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Illogic of the binary

In sports, it does injustice to players such as Imane Khelif

IN 1985, A Spanish athlete, Maria Jose Martinez-Patino, travelled to Kobe, Japan, to compete in the World University Games. She had forgotten to carry her "certificate of femininity", secured in 1983 at the World Track and Field Championships in Helsinki. There, her cheek swab test returned an unclear result, marking the beginning of a trauma that continued for nearly three years.

Martinez-Patino was eventually diagnosed with androgen insensitivity. Chromosomally, she was XY, recognised as the male identity, and not XX, recognised as the female identity.

In 1968, the Olympics had introduced compulsory chromosome testing of all female athletes with the Barr Body test, a cheek swab. Sport has a long and disturbing history of sex testing beginning with what are known as the nude parades — being made to walk naked before a panel of doctors. But only women are subjected to sex testing in sport because the anxiety is that men will sneak into women's competitions to bag medals easily. The opposite anxiety does not hold because women are seen as far less strong than men. The weaker sex.

Over time, the nude parades were replaced with more sophisticated tests, one of them being chromosome testing which continued until 1999. It was under this regime of compulsory chromosome testing that Martinez-Patino learnt that she had androgen insensitivity. It took her until 1988 to prove conclusively that she was not a cheat, that she had gained nothing from her genetic condition to give her an edge in competitive sport.

If anything, it was the test that failed Martinez-Patino, plunging her into trauma, and putting an abrupt stop to her competitive career.

Yet, this regime of compulsory sex testing (by chromosome) continued. In 1996, however, the chromosome test changed to a more sophisticated one called the Sex Determining Region Y chromosome test or SRY. The science of sex testing is continually getting more sophisticated. In 1999, however, the era of compulsory sex testing was put to an end.

What is curious, though, is that in 2014 when the Indian government went to the Court of Arbitration in Sport in Lausanne to defend the sprinter Dutee Chand who was disqualified on account of naturally high testosterone levels, Martinez-Patino was part of the panel who argued against Chand. By 2014, the debate about sex in sport was being phrased largely in terms of hormone levels, in this case testosterone. Male athletes have no ceiling on testosterone, women do. World Athletics's definition of hyperandrogenism is that it is a condition where a female athlete tests in excess of 10 nanomoles of testosterone per litre of blood.

How did an athlete traumatised by the binary insistence of sex-testing turn up to argue for the other side? Are naturally high testosterone levels (as against unnaturally high by dope) different from a genetic anomaly like androgen insensitivity? Is one cheating while another an accident of nature?

The answer is, no. Neither is cheating. Neither is unfair. What is unfair is the insistence on binary and precise identification of

two sexes, the assertion there are only male and female sexual identities and they occupy two precise locations rather than a spectrum of biological possibilities of anatomy, chromosomes and hormones (to name only the most prominent markers of biological sex).

The scientific evidence indicates that there are as many as 58 variations between male and female identities, the Madurai bench of the Madras High Court has written in an April 2019 judgment (*Arunkumar vs The Inspector General of Registration*). The United Nations has noted that 1.7 per cent babies may be born intersex. Nearly two out of 100. The *Arunkumar Sreeja* judgment suggests that a large number of infants may be subjected to sex-correction surgeries shortly after birth.

Chand would go on to win her case, on the grounds that the scientific evidence available in 2014 did not indicate that higher levels of testosterone in women accounted for a 10-12 per cent increase in speed over women athletes in sprinting, which is the level at which male athletes perform. In other words, the testosterone ranges identified for female and male athletes are not as clean as a binary division indicates.

What does this mean? That we may be biased towards reading the science of sex in a binary fashion. That we may be forcing the evidence into two categories. The science is not flawed. But our reading is.

This insistence is understandable when we consider how long and hard women have struggled to be able to compete in sport. The first edition of the modern Olympics in

Athens in 1896 did not permit women to compete. Now, sport is played on the basis of two categories, male and female. There is no other category.

But what about transpersons? The Olympics now permits transitioning athletes to compete, without completing sex reassignment surgery unlike before the 2021 Tokyo Olympics, but in most events, the international federations concerned follow the rule that male to female transitioning sports persons must have begun hormone suppression therapy before the age of 12. The IOC follows the criteria laid down by the international federation governing each sport. The distinction between being male and female is still strictly policed. Imane Khelif is not a transwoman, social media posts saying this are incorrect, she was born a woman and remains one.

This logic of two may explain why sex testing fails to interpret reasonably common anomalies in statistical terms, and does injustice to a significant number of women athletes. That may also be why some are so quick to panic at the sight of a Khelif who does not conform to the figure of a feminine type. And that may also perhaps explain why an athlete traumatised by the binary regime of sex testing like Martinez-Patino turns up to argue on the other side when the debate has changed in language.

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