#### When is it fair to be a woman?

## UNFAIR ADVANTAGE AND THE MYTH OF THE LEVEL PLAYING FIELD IN IAAF AND IOC POLICIES ON HYPERANDROGENISM

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#### Outline

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- Caster Semenya's debacle and the IAAF/IOC Hyperandrogenism Regulations
- Dutee Chand's appeal to the Court of Arbitration for Sport and the suspension of the Regulations
- New developments the Disorders of Sex Differentation new IAAF Regulations

### Where it all started: Caster Semenya



Caster Semenya winning Gold Medal 800 m with 1:55.45 Berlin 2009. Her medal was revoked shortly afterwards and she was banned from competing for 11 months during investigation (medal was returned later).

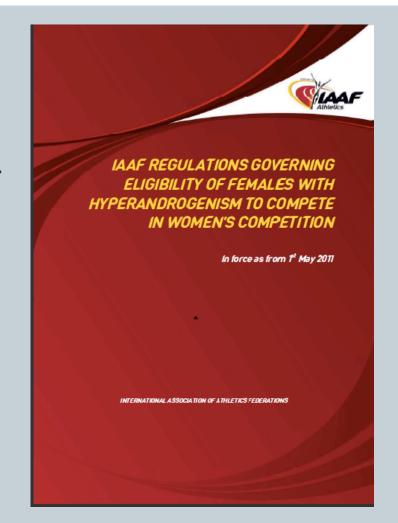
#### "These kind of people should not run with us. For me, she's not a woman. She's a man"

- Fair competition as the rationale of sex segregation in sports
- Binary ontology of sex
- Discriminatory attitude towards challenges to the norm



#### IAAF regulations: re-creating a binary ontology

What is it that makes a woman (and a man) for the purposes of sports competitions?



#### The binary ontology of sex

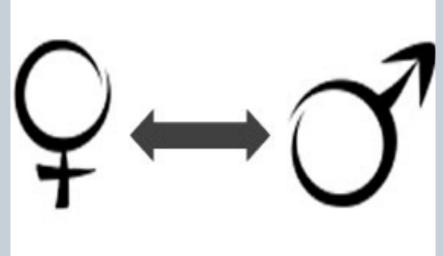


#### Sex as a dichotomy



### What's the master property of 'male' and 'female'?

#### Sex as a continuum



A broad spectrum of conditions lies between 'male' and 'female'

#### The continuum of sex differentiation

Table 2 An example of a DSD classification Sex chromosome DSD 46,XY DSD 46,XX DSD (A) 45,X (Turner syndrome and variants) (A) Disorders of gonadal (testicular) development (A) Disorders of gonadal (ovarian) development Complete gonadal dysaenesis (Swyer syndrome) Ovotesticular DSD Testicular DSD (eg, SRY+, dup SOX9) (B) 47,XXY (Klinefelter syndrome and 2. Partial gonadal dysgenesis 3. Gonadal dysgenesis 3. Gonadal regression variants) 4. Ovotesticular DSD (C) 45,X/46,XY (mixed gonadal (B) Disorders in androgen synthesis or action (B) Androgen excess Androgen biosynthesis defect (eg. 17-1. Fetal (eg., 21-hydroxylase deficiency, 11-hydroxylase dysgenesis, ovotesticular DSD) hydroxysteroid dehydrogenase deficiency, 5x deficiency) reductase deficiency, StAR mutations Fetoplacental (aromatase deficiency, POR) 2. Defect in androgen action (eg, CAIS, PAIS) (D) 46,XX/46,XY (chimeric, Maternal (luteoma, exogenous, etc) ovotesticular DSD) 3. LH receptor defects (eg, Leydig cell hypoplasia, aplasia) 4. Disorders of AMH and AMH receptor (persistent mullerian duct syndrome) (C) Other (eg, cloacal extrophy, vaginal atresia, MURCS, other (C) Other (eg, severe hypospadias, cloacal extraphy) syndromes)

Huges et al Arch Dis Child (2006)

#### IAAF regulations: recreating a binary ontology

**First assumption:** sex segregation provides fair competition to participants.

Since 1928, competition in Athletics has been strictly divided into male and female classifications and females have competed in Athletics in a separate category designed to recognize their specific physical aptitude and performance.



#### IAAF regulations: recreating a binary ontology

**Second assumption:** Testosterone is the master molecule of 'athleticism'

The difference in athletic performance between males and females is known to be predominantly due to higher levels of androgenic hormones in males resulting in increased strength and muscle development.



# IAAF regulations: when is it fair to be a woman?

#### (10)

#### Third assumption:

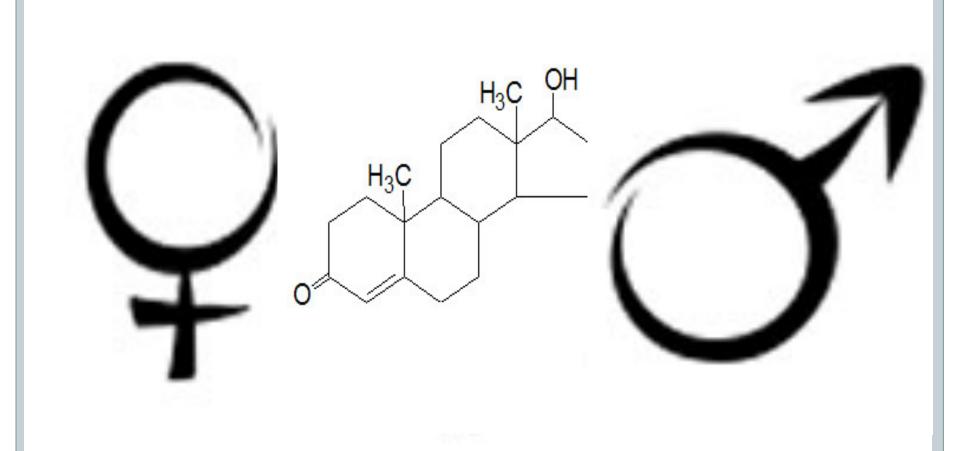
Hyperandrogenism constitutes unfair advantage.

"A female with hyperandrogenism who is recognised as a female in law shall be eligible to compete in women's competition provided that she has androgen levels below the male range [10 nmol/lit] or, if she has androgen levels within the male range, she also has an androgen resistance which means that she derives no competitive advantage from such levels"



### The 'androgenization' of sex...





#### ...and fairness: a level playing field?

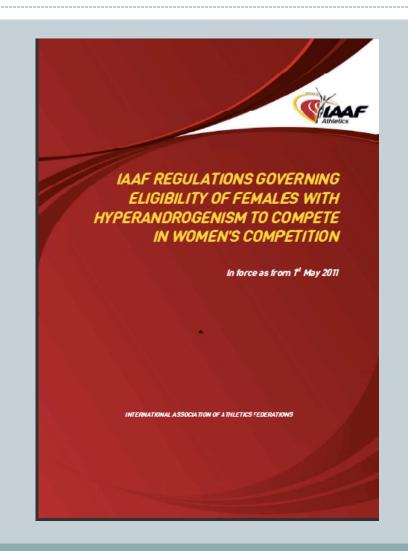




# IAAF regulations: the 'pathologization' of transgressing bodies

#### When is it fair to be a woman?

If you want to be a woman, one who is fair to her fellow competitors, you got to have the right level of androgens either by 'nature' or after submitting to medical treatment.



#### The 'unfair advantage' thesis

14

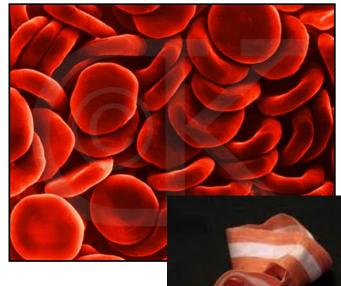
"The female former Olympic athletes, who contributed to the creation of the IAAF regulations, agreed that success in sport should be due to the combination of talent and dedication. In events where androgenization provides a powerful advantage, women want to compete against alike, not against women with a degree of hyperandrogenism that gives them a male physiology.

(S Bermon, M Ritzén, A Lindén Hirschberg & TH Murray, AJOB 2013)



#### Genetic and biological variations (1)



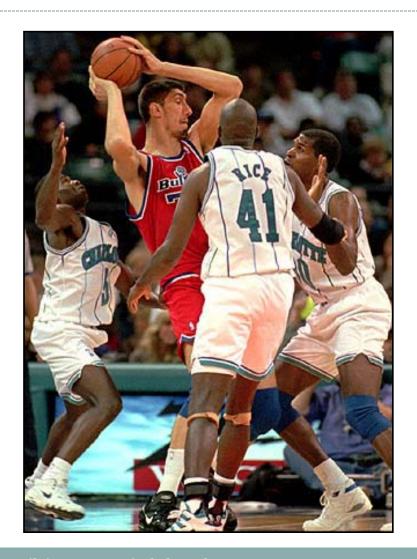


Finnish skier Eero Mäntyranta, two gold medals at Innsbruck Winter Olympics, 1964.
Primary familiar polycytemia: genetic condition causing increase in red blood cell production.

(17)

### Competing 'against alike'?

#### Genetic and biological variations (2)





Above: Michael Phelps:

Marfan syndrome?

Left: NBA Basketball players

with acromegaly

### Genetic and biological variations (3)

Table 1: Major candidate genes associated with human athletic performances.

#### Endurance capacity PPARD Nuclear respiratory factors (NRF2) PGC-1 alpha HIF-1 alpha EPAS-1 and HIF-2 alpha Haemoglobin Skeletal muscle glycogen synthase (GYS1) ADRB2 CHRM2 VEGE Muscle performance CK-MM ACTN3 MLCK ACE AMPD1 IGF-1 Tendon apparatus ABO blood group COL1A1 and COL5A1 TNC Psychological aptitude Serotonin transporter gene (5HTT) BDNF UCP2

Lippi, G., Longo, U. G., & Maffulli, N. (2010). Genetics and sports. British Medical Bulletin, 93(1), 27-47.

### The myth of the 'level playing field'

"The fact is the playing field [in elite sports] has never been level. There will always be genetic variations that provide a competitive edge for some athletes over others. We readily accept the genetic, athletic gifts that elite athletes possess without trying to find ways to "level the playing field".

(Claire Sullivan, JSSI 2011).

Why singling out hyperandrogenism from other biological and genetic 'advantageous' variations?

### Genetic and biological variations (4)



South African athlete Caster Semenya: Hyperandrogenism. 800 m gold medal withdrawn at Berlin World Track Championship, 2009

### 4. Perception as Trigger for Testing

#### HYPERANDROGENISM AND SEX REASSIGNMENT

TITLE

IAAF Regulations Governing Eligibility of Females with Hyperandrogenism to Compete in Women's Competition -In force as from 1st May 2011

IAAF Hyperandrogenism Regulations - Explanatory Notes -In force as from 1st May 2011

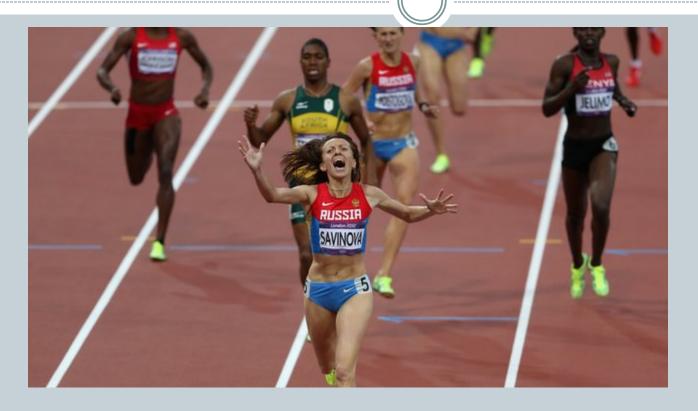
IAAF Hyperandrogenism Regulations - Appendices

http://www.iaaf.org/aboutiaaf/documents/medical

Former IAAF Hyperandrogenism Regulations, suspended since July 27, 201 Hirsutism scoring sheet according to Ferriman and Gallwey (Grade 0 at all sites indicates absence of terminal hair)

Body Area	Date o	fexam:
Upper Lip		Score
Chin	30000	Score
Chest	原到原到原到原到	Score
Upper Abdomen	דון דון דון דון	Score
Lower Abdomen	(+) (+) (+)	Score
Arms		Score
Thigh		Score
Upper Back		Score
Lower Back	(i) (i) (i)	Score
	TOTAL SCORE	

### Perception as Trigger to Testing (2)



"Just look at her"

Mariya Savinova finishing 1° at London Olympics with 1:56.19 (25)

Setting an upper limit for testosterone: A problem of consistency, and discrimination.

#### A threshold only for female athletes

"What the sex test effectively does, therefore, is provide an upper limit for women's sporting performance; there is a point at which your masculine-style body is declared 'too masculine', and you are disqualified, regardless of your personal gender identity. For men there is no equivalent upper physiological limit — no kind of genetic, or hormonal, or physiological advantage is tested for, even if these would give a 'super masculine' athlete a distinct advantage over the merely very athletic 'normal' male."

(V Heggie, Endeavour 2010)

### **Performing Feminity**

"Today the purpose of the femininity tests carried out on women athletes taking part in the Olympic Games is to make sure that all female athletes compete under identical anatomical conditions"

Eduardo Hay, IOC Medical Commission (1974) The purpose of the new policity is "to guarantee the fairness and integrity of female competitons for all female athletes [...] women should compete against alike"

IOC Medical Commission (2011)

# The Burden of Performing Femininity in Athletics (1)

JUN 12, 2012 1:38PM FT

### Runner Caster Semenya Looks a Lot More Feminine Than She Did in 2009

REBECCA GREENFIELD



# The Burden of Performing Femininity in Athletics (2)



### Singling out Hyperandrogenism

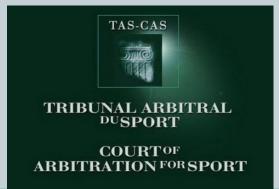
#### Unwarranted:

- It challenges deeply entrenched social beliefs about how female athletes should look like in a way that other variations do not
- Pressure to perform heteronormative standards of femininity on women athletes

#### The case of Dutee Chand



IAAF REGULATIONS GOVERNING
ELIGIBILITY OF FEMALES WITH
HYPERANDROGENISM TO COMPETE
IN WOMEN'S COMPETITION



Tribunal Arbitral du Sport

Court of Arbitration for Sport

CAS 2014/A/3759 Dutee Chand v. Athletics Federation of India (AFI) & Association of Athletics Federations (IAAF)

#### INTERIM ARBITRAL AWARD

delivered by the

#### MEDIA RELEASE

ATHLETICS

CAS SUSPENDS THE IAAF HYPERANDROGENISM REGULATIONS

#### COURT OF ARBITRATION FOR SPORT

sitting in the following composition:

President:

The Hon. Justice Annabelle Claire Bennett AO, Federal Court of Australia,

Sydney, Australia

Arbitrators:

Prof. Richard H. McLaren, attorney-at law in London, Canada

Dr Hans Nater, attorney-at-law in Zurich, Switzerland

Ad hoc Clerk:

Mr Edward Crayen, barrister in London, United Kingdom

in the arbitration between

Ms Dutee Chand, Odisha, India

Represented by Mr James Bunting, Mr Carlos Sayao, and Hon. Morris J. Fish Q.C. of Davies Ward Phillips & Vineberg LLP in Toronto, Canada

Appellant

and

Athletics Federation of India (AFI), New Delhi, India

First Respondent

July 27<sup>th</sup> 2015

http://www.tascas.org/fileadmin/user upload/award\_internet. pdf

The International Association of Athletics Federations (IAAF), Monaco Cedex

### The CAS Decision

- 1. The CAS panel has concluded that there is "presently **insufficient evidence** about the degree of advantage that androgen-sensitive hyperandrogenic females enjoy over non-hyperandrogenic females" (paragraph 522, Interim Award CAS, [30]) and have asked IAAF to demonstrate a "correlation" between levels of testosterone in female athletes and competitive advantage.
- 1. Hyperandrogenism Regulations **suspended for 2** years in order to give the IAAF the opportunity to provide the CAS with scientific evidence about the quantitative relationship between enhanced testosterone levels and improved athletic performance in hyperandrogenic athletes.

#### The IAAF Reaction

27 JUL 2015 PRESS RELEASE MONACO

#### IAAF COMMENTS ON INTERIM AWARD ISSUED BY THE CAS ON THE IAAF'S HYPERANDROGENISM REGULATIONS

The IAAF is happy to note that the CAS Panel in its interim award specifically found that the IAAF and its experts have 'acted with conspicuous diligence and good faith', seeking 'to create a system of rules that are fair, objective and founded on the best available science', and that those rules 'have been administered in confidence and with care and

The IAAF is also happy to note the CAS Panel's ruling that there is a sound scientific basis to the Regulations, in that endogenous testosterone is 'the best indicator of performance differences between male and female athletes', and its acceptance that hyperandrogenic female athletes may have a competitive advantage over athletes with testosterone levels in the normal female range.

http://www.iaaf.org/news/press-release/hyperandrogenism-regulations-cas-dutee-

### Dutee Chand's (and the media) reaction





The Indian **EXPRESS** 



Home - Sports - Sport-Others

# Dutee Chand's journey from sprinter to pioneer

The athlete's successful challenge of established regulations opens the door for others caught in a similar predicament.

### Not over yet...

While the 2015 CAS decisions cleared the track for competition for Dutee Chand, Caster Semenya and for other female athletes with hyperandrogenism, the grounds on which the suspension of the regulations has been granted are problematic – more evidence does not mean an answer to the question of what counts as unfair advantage!

https://www.huffingtonpost.com/silvia-camporesi/clear-skies-overhead-forb\_7896924.html

### As expected...

26 APR 2018 PRESS RELEASE MONACO

# IAAF INTRODUCES NEW ELIGIBILITY REGULATIONS FOR FEMALE CLASSIFICATION







The IAAF this week issued new Eligibility Regulations [English | French] for Female Classification (Athlete with Differences of Sexual Development) for events from 400m to the mile, including 400m, hurdles races, 800m, 1500m, one mile races and combined events over the same distances ('Restricted Events').

The new regulations require any athlete who has a Difference of Sexual Development (DSD) that means her levels of circulating testosterone (in serum) are five (5) nmol/L or above and who is androgen-sensitive to meet the following criteria to be eligible to compete in Restricted Events in an International Competition (or set a world record in a Restricted Event at competition that is not an International Competition):

- (a) she must be recognised at law either as female or as intersex (or equivalent);
- (b) she must reduce her blood testosterone level to below five (5) nmol/L for a continuous period of at least six months (e.g., by use of hormonal contraceptives); and
- (c) thereafter she must maintain her blood testosterone level below five (5) nmol/L continuously (ie: whether she is in competition or out of competition) for so long as she wishes to remain eligible.

These new regulations, approved by the IAAF Council in March, will come into effect from 1 November 2018 and replace the previous Regulations Governing Eligibility of Females with Hyperandrogenism to Compete in Women's Competition, which no longer apply anywhere in the sport.



Caster Semenya may have to reduce hormone levels to compete at Olympics

By Aimee Lewis, CNN

① Updated 1201 GMT (2001 HKT) April 26, 2018







#### Caster Semenya expected to be affected by IAAF rule changes

O 26 April 2018 Athletics





https://www.iaaf.org/news/press-release/eligibility-regulations-for-female-classifica

#### Conclusions

- IAAF regulations on hyperandrogenism as a remarkable example of **co-production** in which **binary sex ontologies** are recreated for the sake of a 'fair' competition
- Sex and fairness get androgenized, difference pathologized
- More "scientific evidence" about a correlation between testosterone and performance advantage cannot answer questions about what counts as unfair advantage in competition
- Notions like 'fairness' and 'level playing field' remain unproblematized

#### Selected References

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**Camporesi S** (2015) The Burden of Proving Femininity in Athletics: Why Dutee Chand Should be Allowed to Compete <a href="http://www.huffingtonpost.com/silvia-camporesi/the-burden-of-proving-femininity-in-athletics\_b\_6940562.html">http://www.huffingtonpost.com/silvia-camporesi/the-burden-of-proving-femininity-in-athletics\_b\_6940562.html</a>

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## Gender, Sport and Ethics The Case of Caster Semenya

Edited by Sandy Montanola, Aurelie Olivesi



Contributions by Anaïs Bohuon & Eva Rodriguez, and by Silvia Camporesi & Paolo Maugeri

#### Part 2 The Intersex Hypothesis, Communications, History of Science and Law

Contributions by Fabien Rose and by Laurence Brunet & Muriel Salle

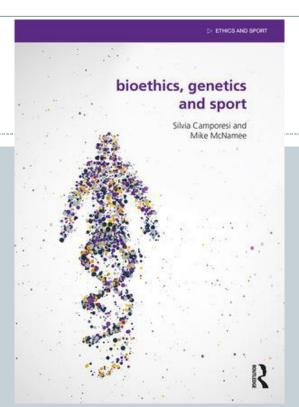
#### Part 3. Media, Identity, Gender and Socio-culture in Sports

Contributions by Sandy Montañola & Aurélie Olivesi, and by Arnaud Richard

#### Part 4. Silence and Post-apartheid

Contributions by John Sloop and by Elaine Salo

Post-face by Silvia Camporesi





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