAF developed a biological screening process that is a great improvement over previously adopted policies. Though the policy could still be improved further, other international sport governing bodies should adopt the policy because it comes the closest to balancing the need for fairness in international women's sporting competitions with the interests of individual athletes.

179. IAAF Medical and Anti-Doping Commission, *supra* note 11, § B(2).

180. *See* Elsas et al., *supra* note 8, at 250-51, 253.

181. Bhowmick & Thottam, *supra* note 91.