

# You Ain't Woman Enough: Tracing the Policing of Intersexuality in Sports and the Clinic

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## Abstract

This article traces the continuities and discontinuities in the history of sporting and clinical rules concerning intersexuality. Through the parallel investigation of how intersexual bodies have been monitored, examined, and modified in the sporting and medical worlds, I argue that neither of them have ‘progressed’ to become more ‘respectful’ or ‘inclusive’. Rather, changes in the management of intersexuality in both areas consist in different iterations of a pervasive conceptualisation of bodies as dichotomously gendered. I contend that medical and sporting bodies’ supposedly ‘scientific’ search to ‘determine’ gender not only is a failed endeavour, given the contradictory gender ‘markers’ that have been ‘discovered’ and enforced on bodies, but also constitutes an attempt, disguised through discourses of health and fairness, to render intersexuality a problematic form of embodiment.

## Keywords

clinic, gender, history, intersexuality, science, sports

## Introduction

What does it mean to ‘run like a girl’? This question has recently resulted in many problems for Christine Mboma, an eighteen year old Namibian sprinter who broke the

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30 year-old women's world 400 meter record last July. After such an outstanding performance, however, she was barred from running the Olympic 400 meter race in Tokyo 2020 because she was found, together with fellow runner Beatrice Masilingi, to have an intersexual condition which increases her levels of testosterone above the 'normal' female range (BBC Sport, 2021). According to the sports governing body World Athletics (henceforth, 'IAAF'),<sup>1</sup> these women's participation in the female division would have threatened fair competition, only allowing them to run if they agreed to hormonally or surgically lower their testosterone levels. All three 800 meter medallists from Rio 2016, Francine Niyonsaba, Margaret Wambui and Caster Semenya encountered the same problem, and were unable to compete at Tokyo 2020 after refusing to undergo medical treatment to artificially suppress their testosterone levels (Higgins, 2011).

These controversies surrounding intersexuality are, however, not new. The gradual acceptance of women in sports competitions in the early twentieth century was followed by increasing fears about female athletes not being 'true' women. Helen Stephens, who won the gold medal for the 100 meter race in Berlin 1936, was accused of being a man by her competitors and the 'height, musculature and masculine features' of the silver medallist in the same event, Stella Walasiewiczówna, also prompted questions about her womanhood (Harper, 2020: p. 30). Perhaps the most (in)famous case of 'gender fraud' is Heinrich Ratjen's, whose participation in the 1936 Games as a woman is said to have been part of a Nazi scheme to ensure the success of Germany in the Berlin Games (Berg, 2009). During the Cold War, Soviet sister athletes Irina and Tamara Press, who systematically outperformed their American competitors, were nicknamed the 'Press Brothers' by the US media, fuelling numerous rumours about their 'true' gender (Wiederkehr, 2009). As we shall see, anxiety about the 'unfemininity' of some female athletes led to the establishment of 'gender verification', 'sex testing' or 'femininity testing'<sup>2</sup> procedures by the IAAF and the International Olympic Committee (IOC), which seek to screen out 'fake' intersexual women from the female division.

The policing of intersexuality is not confined to the sports world. The medical profession also has a long history of monitoring and 'normalising' intersexual bodies, mobilising health, instead of levelling the playing field, as the main justification to control and treat intersexuality (Dreger, 1998). While the evolution, rationales and problems attached to clinical and sporting protocols managing intersexuality have separately been matters of lengthy academic discussion (see Daly, 2015; Elsas et al. 2000; Feder, 2014; Kessler 1990; Ljungqvist et al., 2006; Malatino, 2019), this paper seeks to explore how the history of both sorts of regulation proceeds from shared assumptions about gender and embodiment. Reading together the history of how clinical and sporting bodies have been dealing with intersexuality opens up a new path of inquiry to study how embodiment, ambiguity and gender have been conceptualised and regulated.

How do sporting and clinical policies justify their commitment to surveil intersexuality? Have both 'systems' been fuelled by similar fears or concerns? What do the constant changes in each of these policies mean for how intersex is seen? By seeking to answer these questions, this paper puts forward two main arguments. First, changes in both sorts of policies, albeit framed as 'progress' in terms of scientific accuracy, inclusivity, health and respect for autonomy, consist in different iterations of a constant conceptualisation of bodies as dichotomously gendered. Second, binary gender difference, despite

being the foundational matrix of both clinical and sporting rules, is defined and established inconsistently, since each policy, at different moments in time, has relied on different bodily characteristics to determine to which gender athletes and patients belong. Juxtaposing these policies enables us to see that their purpose to find, through scientific investigations, the essence of gender in bodies is necessarily doomed, with each of them relying on different (and often contradictory) gender ‘revealing’ characteristics to assign and verify gender.

In *Gender Trouble*, Judith Butler (1990) questioned the ‘naturalness’ of sex, and argued that it is a cultural and social construction and not an immutable and pre-discursive category which bodies ‘possess’, interrogating how ‘sex’ has become to be seen stable and binary:

And what is ‘sex’ anyway? Is it natural, anatomical, chromosomal, or hormonal, and how is a feminist critic to assess the scientific discourses which purport to establish such ‘facts’ for us? Does sex have a history, or histories? Is there a history of how the duality of sex was established, a genealogy that might expose the binary options as a variable construction? Are the ostensibly natural facts of sex discursively produced by various scientific discourses in the service of other political and social interests? (Butler, 1990: p. 10)

This paper takes up these questions through investigating the history of two scientific discourses committed to enshrining the body as a fixed entity, establishing which bodily differences are meaningful and setting up different categories to which they ‘naturally’ and ‘inherently’ belong (Weber, 2006). My central goal is to show that putting side-by-side the evolution of sporting and clinical policies reveals precisely the opposite of what they set out to do: that bodies perhaps do not have immutable differences that allow for their clear distinction; and that intersex management policies in sports and the clinic have not ‘progressed’ to become more ‘refined’ or ‘inclusive’; but have rather mutated in accordance with the relevant discourses of each moment, with the underpinning core principle remaining the maintenance of the gender binary and the surveillance of intersexuality as gender transgression.

The scope of this paper is limited to intersexuality, although the inclusion of transgender athletes in sports has been a matter of contention, and the medical profession also has a complicated history and relationship with transgender bodies (IOC, 2004; Cavanagh and Sykes, 2006). Likewise, I also leave unconsidered debates surrounding doping as an obstacle to fair competition, since my primary concentration is on bodies that, because of their ‘natural’ disruption of the gender binary, are accused of threatening sports(wo)manship.

## **Compulsory Gender Verification in Sports: Revealing Impostors Through Chromosomes**

From 1946 until 1966, each national federation was supposed to have ‘validated’ the gender of their female athletes (Harper, 2020). However, given increasing suspicions that Eastern Bloc countries were sending ‘fake’ women to female sporting events, the IOC and the IAAF established compulsory gender verification as a condition for

women to take part in their competitions. In the 1966 British Empire and Commonwealth Games in Kingston, organised by the IAAF, a gynaecological inspection was required to confirm that all female athletes had female genital organs. Two weeks later, at the European Athletics Championships in Budapest, the examination was only visual (Harper, 2020). Neither of these methods, deemed a 'nude parade' and considered deeply 'crude' and 'humiliating' by the athletes forced to submit to them, was adopted by the IOC, on the grounds that laboratory-based tests would be more 'dignified', entailing 'minimal physical and psychological disturbance' (Hay, 1972: p. 998; Schultz, 2012: p. 446). The IOC opted for the so-called Barr body or buccal smear test, which consisted in taking a sample from the athlete's mouth for genetic evaluation.

From 1958 until 1992, all female athletes (except for Princess Anne, who was exempted when she competed in the 1976 Olympics) were required to have their 'womanhood' tested before taking part at any IAAF and IOC events (Harper, 2020). A sample from the inside of the mouth was taken from every female athlete before competing, and evaluated for the presence of Barr bodies, a mass that can only be found in XX chromosomes. If she failed the test, the athlete was to be told in 'complete secrecy' so that she could withdraw without anyone else having to know the 'real reason' why she could not compete (Hay, 1972: p. 999). All those who passed the test would be issued a 'certificate of femininity', which they could use at every international competition in order to avoid future tests (Hay, 1972: p. 999). The justification behind this compulsory testing was to ensure fairness. In the words of Eduardo Hay (1972, p. 999), member of the IOC Medical Commission:

The investigation for femininity of the athletes participating in the Olympic Games verifies that the athletes are competing on an equal basis, considering their physical status. In cases of intersexuality or hermaphroditism, the athlete must be barred from competition in order to ensure fair play.

Nevertheless, several members of the scientific community (De La Chapelle, 1986; Ferguson-Smith, and Ferris 1991; Ljungqvist and Simpson, 1992; Simpson et al., 1993) raised concerns about whether the buccal smear test was fit for purpose. Such a test is designed to detect a person's chromosomal sex, as the Barr body is only present in XX individuals, while their gonadal, morphological and psychosocial sex attributes remain undetected (De La Chapelle, 1986). In practice, this means that those who have been raised as women, have 'feminised' external genital morphology and secondary sexual characteristics, but lack two X chromosomes, will not be 'verified' as women. This is often the case of individuals with Androgen Insensitivity Syndrome (AIS) or gonadal dysgenesis, who are usually assigned female at birth because their 'external' body is, with varying degrees, typically female, 'but' have XY chromosomes (Ljungqvist and Simpson, 1992). The main issue of contention within the scientific community (De La Chapelle, 1986; Ljungqvist and Simpson, 1992) was if and to what extent possessing a Y chromosome (but a 'feminised' body) provides athletes with an unfair advantage over their XX competitors, as 'male' genetic make-up is not necessarily accompanied by 'manly' attributes which entail greater strength, power or flexibility. In fact, it is not uncommon for some of these conditions to go undiagnosed until a full gynaecological exam is performed, which usually does not happen until puberty, as

the external anatomy might be 'normal' and the only noticeable 'anomaly' might be lack of menstruation, which is not unusual in elite female athletes. This is why some scientific commentators (De La Chapelle, 1986; Simpson et al., 1993) also criticised the test for being potentially disruptive and having a dramatic psychological impact on athletes, who might have their gender and identity questioned by a laboratory-based test which detects the presence of XX chromosomes.

This is precisely what happened to María José Martínez Patiño, a Spanish hurdler who failed her gender verification test in the World University Games in Kobe 1985, since she turned out to have AIS. As a result, she was barred from competing, was stripped of all her medals, expelled from her athletics residence, had her sports scholarship revoked and lost many of her friends and her fiancé. Instead of faking an injury and withdrawing quietly, as she was advised to do, she decided to fight her disqualification, being convinced of her 'femininity': 'I knew I was a woman, and that my genetic difference gave me no unfair physical advantage. I could hardly pretend to be a man; I have breasts and a vagina. I never cheated' (Martínez-Patiño, 2005: p. 538).

Her case was crucial in the push for changing the testing rules. The IAAF abolished mandatory gender verification between 1990 and 1992. In addition to being considered an 'unfair' test which excluded those who had XY chromosomes but 'were raised as females and lived with female gender' (Simpson et al., 1993: p. 311), like Martínez Patiño, its necessity was deemed to be 'a less pressing concern' in comparison to the 1960s (Ljungqvist and Simpson, 1992: p. 852). This is because athletes' anatomy was already carefully surveilled through anti-doping controls, which require athletes to take a urine test whilst being watched to ensure that 'urine actually comes from [the athlete's] urethra' (Ljungqvist and Simpson, 1992: p. 852).

The IOC did however decide to keep mandatory gender verification, although it substituted the Barr body for a Polymerase Chain Reaction (PCR) test in 1992, which looked for 'male-related genetic material' through amplifying DNA cells, also extracted from a buccal sample (Ljungqvist et al., 2006: p. 225). The PCR method was subject to similar criticisms to the previous test, since, despite being 'more technically sophisticated', it was still focused on genetic variations only, neglecting other aspects that might actually have an impact on athletic performance (Anderson, 1991; Ha et al., 2014: p. 1037; Ljungqvist and Simpson, 1992: p. 851). Opposition grew and, by the end of 1990s, several medical associations had opposed gender verification, with the IOC eventually deciding to abolish blanket testing in 1999 (Elsas et al., 2000; Rupert, 2011). Since the 2000 Olympic Games in Sydney, both the IOC and the IAAF have dropped compulsory testing, although, as I shall explain below, athletes might still be required to undergo testing if any concerns about their eligibility arise.

## **Money's Protocols: Intersexuality in the Clinic**

While female athletes were required to undergo laboratory-based tests evaluating their chromosomes to verify their gender, the dominant protocols for the management of intersexuality were developed in John Hopkins University by John Money and his colleagues (Reis, 2009). The period of dominance of Money's protocols, which spanned from the 1960s until the early 2000s, coincides with the era of compulsory gender testing in sports.

Money and his colleagues' focus was on intersex children and, specifically, newborns, developing recommendations for how to provide their extremely young patients with a healthy upbringing. For Money's team, the biggest challenge intersex patients encountered was the lack of harmony between their physical sexual variables (gonads, hormones, internal and external genital morphology), because these anatomical 'contradictions' were considered to hinder the development of a stable 'gender identity/role' as a man or a woman (Money, Hampson and Hampson, 1957). Although Money rejected the idea that gender was (only) biologically determined, as he believed that it was also 'created' through 'social' and 'environmental' aspects like 'nouns, pronouns ... hair-cut, dress, and personal adornment', he thought that anatomical elements, like genital appearance, played a crucial role in its establishment (Money, Hampson and Hampson, 1957: p. 335):

On the one hand it is evident that gender role and orientation is not determined in some automatic, innate, or instinctive fashion by physical, bodily agents, like chromosomes, gonadal structures, or hormones. On the other hand, it is also evident that the sex of assignment and rearing does not automatically and mechanistically determine the gender role and orientation ... Rather, it appears that a person's gender role and orientation becomes established, beginning at a very early age, as that person becomes acquainted with and deciphers a continuous multiplicity of signs that point in the direction of his being a boy, or her being a girl.

As one acquired one's gender identity through interacting with the rest of the world, being born with 'ambiguous' anatomy challenged the process of 'normal' gender rearing, since the baby's ambiguous genitals prevented the most basic announcement ('it's a boy!' or 'it's a girl!') from triggering the chain of communications, responses and actions that would shape the child's gender (Money and Ehrhardt, 1972). In order to ensure that those born with 'doubtful' genitalia could have a healthy psychological development and rescue them from 'swing[ing] on a boy girl-pendulum' (Money and Ehrhardt, 1972: p. 12), Money (Hampson, Money and Hampson, 1956: p. 559) recommended gender assignment and surgery to 'correct' 'confusing' anatomy as soon as possible, and by eighteen months at the latest, removing early on in life the major obstacles for 'psychological healthiness', hence securing the 'successful establishment of a thoroughgoing conviction of gender'.

The criterion for gender assignment was neither gonadal nor chromosomal sex, but 'the morphology of the external genitals and the ease with which these organs can be surgically reconstructed to be consistent with the assigned sex' (Money, Hampson and Hampson, 1957: p. 334). Perhaps the most illustrative example of how the process of gender assignment, subsequent surgery and gender-rearing worked is the John/Joan case, highly publicised by Money's team as evidence of success of their protocols and understanding of gender (Money and Ehrhardt, 1972). As a result of a botched circumcision, a boy had his penis ablated at seven months old. Given that his phallus would never achieve the expectations of a 'normal' penis (that is, urinating standing up and penetrating a vagina) (Fausto-Sterling, 2000: p. 57), but had the potential to be surgically fixed to resemble a vulva, Money and his team advised the family to raise him as a girl. The baby underwent the necessary operations, and her parents were reassured that she

would ‘differentiate a female gender identity’, provided they followed their guidelines on policing her ‘girlness’ (Money and Ehrhardt, 1972: p. 119). The team explained to them the importance of ‘gender rearing practices’, like having her wear dresses, growing her hair long, teaching her to urinate sitting down and preparing her to be a proper housewife (Money and Ehrhardt, 1972: p. 119–121). For a healthy upbringing, unconfused anatomy therefore had to be accompanied with the (self)conviction and messaging from parents that the child is a boy or a girl, with Money noting that ‘no person in our society could be other than crippled without a sturdy conviction of belonging either to one sex, or the other—of being a man or being a woman’ (Hampson, Money and Hampson, 1956: p. 549). Nevertheless, this approach had tragic consequences for ‘Joan’, who never adapted to being a girl and, at age 14, decided to live as a boy (Diamond and Sigmundson 1997), an identity he maintained until he committed suicide at age 38.

In order to imprint a stable and clear gender identity on their children, parents had to be convinced of their child’s gender in the first place, as otherwise their uncertainty would be ‘covertly transmitted to the child, as contagiously as though it were rubella’ (Money and Ehrhardt, 1972: p. 15). In practice, this meant that they were given dubious and partial information about their child’s diagnosis and treatment, with the medical team using terms like ‘genital unfinishedness’, suggesting that their child only needed a ‘final’ surgical touch to secure their maleness or femaleness (Hampson, Money and Hampson, 1956: p. 553). Besides, parents were advised to be careful when disclosing medical information to their children, extended family and friends, even being recommended to move away and start a new life somewhere where nobody would suspect that their child had been born ‘genitally unfinished’ (Chase, 2002).

## **Similar Fears, Contradictory Policies**

### *Gender as a Natural and Dichotomous Category*

Sporting and clinical policies in place during the second half of the twentieth century shared an underlying assumption that, even where there is some ambiguity, differences exist between men and women which scientific knowledge can decipher and police, for the sake of health, under Money’s protocols, and for the sake of fairness, in IOC and IAAF regulations.

As explained above, Money considered that having a stable gender identity was a necessary prerequisite for good psychological health. Early gender assignment and prompt surgical genital (re)construction were required to ensure that the child would grow up to be an unconfused ‘boy’ or ‘girl’. Like learning a language, Money (1985a: p. 75) explained, which is a postnatal, social experience, there is a point in which it ‘gets implanted into the brain, it stays there, as permanently ineradicable as it if had been programmed there prenatally by genes, hormones, or other brain neurochemistry’. However, in the same way as bilingual children may experience confusion when ‘two languages are spoken to them interchangeably’, making them ‘slower than unilingual children in mastering either language’, if intersex individuals received gender assignment or underwent surgery too late, or had their gender reassigned when they were older, their

capacity for establishing a stable gender identity/role would be hindered (Money and Ehrhardt, 1972: p. 18). Like language learning, gender rearing should be unconfused, allowing for 'the demarcation of boundaries around what would otherwise be a chaotic confusion of sound waves' (Money and Ehrhardt, 1972: p. 19). Not providing children with these demarcations could give rise to cases of 'insidious ambiguity', like those in which 'the boy becomes an extreme sissy, or the girl becomes an extreme amazon' (Money and Ehrhardt, 1972: p. 17).

In formulating these postulates, Money tried to pin down the 'basis' of differences between men and women, suggesting that, whilst male and female biological attributes existed, social interaction played a crucial role in the creation of manhood and womanhood, calling for a 'paradigm shift away from the two-term juxtaposition of nature/nurture to a three-term integration of nature/critical-period/nurture' (Money, 1985b: p. 284). Indeed, as Nikki Sullivan (2015: p. 19) explains, Money was not a social constructionist, but an 'interactionist', 'acknowledg[ing] the generative effects of both biology and culture'. He coined the expression 'gender identity/role', borrowing the term 'gender' which until then had only a 'grammatical usage' (Money, 1985b: p. 280), in order to refer to 'the experience one has of oneself as a man or a woman', which, as seen above, was separate, although not completely detached from, anatomical 'sex' (Sullivan, 2015: p. 22). By formulating the concept of 'gender identity/role', Money took the differences between boys and girls, men and women, as a 'given', as part of a 'natural' system which intersex individuals deviated from, believing that his scientific endeavours would contribute both to unmask or crack how gender was established and help those who challenged the 'natural' system to return to the norm (Fausto-Sterling, 2000).

Albeit mobilised in terms of ensuring fairness and focused on the playing field alone, sports gender verifying policies replicate a similar understanding of gender. Gender verification tests also assumed gender to be a 'naturally' occurring phenomenon; they looked for what it is that differentiates men and women, devising a 'smoking gun' (like chromosomal testing) in order to protect the integrity of women's sports. While Money justified the quest to pin down gender as a necessary step to figure out how to treat those born with ambiguous sexual traits (and, for him, gender could not be determined through a laboratory-based test alone), sports testing policies were intended to prevent unfair play. Since the inclusion of women in sports, gender segregation has been considered a must for levelling the playing field, since it is assumed that men and women constitute two natural different categories, and that such categories (and not others) are relevant in competitive terms (Camporesi and Maugeri, 2010). Gender verification, as the method to draw the line between genders in 'borderline' cases, contributed to the naturalisation of gender difference as an inherent feature of bodies, nurturing the idea that men and women can and must be distinguished in order to ensure fairness (Ritchie, 2003).

### **Contradictions**

Although both relied on scientific knowledge, sporting gender verification protocols regarded gender as something that could be determined through a laboratory test, while Money had an 'interactionist' vision of how gender came to fruition. Moreover, the manner in which each world upheld gender differed: whilst chromosomal sex was the



defining feature for sports, genital morphology was crucial to establish whether someone would be brought up as a boy or a girl. Of course, sporting rules and Money's protocols had different goals and scope, since the former were limited to ensuring that only (chromosomally) full women could compete, whilst the latter led to marking intersex bodies permanently, not only with surgical fixes, but also with rearing practices which would 'imprint' gender on them. At the same time, one cannot help but think about the intersex baby who, being raised as a girl and subject to feminising surgery, would grow up to become an athlete only to be excluded from competition by having their (imposed) womanhood questioned. As many critics of chromosomal testing noted and Martínez Patiño experienced first-hand, the impact of gender verification tests, albeit confined to the purposes of competition, was far-reaching and could have a deep effect on athletes' lives.

In Money's protocols, womanhood was marked by appearance (and, as the child would grow up, the conviction of being a woman), and the priority was to guarantee that bodies looked female, even though that might come at the expense of other functions. As the aim of surgery was to 'feminise' genital anatomy, the removal or trimming of highly sensitive areas, such as the inner labia, to build a proper (that is, penetrable) vagina, or the 'enlarged' clitoris, so it would no longer resemble a penis, was required, compromising the capacity to experience orgasm (Fausto-Sterling, 2000). The ultimate goal was to secure the child's female looks, satisfying the intersex person themselves and everyone around them that their bodies were (at least apparently) unambiguous.

In contrast, gender testing policies did not base their verification on appearance. In fact, it was precisely 'confusing' appearance that triggered the need for such tests to begin with, when women started to play sports, developing and showing physical features, such as muscularity, strength, physical effort or exhaustion, that were seen as masculine and incompatible with 'true' womanhood (Wackwitz, 2003). Displays of strength and resistance disrupted the idea of women as fragile and delicate, rising doubts about 'true' femininity and calling for the need to implement gender verification tests (Lock, 2003). Put differently, laboratory tests through which the 'inner' constitution of what was believed could be scientifically determined as the 'essence' of womanhood became the route to check that those who competed as women were, effectively, women, since their 'traditional' feminine physique had already been altered by their athletic performance. However, neither Money's protocols nor chromosomal testing lasted for long, being substituted for newer rules encapsulating the 'progress' made in both 'the search for an acceptable and equitable solution ... to manage the issue of gender amongst participants in women's events' (IAAF, 2006, p. 1), and in 'diagnosis, surgical techniques, understanding psychosocial issues, and recognising and accepting the place of patient advocacy' (Hughes et al., 2006: p. 554).

## **A New Era of Old Controversies in Sports**

### *Suspicion Based Testing: The Beginning of the Caster Semenya Saga*

The IAAF and the IOC abolished compulsory testing during the 1990s, but both sporting bodies remained concerned about intersexuality. In 2006, the IAAF published a new Policy on Gender Verification, where it set out the process to follow if concerns about an athlete's gender were to emerge. In a nutshell, if there were any 'suspicions', for

instance arising from anti-doping controls, an athlete could be asked to attend a medical examination before a panel composed of 'gynaecologists, endocrinologists, psychologists, internal medicine specialists and experts on gender/transgender issues' (IAAF, 2006: para 4). The IAAF (2006: para 2) made explicit that 'determination should not be done solely on laboratory based sex determination', distancing itself from its previous Barr body testing method. Seeking to establish clarity, it also provided a list of conditions that should be allowed, classifying them as those that 'accord no advantage over other females' (AIS (complete or almost complete), gonadal dysgenesis and Turner's Syndrome), and those which 'may accord some advantages but [are] nevertheless acceptable' (congenital adrenal hyperplasia, androgen producing tumours and polycystic ovary syndrome) (IAAF, 2006: para 6).

This new policy thus constituted an attempt to address the criticisms of chromosomal-based testing, moving towards a more 'holistic' way to 'verify' gender and screening out only those conditions which were thought to be relevant in competitive terms, and not other 'atypically' female genetic variations. Moreover, while the previous era focused on chromosomes, which cannot be changed through any sort of treatment, the 2006 policies did not definitely close the door on athletes who 'failed' their gender verification tests, as they had the option of undergoing 'appropriate medical and surgical measures', such as gonadectomy, if they wished to return to competition (IAAF, 2006: para 4).

It was the ongoing case of Caster Semenya, a South African runner whose womanhood is still questioned because of her muscular appearance and outstanding performance, that prompted another change in the IAAF testing rules. In the 2009 World Championships in Berlin, where she won a gold medal in the 800 meter race, she was gender-tested twice, apparently without her proper informed consent, and her results were somehow leaked to the press. Although the IAAF warned that tabloids' allegations that she had testes which tripled her testosterone levels over 'average females' 'should be treated with caution', it banned her from competition for eleven months, until she was eventually cleared by a 'panel of experts' and allowed to run again (Zinser, 2010).

### *Continuing the Saga: The Importance of Testosterone*

After the Semenya affair in Berlin, the IAAF and the IOC reassessed their protocols and announced new ones in 2011 and 2012 respectively. The most noticeable change was that both sporting bodies abandoned the quest to determine the gender of suspicious athletes, explicitly rejecting the expressions 'gender verification' or 'sex testing', and noting that:

nothing in these Regulations is intended to make any determination of sex. Instead, these Regulations are designed to identify circumstances in which a particular athlete will not be eligible (by reason of hormonal characteristics) to participate in the female category. (IOC, 2012: p. 1)

Leaving gender aside, these regulations claimed to only pay attention to the one characteristic which is believed to underpin the differences in athletic performance between men and women, namely testosterone (IAAF, 2011; IOC, 2012). Hyperandrogenic

women became the focus of attention not only to ensure ‘the fundamental notion of fairness of competition’, but also ‘the early prevention of problems associated with hyperandrogenism’ (IAAF, 2011: p. 1).

Like the 2006 policies, investigation would be triggered by suspicion, usually when ‘individuals display[ed] masculine traits and [had] an uncommon athletic capacity in relation to their fellow female competitors’ (IAAF, 2011, p. 1). After a thorough medical examination, starting from a general assessment and escalating to a full endocrinological examination through blood tests, the IAAF (2011, para 6.5) would rule whether the athlete was eligible to compete, depending on whether her androgen levels were ‘below the male range’ (that is, her testosterone was below 10 nmol/L), or, even if they were not, she had androgen resistance, meaning she ‘derived no competitive advantage’ from her male-range androgenic levels. If she did not meet these conditions, the athlete would be banned from competing until she underwent the treatment recommendations issued by the IAAF.

The establishment of testosterone as the critical factor in sporting policies was not exempt from controversy. Some commentators (Karkazis et al., 2012) questioned the causal connection between testosterone and athletic capacity, arguing that there are some women who do not react to testosterone and are incredibly successful (like women with CAIS, such as Martínez Patiño) and there are also some women with some very high levels of testosterone, like those with CAH, who are prone to having biological characteristics which are detrimental for sport performance, like short stature, or obesity. In fact, other factors, anatomical and social, have been contended (Behrensen, 2013; Cooky and Dworkin, 2013; Genel, Simpson and De La Chapelle, 2016; Karkazis et al., 2012; Vilain and Sánchez, 2012) to be as relevant as testosterone (if not more) in sporting terms, but are yet not deemed relevant for ensuring fair play, such as mitochondrial variations (which give outstanding aerobic capacity and resistance), acromelagly (an hormonal condition found in many basketball players, which causes them to have large hands and feet), a complete and balanced diet, or access to high level training since an early age. Besides, the requirement to lower one’s testosterone levels, either via pharmacological treatment or gonadal removal, gave rise to many concerns given the negative impact this might have on the athletes’ health, with side effects like ‘excessive thirst, urination, and electrolyte imbalances; disruption of carbohydrate metabolism ...; headache, fatigue; nausea, hot flushes; and liver toxicity’ (Behrensen, 2013; Jordan-Young, Sönksen and Karkazis, 2014: p. 2; Karkazis et al., 2012; Vilorio and Martínez-Patino, 2012). This is why the IAAF’s approach was also accused of being unethical, since seeking to lower testosterone levels is neither driven by a clear medical necessity, nor does it take into account the athlete’s quality of life, its aim is just to meet the eligibility threshold (Jordan-Young, Sönksen and Karkazis, 2014).

Indian sprinter Duttee Chand who, after undergoing medical examinations seemingly without her consent, was banned by the Sports Authority of India from running in the women’s division because her levels of testosterone were too high, challenged the IAAF Hyperandrogenism Regulations before the Court of Arbitration for Sport (CAS). Chand’s core argument was precisely that one’s levels of testosterone were not a determinative factor for one’s athletic performance. She furthermore argued that the policy was discriminatory against hyperandrogenic women and women in general, since men

can compete without having to undergo any sort of examination or treatment, even if their testosterone levels ‘fall above the upper limit of the “normal” range of male testosterone’ (*Duttee Chand v Athletics Federation of India (AFI) & The International Association of Athletics Federation* (2014) Court of Arbitration for Sport 2014/A/3759, paras 112–125).

In July 2015, the CAS ruled that the IAAF regulations constituted a violation of the prohibition against discrimination set forth in the Olympic Charter and the IAAF Constitution (*Chand*). Although it did accept that ‘there is a scientific basis of the use of testosterone’ as a ‘material causative factor in the athletic ability for sports performance’, it was not convinced that Hyperandrogenism Regulations were ‘justified as necessary and proportionate means’ to guarantee a level playing field (*Chand*: paras 497–511). The CAS (*Chand*: para 511) explained that, under the IAAF regulations, levels of endogenous testosterone were not used to decide whether someone would compete in the female or male category, a divide for which the CAS was persuaded testosterone was a ‘key biological indicator’, but they were used ‘to create a new category of ineligible female athletes within the female category’. The exclusion of hyperandrogenic women was not considered a necessary and proportionate means for preserving fairness in athletics competition as it was not enough to establish that levels of testosterone above 10 nmol/L have ‘some performance enhancing effect’, placing on the IAAF the onus to prove that it conferred ‘*such a significant performance advantage* over other members of the category that allowing individuals with that characteristic to compete would subvert the very basis for having the separate category and thereby prevent a level playing field’ (*Chand*: para 528, emphasis in original).

### ***Current Sporting Regulations: Differences of Sex Development***

The CAS finding that 2011 IAAF regulations did not provide ‘sufficient scientific evidence about the quantitative relationship between enhanced testosterone levels and improved athletic performance in hyperandrogenic athletes’ (*Chand*: para 547) led to its suspension for a period of two years and the eventual elaboration of new rules in 2018, which are currently in place.<sup>3</sup> Fairness remains a key underpinning principle, together with inclusivity, since the IAAF (2018a: para 1.1) ‘wishes the sport of athletics to be as inclusive as possible, and to encourage and provide a clear path to participation in the sport for all’. Likewise, testosterone persists as the crucial element of female athletes’ eligibility, with the IAAF (2018a) keeping its distance from previous gender verification rationales. There are three main changes from the 2011 rules. First, the scope is narrowed to international competitions of races between 400 metres and one mile alone, on the grounds that it is in these events ‘where most performance-enhancing benefits can be obtained from elevated levels of circulating testosterone’ (IAAF, 2018b, p. 4). Second, regulations only apply to female athletes with Differences of Sex Development,<sup>4</sup> and the accepted testosterone threshold is lowered from 10 to 5 nmol/L (IAAF, 2018b, para 2.2). Third, women who meet these requirements are ‘not barred from competing in the sport’, as the IAAF (2018b: para 2.2) lets them compete in non-restricted events (that is, in races other than between 400 meter and one mile, and at any non-international competitions), and in any events in the male classification or in any ‘intersex (or similar) classification that the event organiser may offer’.

Given the similarities, the current rules have been subject to similar criticisms to 2011 regulations. The World Medical Association (WMA, 2019) has demanded their ‘immediate withdrawal’ as they ‘constitute a flagrant discrimination based on the genetic variation of female athletes’. The WMA is also concerned about the ethical implications for physicians treating athletes with high levels of endogenous testosterone ‘if the condition is not recognised as pathological’. Likewise, the UN Special Rapporteur on Health (2016, paras 56–57) expressed concerns about there being ‘sufficient evidence’ to exclude women with increased testosterone from competition, and rejected the implementation of policies which ‘force, coerce or otherwise pressure women athletes into undergoing unnecessary, irreversible and harmful medical procedures in order to participate as women in competitive sport’.

Most of these criticisms featured in the case Semenya brought in front of the CAS in 2018 (*Mokgadi Caster Semenya v International Association of Athletics Federations*, (2019) Court of Arbitration for Sport 2018/O/5798). This time, the CAS (*Semenya*: para 626) upheld the regulations, admitting that, although they established ‘differential treatment’ on the basis of ‘innate biological characteristics’, such discrimination was ‘necessary, reasonable and proportionate’. The burdens these regulations entailed for relevant athletes, such as the effects of testosterone-suppressing treatment, or undergoing intimate medical examinations and assessments of virilisation, despite being ‘unwelcome and distressing’, were considered to not outweigh ‘the need ... to attain the legitimate objective of protecting and facilitating fair competition in the female category’ (*Semenya*: para 593–603).

Semenya unsuccessfully appealed this decision to the Swiss Federal Supreme Court, whose powers were circumscribed to determining whether the CAS ruling ‘violates fundamental and widely recognised principles of public order’ (Swiss Federal Supreme Court, 2020). Her case is now pending in front of the European Court of Human Rights. Refusing to artificially lower her testosterone levels to compete, Semenya explains that she is determined to ‘fight for the human rights of female athletes ... until we can all run free the way we were born’ (Norton Rose Fullbright, 2020).

## **Current Clinical Protocols on the Management of Intersexuality**

This new era of sports policies coincides with the changes in the clinical management of intersexuality, with the elaboration of the Chicago Consensus Statement, produced by leading international experts in 2006 (Davis, 2015). In addition to introducing the new nomenclature of Disorders of Sex Development (a change of terminology that has not been uncontroversial, with some commentators (Feder and Karkazis, 2008) suggesting it pathologizes intersex embodiment, considering alternatives like ‘differences’ of sexual development, which is the preferred label by the IAAF, more appropriate), the 2006 statement marked a turning point in how the medical profession dealt with intersex individuals. It established that gender reassignment ‘should be avoided before expert evaluation’, which should only be performed by ‘an experienced multidisciplinary team in constant open communication with the family’ (Hughes et al., 2006: p. 555). Since 2006, medical practice has stressed the importance of the family and child’s

understanding, involvement and consent to treatment and surgery, abandoning Money's pressure and anxiety for 'fixing' genitals as soon as possible (Hughes et al., 2006).

Moreover, although 'normalising' surgery has not been ruled out definitively, the 2006 statement restricted it to cases of 'severe virilisation' and placed 'emphasis on functional outcome rather than strictly cosmetic appearance' (Hughes et al., 2006: p. 557). Therefore, the notion of (psychological) well-being is no longer so tied together with having an unclear and 'normal' anatomy, but is more holistic, acknowledging that 'quality of life encompasses falling in love, dating, attraction, ability to develop intimate relationships, sexual functioning' (Hughes et al., 2006: p. 557).

As a consequence, within the medical profession, interventions that are primarily aimed at 'fixing' the appearance of the baby's genitalia have increasingly become more controversial and there is concern about the lack of evidence for the positive or negative effects of early surgical treatment (Creighton et al., 2014; Lee et al., 2016; Liao et al., 2019; Mouriquand et al., 2016). The 2016 update of the Chicago Consensus Statement (Lee et al., 2016: p. 176) echoes this concern, recognising that early surgery has come 'under intense scrutiny', 'with a number of agencies condemning or calling for a complete moratorium on elective genital surgery or gonadectomy without the individual's informed consent'. Indeed, Human Rights Watch (2017) condemned interventions when the child is 'too young to participate in the decision' and Amnesty International (2017: p. 55) recommended that States should 'guarantee bodily integrity' by 'postponing non-emergency invasive and irreversible genital surgery or hormone treatments ... until [infants] are able to meaningfully participate in decision making and give their informed consent'. Likewise, the Council of Europe Commissioner for Human Rights (2015: p. 8) issued a report where it called on member states to 'end medically unnecessary "normalising" treatment of intersex persons when it is enforced or administered without the free and fully informed consent of the person concerned', a stance that was reaffirmed in 2020 (Council of Europe Commissioner of Human Rights, 2020).

## **Progressing Towards What?**

If the clinical and sporting guidelines now in place are evaluated side-by-side, one can see that the commonalities between both sorts of policies remain remarkably similar to those of the previous era, analysed in the first part of the paper.

### *Reliance on Scientific Knowledge to Unfold Gender*

Current clinical intersex management guidelines continue to see gender as a phenomenon which can make itself visible through clinical evaluations. When an intersex child is born, they are supposed to be subject to a complete assessment by a multidisciplinary team in order to make any sort of decisions about whether they will be raised as boys or girls (Hughes et al., 2006). The 2016 update of the 2006 statement (Lee et al., 2016: pp. 164–167) regrets that 'a biomarker of gender identity is not (yet) available', but notes that 'several tools have been developed for the systematic assessment of gender identity', such as 'prenatal and postnatal androgen exposure' or 'genital status', together

with factors like ‘anticipated quality of sexual function, surgical options, fertility potential or gonadal malignancy’.

The idea that babies have characteristics inscribed on them which, if correctly diagnosed, can help to establish their gender is not that far away from the principles underpinning Money’s protocols. The differences are in how gender is established and how it is policed through one’s upbringing. Genital morphology is no longer considered the key aspect of gender assignment to which the rest of the body can be adapted; as now attention is paid to a wide range of features, such as gonadal, chromosomal and hormonal structures (Lee et al., 2016). Likewise, current protocols (Lee et al., 2016: p. 168) adopt a more integral view of welfare, no longer completely tied to having an ‘unconfused’ anatomy, making clear that there are many aspects which contribute to one’s well-being, including ‘physical health, age, social values and resources’.

It is acknowledged that intersex individuals might in the future identify with other gender identities or feel uncomfortable with their seemingly ‘different’ bodies. However, this is no longer viewed as a threat to their psychological development, as long as it is managed appropriately with the assistance of psychological care (Hughes et al., 2006). Periodical psychological assessments are supposed to be in place for intersex children through their childhood and adolescence in order to examine whether they display any ‘atypical gender role behaviour’ or ‘gender dysphoria’ since these, if persistent, might trigger a discussion about gender reassignment (Hughes et al., 2006: p. 557). Psychological support is also supposed to offer guidance and advice on interpersonal relationships, ‘address[ing] fears of rejection and advis[ing] on the process of building a relationship with a partner’ (Hughes et al., 2006: p. 558).

Therefore, new protocols strive for more openness, communication, and multidisciplinary expertise, and unlike Money’s protocols, they view mental health as not as narrowly dependent upon binary and unambiguous gender identity. Nevertheless, the idea of gender as a dichotomous category that might be determined, at least in substantial part, through scientific investigation of biological features, and which can be surveilled and controlled, now through psychological assessments, remains engrained in current medical protocols. Put differently, the notion that gender exists for all bodies and that it leads to differences in development, both in physical and psychological terms, continues to be present in how the medical profession conceives embodiment, and targets intersexuality as a condition needing specific treatment and care.

The idea of there being natural, and hence scientifically determinable, differences between men and women (and between certain intersexual individuals raised as women and cis women) also underpins current sporting eligibility regulations. Gender segregation in sports derives from the notion that men and women have biological differences in ‘size, strength and power ... due in large part to men’s much higher levels of circulating testosterone’ (IAAF, 2018a, para 1.1). Having increased testosterone is also what justifies the exclusion of individuals with certain DSDs from the women’s division since, in accordance with ‘broad and medical scientific consensus’, these individuals have ‘high levels of endogenous testosterone [which] can significantly enhance their sporting performance’ (IAAF, 2018a: para 1.1). (Whether this ‘broad and medical consensus’ exists and is founded on ‘good’ science is, however, more controversial (Pielke, Tucker and Boye, 2019; Sonksen et al. 2018)). The CAS places utmost importance on

the fact that the IAAF bases its athletic divisions (and exclusions) on scientific findings, noting that ‘the role of evidence and scientist assessment to support regulatory decision-making is obviously of great importance’ (*Semenya*, para 517). In fact, the degree of ‘trust’ to scientific knowledge is such that the CAS seems to give more weight to the expert witnesses trained in ‘hard’ sciences, than those from ‘softer’ disciplines, such as law, ethics or sociology (Holzer, 2020). For instance, in *Chand*, the CAS (para 463) approached with caution the arguments of Katrina Karzakis, a cultural anthropologist and bioethicist who contributed to Chand’s appeal as an expert witness, since hers was a ‘sociological opinion, which does not equate to scientific and clinical knowledge and evidence’.

In *Semenya*, the CAS (para 535) was persuaded by the scientific evidence provided by the IAAF suggesting that certain DSDs increase levels of circulating testosterone, which ‘might result in a significantly enhanced sport performance ability’. Although both the IAAF (2018a, para 1.1) and CAS (*Semenya*, para 501) stress that it is not their purpose ‘to question or pass judgement upon any person’s sex or gender’, the IAAF contended in *Semenya* (para 503) that women with some DSDs can be deemed ‘male’ for ‘sporting purposes’ because ‘from a biological perspective ... [they] are the same in every material aspect to male athletes without DSD’. This is the case of 5-ARD athletes (that is, XY individuals with male gonads but insufficient dihydrotestosterone, which precludes the formation of ‘normal’ external male organs, causing various degrees of external genital morphology feminisation), who the IAAF (*Semenya*, para 503) considers ‘biological[ly] and physiological[ly]’ identical to ‘normal’ males, with the only differences being ‘the size and shape of external genitalia’, which has ‘no impact on sport performance’. The CAS (*Semenya*, para 507) did not reject the characterisation of some women athletes as ‘biological males’, framing it as a matter of mere terminology and dismissing its importance, since the Panel only had to pay attention to whether athletes with certain DSDs have a relevant enough advantage ‘to subvert fair competition in certain athletic events’. However, the use of this vocabulary (‘biological maleness’) by the IAAF, and its tacit acceptance (or at least not explicit rejection) by the CAS, is relevant for our discussion, since it brings to light that gender, disguised as a matter of testosterone, remains a crucial aspect of sporting policies. Despite its disclaimers, the IAAF does make judgements about athletes’ gender, deeming some of them ‘biological males’ and hence ineligible for women’s competitions. Moving on from chromosomal testing, now the measurement of testosterone and the diagnosis of certain DSDs is the formula to ensure that only ‘full’ women compete, excluding ‘biological males’ from the running track.

### *Gender Transgression*

Under the discourses of fairness, health and inclusivity, dubious gendered embodiment, rather than hyperandrogenism, seems to be the real problem for the IAAF (Human Rights Watch, 2020; Karkazis and Carpenter, 2018), since enhanced testosterone levels are only considered to be an issue if connected to a DSD, with other conditions that may enhance testosterone ‘above the normal female range’ being outside the scope of the regulations (IAAF, 2018a: footnote 4).



Although the IAAF (2018a: para 1.1) explains that ‘in no way are [the regulations] intended as any kind of judgement or on questioning the sex or the gender identity of any athlete’, these rules remain committed to classifying athletes by gender. As we have seen, the IAAF deems some athletes diagnosed with certain DSDs ‘biologically male’ and opens the door for them to compete in the male or intersex classification if they refuse to lower their testosterone levels. The justification the IAAF (2018b: p. 4) offers for this move is that it is being ‘conservative’ with the restrictions it places upon athletes’ options, not barring them from sport completely but letting them participate in some races (relevant athletes can also run races other than those between 400 meter and one mile) and divisions. Whilst this might be true, the fact that athletes with certain DSDs are offered the ‘choice’ of competing in gender categories which do not align with their gender identity, but which adhere with their anatomy, can also be seen as an attempt to order them into the gender ‘box’ they are seen as ‘naturally’ belonging to. If they decide to run in the male category, they can do so ‘at any competition at any level, at any discipline, without restriction’ (IAAF, 2018a: para 2.6), as though their unmodified bodies had a ‘natural’ place in this division, not having to undergo any sort of treatment to be able to compete fairly with their peers. Whereas female athleticism requires containment within the ‘limits’ of normal (hormonal) femaleness, in the male division there is no testosterone threshold threatening fair competition.

As a matter of fact, the IAAF itself (2019) acknowledges that its requirement for testosterone-suppressing treatment is not only justified because of fairness and health reasons, like, for instance, the increased risk of malignancy in undescended testes, but also because it enables the alignment of one’s appearance and one’s gender identity:

[i]n 46XY DSD individuals, reducing serum testosterone to female levels by using a contraceptive pill (or other means) is the recognised standard of care for 46XY DSD athletes with a female gender identity. These medications are gender-affirming.

Concerns about gender ‘consistency’ thus appear to inform the IAAF’s regulations, seeking to ensure that intersexual individuals receive ‘an extensive investigation’ with a clear diagnosis ‘to clarify the individual’s gender identity’ (IAAF, 2019). In fact, the modus operandi of the IAAF in treating athletes shares a striking similarity with Money’s treatment protocols. Not only have several athletes, like Semenya and Chand, denounced the fact that they have been medically examined for eligibility purposes without their consent, but evidence has transpired that in the last few years some athletes have been subject to inadequately informed gonadal removal and genital normalising surgeries (Carpenter, 2020). The Ugandan runner Annet Negesa (Human Rights Watch, 2020) recently claimed that, after some testing of she was not properly informed, the IAAF advised her to travel to France for a medical appointment which consisted in a battery of further tests. Several months later, she underwent what she was told would be ‘a simple surgery—like an injection’, only to find out after waking up from the procedure that her internal testes had been removed. The French hospital Negesa was sent to is an IAAF referral centre specialised in intersex conditions whose team of professionals admits that ‘although leaving male gonads ... carries no health risk’, they

propose ‘partial clitoridectomy with a bilateral gonadectomy, followed by deferred feminising vaginoplasty and estrogen replacement therapy’ (Fénichel et al., 2013: p. 1058).

Non-Western athletes have been disproportionately impacted by these sorts of treatments, which has prompted the discussion of what sort of understanding of gendered embodiment is policed by the IAAF and how its criteria of ‘biological maleness’ does not necessarily stand across non-white cultures (for instance, the concept of ‘hermaphroditism’ does not exist in Sepedi, Semenya’s native language) (Munro, 2010; Hoad, 2010).

Gender ambiguity also seems to be a fear against which current clinical protocols are set up. As we have seen above, current recommendations (Hughes et al., 2006: p. 55) make clear that all intersex babies ‘should receive gender assignment’ after ‘expert evaluation’. Albeit the deciding factor is not genital morphology anymore, but a holistic evaluation establishing which gender is in the best interests of the child, medical protocols remain committed to seeing bodies dichotomously, as male or female, reinforcing, in the words of Anne Fausto-Sterling (2000: p. 101), ‘the monolithic conceptions and correlations between gender identities and embodiment’. New protocols (Lee et al., 2016) move away from the ‘urgency’ of normalising surgeries that were the norm in the Money era, acknowledging the importance of the intersex individual’s informed consent and participation in these decisions. Nevertheless, surgery remains to be framed as an ongoing dilemma. Parents, and intersex individuals as they grow up, continue to be put in a position where they must make a decision between surgically fixing ambiguous anatomy, which would seemingly enable ‘normal’ development, preventing potential issues with body image, gender identity and bullying (Binet et al., 2016; Yankovic et al., 2013), or letting their bodies unmodified, without the pain of (possibly multiple follow up) surgeries and the irreversible (physical and psychological) side effects of constant medical surveillance and interventions (Roen, 2019).

Whilst there were clear contradictions between Money’s protocols and chromosomal sporting testing rules when determining gender, the ‘clash’ between current clinical and IAAF guidelines is less pronounced. The IAAF (rather performatively) attempts to distance itself from the rationale of gender determination and its treatment recommendations adhere to ‘international guidelines for DSD’ given its (also performative) ethical commitment to ‘try not to over-medicalise the lives of patients’ (IAAF, 2019). Nevertheless, both set of protocols assume that anatomical features *mean* something about the athlete’s and patient’s gender, and set out recommendations that will serve to ‘marry’ their bodies with their gender identities. Albeit with new discourses (of inclusivity, respect, autonomy), both policies keep trusting science to ‘unravel’ gender from bodies, signalling intersexuality as an issue because of its disruption of the established gender binary. Moreover, the pervasiveness of both policies is far reaching, not only in cases where athletes and patients have been subject to irreversible surgeries, but given the constant surveillance and control that intersex bodies are under in the medical and sporting world. Semenya, who has not undergone surgery, confesses that the constant scrutiny and (mis)labelling of her anatomy has brought her incredible and life-long pain, explaining how the IAAF calling her ‘biologically male’ hurt ‘more than I can put in words ... You’re calling me something I’m not ... You should be careful on that’ (Gregory, 2019).

To recover Butler’s quote from the start of the piece: the vision of bodies as classifiable entities between two different static and scientifically determinable gendered categories

does have a history, and this article has traced two particular discourses that have nurtured this idea. Medicine and sports have insisted on discovering physical signs of gender difference, elaborating intricate methods to spot and ‘fix’ those who are seen as failing to comply with binary gendered embodiment (Fausto-Sterling, 2000). In Butler’s words (1993: p. xiii), medical and sporting protocols can be seen as ‘regulatory practices that ... demarcate, circulate and differentiate ... the bodies [they] control’. They both act as discursive frameworks which delineate the binary gendered forms in which bodies can exist, and hence where possessing a form of embodiment that does not fit this ideal is excluded from the ‘domain of cultural intelligibility’ (Butler, 1993: p. xii). Put differently, it is through discourses like those of health and competition fairness that intersexual bodies are thought of as sitting outside of ‘normal’ bodily expectations, being pushed to the boundaries, such as outside of the sport, or other gendered—male or intersex—categories, unless they adapt to the regulatory norms that signify them as othered. Not only is the history of sporting and medical rules regarding intersexuality helpful to uncover that binary gendered ideals are one of their core underpinning principles (Butler, 2009), but also unravels the constant instability and contradictions in the insistence of attaching meaning to what are supposed to be inherent and fixed gendered bodily features.

## Conclusion

So, what does it mean to ‘run like a girl’? Sporting bodies have been committed to unfold what distinguishes the athletic performance between men and women, using several scientific methods to ‘discover’ gender differences and ‘reveal’ impostor athletes. Tracing the history of how sporting regulations, together with clinical protocols, have mutated under different changing narratives, with their key turning points coinciding in time, shows that, despite several reforms, changes and disclaimers, both sorts of policies continue to delineate and uphold binary gender on bodies. Both worlds have been devoted to investigating and controlling intersexuality, examining and even modifying ambiguous bodies to ensure that they no longer destabilise the gender binary, creating ‘full’ women who are ‘healthy’ and do not pose a threat to fair competition.

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## Notes

1. It was first known as the International Amateur Athletic Federation and, later, the International Association of Athletics Federations, both abbreviated IAAF, until it was rebranded as World Athletics in 2019.
2. These terms are used interchangeably by regulating bodies, reports and academics (Wackwitz, 2003; Wiederkehr, 2009).
3. During this two year period, the IOC did not establish regulations for the 2016 Olympics, but its consensus meeting in 2015 showed support to the IAAF hyperandrogenism rules, encouraging the IAAF ‘to revert to CAS with arguments and evidence to support the reinstatement of its hyperandrogenism rules’.
4. And certain types of DSD specifically: ‘ $\alpha$ -reductase type 2 deficiency; partial androgen insensitivity syndrome (PAIS);  $17\beta$ -hydroxysteroid dehydrogenase type 3 ( $17\beta$ -HSD3) deficiency; congenital adrenal hyperplasia;  $3\beta$ -hydroxysteroid dehydrogenase deficiency; ovotesticular DSD; or any other genetic disorder involving disordered gonadal steroidogenesis’ (IAAF, 2018a: para 2.2).

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