



OLYMPICS

## Some of Their Parts

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### *"Gender Verification" and Elite Sports*

If all goes as expected, new sex testing rules for female athletes will be in place for the 2012 Olympic Games in London this summer. The change came in response to the case of Caster Semenya, a young South African runner whose muscular body and spectacular win at the Berlin World Championships in 2009 in the 800m sparked an international debate over whether she was "really" female and thus eligible for women's competitions. The process for determining her eligibility, which included a detailed and protracted examination of her body to determine her "true" sex, left her shamed and humiliated. Amid ensuing debates about how to determine sex and whether universal sex testing is necessary in elite sports, the International Association of Athletics Federations (IAAF) [released new policies](#) for determining eligibility to compete as a female; [the IOC is expected to pass a similar policy in the time for the summer Olympic Games](#).

These policies engage a labyrinth of contemporary political and scientific struggles concerning the boundaries between male and female. Earlier modes of sex testing aimed to distinguish males from females, which might seem the easiest of tasks. Yet with at least six biological markers of sex, and none present in all people labeled "female," each attempt to identify "biological women" failed, inappropriately excluding people that experts and lay people alike would consider women, and failing to exclude others whom most would consider men. For the new policies officials sought to identify "masculine advantage" rather than sex itself based on the notion that observed differences between male and female athleticism are due to differences in testosterone levels. Female athletes whose endogenous (ie, non-doping) levels are above the typical female range, which includes many women with intersex traits, are presumed to have an advantage over women with lower levels of testosterone. Female athletes *known or suspected* to have hyperandrogenism will be allowed to compete only if they agree to medical intervention, or if they are found to be "insensitive" to androgens.

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Like with earlier sex testing policies, there is an unquestioned assumption that "science" and "experts" can resolve what seems confusing about sex, and these policies once again draw a line between male and female. What is the perceived urgency to have such a line? And what are the proposed methods for producing it? What cultural work is performed by a return to an official, medico-scientific process of "gender verification"? How is the task accomplished especially given that the scientific basis for the new policies is so weak? Three core elements bolster the story of "scientific gender verification": the "sex hormone" concept; tensions between discursive and material "modes" of sex; and erasure of the contexts in which an athlete's sex is "doubted."

### OUR HORMONES, OUR SELVES

For a century, so-called sex hormones have been called on to do a lot of heavy lifting for explaining what makes us men and women. As Nelly Oudshoorn notes, however, the cultural idea of "sex hormones" as "essences of masculinity and femininity" doesn't map well onto what these steroids actually do in bodies, which extends far beyond producing sex traits. These hormones influence cell, tissue, organ, and functions in the brain, breast, bone, and the cardiovascular system. The labeling of testosterone and estrogen as "[sex hormones](#)" then persistently discounts data that doesn't fit this paradigm, distorting research, theory, and even medical practice owing to a persistent faith that so-called sex hormones are responsible only and primarily for most physical and behavioral differences between men and women.

What useful facts are supposedly revealed by testosterone levels in female bodies? Women's bodies make testosterone, and our bodies vary greatly in terms of the amounts we produce and the way we use it (the distribution and sensitivity of hormone receptors also varies *within* individuals, as well as between people). Testosterone levels then not only can't tell the fully story of someone's sex (or gender, for that matter), but they also can't predict an individual's athletic performance relative to other people, even those with dramatically different testosterone levels. Although it's common wisdom that "off the charts" testosterone levels will propel women into male-level performance, it's doesn't bear out. None of the women who have been suspended because of questions about their sex (and who likely have hyperandrogenism) have been world record holders; they aren't "outliers" among their elite athletic peers. A great athletic performance doesn't allow you to infer that someone has high testosterone, but then, a great athletic performance isn't what brings women athletes under scrutiny (at least

not on its own).

So what does? Looking “masculine.” And that, as it turns out, is much more correlated to testosterone in women’s bodies. High androgens produce what are commonly read as “masculine” traits such as increased body and facial hair, low body fat, acne, deepening of the voice, and bulky, well-defined muscles. Inferring these “surface” masculinities on a woman’s body are indicators of a deeper “true” masculinity or maleness incites scrutiny and suspicion around particular types of bodies and modes of gender presentation and amplify the pressure women athletes already experience to appear “feminine” (often a codeword for “heterosexual”).

Sporting officials turned to hormones as a “neutral” way to decide who can enter women’s competitions, but this neutrality is illusory. As hormonal levels become the standard by which athletic officials, via medical professionals, investigate sex claims, what makes a woman legitimate (and thus eligible) will be determined by a culturally infused medical gaze that converts the neutral information of testosterone levels into the scientifically meaningless but culturally-loaded message of “too much male essence.” Reading hormone levels in this way reveals an allegiance to a particular social universe that views male and female as binary and discrete, and often conceals or even negates the athlete’s lived reality. More troubling, it requires women who may have no medical problems and no concerns about their bodies to agree to medical intervention in order to continue their athletic career.

#### SEX A LA MODE: CULTURAL VERSUS LIVED

Sex testing policies reveal an old tension between two different modes for “doing” sex: a cultural mode and a lived mode. In the cultural mode, sex is singular within bodies and dimorphic “in the world”: every individual body fits neatly into male or female. As the predominant cultural framework for thinking about sex, this mode determines how we sort evidence we encounter in the world, which in turn makes it very difficult for the many and varied kinds of complexities, inconsistencies, and category “failures” to be perceived—even though these are the rule rather than exceptions in the lived mode. [In this latter mode, sex is multiple within bodies, and is not always easily classed across bodies.](#)

Think of this tussle in the history of sports sex testing. The process began with certainty about what traits indicated male and which ones indicated female. But once the policy had to be enacted, medical experts ran into classificatory problems because no single bodily trait could work to arbitrate sex. After 50 years, the “experts” on sex finally gave up, resulting in a brief halt to mass screening. Nevertheless the idea that achieving fairness requires the continued division of athletics into male and female categories, the issue becomes how to determine such divisions. The switch from mass testing to case-by-case investigations also involves a switch in the kind of evidence that counts.

While the “cultural” mode doesn’t need evidence (and proceeds as though all evidence would be interchangeable because sex is unitary within bodies), the lived mode is ecumenical in terms of the evidence that can reveal sex in a body. In mass testing, one particular trait (usually a less culturally salient, molecular aspect of sex) is foregrounded (e.g., the Barr body, indicating two X chromosomes). All bodies are subject to extraction of material and scrutiny of the trait, and it was the “surprises”—when “lived” sex didn’t conform to “cultural” sex—that constituted the “failure” of mass testing. (Of course, the problem of sex testing is not with the tests per se, but with the assumption that any singular marker of sex is adequate to classify people into a two sex system.) With ad hoc testing, “lived” sex is constituted by culturally available signals of sex. Here, the “molar” body is jumbled with the cultural, performative body: everything from hairstyle to gait to overall body shape to facial hair can trigger investigation.

#### SILENCES AND WHAT’S LEFT OUT

The new policies involve a sleight-of-hand: the “masculine” traits that trigger the questioning of an athlete’s sex are obfuscated once the investigation begins. By focusing on what happens *after* someone’s sex is questioned, it appears as though a “neutral” bodily fact (testosterone level) is the exclusive basis for comparing athlete’s qualifications to compete.

From the initial moment of “doubting sex,” through the process of investigation and possible requirement for medical interventions, gender norms get misrecognized as neutral and pure bodily signals of testosterone level. Especially since this new policy plays out in the arena not just of sports, but of medical diagnosis and compulsory (often medically unnecessary) “treatment,” Karla Holloway’s notion of “predictable failures” is useful. [Holloway argues](#) that “privacy” is implicitly reserved for socially-privileged groups (male, white, heterosexual), and that living outside these interlocking privileges means inhabiting a body that is always, to some extent, “public” and available for scrutiny, probing, and coercion in ways that fly under the radar of institutions and individuals doing the looking.

Pressures for women athletes to perform hegemonic femininity goes hand in hand with harassment and exclusion of lesbian athletes, and it’s also the case that scrutiny of women athletes engages longstanding histories of scientific fascination with supposed sexual peculiarities of women of color. In the three cases we know of, Semenya, Indian runner [Santhi Soundarajan](#), and another (unnamed) Indian woman soccer player (excluded in 1999), the women investigated under the ad hoc policy have all been brown or black women from the global South. In Semenya’s case, the specific treatment she received during official investigation was horrifyingly resonant with the medicalized, racist use of Black women’s bodies as “infotainment” (eg, display of Sartje Baartman as the “Hottentot Venus” and the public gynecological exams and surgeries that Marion Sims performed on African American women slaves).

#### CONCLUSION

The argument for this policy, that high testosterone levels signal athletic advantage over other women, is specious. Medical experts on sex know that sex is not “one thing” in the body. These policies attempt an end run around that observation by claiming not to decide who is really a woman, but who’s “too masculine” to compete as one. But the very complexity of sex in the body means that answering what sex *is* means answering what it is *for*. The doctors who have devised these policies are experts in “disorders of sex development” who have developed their approaches in the context of stabilizing ambiguous sex in intersex infants. That is a fundamentally different project from the question of adjudicating sex in adults, especially for the specific non-sexual purpose of judging athletic

potential and performance.

There are a number of ways in which this move to examine testosterone levels (rather than, say, sex chromosomes) *feels* rationale. For one thing, testosterone is associated with muscle size and strength (it's just not associated in the simple linear way that this policy suggests, and it *cannot* be used to “rank” athletic potential or capacity across different individuals). For another thing, testosterone, unlike chromosomes, does have some correlation with externally-observable traits that are coded as “masculine” such as hair patterns and musculature, especially. This correlation is especially pernicious, though, because the tests seem to confirm that “masculine appearance” truly signals “maleness” thereby ratifying the scrutiny and suspicion of women who don't meet hegemonic standards of femininity. But the idea that the presence of women with hyperandrogenism is athletically rather than culturally threatening to other women athletes doesn't hold up. In the process, what we get is extraordinary scrutiny of women who fail to conform to gender norms, which is hardly a step toward fairness for female athletes.

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