

Run Like a Girl: Renewing the Western Gender Binary through Testosterone Regulations in an Age of Neocolonialism

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Abstract

The division of sports competitions into male and female categories is taken for granted by many, but in recent years, athletes like Caster Semenya of South Africa have shed light on the problematic nature of forcing multifarious genders into these binary categories. Testosterone limits, the latest phase of sex definition in athletics, attempt to hide behind scientific objectivity. However, a closer look at the history of sex testing shows that the “science” of the field has always reflected cultural fabrications, not innate biology. In this case, testosterone regulations and their disproportionate impact on athletes from the Global South reflect an effort to uphold the narrow definition of femininity traditionally prevalent in the West. Writers of the regulation reinforce this definition because it affirms their power as white men. The resulting neocolonial violence towards Black and Brown bodies is twisted to resemble care and equity.

Keywords: athletics, femininity, gender, health, hyperandrogenism, neocolonialism, science, sex, structural violence, testosterone

Propriospect

As a non-binary person, I know that there is so much more diversity of gender and sex than is assumed by the binary. Thus, the binary rigidness of sports has been a challenge for me to grapple with. There is no easy fix that could restructure sports in a way that is radically inclusive, which would require dropping binary language, while also allowing for women and gender minorities to excel. Thus, I approach this issue with less of a revolutionary stance than I take on other issues; I'm not advocating for a complete reconstruction of international sports competitions but rather specific reforms that would recognize the diversity of professional sports and ensure human rights for all.

In discussing Caster Semenya, I find it important to note that although I am a queer person of color, I am also an American writing from an elite university. Thus, I cannot pretend to know what it is like to be from the Global South or to have my gender questioned on an international stage. Keguro Macharia (2009) writes on the challenge of writing about Semenya because it “participates in an ongoing spectacularization” of her life and career (para. 1). A worst-case scenario of mine would be to justify my place in the conversation due to my queerness while contributing to the pattern of scholars in the Global North patronizing Africa with academic elitism. Thus, rather than approaching Semenya as a case study, I aim to acknowledge her as a human and extraordinary athlete caught in a deep system of racialized sexism. I seek to demedicalize her body and celebrate her as a champion deserving of all her success.

Introduction

At the age of 18, Mokgadi Caster Semenya competed in her first World Athletics Championships, where she became the 2009 female champion in the 800-meter race. Semenya's victory by more than two seconds over the next finisher produced more than mere respect from her competitors and viewers; she was faced with criticism and speculation about whether or not she was really a woman (Longman, 2016). Competitors used her "masculine" features to question the validity of her victory. Since then, World Athletics, the international governing body of track and field formerly called the International Association of Athletics Federations (IAAF), has created multiple regulations that limit the levels of testosterone in athletes who compete in female competitions. How can it be that exceptional athletes can be excluded from competition because of the way they were born?

Many have astutely pointed out that there are a variety of physical and environmental advantages that allow athletes to have such exceptional abilities (Longman, 2016; Longman, 2018; Padawer, 2016; Pūras, Melzer, & Radačić, 2018). Athletes with genetic mutations that lead to significantly increased blood hemoglobin levels compete without restriction from sports officials (Longman, 2018). Athletes whose families have poured fortunes into their coaching and training compete alongside those who may not have had the privilege of being able to devote hours a day to training in sports (Karkazis & Jordan-Young, 2018). An equal playing field that eliminates the advantages athletes have over one another is not only impossible to achieve (Longman, 2018) but would also cause competition to lose its meaning. Ironically, World Athletics fixates itself on testosterone regulations in the name of fairness instead of focusing on more pressing issues that actually threaten the integrity of competition, like doping.

International sporting events attempt to provide an equal playing field for athletes of all backgrounds to come together and compete. In many ways, running is one of the sports that comes closest to this mission. It does not require expensive equipment, like gymnastics or fencing, and it is not specific to a single culture, like baseball or skiing. Despite the great diversity of professional track athletes, World Athletics leaders—specifically those who the organization has shared to be behind its testosterone regulations—are unsurprisingly all white men. Their testosterone regulations make no mention of race and instead hide behind supposedly indisputable science. In reality, World Athletics leaders use regulations to reinforce a Western definition of femininity that is characterized by whiteness, weakness, and submission to men. World Athletics’ fixation on implementing a testosterone limit reflects a fear that strong, Black and Brown bodies will redefine what is female, thus challenging the long-term power of white men. These regulations result in harmful and invasive medical practices administered to Black and Brown athletes, thus subtly perpetuating the neocolonial practice of harming people from the Global South in the name of care for those targeted and justice for all.

The Rise of Caster Semenya and the Birth of Testosterone Regulations

After facing the criticism following her 2009 World Athletics Championships victory, Caster Semenya was temporarily barred from competition by World Athletics as they subjected her to sex tests (Longman, 2016). Two years later, World Athletics released its first “Regulations Governing Eligibility of Females with Hyperandrogenism to Compete in Women’s Races.” The document does not explicitly define hyperandrogenism, but the regulation details equate it to high levels of testosterone (World Athletics, 2011). The regulation requires women to have total testosterone levels below what it defines as the “normal male range” of 10 nanomoles per liter

(World Athletics, p. 12). Because World Athletics gave its “Medical Managers” permission to investigate any athlete for hyperandrogenism as long as they had “reasonable grounds,” (World Athletics, p. 1), the regulation immediately put many professional athletes at risk of drastic career setbacks due to mere speculation.

In 2015, this regulation was challenged by Indian sprinter Dutee Chand. Early in her career, Chand was finding great success in 100-meter and 200-meter races. This success spurred questions about her gender similar to those faced by Semenya. After the Athletic Federation of India dropped her due to this gossip, she filed an appeal with the Court of Arbitration for Sport (CAS), the highest court that settles cases in sports. The hearing lasted four days, and in the end, the judges ruled to suspend the World Athletics regulation for two years because there was insufficient evidence that having a higher level of testosterone was an advantage greater than other genetic or environmental factors (Padawer, 2016).

In this two-year period, athletes like Chand and Semenya were able to simply focus on their running without having to deal with the messy politics of regulations. Both athletes made it to the 2016 Río Olympics, a great achievement in it of itself. Semenya went further and won the 800-meter gold medal in an exciting race. Her success launched her back into the center of the testosterone debate. In a post-race interview, competitor Lynsey Sharp of Great Britain discussed running against Semenya after World Athletics’ first regulation was suspended:

I’ve tried to avoid the issue all year and um, you can see like how emotional it was like between me and Melissa and Joanna at the end. We know how each other feel [*sic*], but it’s out of our control and very much reliant on the people on the top sorting it out and I, I think the public can see as well, sorry, like just how, how difficult it is. (Daemonlinks, 2016, 3:38)

Sharp, who placed sixth at the Río Olympics, seems to speak not only for herself but also for her friends and fellow white runners, Melissa Bishop and Joanna Józwiak, the fourth and fifth place finishers. She notes the challenge of competing in the Olympics, but rather than understanding



Figure 1. Lynsey Sharp gets emotional as she discusses running against Semenya (Daemonlinks, 2016)

that the challenge is part of the Olympic process, she suggests that her success is “reliant on the people on the top.” As she talks to the interviewer, she tears up a little in an emotional plea to the World Athletics forces above to adopt rules that would supposedly allow her to medal.

In response to the CAS’s suspension and calls from athletes and the public to reinstate the first testosterone regulation, World Athletics developed a new regulation with slightly different rules. On April 26, 2018, World Athletics unveiled its “New Eligibility Regulations for Female Classification.” This new regulation limited testosterone levels to 5 nanomoles per liter, but it only applied to athletes competing in what the regulation calls “Restricted Events,” or the 400-meter, 800-meter, 1500-meter, one mile, and hurdle races (World Athletics, 2018). Suddenly, athletes of other events, such as 100-meter and 200-meter runner Dutee Chand, could stop worrying about testosterone politics and simply focus on competing. In an interview, Chand shares “For me, it’s the best result. No one can stop me from participating now” (Negi, 2018). For others, like Semenya, this regulation presented a renewed obstacle to being able to compete freely.

In defining “Restricted Events” as races that conveniently happen to be the exact range that Semenya runs, the 2018 regulation seemed to target her directly. Because it threatened to

completely ban her from meaningful competition, Semenya had no choice but to fight the regulation. Like Chand, she turned to the CAS to challenge whether the regulation was fair and would be allowed to be implemented. On May 1st, 2019, the CAS unveiled its 2-to-1 decision to uphold World Athletics' regulation, effectively barring Semenya from the races that constitute her career unless she began hormone treatment (Longman & Macur, 2019). The Court admitted that the World Athletics' regulation is discriminatory both on the basis of legal sex and "innate biological characteristics," but it described this discrimination as "valid and lawful" because of the supposed need for the regulation (Semenya v. IAAF, 2019, p. 144). Semenya is continuing to work with her lawyers on an appeal, but in the meantime, World Athletics has effectively banned her from competition at the 2019 World Athletics Championships, the 2020 Tokyo Olympics, and all other international competitions (Longman, 2019).

World Athletics' Retort: Hiding Behind the Guise of Science

World Athletics was able to create its New Eligibility Regulation despite the CAS's suspension of the first regulation because it cited new science to back up its reasoning. The press release claims that "There is a broad medical and scientific consensus, supported by peer-reviewed data and evidence from the field, that the high levels of endogenous testosterone circulating in athletes with certain DSDs [Differences in Sexual Development] can significantly enhance their sporting performance" (World Athletics, para. 7). This statement is incorrect in several ways. Firstly, it does not accurately summarize the scientific results, which found that testosterone only produces an advantage for some competitions (Bermon & Garnier, 2017). Secondly, the evidence supporting the regulation was been proven to be faulty and at times not even peer-reviewed (Pielke, Tucker, & Boye, 2017). Finally, there is no consensus within

medical and scientific communities on this topic. Dr. Stéphane Bermon, the leading scientist conducting research that supports the regulation, is likely biased, for he serves as the director of the World Athletics Health and Science Department (World Athletics, 2018) and has been a longtime advocate for testosterone limits (Karkazis & Jordan-Young, 2018).

The paper that was the primary source of scientific evidence behind the 2018 regulation was Stéphane Bermon and Pierre-Yves Garnier's 2017 study titled "Serum androgen levels in relation to performance in track and field." The authors analyzed 2,127 competition results and corresponding serum androgen levels. Serum androgen refers to blood hormones, including testosterone, that contribute to what has been defined as male development (Tulane University, n.d.). Bermon and Garnier found statistically significant relationships between serum androgen levels and performance in the women's 400-meter, 400-meter hurdles, 800-meter, pole vault, and hammer throw competitions. They did not find statistically significant relationships for other female competitions or any male competitions (Bermon & Garnier). This lack of correlation in other events challenges the belief put forth in the 2011 World Athletics regulation that testosterone on its own is an advantage so powerful that it can be depended on to produce victories. Despite the clear conclusion that there is a statistical correlation in only the above events, World Athletics chose to define "Restricted Events" as races between 400-meters and one mile (World Athletics). The regulation ignores the study's results in the pole vault and hammer throw while arbitrarily restricting runners of the 1500-meter and one mile races. This demonstrates that although World Athletics has some scientific evidence to back up its 2018 regulation, it uses this evidence to merely supplement decisions that were made arbitrarily.

The data used in Bermon and Garnier's 2017 study was found to be faulty and irreproducible, thus calling into question the validity of the study's results. Upon attempting to

recreate the statistical analysis performed by Bermon and Garnier, researchers found that much of the data used could not be accounted for in real race results. Up to one third of the data was attributed to duplicated athletes (athletes that were included with multiple race times), duplicated times (times that had been counted in the results twice), or phantom times (times that could not be found in the races cited) (Pielke, et al., 2017). Bermon and Garnier failed to release the data they analyzed in their study, a standard accountability practice in their discipline. The researchers were only able to acquire the data used in the study after requesting it on a public forum that exposed Bermon and Garnier’s secrecy (Pielke, 2018). Bermon responded to their criticism by publishing a brief study that supposedly addressed the issues in his original work (Bermon, Hirschberg, Kowalski, & Eklund, 2018). He admitted to 230 inaccurate data points, but this new study still did not publish its data, and it was not even peer-reviewed (Pielke). This lack of transparency, the evidence of scientific malpractice, and Bermon’s employment at World Athletics all suggest that Bermon and Garnier’s study was not motivated by a genuine search for scientific truth but rather extreme bias.

The Newest Installment of a Long History of Sex Testing

Despite the difference in language between the 2018 regulation and historical sex tests, World Athletics’ continued fixation on testosterone obscures a long history of abusive sex testing and rebrands the practice as objective and scientific. Sex testing has been a part of athletics since the beginnings of female



Figure 2. Gender certification cards issued after athletes passed sex tests (retrieved from Padawer, 2016)

participation in professional sports (Karkazis & Jordan-Young, 2018). It has historically been standard practice in the Olympics for all female athletes to have to pass a gender verification test (Padawer, 2016). These tests started as genital exams, which were rightly criticized for their traumatizing nature (Karkazis & Jordan-Young). As technology advanced in the 1960's, sports officials shifted sex testing to rely on chromosomal tests (Karkazis & Jordan-Young; Padawer). These were found to be problematic as well when hurdler Maria José Martínez-Patiño was found to have XY chromosomes but a complete insensitivity to androgens within her cells. After being barred from competition and having all her medals stripped, she challenged the chromosomal definition of sex and won (Padawer). The debunking of the definitive nature of chromosomal tests ultimately set the stage for testosterone regulations to revive sex testing.

Both of the World Athletics testosterone regulations attempt to distance themselves from the history of sex testing, but their policies renew the culture of surveillance and harm that has always surrounded sex tests. In contrast to the harsh consequences administered to Martínez-Patiño in the 1980's, the 2018 regulation lays out many options for athletes affected by the testosterone limit. The first option is for the athlete to compete in other races, including male classification races, intersex classification races, non-international races, or races that are not considered "Restricted Events." The second option is for the athlete to lower testosterone levels to 5 nanomoles per liter and maintain this level throughout their career (World Athletics, 2018). On the surface these options appear to be much more generous and progressive than the historical strategy of blaming the athlete and nullifying their career. However, closer examination reveals that the outlined options have been constructed to resemble benevolence, but they are still highly unreasonable. Because testosterone is not an all-powerful substance that gives athletes supernatural abilities, having higher levels of it does not automatically allow

athletes to be competitive in male classification races. Nor is it a viable option for athletes to forgo competing in important international competitions. Unfortunately, athletes cannot sustain a world-class career by only competing in non-international races or intersex races. Finally, switching events is not a feasible option for professional athletes who have spent years training for a specific event. Thus, there is no way for athletes to maintain their careers while also adhering to the World Athletics guidelines for competing in other competitions.

Lowering one’s testosterone levels has been proven to be an equally unfeasible option. The process to lower testosterone requires either hormone treatment or surgery to remove internal testes (Longman, 2016). The United Nations has written that these procedures

can cause irreversible harms to women, including compromising bone and muscle strength and risking chronic weakness, depression, sleep disturbance, poor libido, and adverse effects on lipid profile, diabetes, and fatigue. These procedures necessitate long term hormone replacement and may also sterilize women. (United Nations, 2018, p. 5-6)

By putting their careers on the line, the regulation coerces athletes into unnecessary and harmful medical procedures. The UN likens this coercion to violations of basic human rights, “cruel, inhuman or degrading treatment,” and even torture (p. 6).

Although it is not outlined in the World Athletics regulation, in practice, athletes have continued to have to endure a variety of abusive sex tests through recent years. Despite the

general understanding of their inconclusive nature, medical professionals continue to use chromosomal tests. They also continue to rely on subjective, outdated, and culturally biased scales that measure genital size, pubic hair

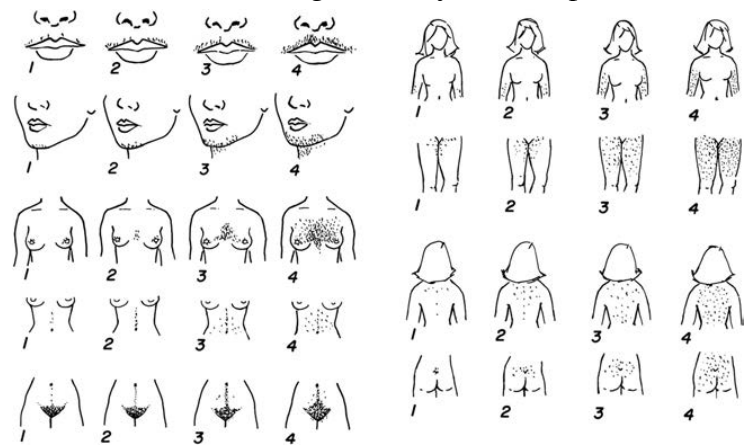


Figure 3. The Ferriman-Gallwey Scale assesses body hair (retrieved from Karkazis & Jordan-Young, 2018)

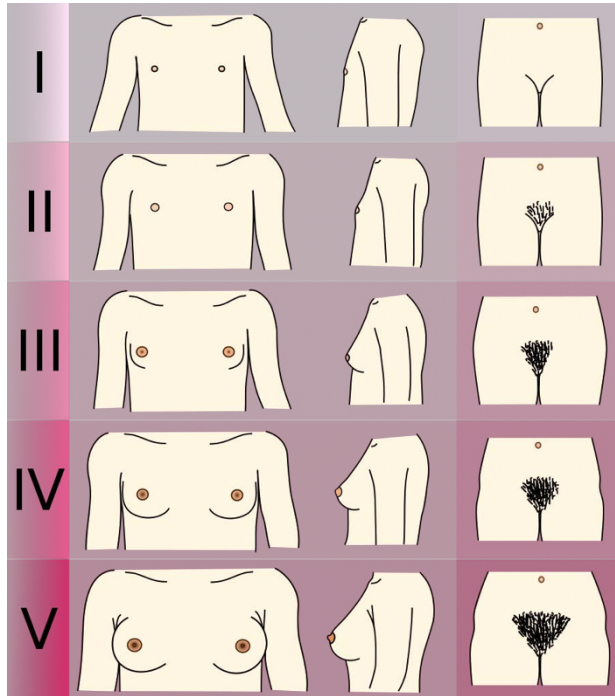


Figure 4. The Tanner Sclae-Female judges pubic hair and breast size (retrieved from Karkazis & Jordan-Young, 2018)

growth, and breast size to determine sex (Karkazis & Jordan-Young, 2018; Padawer, 2016). In a presentation on the argument for a testosterone limit, Stéphane Bermon listed “Importance of GYNAECOLOGICAL EXAMINATION: PPHE” as one of his greatest take-away’s and recommendations for policy-makers (cited in Karkazis & Jordan-Young, p. 27). Bermon’s suggestion of a preparticipation health exam (PPHE), his euphemism for a genital exam, would subject

all athletes participating in female classification competitions to the traumatizing practices that World Athletics has ironically attempted to distance itself from.

On its own, Bermon’s research seems like an isolated incident of flawed science, but the history of sex tests demonstrates that the science of sex definition has always been no more than a cultural fabrication. Sex is made up of at least five components: karyotype, genitals, hormones, gonads, and secondary sex characteristics. Each sex test attempts to define sex as binary by relying on one of these components. This is problematic not only because all of these components exhibit much more variation than is assumed by the binary, but also because they often function independently of one another (Karkazis & Jordan-Young). Many geneticists and endocrinologists agree that “relying on science to arbitrate the male-female divide in sports is fruitless... because science could not draw a line that nature itself refused to draw” (Padawer, 2016, p. 35). It is therefore no surprise that the World Athletics regulation, which relies on the

“science” of sex definition, perpetuates discriminatory violence towards female and gender minority bodies.

Neocolonial Medicine: Violence as Care

Following the release of the 2018 World Athletics regulation, the African National Congress (ANC), South Africa’s ruling party, issued a statement condemning the “racial undertones” of the regulation (Mabe, 2018, para. 2). It claims that the regulation disproportionately affects athletes from East Europe, Asia, and Africa. Because the language of the regulation does not make any mention of race or country of origin (World Athletics, 2018), some may assume the ANC is simply being defensive over a star athlete from its country. However, examination of publications, talks, and interviews with sports policy makers confirm that all athletes that have been investigated for high testosterone levels have been Black or Brown and from the Global South (Karkazis & Jordan-Young, 2018).

Those who believe that this is a mere coincidence cite the Global North practice of “normalizing” babies with ambiguous genitalia as a possible reason that no investigated athletes have been from the Global North. It is generally standard practice for medical professionals in the Global North to perform surgeries or alter the hormones of babies who are born with genitalia that do not fit the binary as soon as possible (Karkazis & Jordan-Young; Children’s Hospital of Wisconsin, n.d.). According to Dr. Yvonne Wu, a professor at the University of California San Francisco, ambiguous genitalia at birth can sometimes be a symptom of other health problems (personal conversation, November 17, 2018). However, surgeries and hormone treatments to treat this mere symptom are medically unnecessary for the health of the child. These practices continue despite the inability for babies to consent to them because medical

professionals believe that patient will benefit from them in the long-term (Karkazis & Jordan-Young, 2018).

Until 2019, most of the details about the medical procedures endured by athletes with higher levels of testosterone were shrouded by confidentiality concerns. However, the redacted CAS court report, which was released after the Court's decision to uphold the World Athletics regulation, made public the disturbing truth of Caster Semenya's abusive medical treatment. Semenya was just eighteen years old when World Athletics began to force tests and medical treatments on her. Following her 2009 championship victory, World Athletics informed her that if she wished to continue competing, she would have to take medications to lower her testosterone levels to 10 nanomoles per liter. The report writes that the "decision to undergo treatment, however, was not a meaningful choice since running was and is her life and her only means of making a living" (Semenya v. IAAF, 2019, p.17). Semenya consistently took medication from 2010 until the Chand decision in 2015. Throughout this period, she experienced a variety of negative side effects, including "becoming hot and sweating profusely each night and experiencing weight gain. She also felt sick constantly, suffered from regular fevers and had constant internal abdominal pain" (Semenya v. IAAF, p.17).

Other athletes have since come out with their own experiences of coerced and forced medical treatments. In September of 2019, Annet Negesa, a Ugandan ex-runner, shared that she had been flagged for elevated testosterone during her preparations for the 2012 Olympics. Her doctors, who had consulted with Stéphane Bermon, recommended surgery to remove her gonads as her primary option to continue running. Negesa was under the impression that she would receive a simple surgery that would allow her to return to running within weeks. However, she woke up from the procedure with unexpectedly large cuts (Mebus, Sviridenko, Willison, &

Seppelt, 2019). Negesa obviously was not given full information about her medical options, so she was therefore unable to fully consent to surgery. Another athlete, who wished to stay anonymous, also received a gonadectomy, which caused her to develop osteoporosis, depression, and prolonged hormone deficiency. Both of the athletes' careers were ended by this surgery, despite doctors telling them that treatment was the only way that they could continue running. The anonymous athlete shared that "I've often thought of killing myself. They stole my life, my existence... I wished that I had died in their hands then, because they would have been held responsible and punished" (Young, 2019, para. 10).

The treatment of athletes with elevated levels of testosterone in the last decade is not only abusive but also a modern reflection of colonialism that must be considered within the context of racial hierarchies. Throughout history, colonists have imposed violence on peoples of the Global South, often patronizingly in the name of care for those they harmed. Female Black bodies, specifically female Black bodies from South Africa, have a long history of violence stemming from the white, male gaze. In the early 1800's a Khoikhoi woman was taken to England from her home of South Africa and given the name Sara Baartman. In London and later in Paris, she was displayed naked to Europeans who were fascinated with her genitals. When she passed away, her body was dissected and put on display in a French museum (South African History Online, 2018). Modern sex testing is strikingly reminiscent of both this fascination with the Black female body and the concept of violence disguised as care.

Although global medical organizations agree that the procedures required by the World Athletics regulation are medically unethical, the fact that World Athletics leadership continues to advocate for these procedures demonstrates that their work is driven by neocolonial principles. World Medical Association President Leonid Eidelman and Chair Frank Ulrich Montgomery

(2019) explain that “A medical treatment is only justified when there is a medical need... Medical treatment for the sole purpose of altering the performance in sport is not permissible” (para. 6). World Athletics has administered unnecessary medical treatment to athletes not only to alter their running but also to further their own research, at the expense of Black and Brown bodies. When Caster Semenya began taking hormone suppressing medication, there was no information on how the drug would work. For this reason, Semenya expressed that she felt like World Athletics was treating her as a “lab rat” or “guinea pig” to “experiment” with how medications could affect the bodies of athletes like her (cited in Semenya v. IAAF, 2019, p. 18). Athletes are routinely coerced into medical procedures and given incomplete information both about what doctors are doing to their bodies. This demonstrates how, led by Stéphane Bermon, medical professionals who work with these athletes see the bodies of people of color as test experiments rather than people who have the right to bodily integrity. Their presumed ownership of Black bodies is evidence that the racist thinking that historically justified slavery has persisted over time and adapted to disparate situations.

Using the Western Gender Binary to Reinforce White, Male Power

In its “About World Athletics” page, World Athletics (n.d.) writes of its mission to make track and field a “sport for all” by “ensuring that the maximum number of citizens are able to participate in athletics” (para. 5). Why then does it focus so heavily on implementing a testosterone regulation that eliminates participation opportunities for many athletes? Presentations from the 2012 International Convention on Science, Education and Medicine in Sport reveal that the disproportionate number of athletes of color who have been investigated for

higher levels of testosterone is not a coincidence but a reflection of racialized policy making. Although the World Athletics Council, the organization's leadership body, is fairly racially diverse, all those who



Figure 3. *La Maja Desnuda* (Goya, 1800)

are publicly known to have worked on and backed the testosterone regulations, including Stéphane Bermon and World Athletics president Sebastian Coe, are white men (Karkazis & Jordan-Young, 2018).

At the convention, Stéphane Bermon's presentation on the justification for testosterone limits demonstrated his intent to emphasize the Western definition of femininity. On his first slide he presented two images under the title "Men and Women: Different Phenotypes" (cited in

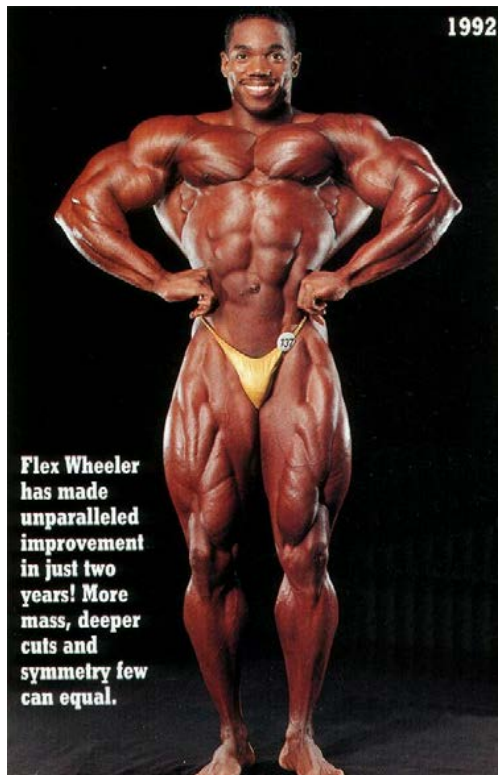


Figure 4. *Flex Wheeler in a 1992 magazine* (retrieved from Karkazis & Jordan-Young, 2018)

Karkazis & Jordan-Young). To represent the female phenotype he displayed *La Maja Desnuda*, Francisco Goya's romantic era reclining nude. Representing masculinity was an image of Flex Wheeler, a bodybuilder who seems to be made of pure muscle.

Although these are clearly extreme examples of male and female phenotypes, they hint at how Bermon understands masculinity and femininity (Karkazis & Jordan-Young).

His feminine icon is pale and sexually inviting; she lays passively and suggests submission to men. In contrast,

Flex Wheeler displays dominance and power. Obviously,

neither of these images are representative of all men and women. La Maja Desnuda is not a real woman but rather another white man's depiction of one. It is a known fact that Flex Wheeler doped for multiple decades, so it is ironic that Bermon, who works for the World Athletics Anti-Doping Commission (Karkazis & Jordan-Young, 2018), displays Wheeler's body as what he considers the natural male phenotype. The images demonstrate the framework that Bermon brings to his work on testosterone "science" and regulation. Furthermore, the generally positive reception of these images during the conference suggests that these understandings of femininity and masculinity are a creation of society that is shared by many more than just Bermon.

In Bermon's culturally fabricated reality, femininity exists primarily to legitimize white, male power. Because it requires women to submit and appeal to men, it is necessarily fragile and white. In female competitions, Bermon seeks to uphold his definition of femininity, not celebrate



Figure 5. Francine Niyonsaba, Caster Semenya, and Margaret Nyairera Wambui on the podium after winning the women's 800m (retrieved from Rupiah, 2016)

the diversity of what "female" can mean. Therefore, it is no surprise that Bermon felt threatened by the women's 800-meter podium in Río, which honored three strong, smiling women from Africa. Athletes like Caster Semenya who win

titles and medals while also contesting the binary nature of gender and sex challenge the very system that allows older white men with unexceptional past snowboarding careers, like Bermon to continue to hold power (Eubylon Health Care, n.d.).

In contrast to Semenya, Lynsey Sharp's slighter figure, blonde hair, and clear, pale skin seem to be the closest an Olympic runner could get to the image of La Maja Desnuda. There have been many athletes in addition to Sharp who have also called for a testosterone limit after losing to Semenya in races. Polish Joanna Józwiak, the fifth-place finisher at Río, felt "like a silver medallist [*sic*]" and was proud to be "the first European, the second white" (cited in Critchley, 2016). Józwiak questions the validity of all three medalists' victories, suggesting that on some level she also doesn't believe that Black bodies belong in female races with her.



Figure 6. Caster Semenya congratulates Lynsey Sharp and Melissa Bishop as they are locked in a tight hug (retrieved from Snowden, 2016)

While it seems like World Athletics has come to support these white athletes, in reality it is using their stories to build support for their own objective of imposing testosterone limits in female races. In addition to exhibiting physical traits that match Bermon's definition of femininity, these white athletes also demonstrate dependence on World Athletics when they plea for them to reinstate regulations. This legitimizes the power that World Athletics gives to the white men who advocate for testosterone regulations. The athletes likely appeal to sports viewers who share the same narrow definitions of femininity and masculinity as Bermon, and they thus build support for World Athletics policies.

While the testosterone controversy has divided athletes along racial lines, in the end, all who compete in female classification races are negatively affected by this regulation. Athletes

who do not fit the gender binary, who have higher testosterone levels, or who do not present as femme are subjected to extreme bodily scrutiny, traumatizing and abusive sex tests, and unnecessary and detrimental medical procedures. Their lives and careers are sensationalized and medicalized by the media, and all of their achievements are attributed to a single hormone instead of their hard work. Black and Brown athletes who do not have higher levels of testosterone have the validity of their successes challenged simply because their skin color does not fulfill Western standards of femininity. White athletes who have actively advocated for testosterone regulations may feel like a regulation is an ultimate victory, but they are used as pawns by World Athletics to uphold white, male power. They contribute to the reinforcement of a system that privileges them over people of color and individuals who challenge the gender binary but also oppresses them on the basis of gender. Finally, testosterone regulations put all who compete in female classification competitions under the surveillance of male authorities. Although this disproportionately affects parts of the athlete community that are already most oppressed, it hurts all athletes competing in female classification competitions because it codifies a justification for surveillance.

Looking to the Future for Caster Semenya

Caster Semenya has become the face of the issue of testosterone because she is the most prominent and celebrated athlete affected by the regulations. Despite this, for almost the whole decade following her launch into the international spotlight, Semenya avoided publicly discussing the issue. Following the 2017 World Athletics Championships, she was asked in a press conference about how a new World Athletics regulation would affect her future. At the

time, the first regulation was still under the CAS’s suspension, and the most recent regulation had not yet been released. She responded,

Those are the things, issues I don’t focus on. It’s none of my business. It’s their business. So, my business is to train hard and to see what I can come up with in competition... I’m not even bothered, if I may say. I’m a kind of a person who doesn’t really focus on negativity. I’m a positive person, and I look at things in a positive way... I’m Caster Semenya. I’m an athlete. (Nuffin’ Long Athletics, 2017, 13:16)

Although some may see the debate over testosterone to be completely her business, Semenya continually expressed her desire to simply be allowed to focus on being an athlete. For years, the issue captivated World Athletics, Semenya’s competitors and fans, queer scholars, medical specialists, and internet trolls. The only person who seemed missing from the conversation was Semenya herself.



Figure 7. A Tweet from Semenya weeks after World Athletics released its new regulation (caster800m, Twitter)

Avoiding public discussion about testosterone regulations was likely a strategy Semenya used to cope with the trauma she endured as a result of both her physical mistreatment and her psychological exploitation. In the CAS court report, Caster Semenya shared that World Athletics has indeed told her that she is not a woman. Semenya was “unable to express the depth of hurt and insult” she felt as a result of this accusation (Semenya v. IAAF, 2019, p. 18). The result of a decade’s worth of unyielding scrutiny of her body is that Semenya’s “love for the sport of athletics has been ‘drained’” (Semenya v. IAAF, p. 17). By not directly commenting on World

Athletics regulations in public, Semenya was doing her best to maintain her last remnant of privacy.

Semenya was forced to change her strategy when the future of her career was put on the line by the World Athletics 2018 regulation. By going to the CAS to challenge the regulation, Semenya took an extremely public facing role in the fight for gender equity in athletics. This action contrast greatly with Semenya's earlier attempts to focus solely on running. Despite her efforts, the CAS's decision to uphold World Athletics regulation has suspended Semenya's career indefinitely. She was unable to compete at the 2019 World Athletics Championships, and she remains barred from all other international 800-meter races. Athletics South Africa optimistically included her on the 2020 Tokyo Olympics preparation team, so if an appeal is able to go in her favor, she will be ready to compete (Richardson, 2019). However, Semenya's tweet announcing that she signed with a semi-professional soccer team (caster800m, 2019) shows that she is exploring other career opportunities in sports besides track.

Since establishing herself as the leader in the fight for fair regulations in athletics, Semenya has surely experienced an increase of hateful comments from online aggressors who routinely misgender her and make fun of her appearance. However, Semenya has also received



Figure 8. LeBron James and Caster Semenya pose for a photo after a race (SiyaBeyile, Twitter)

strong support and recognition from notable names in the international athletic community. In 2018, Semenya was sponsored by Nike, who created a touching promotional video that celebrated her strength, speed, and well-deserved success (Nike, 2018). In September 2018, fellow

Nike sponsored athlete LeBron James flew to Berlin to support Semenya in a race (ESPN, 2018). Later that fall, Semenya won the Wilma Rudolph Courage Award from the Women’s Sports Foundation and Billie Jean King (CCTV Africa, 2018). In December, she was featured on the cover of Forbes Woman Africa (ForbesWomanAfri, 2018).

With the support of her communities behind her, Caster Semenya has most recently begun to reclaim her story by sharing her experiences in her own words. In her Player’s Tribune article, she writes of how World Athletics treated her:

They have tested my body. They have tried to make me change my body, to take medicine to lower my testosterone. I do not want to change my body. I do not know what effects that medicine will have on my body for the rest of my life. I know the reason for this is because I am great. If I had high testosterone and wasn’t winning would they even care at all? I know it is a way to have control. We in South Africa know about control. We know about domination and power. I am not like the other runners. That is a threat. (Semenya, 2019, para. 16-17)

While doctors and scholars have been discussing Semenya and sometimes even speaking for her for the last 10 years, Semenya demonstrates that this whole time, she has been the greatest expert on the gender and racial politics that surround her. To combat language about her “case,” which further sensationalizes and medicalizes her career and life (Macharia, 2009; Hoard, 2010), Semenya calls for recognition of the humanity and value of those who are different, a principle that guides her own life.



Figure 9. The December issue of Forbes Africa Woman featuring Semenya (ForbesWomanAfri, Twitter)

Semenya’s Player’s Tribune article showcases her resilience and strong sense of self-worth. When she writes that as a child “I wanted to be a soldier. And I am in some ways now – fighting for fairness. Fighting for gender rights” (para. 26), she demonstrates that she has undergone a fundamental shift from wanting to focus solely on running just two years earlier to now identifying as an activist. Despite having been robbed of her privacy, her self-determination, and her career, she knows that she inspires young girls and that she is the best role model they could have. She knows that no matter what World Athletics does, she is “the girl from the South African bush who is the best runner in the world” (Semenya, 2019, para. 28). She knows that as a strong, fast, and successful Black woman, she is a threat to traditional definitions of femininity, and this only makes her more powerful.



Figure 12. Caster Semenya hugs a kid who says, “When I grow up, I want to be like Caster” (Nike, 2019)

References

- ABC News. (2018, June 22). *Transgender track stars speak out as critics allege unfair advantage*[Video file]. Retrieved from https://www.youtube.com/watch?v=sHqiG_hrbsc
- Ambiguous genitalia. (n.d.). Retrieved from <https://www.chw.org/medical-care/urology/conditions/ambiguous-genitalia>
- African National Congress. (2018, April 26). *ANC statement on new IAAF regulations on female testosterone*[Press release]. Retrieved from <http://politicsweb.co.za/politics/iaaf-discriminating-and-trying-to-exclude-athletes>
- Bermon, S., & Garnier, P. (2017). Serum androgen levels and their relation to performance in track and field: Mass spectrometry results from 2127 observations in male and female elite athletes. *British Journal of Sports Medicine*,*51*(17), 1309-1314.
doi:10.1136/bjsports-2017-097792
- Bermon, S., Hirschberg, A. L., Kowalski, J., & Eklund, E. (2018). Serum androgen levels are positively correlated with athletic performance and competition results in elite female athletes. *British Journal of Sports Medicine*,*52*(23), 1531-1532. doi:10.1136/bjsports-2018-099700
- Caster800m. (2018, May 16). Confidence is silent. Insecurities are loud [Tweet]. Retrieved from https://twitter.com/caster800m?ref_src=twsrc%5Egoogle%7Ctwcamp%5Eserp%7Ctwgr%5Eauthor
- Caster800m. (2018, May 16). Happy to announce my signing with @jvwgirlsfootball for 2020 season. Looking forward to this journey. [Tweet]. Retrieved from https://twitter.com/caster800m/status/1169897609839857665?ref_src=twsrc%5Etfw%7Ctwcamp%5Etweetembed%7Ctwterm%5E1169897609839857665&ref_url=https%3A%2

F%2Fwww.espn.com%2Fsoccer%2Fsouth-africa%2Fstory%2F3936103%2Fsemenya-signs-with-south-african-football-team

CGTN Africa. (2018, October 19). *South Africa's Caster Semenya receives Wilma Rudolph Courage Award*[Video file]. Retrieved from <http://newsvideo.su/video/9525806>

Cobb, R. (2018, November 24). Email.

Court of Arbitration for Sport. (2015, April 1). *Dutee Chand allowed to take part in the Asian Athletics Championships*[Press release]. Retrieved from <http://www.tas-cas.org/en/general-information/news-detail/article/athletics-case-dutee-chand-v-ifa-iaaf.html>

Court of Arbitration for Sport. (2015, November 18). Retrieved from <https://www.wada-ama.org/en/court-of-arbitration-for-sport>

Court of Arbitration for Sport. (2017, July 28). *CAS Suspends the IAAF Hyperandrogenism Regulation Until End of September 2017*[Media release].

Critchley, M. (2016, August 22). Rio 2016: Fifth-placed Joanna Jozwik 'feels like silver medallist' after 800m defeat to Caster Semenya. *The Independent*. Retrieved from <https://www.independent.co.uk/sport/olympics/rio-2016-joanna-jozwik-caster-semenya-800m-hyperandrogenism-a7203731.html>

Daemonlinks. (2016, August 20). *Testosterone? Heartbreaking Lynsey Sharp Interview! After Womens 800m final 2016 Rio 2016 Olympics*[Video file]. Retrieved from <https://www.youtube.com/watch?v=fI8SuA7aigo>

Dr. Stéphane Bermon, specialist in sports medicine. (n.d.). Retrieved from <http://www.eubylonhealthcare.com/de/spezialisten/st%C3%A9phane-bermon>

- ForbesWomanAfri. (2018, December 6). [NEW EDITION] In the new #ForbesWomanAfrica magazine, we sit down with South African Olympic gold medalist, #CasterSemanya @caster800m. She discusses being herself, and winning, against all odds. Grab your copy! [Tweet]. Retrieved from https://twitter.com/caster800m?ref_src=twsrc%5Egoogle%7Ctwcamp%5Eserp%7Ctwgr%5Eauthor
- Goya, F (1800). *La Maja Desnuda* [Oil on canvas]. Museo Nacional del Prado, Madrid, Spain. Museo del Prado (n.d.). Retrieved from <https://www.museodelprado.es/en/the-collection/art-work/the-naked-maja/65953b93-323e-48fe-98cb-9d4b15852b18>
- Hoad, N. (2010). “Run, Caster Semanya, Run!” Nativism and the Translations of Gender Variance. *Safundi*, 11(4), 397-405. doi:10.1080/17533171.2010.511785
- Karkazis, K., & Jordan-Young, R. M. (2018). The Powers of Testosterone: Obscuring Race and Regional Bias in the Regulation of Women Athletes. *Feminist Formations*, 30(2), 1-39. doi:10.1353/ff.2018.0017
- KweséESPN staff. (2018, September 4). NBA star LeBron James flies to Berlin to watch Caster Semanya. *ESPN*. Retrieved from http://www.espn.com/nba/story/_/id/24572182/nba-lebron-james-flies-berlin-watch-caster-semenya
- Longman, J. (2016, August 18). Understanding the Controversy Over Caster Semanya. *New York Times*. Retrieved from <https://www.nytimes.com/2016/08/20/sports/caster-semenya-800-meters.html>
- Longman, J. (2018, April 25). Track’s New Gender Rules Could Exclude Some Female Athletes. *New York Times*. Retrieved from <https://www.nytimes.com/2018/04/25/sports/caster-semenya.html>

- Longman, J., & Macur, J. (2019, May 1). Caster Semenya Loses Case to Compete as a Woman in All Races. Retrieved from <https://www.nytimes.com/2019/05/01/sports/caster-semenya-loses.html?searchResultPosition=8>
- Longman, J. (2019, July 30). Caster Semenya Barred From 800 Meters at World Championships. Retrieved from <https://www.nytimes.com/2019/07/30/sports/caster-semenya-world-championships.html?searchResultPosition=2>
- Macharia, K. (2009, September 20). On Caster Semenya [Web log post]. Retrieved from <https://gukira.wordpress.com/2009/09/20/on-caster-semenya/>
- Mebus, V., Sviridenko, O., Willison, E., & Seppelt, H. (2019, November 26). Ex-Athletinnen leiden unter Folgen von Hormon-Operationen. Retrieved from <https://www.sportschau.de/hintergrund/schwere-vorwuerfe-gegen-iaaf-arzt-100.html>
- Mokgadi Caster Semenya v. International Association of Athletics Federations. (CAS, 2019).
- Negi, L. (2018, May 02). Exclusive! Dutee Chand is ready to start life anew. Retrieved from <https://www.rediff.com/sports/interview/exclusive-dutee-chand-is-ready-to-start-life-anew/20180502.htm>
- Nike. (2018, September 10). *Nike - Just Do It: Caster Semenya*[Video file]. Retrieved from <https://www.youtube.com/watch?v=6UW-VgxIIZI>
- Nike. (2019, November 20). *Caster Semenya: Birthplace of Dreams | Nike*[Video file]. Retrieved from <https://www.youtube.com/watch?v=qXYBcigxjpQ&feature=youtu.be>
- Nuffin' Long Athletics. (2017, August 8). *CASTER SEMENYA ADDRESS DNA/GENDER ISSUES ANGRILY IN PRESS CONFERENCE*[Video file]. Retrieved from <https://www.youtube.com/watch?v=oRjPoNez3jg>
- Padawer, R. (2016, July 3). Too Fast to be Female. *New York Times Magazine*, 32-49.

- Pielke, R., Jr. (2018, July 13). A Call for Bermon and Garnier (2017) to be Retracted [Web log post]. Retrieved from <http://www.sportsintegrityinitiative.com/call-bermon-garnier-2017-retracted/>
- Pielke, R., Jr. (2018, June 5). IAAF opens up on testosterone: Some reactions [Web log post]. Retrieved from <http://www.sportsintegrityinitiative.com/iaaf-opens-testosterone-reactions/>
- Pielke, R., Jr. (2018, October 25). *A Critique of the Use of Evidence in IAAF*. Lecture presented at ISLJ Annual Sports Law Conference in The Hague, Netherlands. Retrieved from https://drive.google.com/file/d/18jJr6kxeqwW_n4vRYi2muPN_xC4H5hUH/view
- Pielke, R., Jr., Tucker, R., & Boye, E. (2018, July 9). Serious Problems Found in a Partial Replication of Bermon and Garnoier (2017) (Rep.).
- Pūras, D., Melzer, N., & Radačić, I. (2018, September 18). Mandates of the Special Rapporteur on the right of everyone to the enjoyment of the highest attainable standard of physical and mental health; the Special Rapporteur on torture and other cruel, inhuman or degrading treatment or punishment; and the Working Group on the issue of discrimination against women in law and in practice [Letter to Sebastian Coe]. Palais Des Nations, Geneva, Switzerland.
- Richardson, J. (2019, November 4). Semenya included in ASA's Tokyo 2020 preparation squad. Retrieved from <https://www.thesouthafrican.com/sport/semenya-included-in-asas-tokyo-2020-preparation-squad/>
- Rupiah, K. (2016, August 25). Too big, too strong, too powerful, too black for weepy, waifish Sharp and Jozwik. *Mail & Guardian*. Retrieved from <https://mg.co.za/article/2016-08-25-00-too-big-too-strong-too-powerful-too-black-for-weepy-waifish-sharp-and-jozwik>

- Sara "Saartjie" Baartman. (2018, June 11). Retrieved from
<https://www.sahistory.org.za/people/sara-saartjie-baartman>
- Semenya, C. (2019, September 27). I Wanted to be a Soldier. Retrieved from
<http://projects.theplayerstribune.com/caster-semenya-gender-rights/p/1>
- Snowdon, K. (2016, August 21). Lynsey Sharp Defends Caster Semenya Comments After Coming Sixth In Women's 800m Final In Rio. *Huffington Post*. Retrieved from
https://www.huffingtonpost.co.uk/entry/lynsey-sharp-defends-caster-semenya-comments-after-coming-sixth-in-womens-800m-final-in-rio_uk_57b9ae1de4b0f78b2b4a53c1
- SiyaBeyile. (2018, September 2). Levels! When @KingJames flies into Berlin to watch our gem @caster800m [Tweet]. Retrieved from
https://twitter.com/caster800m?ref_src=twsrc%5Egoogle%7Ctwcamp%5Eserp%7Ctwgr%5Eauthor
- The Hormones: Androgens. (n.d.). Retrieved from
<http://e.hormone.tulane.edu/learning/androgens.html>
- Walton, G. (2018, November 1). IAAF gender rules 'killing' next generation - Semenya. *Mail & Guardian*. Retrieved from <https://mg.co.za/article/2018-11-01-iaaf-gender-rules-killing-next-generation-semenya>
- World Athletics. (n.d.). About World Athletics. Retrieved from
<https://www.worldathletics.org/about-iaaf>
- World Athletics. (n.d.). Council. Retrieved from <https://www.worldathletics.org/about-iaaf/structure/council>
- World Athletics. (n.d.). *IAAF Regulations Governing Eligibility of Females with Hyperandrogenism to Compete in Women's Competition*(Rep.).

World Athletics. (2018, April 26). *IAAF Introduces New Eligibility Regulations for Female Classification*[Press release]. Retrieved from <https://www.worldathletics.org/news/press-release/eligibility-regulations-for-female-classifica>

World Medical Association. (2019, May 15). Physician leaders reaffirm opposition to IAAF rules. Retrieved from <https://www.wma.net/news-post/physician-leaders-reaffirm-opposition-to-iaaf-rules/>

Wu, Y. (2018, November 17). Personal conversation.

Young, D. (2019, September 27). Track is holding a fraudulent world championship. Retrieved from <https://www.nydailynews.com/sports/more-sports/ny-caster-semenya-absent-track-world-championships-20190927-ndgu5dh43fhvxm6iojf2ayw6d4-story.html>