The Phantom Category of ‘Intersex’ in Elite Sports

Knowledge about ‘Disturbing’ Female Bodies and Athletic Performances

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Submitted in fulfilment of the requirements for the degree of
DOCTOR OF PHILOSOPHY

Faculty of Education
Monash University, Australia

May 2013
Notice 1

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Abstract

In this thesis I contribute to the discourse on disturbing bodies and athletic performances in female sports through the phantom category of ‘intersex’. As ‘Intersex’ is disputed as an identity and represents a wide range of anatomic makeups, Iain Morland designates it as a phantom category. I adopt this usage as it problematises the category and trouble the logic of ‘intersexphobia’ that circulates around the female body and athletic performance ideals in elite sports. This research contributes new understandings of the phantom category of intersex because it is the first study to bring together in a dialogue IOC/IAAF medical representatives involved in the management/treatment of athletes with intersex variations, intersex organisation representatives and female athletes. By juxtaposing their voices I have complicated the ways in which it is possible to understand members of each group and elucidated strategies and relations of power which structure the discourses related to the phantom category of intersex in elite sport.

This study has a strong archival element, drawing on pertinent material from the Olympic Museum in Switzerland. This archival research extends understanding of the history of medical testing of ‘unreal women’ and underscores the influence of Avery Brundage, a central figure in the development, standardisation and implementation of the femininity tests, both nationally and internationally. This archival research has also enabled me to contribute to an understanding of how sport medical experts have vigorously questioned the IOC’s insistence upon defining femininity through testing since the 1970s. It also afforded access to and analysis of a previously unreported IOC survey directed towards women athletes at the Lillehammer Games (1994) on the subject of gender verification.

To make sense of this historically layered and diverse data, covering material from 1928 to 2012, this study employs several analytic strategies. I consider Foucauldian genealogical strategies when analysing continuing and discontinuing concepts of knowledges and truths which mark and regulate particular bodies and athletic performances as normal versus abnormal. Expanding on frameworks of biopower and biopedagogy I also scrutinise whose truths and knowledges are privileged and therefore who is seen as more competent than others to tell the truth about these issues. By also attending to Foucauldian concepts of “subjugated knowledges” and their “insurrection”, this study conceptualises the understandings and subjective experiences of female athletes who have been tried and tested and of intersex organisations. This thesis also draws on Morland’s idea of “one’s embodied cultural location”, Nikki Sullivan’s concept of somatechnologies and Pierre Bourdieu’s notion of habitus.
Together these frameworks form critical components when considering how structuring
structures and subjective experiences inform how participants justify or contest the employment
of particular somatechnologies to conceptualise and limit corporeality and athletic
performances in female sports. In bringing all these voices into dialogue and by uncovering
new material at the Olympic Archives, I have opened up new ways of thinking about how
bodies and athletic performances are marked and regulated. I have also developed
understandings of how ongoing practices of the regulation of female athletic bodies are
justified, continued and discontinued.
Declaration

I certify that his thesis contains no material which has been accepted for the award of any other degree or diploma in any university or other institution.

I affirm that to the best of my knowledge the thesis contains no material previously published or written by another person, except where due reference is made in the text of the thesis.

Annette Claudine Gisele Brömdal.

Date:

Ethics Approval

This thesis complies with the ethics guidelines of the Monash University Human Research Ethics Committee (MUHREC) and attained its ethics approval (CF10/1674 – 2101000929) from the MUHREC on 17 September 2010 (see Appendix One).
Acknowledgements

First acknowledgements must go to my supervisor, Dr Mary Lou Rasmussen. She has consistently provided me with honest, constructive, on occasion tough, but always vital feedback on my work and on surviving this research journey. Her encouragement and unwavering support have been a guiding light since day one and her vast and impressive knowledge and professional generosity have also helped me grow by gently challenging the ways in which I understand the world. My thanks also go out to those many academics who have, at different times of the journey, generously given their time and assistance to help me realise this goal: Dr Steven Angelides, Associate Professor Emerita Ingegerd Municio Larsson, Professor Amanda Gouws and Dave Lewis.

As with all grand undertakings, the support of one’s family is crucial and I am thus indebted to my partner, Julian who not only proof-read and commented on each and every page, but also supported me during the difficult and stressful periods, when it mattered most. My unending thanks go to my father and mother – Mikael and Helena – for providing me such a strong bedrock of love and support all the way from Sweden even as things have gone both up and down whilst I’ve been working, ‘down under’. I am forever thankful and proud to have you as my parents. My sincere appreciation also goes to Julian’s mother, Eva for always encouraging me to persevere with this work and for supporting us with all those lovely and healthy dinners when we had no energy to feed ourselves.

I would also like to thank Mayur Katariya from the Faculty of Education at Monash University, for his consistent and professional support during my candidature, Professor Ian Breward for his careful reading of the thesis, as well as Rosemary Viete for her exceptional, careful editing of the thesis and for making me feel at ease during the final submission stage.

Lastly, I would like thank all the participants who took part in this study for so generously sharing their experiences and stories with me and for so often inviting me into their lives with such open hearts.
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<td>AAS</td>
<td>Anabolic-Androgenic Steroids</td>
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<td>AIS</td>
<td>Androgen insensitivity syndrome</td>
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<td>AISSG</td>
<td>Androgen Insensitivity Syndrome Support Group</td>
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<tr>
<td>AAU</td>
<td>Amateur Athletic Union (of the United States in this case)</td>
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<td>ASA</td>
<td>Athletics South Africa</td>
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<tr>
<td>CAF</td>
<td>African Football Confederation</td>
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<tr>
<td>CAH</td>
<td>Congenital Adrenal Hyperplasia</td>
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<td>CAIS</td>
<td>Complete Androgen Insensitivity Syndrome</td>
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<tr>
<td>CAS</td>
<td>Court of Arbitration of Sport</td>
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<tr>
<td>DSD</td>
<td>Disorder of Sex Development</td>
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<tr>
<td>EB</td>
<td>Executive Board</td>
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<tr>
<td>EG</td>
<td>Equatorial Guinea</td>
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<tr>
<td>FIFA</td>
<td>International Governing Body of Football</td>
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<tr>
<td>HA</td>
<td>Hyperandrogenism</td>
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<td>IAF</td>
<td>International Athletic Foundation</td>
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<td>IAAF</td>
<td>International Association of Athletics Federations</td>
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<td>IOA</td>
<td>Indian Olympic Association</td>
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<td>IOC</td>
<td>International Olympic Committee</td>
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<td>ISF</td>
<td>International Sport Federation</td>
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<td>ISNA</td>
<td>Intersex Society of North America</td>
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<td>ISSA</td>
<td>Intersex South Africa</td>
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<td>ITANZ</td>
<td>Intersex Trust Aotearoa New Zealand</td>
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<td>IVIM</td>
<td>Internationale Vereinigung Intergeschlechtlicher Menschen</td>
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<tr>
<td>JAMA</td>
<td>Journal of the American Medical Association</td>
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<td>MUHREC</td>
<td>Monash University Human Research Ethics Committee</td>
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<td>NOC</td>
<td>National Olympic Committee</td>
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<td>NSF</td>
<td>National Sport Federation</td>
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<td>NZ</td>
<td>New Zealand</td>
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<tr>
<td>MTF</td>
<td>Male to Female (referring to trans* people)</td>
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<td>OC</td>
<td>Organising Committee</td>
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<td>OG</td>
<td>Olympic Games</td>
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<tr>
<td>Abbreviation</td>
<td>Description</td>
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<tr>
<td>OGR</td>
<td>Optimum Gender of Rearing</td>
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<td>OII</td>
<td>Organisation Internationale des Intersexués/ Organisation Intersex International</td>
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<tr>
<td>PAIS</td>
<td>Partial Androgen Insensitivity Syndrome</td>
</tr>
<tr>
<td>PCOS</td>
<td>Polycystic ovary syndrome</td>
</tr>
<tr>
<td>PCR</td>
<td>Polymerase chain reaction</td>
</tr>
<tr>
<td>PFCP</td>
<td>Primary familial and congenital polycythemia</td>
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<tr>
<td>PKI</td>
<td>Polski Komitet Olimpijski</td>
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<td>SA</td>
<td>South Africa</td>
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<tr>
<td>SGBE</td>
<td>Sex, gender, body and embodiment (mainly used in the introduction and conclusion)</td>
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<tr>
<td>UNESCO</td>
<td>United Nations Educational, Scientific and Cultural Organization</td>
</tr>
<tr>
<td>USA</td>
<td>United States of America</td>
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<tr>
<td>USOC</td>
<td>United States Olympic Committee</td>
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<td>WWC</td>
<td>Women’s World Cup (in this case, soccer)</td>
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<td>WADA</td>
<td>World Anti-Doping Agency</td>
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<tr>
<td>WSI</td>
<td>WomenSport International</td>
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<td>WWII</td>
<td>Second World War</td>
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Introduction

We are not in favour of intersexuality, we detect it and then we either treat it or we don’t. It is certain that there will be a certain time where the athlete’s performance will be enhanced. (Schamasch cited in Rondot, 2008)

...the institution of medicine does not need to be, and ought not to be the first and final source of ‘truth’ about our bodies, or our sexualities. We (whether we are scholars, or intersexed persons, activists or some combination of these three) are not yet done with ‘intersex’. (Holmes, 2011, p. 388)

The idea that medicine and science are often assumed to have a pre-eminence as the authoritative producers of knowledges and “truths” concerning people’s sex, gender, sexuality and bodies, has always fascinated me. Holmes advocates for a “critical use of [the term] intersex” (2011, p. 388) over the current nomenclature “disorders of sex development” (DSD). This preference carries with it an argument that although the term DSD may be developed and sustained within the field of medicine, this fact itself does not necessarily equate to a wholesale claim of authority that the term must be used or that this institution needs to be or should be the expert producing particular “truths” about bodies, sex or gender. Holmes represents a strong voice within the intersex activist movement and within the cohort of scholars raising questions about who establishes ‘truths’ and ‘knowledges’ about our sex, gender, bodies and sexualities that seem to count more than others (Foucault, 1980f, p. 131). This project draws on and extends this critical approach via an interrogation of contemporary and historical discourses related to intersex athletes in elite sport.

Ever since I can remember, issues regarding the binary sex, gender, body and sexuality model have troubled me. I have often felt that my sex, gender and sexuality have been read and assumed by society at large by how my body looked and my embodiment. Growing up I often did not agree with how I was perceived by others when compared to how I perceived myself. I was walking around with a body that most people categorised as female even though I was internally challenging this model. I questioned why my sex, gender and body could not just be understood as “Netta” (my nickname) and to this day I prefer to be thought of simply as “Netta”

1 Since 2006 the medical establishment no longer refers to ‘intersex’ when referring to individuals born with intersex variations. Through a highly debatable consensus statement the taxonomy changed within medicine to ‘disorders of sex development’ (DSD) (Houk, Hughes, Faisal Ahmed & Lee, 2006).

2 There are many ways in which bodies challenge normative sex, gender and body norms, including chromosomal makeup, hormone production levels, internal and/or external genitalia (in combination or independently) which are “atypical” of “standard” male and female anatomy (Fausto-Sterling, 2000a) and fluid gender identity. A person can also challenge these norms by embodying “atypical” secondary sex characteristics in their muscular physique, hair distribution, voice and stature (OII Australia, 2011).
than someone who has to be and identify with a particular sex and gender. The fact that we generally, legally and linguistically live in societies that identify us as either men or women has further enforced my interest concerning the binary legacy.

When the debates surrounding the Caster Semenya controversy of August 2009 broke loose I could see similar discourses to the ones argued by Holmes, suggesting that the medical commissioners of the International Olympic Committee (IOC) and the International Association of Athletics Federation (IAAF) did “not need to be, and ought not to be the first and final source of ‘truth’ about” Semenya’s sex, gender or body (2011, p. 388). A year earlier the former Medical and Scientific Director of the IOC, Dr Patrick Schamasch had also stated that sport organisers should not be “in favour of intersexuality in sports” (Schamasch in Rondot, 2008), which further concerned me. What troubled me with the Semenya incident and Schamasch’s statement prompted me to want to develop a better understanding of the IOC and the IAAF’s role in producing and circulating particular ideas and values, and to find out to what extent those ideas in fact existed already in the culture they operated in. I also wanted to better understand what role female athletes and intersex organisations had in the production of truths and knowledges about marking particular bodies and athletic performances as normal or abnormal in female elite sports and how this affected female athletes. Therefore, the research questions driving this study have been:

1. In what ways do the IOC/IAAF, intersex organisation representatives and female athletes mark and regulate particular sex, gender, body, embodiment and athletic performances as normal versus abnormal in female sports?

2. How do these knowledges and truths affect the ways in which athletes are depicted, treated and managed in female sports?

3. How do these knowledges and truths affect the ways in which these cohorts of participants read and mark their own bodies, and if applicable, athletic performances?

4. And what do the answers to these questions tell us about how normative versus non-normative understandings about sex, gender, body, embodiment and athletic performances are produced, circulated, deployed, justified and contested between and among these three cohorts of participants?

These questions are important to pose when considering that institutions of medicine, and in this case the medical commissions of the IOC and the IAAF, do “not need to be, and ought not to be the first and final source of ‘truth’ about our bodies” (Holmes, 2001, p. 388) or about.

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3 A ‘female’ athlete henceforth implies a person who has represented their country as a female competitor and competed in the female sport category.

4 I am applying the term ‘knowledges’ as used by Foucault rather than ‘knowledge’ (Foucault, 1980f, p. 131).
athletes’ athletic performance in female sports. By also attending to discourses of intersex organisation representatives and female athletes themselves, this thesis expands on current understandings about the ways in which particular bodies and athletic performances are marked as ‘disturbing’ or ideal in women’s sports. Considering the discourses by athletes in female sports may thus not only provide us with insights into what modificatory practices they are required to endure in order to partake in elite sports but also examine how their values affect the ways in which they depict, mark and regulate their own bodies and athletic performances. Examining the discourses by intersex organisation representatives, who may act as a political force between the IOC/IAAF and female athletes on behalf of athletes with intersex variations, further complicates the ways in which ‘truths’ about how bodies and athletic performances are marked and regulated in female sports. By examining all participants’ values, an expanded appreciation about the different justifications and contestations about who is and is not feminine enough, or eligible to compete in female sports, may provide new insights into these modificatory practices. This affords us, again, a deepened understanding about the continuing and discontinuing processes of when particular bodies and athletic performances of female athletes are marked ‘disturbing’ or ‘normal’ and how the participation itself in these conversations, leads to the continuation of shaping and policing the corporeality of oneself and others.

To provide a brief background, both medical and scientific institutions have been sites which produce truths and knowledges concerning intersex bodies (Holmes, 2011). Within these institutions, intersex variations have been regarded as deviations from ideal biological sex development and thus a phenomenon which is disorderly and abnormal and which can become orderly and normal again with the help of science and medicine. As a result, the discourse on intersex has been confined to the professions of medicine and science since the early 1950s (Chase, 1998b; Holmes, 2009, 2011). Debates still continue to this day about the ways in which the medical and scientific establishments manage intersex variations and criticism is still directed toward institutionalised sex re-assignments and corrective sex surgeries of intersex infants. Topics addressing the need to and how to improve the health care of people with intersex variations thus continue.6

5 I will be referring to the IOC and the IAAF as IOC/IAAF, if their policies, values, truths and knowledges are consistently the same and the main reasons for doing this is that they both represent the two leading institutions concerning sex/femininity /gender/ Hyperandrogenic testing and often mirror each other in opinions (when this is not the case, I will distinguish between them).
For example, in 2006 a debate about the scientific ‘accuracy’ of nomenclatures in global health care began. As a result, a taxonomy revision from *intersex* to *disorders of sex development* (DSD) was mooted and adopted by the scientific and medical establishment. This has subsequently influenced how medical professionals, intersex organisations, individuals with intersex variations and intersex activists have viewed and defined intersex variations. By literally categorising intersex as a disorder, the new umbrella terminology has pathologised individuals with intersex variations through nomenclature. The taxonomy revision has been criticised by a host of voices within and outside medicine\(^7\), and it has been argued that through the revision, the narrative of intersex has been further confined to the medical and scientific establishments allowing them to further assume the mantle of being “those who are charged with saying what counts as true” (Foucault, 1980f, p. 131). Thus to clarify, I will be using the terms ‘intersex variations’ and ‘HA variations’ throughout this thesis rather than ‘disorders of sex development’ as I do not agree with the ‘disorder’ classification and how it was developed in general.

Medical and scientific institutions in elite sports have also been identified as sites that produce and circulate certain truths and knowledges about female athletes who ‘disturb’ ideal understandings of the female sex, gender, body, embodiment (sgbe)\(^8\) and their athletic performances.\(^9\) Even though it may have seemed that the IOC and the IAAF gender verification procedures\(^10\) were relatively unquestioned and uncontroversial practices up until the Semenya controversy of 2009 (Hersher, 2010), the fact is that sex, femininity and gender tests for the purpose of identifying “hermaphrodites” and male imposters had been underway for quite some time (IAAF, 2006b, p. 9). Sex tests became a mandatory and institutionalised procedure within the IOC and their International Sport Federations (ISFs) over the course of some thirty years between 1968 and 2000. These tests have now culminated in the policy position of the 2011 HA (Hyperandrogenism) testing technology mandated by the IOC and the IAAF.\(^11\) Even though mandatory genetic sex tests were originally introduced to deal with allegations that perhaps men “masquerading” as women or “hermaphrodites” were participating in female only sporting events to obtain ‘unfair’ competitive advantages, no known male imposter has ever been caught in this sex hunt (Dickinson et al., 2002; IAAF, 2006b, p. 9; Reeser, 2005; Simpson et al., 2000). Instead, a significant number of athletes with diverse intersex variations, mainly androgen

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\(^7\) Read further on pp. 17-22.
\(^8\) Henceforth I will use ‘sex, gender, body and embodiment’ and its acronym ‘sgbe’ when appropriate.
\(^9\) Read further in Kessler & McKenna, 1985; Kane, 1995; Schultz, 2012; Karkazis, Jordan-Young, Davis & Camporesi, 2012; Shani & Barilan, 2012; Viloria & Martínez-Patiño; 2012
\(^10\) Other international sport federations, such as the governing body of soccer (FIFA), the international skiing federation (FIS) and the international tennis federation (ITF), literally, still verify the gender of athletes in female only sporting events on a ‘case-by-case’ basis. (FIFA, 2011; FIS, 2012a, 2012b; ITF, 2012)
\(^11\) However, as the IOC can only make recommendations, for the ISFs representing basketball, judo, skiing, volleyball and weightlifting it would take a few more years until they abolished their mandatory inspections (Simpson et al., 2000, p. 1569).
insensitivity syndrome (AIS) and gonadal dysgenesis (Turner syndrome), have been identified and often suspended from further competition, even though it has been suggested that these athletes did not disturb the ‘level playing field’ (de la Chapelle, 1986; de la Chapelle & Genel, 1987; Genel & Ljungqvist, 2005; Reeser, 2005; Simpson et al., 1993).

Bearing these backgrounds in mind, I am expanding on the ways in which truths and knowledges about shaping and policing particular bodies and athletic performances in female sports as normal or abnormal are continued or discontinued. By considering the discourses of the IOC and the IAAF, intersex organisations and female athletes themselves, I delve into the logics on which they base their understandings. I thus ask: What do female athletes think about the sex/femininity/gender tests and about those who have been sex or gender challenged versus those who have not? What do they think about past and present testing and what do intersex organisations think about those same testing procedures and testing targets?

In order to examine how sgebe and fair athletic performances in female sports are thought about in these realms I began my data collection by conducting semi-structured, in-depth interviews with two medical representatives. One of them was from the IOC and the other from a European NOC, who had both been and remain involved in the management/treatment of athletes with intersex variations. I also performed semi-structured, in-depth interviews with eight intersex organisation representatives who had either commented on or contacted the IOC/IAAF on the topic of ‘fairness’ as it relates to athletes with intersex variations. As I was not able to conduct interviews with female athletes regarding these tests (the reasons for which I clarify in the methodology chapter), I instead researched autobiographical accounts of nine female athletes discussing their experiences and opinions about these tests. Additionally, I examined diverse IOC/IAAF/National Sport Federation (NSF) policies on sex/femininity/gender/Hyperandrogenism (HA) as well as archival material on the topic from the Olympic Museum in Switzerland ranging from 1928 to 2012.

In this research project I need to qualify the ways in which I use particular terms, such as ‘performance’ and ‘disturbing’ in order to illustrate their intended meanings. When I use the term ‘performance’ I am using it from two perspectives. First, it refers to an athlete’s physical and athletic achievements through the exercise of their speed, strength and, if applicable, measurements such as personal bests in time, length, height, et cetera. The athlete’s performance is also viewed from a Butlerian (1997) gender perspective where femininity is taught and enforced via social regulations through which either penalties or rewards are given. A negative performance thus implies that the athlete either performs their “gender wrong” (i.e.

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12 Hyperandrogenism will henceforth be referred to as HA and “is a term used to describe the excessive production of androgenic hormones in females” (IAAF, 2011b, p.1). “There are some types of cases of hyperandrogenism that do not confer a competitive advantage because of non-functional androgen receptors” (IOC, 2012a).
in a non-normative fashion) or performs in a fashion which is perceived to challenge the ‘level-playing field’ in female sports and initiates a “set of punishments both obvious and indirect” (Butler, 1997, p. 412). However, if the athlete performs their gender ‘right’, that is, in a fashion which does not disturb the ideals of a ‘level-playing field’ in female sports “it provides the reassurance that there is an essentialism of gender identity after all” (Butler, 1997, p. 412) or the reassurance that there is a need to protect and maintain a ‘level-playing field’ in women’s sports. And so the athlete is ‘rewarded’ by remaining unquestioned or un-vilified. This style of analysis is designed to attend to political and cultural powers and mores which silently direct how the world of elite sports, female athletes and intersex organisations thinks and acts in relation to issues about performing femininity and athletic achievements.

I use the term ‘disturbing’ when I am referring to athletes who trouble, challenge and interrupt binary gender and athletic performance ideals in female sports. I am using this term because deciding powers define what is normal and not normal when it comes to gender and fairness in sport. The current process has the potential to implicate all women, as suspect, in a search for dubious women. Many women may therefore be attending to themselves so they are certain not to appear suspect. That said, anybody who falls into these classifications is therefore seen as potentially a ‘disturbance’ to the continuity of the hetero-normative matrix between sex, gender, body, embodiment and fair athletic performance, even though the person in question may disagree with these labels.

This exploratory research project is significant and novel in four ways. First, even though more and more research is addressing the intersex discourse in elite sports, few studies, as suggested by Heggie (2010, p. 163), focus on the development of the testing technologies, policies and associated nomenclatures or on the voices within the IOC/IAAF who may have contested/ produced such somatechnologies. What remains unexamined, then are the ways in which “bodily-being” is shaped and marked through medical treatments “but also by the discourses that justify and contest the use of such” treatments (Sullivan, 2009, p. 314). Second, there are few accounts expanding on the wider reasons for the continuities and discontinuities of the testing technologies and testing nomenclatures from the first propositions of implementation until today (2013). In seeking to untangle these developments and reasons, this research contributes to the history of the continuation and discontinuation of testing athletes’ femininity in women’s sports. Third, this research is novel through the inclusion of conversations by intersex organisation representatives. Attending to their views on how athletes in female sports are described, treated and managed by significant sporting institutions such as the IOC and the IAAF is an important contribution to contemporary understanding of the ways in which athletes are continuously marked and regulated. Fourth, including the perspectives of
athletes in female competitions who have strong and credible opinions about the tests, either because they have experienced them or have pressured others to be tested, brings a unique perspective to the discourse of marking and regulating bodies and athletic performances in female sports through time. Because their accounts are first-hand, the examination of their accounts also provides new insights into the continuation and discontinuation of shaping and conforming their own bodies and athletic performances. As no study has concentrated on all these aspects simultaneously or examined the relationships between these groups of participants, and how they influence each other, this research will fill an important gap in knowledge and contribute to the fields and studies of feminism, gender, intersex, queer and critical sociology of sport studies.

In the first chapter I commence by providing an account about the instability of femininity and masculinity through the lens of gender and genitalia. Here I draw on previous work when examining the continuous and discontinuous understandings about femininity in elite sports and identifying to what extent genital evaluation and gender performativity have been elements when testing their femininity (Butler, 1999; Kessler, 1993). This is followed by an examination of the different debates through which scientific and medical forces assign sex to gender and gender to sex – the habitus of intersex – and how these discussions around habitus (Bourdieu, 1977, 1990, 1999) are useful when studying the discourses surrounding athletes with intersex variations. Following this, I examine issues around the female body and female embodiment. More precisely, I look at what are considered ‘ideal’ and ‘non-ideal’ female bodies and what behaviours women must exhibit in order not to have their sex and gender questioned. Here, I employ ideas that examine the binary body and embodiment model, such as the notions of (bio)power (Foucault, 1980f, 2003), (bio)pedagogy (Harwood, 2009) and (soma)technology (Sullivan, 2009), ideas which problematise how this binary model has been used to discipline and regulate certain bodies and embodiments while not others. In the last section I consider the relationship between performance, fairness, physical prowess and the disturbance of sgb norms in female sports (Karkazis et al., 2012; Schultz, 2012) leading to the act of sex/femininity/gender/HA questioning of athletes in female competitions and not others. Here I draw on Karkazis et al. (2012), Schultz (2012), Shani and Barilan (2012), Nelly Oudshoorn (1994) and many others challenging the continuation of testing athletes’ femininity through HA verifications.

In the second chapter concerning methodology, I begin by explaining the theoretical lenses which I have used in this research and continue by laying out the reasons for making use of interviews, collecting autobiographical accounts and referencing archive and policy material. I then describe the methods of analysis used in the project, particularly focusing on the
techniques used to ‘open up’ texts, conversations and images as well as on Foucauldian discourse analysis. I then briefly summarise the various approaches taken in interpreting the different data and follow by detailing the ethics process recommended by Monash University, which guided the research. I then describe the recruitment process and present the three cohorts of participants followed by a short piece on limitations and researcher quandaries.

In Chapters Three, Four and Five I consider the ways in which truths and knowledges about sgbf and fair athletic performance are produced, circulated, deployed, justified and contested, particularly within the IOC, the IAAF and a selected NSF. This is specifically achieved through the close examination of the various medical and scientific perspectives on sex/femininity/gender/HA testing in women’s sports as they have appeared over time. More specifically, in Chapter Three I consider discussions concerning female ‘authenticity’ in elite sports and trace the procedures for the testing of this ‘authenticity’ in women’s sports. I then consider the paranoia and the “general politics of truth” (Foucault, 1980f, p. 131) prevalent in the mid-1960s leading to the development of more structured “on-sight inspections” (Larned, 1976, p. 10) of women’s bodies, which were replaced with genetic testing in 1968. Here I study the competing logics and contested convictions of truth leading to shifts in testing technologies. Throughout this chapter I genealogically draw attention to the continuous and discontinuous (Foucault, 1970, p. 50) justifications produced for the fabrication of differing technologies around the body.

Chapter Four focuses on the standardisation and institutionalisation of the testing technologies and the voices within the IOC/IAAF who agreed with or contested these technologies between the 1960s and 2000. Included in this is a recounting of the voices of scientists and athletes who disagreed and campaigned against the testing technologies and some reflection on the ways in which these voices affected the views and processes of the IOC/IAAF. I also draw attention to moments where there have been overlaps and suspension of testing procedures because these can genealogically indicate how particular knowledges and truths have permitted certain ideologies, procedures, nomenclatures and power dynamics to continue or discontinue within the discourse and practice of sex/femininity/gender testing.

In Chapter Five, I set out to examine the logic behind the IOC/IAAF decision to revise their gender verification policy after the Semenya controversy in 2009. Here my focus is on the IOC/IAAF ideology used to establish what are considered fair versus unfair competitive advantages within the discourse of non-manipulated genetic conditions. I seek to trouble the idea that functional testosterone levels, in isolation, determine whether an athlete succeeds in athletics or not (Karkazis et al., 2012). Further, I examine the ways in which the IOC/IAAF medical establishments continue to maintain certain truths and knowledges about normal versus
abnormal body and athletic performances in female sports through their existing HA policies (Schultz, 2012).

Chapter Six considers the production of discourses that purport to ‘protect’ female athletes from ‘unfair’ competition. I explore how biopower (Foucault, 2003; Rabinow and Rose, 2006) and biopedagogy (Harwood, 2009) operate through the IOC/IAAF testing technologies and through female athletes’ demand for the tests to exist. This is done by shining the spotlight on a little known survey produced by the IOC at the Winter Games in Lillehammer (1994) to gauge the opinions of competing female athletes about the need for gender verifications in female sports. I examine the extent to which biopower was influencing both the survey structure and results. In this chapter I also apply the concepts of biopedagogy to help interpret the current IAAF HA policy’s use of two specific technologies developed about the body: one on female hirsutism (‘excessive’ hair growth on body) and one on breast and pubic hair development. This chapter considers female athletes as biopedagogues: potential willing participants in the marking and regulating of competitors’ bodies. I examine how technologies marking the body simultaneously produce suspicion and call on athletes and officials to act on their own suspicions. The relationship between the IOC/IAAF confidentiality measures and the above technologies is also investigated.

Chapter Seven examines the views of intersex organisation representatives and female athletes based on their lived experiences and “embodied cultural location” (Morland, 2009a, p.194). Here I focus on how intersex organisation representatives and female athletes also have some agency in the continuation of shaping and regulating corporeality and athletic performances of female athletes. Through their participation in conversations that either justify particular modificatory procedures on the body – somatechnologies – or contest them (Sullivan, 2009, p. 314), they continue the process of marking and regulating these athletes. This chapter also attends to any disharmonies between female athletes and between intersex organisations on how to read, shape and police corporeality and athletic performances in female sports, and elite sports in general.

In order to attend to all these enquiries I need to consider previous work on discourses challenging binary sex, gender, body, embodiment and athletic performance ideal in society at large, and more specifically in female sports. So in what follows, I will consider debates on the instability of femininity and masculinity through the lenses of gender and genitalia; on the habitus of intersex in elite sports; on discourses challenging binary female body and female embodiment ideals in female sports; and on issues concerning athletic performance, fairness and physical prowess in women’s competitions.
Chapter One: The Habitus of ‘Disturbing’ Bodies and Athletic Performances in Female Sports

There are very few articles by historians on the development of the technology of sex testing for sports, or on the conscientious objectors, the scientists who refused to take part and who advised and campaigned against the use of tests. There is no account explaining why the IOC chose the Barr Body test in the 1960s, or the sex determining region Y test in the 1990s. There is no thorough explanation for the difference between the IAAF and the IOC in the 1990s (and little to nothing on other sporting organisations’ gender testing). (Heggie, 2010, p. 163)

[S]ubjugated knowledges [refer] to a whole series of knowledges that have been disqualified as nonconceptual knowledges, as insufficiently elaborated knowledges: naive knowledges, hierarchically inferior knowledges, knowledges that are below the required level of erudition or scientficity. (Foucault, 2003, p. 7)

Research into the discourse of “intersex”, “hermaphroditism” and, the more recently developed nomenclature within the medical sphere; “disorders of sex development” (DSD)\textsuperscript{13}, is not a new phenomenon. These to some extent separate, yet related subjects have been explored from a mythological perspective (Gilbert, 2002; Ovid & Caxton, 1968), within medicine\textsuperscript{14}, and human sciences\textsuperscript{15}. The term “intersex” originates within the circles of medicine and much of the literature about it was mainly produced for an audience within the field of both medicine and science until the early 1990s (Morland, 2009b, p. 207).

Since then, studies on intersex have also focused on historically unfolding the intersex identity, its activism and progress from the ‘Western’ perspective.\textsuperscript{16} The recent reform of nomenclature, from “intersex” to “disorders of sex development”, has created contentious debates. Although, some within the ‘intersex movement’\textsuperscript{17} strongly oppose a nomenclature which refers to their status as a ‘disorder’ because they consider it dehumanising, others argue that the term ‘intersex’ is equally discriminatory and divisive as it alludes to the identity debate

\textsuperscript{13} Since 2006 the medical establishment no longer refers to ‘intersex’ when referring to individuals born with intersex variations. Through a highly debatable consensus statement the taxonomy changed within medicine to ‘disorders of sex development’ (DSD). (Hughes et al., 2006)


\textsuperscript{17} There is no ‘coherent’ intersex movement as different intersex organizations have different concerns and different agendas even though many of them share the struggle against the conceptualization, policing and normalization of binary bodies.
and does not establish which type of ‘condition’ the person has.\textsuperscript{18} This debate, however, has not been thoroughly examined within the discourse of sports medicine, which this study is interested in considering. The ‘intersex movement’ also faces other challenges regarding how to view, treat and manage people with intersex variations in general\textsuperscript{19} and this research seeks to further appreciate how voices within the ‘intersex movement’ view the recent debates about intersex and elite sports.

Adding another dimension to this growing body of non-medical research and debate are recent scholarly works which have focused on legal and ethical aspects of the clinical management of intersex variations.\textsuperscript{20} Discourses about intersex are also contributing to the field of queer studies, questioning heteronormative sex, gender, body and embodiment idea(l)s\textsuperscript{21}, and more recently are also being considered within the field of elite sports\textsuperscript{22}. However, though considering intersex discourses within elite sports, as projected by Heggie (2010), little scholarly attention has focused on “the development of the technology of sex testing for sports, or on the conscientious objectors, the scientists who refused to take part and who advised and campaigned against the use of [the] tests” (p. 163). Further, no thorough historical explanation exists as to why the IOC has implemented so many different testing technologies and testing names through time. Also, “there is no thorough explanation for the difference between the IAAF and the IOC in the 1990s” (Heggie, 2010, p. 163). For example, why did the IAAF suspend their mandatory gender tests in 1991 while the IOC continued them till 1999? Lastly, there are close to no accounts about how disturbing sex, gender, body, embodiment and fair athletic performances are conceptualised, marked and regulated in elite sports among intersex organisations and among women athletes. The purpose of this study is partially to delve into these unanswered questions (see Chapters Six and Seven).

The key issue that concerns this research is how knowledges and truths about disturbing versus ideal sex, gender, body, embodiment (sgbe) and athletic performances in female sports are produced, circulated, deployed, justified and contested within the IOC/IAAF, among intersex organisation representatives, and among female athletes.\textsuperscript{23} Concentrating on intersex

\textsuperscript{18}Read further in Dreger & Herndon, 2009; Feder, 2009; Holmes, 2009; Morland, 2009b; Spurgas, 2009; Cornwall, 2009.
\textsuperscript{19}Read further in Feder, 2009; Holmes, 2009; Morland, 2009b; Spurgas, 2009; Hinkle, n.d.a, 2008; Dreger & Herndon, 2009.
\textsuperscript{22}Read further in Wonkam, Fieggen & Ramesar, 2010; Martínez-Patiño et al., 2010; Caplan, 2011; Vannini & Fornssler, 2011; Brömdal, 2011a, 2011b; Viloria & Martínez-Patiño, 2012; Karkazis et al., 2012; Dworkin & Cooky, 2012; O’Connor & Dasgupta, 2012; Schultz, 2012; Shani & Barilan, 2012; Wahlert & Fiester, 2012.
\textsuperscript{23}There are many ways in which bodies challenge normative sex, gender and body norms, ranging from chromosomal makeup, hormone production levels, internal and/or external genitalia (in combination or independently) which are “atypical” of “standard” male and female anatomy (Fausto-Sterling, 2000a) and fluid gender identity. A person can also challenge these norms by embodying “atypical” secondary sex characteristics in their muscular physique, hair distribution, voice and stature (OII Australia, 2011).
organisations and women athletes in the research is seen as equally important as focusing on the IOC/IAAF, as the former often constitute what Foucault refers to as bearers of “subjugated knowledges” (2003, p. 7). Incorporating their knowledges and truths – “the insurrection of subjugated knowledges” (Foucault, 2003, p. 7) – and qualifying them as ‘conceptual’ and ‘sufficiently elaborated’, rather than “disqualified as nonconceptual knowledges, [and] as insufficiently elaborated” (Foucault, 2003, p. 7), is vital in the consideration of how truths and knowledges emerge, continue and discontinue.

So in what follows, I commence by providing an account about the instability of femininity and masculinity through a lens of gender and genitalia in the contemporary ‘Western’ culture as it pertains to athletes with intersex variations. This is followed by an examination of the different debates through which scientific and medical forces assign sex to gender and gender to sex – the habitus of intersex – and how these discussions are useful when studying the discourses surrounding athletes with intersex variations. Following this, the third section examines issues around the female body and female embodiment: more precisely, what are considered ‘ideal’ and ‘non-ideal’ female bodies? What behaviours must women exhibit in order not to have their sex and gender questioned? And in what ways may the answers to these queries be useful in understanding how female athletes are conceptualised and limited concerning their body and embodiment? In the last section I consider the relationship between performance, fairness, physical prowess and the disturbance of sex, gender, body and embodiment norms in female sports which leads to the act of sex/femininity/gender/HA questioning of athletes in female competitions. By attending to these relationships and conversations I examine how I can further draw on them when discussing athletes with intersex variations. I conclude this chapter by outlining in greater detail the particular focus and ambitions of this study.
Gender, Genitalia and the Instability of Femininity and Masculinity

...there is very little agreement after all on what it is that constitutes, or ought to constitute, the category of women... (Butler, 1999, p. 4)

...in the everyday world gender attributions are made without access to genital inspection. Instead, what has primacy in everyday life is the gender that is performed, regardless of the configuration of the flesh under the clothes. (Kessler, 1993, p. 3)

If what Butler writes above is true, when studying the numerous intersex controversies in female sports, I begin by asking: What disciplining and normative powers framed these particular women, especially if there is “little agreement” (Butler (1999, p. 4) when it comes to the constitution of femininity? Further, if genitalia appear to be unimportant, as reported by Kessler, when assessing someone’s gender, how come this does not seem to apply to female athletes in elite sports? ‘On sight inspections’ suggest that, just, “access to genital inspection” (Kessler, 1993, p. 3) was indeed the way for medical controllers to assess what sex and gender the athlete was (Larned, 1976). This study thus wishes to consider to what extent genitalia has been an important element in assessing female athlete’s ‘femininity’ through time. Building on this, throughout the history of the IOC/IAAF medical establishments, few studies have delved into examining why the fact remains that, male athletes have not had their genitalia and gender equally questioned in comparison to female athletes? (Kessler & McKenna, 1985, p. 52)

In Undoing Gender Butler (2004, p. 42) suggests that gender is the apparatus by which idea(l)s of masculine and feminine are produced, naturalised and maintained “along with the interstitial forms of hormonal, chromosomal, psychic and performative that gender assumes”. Raewyn Connell also suggests that gender relations are structured, which is possible through “organized, institutionalized power and diffuse, discursive power”, emotional commitments such as prejudices, myths and stereotypes, and through symbolic gender relations such as language, built environment and gender attributions (2002, pp. 59, 63, 65-67). These forces do not act alone but rather continuously intermingle and interact in practice, with the effect of changing the structure of things that is, social views and understandings (Connell, 2002, p. 68).

As all known intersex controversies in elite sports have occurred within women’s sports, this implies that I need to investigate the construction of femininity. This must be at the centre of this study. On the topic of constructing femininity Sandra Lee Bartky (1997) posits that femininity is something which women are compelled to partake in:
Femininity as a spectacle is something in which virtually every woman is required to participate...[t]he precise nature of the criteria by which women are judged, not only the inescapability by judgement itself, reflects gross imbalances in the social power of the sexes... (p. 140)

Women are conditioned to partake in the production, circulation, disciplining and maintenance of femininity and in so doing ensure the perpetuation of gender inequality. Butler (1997) also asserts, through a lens of phenomenology, that femininity is taught and enforced through both performance and social regulations by which either penalties or rewards are given. Hence, “performing one’s gender wrong initiates [a] set of punishments both obvious and indirect, and performing it well provides the reassurance that there is an essentialism of gender identity after all” (Butler, 1997, p. 412). This line of thought proposes that women become acceptably feminine through these regulations, limitations and sanctions. If Butler’s argument is true, then this may help explain greater political and cultural powers which silently direct how the world of elite sports thinks and acts in relation to issues of and about femininity.

Kessler and McKenna (1985, p. 159) argue that the male gender is the “primary construction” in the social construction of gender which implies if a human being does not live up to the standards of masculinity the person must be feminine and if a person does not live up to the standards of femininity the person must be masculine. Kessler and McKenna disagree with the idea that there are no other options (1985, p. 159). Butler (2004, pp. 42-43) and intersex scholar Morgan Holmes (1998, 2009, p. 7) also critique this gender limit, proposing that whatever is not feminine is not necessarily masculine and whatever is not masculine is not necessarily feminine. Rather, there is a range of individuals perceived as ‘gender benders’ who do not fit any of these socially constructed categories. These ‘gender benders’ do not define themselves by the accepted characteristics of either gender camp but rather construct their own gender, such as some groupings within the queer paradigm, for example, trans*24 individuals and intersex individuals (Butler, 2004; Holmes, 1998, 2009). I am thus interested in how leading sport institutions such as the IOC/IAAF view individuals who challenge the binary gender model and what space there is for those identifying outside the binary gender paradigm.

These discussions mainly brought forth by Butler, Bartky, Connell, Holmes, Kessler and McKenna are useful when studying ways in which the binary gender logic may be produced, circulated, deployed, justified and contested within the IOC/IAAF, within and among intersex organizations and among female athletes. They also offer valuable insights into the ways in which popular culture can depict, control, manage and disturb gender. As the controversies...

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24 Henceforth I am using the term trans* when referring to individuals who, socially, spiritually, psychologically or physically, do not identify within the binary gender model as I do not want to reify a particular category within this umbrella terminology.
surrounding intersex in female sports are not a new phenomenon\textsuperscript{25}, the frameworks provided by these ideologies are key to understanding the greater reasons behind why certain female athletes\textsuperscript{26} seem to threaten the binary sex and gender logic more than others. These frameworks also help to provide a cogent reasoning as to the causes behind the IOC/IAAF and associated medical establishments’ testing and scrutiny of women only and not men\textsuperscript{27}.

What needs to be factored into this study in order to understand why intersex controversies in female sports have created such headlines and nervous reactions is the thorough examination of the power-structures, power-relations and hegemonic cultures that, through social and scientific means, argue for or against the idea that women must be tested and at times treated for their ‘abnormality’. As medical establishments of sport institutions operate in a wider culture of medicine, science and popular culture, it is necessary to examine the knowledges and truths that these cultures produce, circulate, deploy, justify and contest regarding femininity and masculinity in order to better appreciate the way these concepts manifest in elite sports. I am thus interested in the idea(l)s that condition the IOC/IAAF, their medical practitioners, intersex organisations and female athletes to act in particular ways when female athletes ‘disturb’ sex and gender norms. Perhaps the participants in these three groups are not only influenced by the cultures and habituses (Bourdieu, 1990, p. 53) in which they operate, but also themselves influence the continuation or the discontinuation (Foucault, 1970, p. 50) of sex and gender idea(l)s in those same dominant cultures and habituses. The following section thus examines the habitus of intersex to understand how the sex and gender dichotomy has been established and sustained by the spheres of medicine and science.

\textsuperscript{25} Women who disturb the binary gender ideals have been the source of multiple anxieties in elite sports since 1928 (Sport: Olympic Games (Concl’d), 1936, p. 60).

\textsuperscript{26} Such as Zdenek Koubek (a.k.a. Zdenka Koubkowa), Hermann Ratjen (a.k.a. Dora Ratjen), Leon Caurla (a.k.a. Lea Caurla), Pierre Bresolles (a.k.a. Claire Bressolles), Iryna and Tamara Press, Ewa Klobukowska, Erik Schinegger (a.k.a. Erika Schinegger), Stanislawa Walasiewicz (a.k.a. Stella Walsh), Maria José Martínez-Patiño, Santhi Soundarajan, Caster Semenya, Salimata and Bilgïusa Simpore who are seen as some of the key figures in the establishment and the continuity or discontinuity of the IOC/ISF sex/femininity/gender/HA verifications. (Tachezy, 1969, pp. 119-20; Hay, 1974, p. 120; Ferguson-Smith & Ferris, 1991, p. 17; Carlson, 2005, p. s39; Martínez-Patiño, 2005; Soundarajan in Mitra, 2012; Ginnane, 2011; Smith, 2010.

\textsuperscript{27} This will be further discussed in Section Four of this chapter – see pp. 29-35.
The Habitus of Intersex in Elite Sports: Assigning Sex to Gender or Gender to Sex

The structures constitutive of a particular type of environment... produce habitus, systems of durable, transposable dispositions, structured structures predisposed to function as structuring structures, that is, as principles of the generation and structuring of practices and representations which can be objectively “regulated” and “regular” without in any way being the product of obedience to rules, objectively adapted to their goals without presupposing a conscious aiming at ends or an express mastery of the operations necessary to attain them and, being all this, collectively orchestrated without being the product of the orchestrating action of a conductor. (Bourdieu, 1977, p. 72)

The belief that gender consists of two exclusive types is maintained and perpetuated by the medical community in the face of incontrovertible physical evidence that this is not mandated by biology. (Kessler, 1990, p. 25)

The presumption of a binary gender system implicitly retains the belief in a mimetic relation of gender to sex whereby gender mirrors sex or is otherwise restricted by it. (Butler, 1999, pp. 4, 10)

Ever since women have been allowed to compete in elite sports, Kessler and McKenna (1985) argue that the IOC and its medical establishment have tried to ensure that the binary sex and gender model remains the dominant standard for deciding issues of gender through biological means. This section suggests that the decisions which the IOC/IAAF and their medical committees make are strongly influenced and shaped by a wider ‘homogenous’ scientific and popular culture, a habitus (Bourdieu, 1990, p. 53). The habitus, which is “the product of history, produces individual and collective practices, and hence history, in accordance with the schemes engendered by history” (Bourdieu, 1977, p. 82). I am thus interested in the norms, rules and regulations concerning the heterogendered binary, that we know of in elite sports today. And, I seek to untangle the ways in which these structures are “products of historical practices” that are “constantly reproduced and transformed by historical practices” lead by those homogenous “agents possessing the schemes” transforming the practicises within the habitus as “a taken for granted” (Bourdieu, 1977, pp. 83, 80). For these reasons, it is pertinent to briefly examine how this wider habitus and those functioning and upholding it, shape opinions about sex and gender and also assign certain sex and gender attributes. These discussions may in turn offer deeper
insights into the reasons why strong contentions and anxieties emerge when athletes in female competitions ‘disturb’ female sex and gender idea(l)s. With an intersex lens, this section examines the discourse on shaping sex and gender through the assignment of sex and gender attributes. An apprehension of the ‘homogenous’ habitus surrounding people with intersex variations is thus useful to understand more fully the logic behind the ways in which female athletes with certain intersex variations have been policed and regulated in female sports and sports medicine through time.

While examining the ‘homogenous’ habitus producing and reproducing particular ideas about sex and gender, I am equally interested in the ways in which these ideas and ideals may be challenged by those not part of the homogenous habitus who may disagree with their logic:

… practices are always liable to incur negative sanctions when the environment with which they are actually confronted is too distant from that to which they are objectively fitted. This is why generation conflicts oppose not age-classes separated by natural properties, but habitus which have been produced by different modes of generation, that is, by conditions of existence which, in imposing different definitions of the impossible, the possible, and the probable, cause one group to experience as natural or reasonable practices or aspirations which another group finds unthinkable or scandalous, and vice versa. (Bourdieu, 1977, p. 78)

Both the homogenous habitus upholding particular sex and gender idea(l)s in female sports as well as resistance to this will be examined when mapping the ways in which rules and regulations in female sports have been structured.

When considering the habitus around intersex, these ‘variations’ have been widely considered to be something disorderly, pathological and a deviation from an ‘ideal’ sex development. Consequently, the discourse on intersex has, until recently, been isolated to the profession of medicine (Chase, 1998b, p. 190; Morland, 2009b, p. 207). In the relatively early days of medicine, surgeons dealt with intersex cases by performing corrective genital surgeries – mainly on infants and children with visible intersex variations around the mid-1900s. The aim of such surgeries was to ‘normalise’ these children, usually at the behest of parents who had either requested the surgeries specifically or to whom the surgeries had been recommended (Dreger & Herndon, 2009, p. 202). Corrective operations for the purpose of normalizing the external/internal genitalia of infants born with intersex variations did not however, become standard practice until the mid-1950’s with the advent of psychologist John Money and psychiatrists Joan and John Hampson, all from John Hopkins University (Dreger & Herndon, 2009, p. 202; Money, Hampson & Hampson, 1955a). Money and the Hampsons together
believed that infants born with intersex variations could be *assigned* one sex through surgery, that is, the infant could be *assigned* the gender identity that went together with the surgically reconstructed genitalia. Money, who was the spearhead behind the so called “OGR model” (optimum gender of rearing), reasoned that if infants with intersex variations were to undergo ‘normalizing’ surgeries, it had to be done as early as possible in life.\(^\text{28}\) This had to be done in order for the child’s gender identity not to become diffused or confused (Dreger & Herndon, 2009, p. 202; Money et al., 1955a).

In her pioneering pieces *The five sexes: Why male and female are not enough* (1993) and *The five sexes revisited* (2000b), Anne Fausto-Sterling sharply criticises the “OGR” theory mainly because it cannot guarantee that the individual will identify emotionally or psychologically with the gender to which they have been assigned. She argues that the very existence of intersex as a phenomenon in itself suggests that the binary sex model is unstable and proposes a more complex view in which humans are born along a continuum of possible sex developments (1993, p. 24, 2000b, pp. 22-23). She not only criticises the sex reassignment surgeries from a moral and ethical perspective, but also questions why the female and male sexes and genders are the only options available (Fausto-Sterling in Kessler, 1990, p. 4; Fausto-Sterling, 1993, 2000a, 2000b).

In Iain Morland’s *Is intersexuality real?* (2001, p 542) and Morgan Holmes’ *The intersex enchiridion: Naming and knowledge* (2011, pp. 394, 404) they extend this discussion and trouble the nature of the phantom category ‘intersex’. Because ‘sex’, “and, by extension, intersex” (Holmes, 2011, p. 394) are socially, biologically, mentally, genetically and medically constructed, so is ‘intersex’. The fact that ‘intersex’ is disputed as an identity and comprises a range of genetic and physical makeups suggests that the category as it is understood and used in elite sports is equally troublesome. This thesis intends to further expand and trouble the continuity and discontinuity of the phantom category of intersex in elite sports and the ways in which the participants continue shaping and limiting their own bodies simply by virtue of partaking in the ‘intersex’ and elite sports debate.

Through their propositions and instructions, Money and his colleagues set the standard for how to depict and manage infants/children with intersex variations and in many ways laid the groundwork for the ensuing structuring habitus of intersex in science and medicine. These discussions also show that through genital re-constructive surgeries they were assigning gender to particular sex attributes, which can be interpreted as one way to keep the binary sex and gender model intact.

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Drawing on this, I am interested to learn to what extent the habitus of intersex in science and medicine may have influenced the habitus of intersex in elite sports and the ways the IOC/IAAF have been informed by medicine and science concerning the management of athletes with intersex variations. This is where the notion of Bourdieu’s habitus becomes relevant. As habituses are defined as “systems of durable, transposable dispositions, structured structures predisposed to function as structuring structures”, the application of this framework helps with the understanding of the “principles which generate and organize practices and representations” within the IOC/IAAF “that can be objectively adapted to their outcomes without presupposing a conscious aiming at ends or an express mastery of the operations necessary in order to attain them” (Bourdieu, 1990, p.53). Considering the influence of the habituses (homogenous and oppositional) upon popular culture, medicine and sports medicine, as it relates to thoughts and attitudes about intersex, may thus clarify why the IOC/IAAF have, since the implementation of sex testing and until today, stressed the importance of identifying, regulating and treating these athletes.

Researchers Kessler and McKenna have also made the connection between the gender assignment surgeries of Money and the discourse of world elite sports through mandatory chromosome testing determining the sex of athletes in female sports (1985, pp. 51-54). Through chromosome tests, the IOC and its ISFs have determined whether female athletes had the biological sex criterion to eligibly compete as women. If women happened to have a 46, XY configuration (often perceived a biological male) marked on the sex test report, they were disqualified. In this case, biological sex criteria were constructed to support the social criteria for gender (Kessler & McKenna, 1985, pp. 51-54). In opposition to this, the authors stress that “the possession of a vagina, labia, and a clitoris, or a penis and scrotum is neither a necessary nor a sufficient condition for developing a female or male gender identity, respectively” (Kessler & McKenna, 1985, p. 57). Similarly, “all the scientific evidence indicates that chromosomes have little or no direct effect on whether persons feel that they are female or male” (Kessler & McKenna, 1985, p. 49). Building on this and recognising that chromosome investigations do not set the foundation for what the IOC/IAAF investigate in women today, I am interested in exploring the diverse technologies the IOC/IAAF have used through history to assess if the athlete was eligible to compete in women’s competitions – through sex tests, femininity tests, gender tests, or as more commonly known today, HA tests. I am also interested in exploring the ways in which the development and understanding of ‘sex hormones’ may have influenced these testing technologies (Oudshoorn, 1994). Furthermore, I am curious as to what extent female athletes agreed with or disputed the IOC/IAAF scientific definitions of their sex and gender.
In the case of the most well-known intersex story of recent times, that of Caster Semenya, the situation seemed even yet more complicated. Because mandatory gender verifications were suspended in 1999, and the gender verification policy which was used to interrogate Semenya was also suspended in 2011, it is now up to the organiser of each sport on a ‘case-by-case’ basis, to determine whether or not a female athlete should be HA tested. Thus, I am interested in exploring the continuities and discontinuities (Foucault, 1970, p. 50) of the policies and technologies used to identify and regulate female athletes whose sex and gender performance challenge those ideals in women’s sports and how and on what grounds they will determine if a female athlete needs to be HA verified today.

The Semenya controversy also brought forth the question of how high levels of functional androgen are allowed to be in female athletes before they disturb femininity ideals in women’s sports (IAAF, 2011a, 2011b; IOC 2012a). Nelly Oudshoorn’s (1994) analysis of the history and the role of ‘sex hormones’, and Kessler and McKenna’s (1985) discussion of how much functional androgen is acceptable in a female athlete before she is eliminated, suggests that ‘sex hormones’ may be a new biological sex criterion assigned to the female gender. Put differently, is the functional production level of androgen the new determining factor of whether or not a female athlete is feminine enough to compete in female only sporting events? I believe it is important to ask whether the testing of functional HA production levels is in fact another tool used to maintain the stability of the binary sex and gender logic. Oudshoorn’s conceptualisation about the history and role of the sex hormones “as the chemical messengers of masculinity and femininity” (1994, p. 17), may thus provide some insights regarding the ways in which the IOC/IAAF have chosen to focus on HA variations since the Semenya controversy.

The Semenya controversy, and others, can also be linked to the ways in which the phenomenon of ‘intersex’ has challenged and threatened the binary sex and gender model, Kessler highlights that a society where sex and gender are based on the female and male polarity means that individuals with intersex variations are not recognised, as they appear in between (1990). Appearing as in between, suggests they are at times also seen as a threat to the binary sex and gender model (Kessler, 1990). The notion of the in between is thus informative when attempting to understand the progression of IOC/IAAF policies, tests and attitudes toward sex, femininity, gender and HA through time – the in between is not just a failure of recognition, it is also a refusal. The determination of these organisations to maintain the binary logic is thus related to society’s lack of recognition of those who appear in between (Creighton, Greenberg, Roen & Volcano, 2009; Kessler, 1990).

The binary logic is further condemned by Butler (1999) who is critical of the discussion about assigning gender to a set of genitalia or assigning biological sex criteria to gender. This
scepticism stems from her disbelief that a particular sex mirrors a gender or that a particular gender mirrors a sex. To tease out these notions, she says we need to critically examine what sex is, and how we define sex. More importantly we need to ask: What history do sex and gender, and I would add sex hormones, have in popular culture and what histories have they had in elite sports? Butler (1999, pp. 9-11) argues that as gender is unstable due to it being culturally constructed and loaded with social meaning, this suggests that sex is equally a shaky concept:

…perhaps this construct called ‘sex’ is culturally constructed as gender; indeed, perhaps was always already gender, with the consequence that the distinction between sex and gender turns out be no distinction at all. It would make no sense, then, to define gender as the cultural interpretation of sex, if sex itself is a gendered category. Gender ought not to be conceived merely as the cultural inscription of meaning on a pregiven sex; gender must also designate the very apparatus of production whereby the sexes themselves are established… [the] production of sex as prediscursive ought to be understood as the effect of the apparatus of cultural construction designed by gender. (Butler, 1999, pp. 10-11)

Butler highlights that as sex was perhaps always gender there is no difference between them; rather, they are both socially constructed and it makes no sense to mirror gender as the “cultural interpretation” of sex. Instead gender is the machinery which produces sex as its biological counterpart. Through this interpretation both sex and gender are breaking down as constructs as well as elements that are biologically fixed and binding. Through the “cultural matrix” and the “radical discontinuity” of sex and gender (Butler, 1999, pp. 9-11, 23-24), it may correspondingly be assumed that an athlete, with or without an intersex variation, may not identify as a man or a woman. Even though there are elements that show that certain morphological structures lead to reproduction, we could question the assumption that sex is binary and that gender mirrors the biological construct ‘sex’, especially when individuals with intersex variations can successfully reproduce (Bodies Like Ours, 2002; Butler, 1999, p. 10; Hinkle, 2004).

The same critique could be directed to the binary gender structure in elite sports. Perhaps athletes compete in the gender category which society places them in, but truthfully to themselves they may identify differently. Hence, is there space or are there viable alternatives for athletes, or ‘any people’, who are perceived to be something different from a man or a

29 It is important to stress that this may apply for ‘any person’ – within and outside of elite sports.
woman? So, understanding and applying some of these different perspectives of sex, gender and sex hormones to the socio-political and scientific culture of the IOC/IAAF, intersex organizations and female athletes is an important feature of this study in better appreciating how they conceptualise and limit those who challenge sex and gender norms. And to trouble the idea that ‘man’ and ‘woman’ are not universal categories and neither are the presumed biological underpinnings.

If we are not born with a sex or locked to a gender identity as Butler proposes, it would imply that we do not have sex or gender through birth; instead it is something that is culturally, medically, legally, linguistically, and politically enforced upon us (Butler, 1999, pp. 10-11). Similarly, when it comes to the “reality” of sex hormones, Oudshoorn stipulates that these have been ‘actively constructed’ to meet certain social ideas produced in particular “educational settings” (1994, p. 4):

Early in the twentieth century, the “essence” of femininity came to be located not in an organ but in chemical substances: sex hormones. The new field of sex endocrinology introduced the concept of “female” and “male” sex hormones as chemical messengers of femininity and masculinity. This hormonally constructed concept of the body has developed into one of the dominant modes of thinking about the biological roots of sex differences. Many types of behaviour, roles, functions and characteristics considered as typically male or female in western culture have been ascribed to hormones. (Oudshoorn, 1994, p. 8)

Hence, we can question to what extent sex hormones have been actively created opposed to actively discovered, and what relation these hormones have had in defining and differentiating ‘femininity’ from ‘masculinity’ and vice versa.

These arguments by both Butler and Oudshoorn, do not mean biology has no effect on how we identify and relate with regard to gender roles and gender identities. Fausto-Sterling (2012) stresses that “the development of sex and gender in humans is layered” (p. 119) and believes that gender development, especially, is “developmental...not a fixed body – but one that changes over time” (p. 113).30 Perhaps because “sex and gender will remain a moving target” (Fausto-Sterling, 2012, p. 123), this layered and developmental nature of sex and gender means that these concepts are too complex and contentious for scientists, anthropologists and sociologist to agree on. This study recognises these complexities and aims to further trouble such sex and gender debates in elite sports through the lens of intersex.

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30 Read more about Fausto-Sterling’s gender development theories concerning the historical evolution how the colour preferences blue and pink have shifted over time. (2012, pp. 109-118)
Lastly, as several female athletes\textsuperscript{31} have been suspended from elite sports because they failed the sex/femininity/gender tests, what room or options do the IOC/IAAF give these athletes who disturb sex and gender expectations? Would they be given the option to compete as male athletes instead? But more importantly, would the idea to compel these women to compete as males solve anything or would this potential option possibly further infringe their own rightful identification as women? These arguments, debates and unanswered questions show how anxieties related to the binary logic need much further examination, which is the aim of this study. Because the IOC/IAAF argue that female athletes will be HA verified on a ‘case-by-case’ basis, those wishing to challenge particular female athletes must scan the body and embodiment of them and find them ‘disturbing’ before filing an official complaint. The next section will thus look at how truths and knowledges concerning the production of disturbing and ideal female bodies and embodiments are in need of both further investigation and reconsideration among the participants of this study.

\textbf{The Female Body and Female Embodiment in Elite Sports}

\begin{quote}
\textit{The body implies mortality, vulnerability, agency: the skin and the flesh expose us to the gaze of others but also to touch and to violence. The body can be the agency and instrument of all these as well, or the site where “doing” and “being done to” become equivocal. Although we struggle for rights over our own bodies, the very bodies for which we struggle are not ever only our own. The body has its invariably public dimension; constituted as a social phenomenon in the public sphere, my body is and is not mine. (Butler, 2004, p. 21)}
\end{quote}

\begin{quote}
\textit{“[B]iopower” is the governance and regulation of individuals and populations through practices associated with the body. (Wright, 2009, p. 1)}
\end{quote}

The Cambridge Dictionary describes the body as “the whole physical structure that forms a person” (Walter, 2006, p. 132), and according to Conboy, Medina and Stanbury (1997) the female body, in particular has “been at the centre of feminist theory” as women have historically “been determined by their bodies” (p. 1). As this study considers how truths and knowledges about normative versus non-normative bodies and embodiments have been produced, circulated, deployed, justified and contested in female sports and among the three cohorts of participants, Susan Bordo adds that the female body has also been a source of control

\textsuperscript{31} Such as Ewa Klobukowska (Tearful Eva, 1968), Maria José Martínez-Patiño (Martínez-Patiño, 2005), Santhi Soundarajan (Mitra, 2012), Caster Semenya (Ginnane, 2011) and the Salimata sisters (Smith, 2010).
‘Embodiment’ then describes the process involved when “someone…represents a quality or an idea exactly” (Walter, 2006, p. 406), that is, when someone has transformed by other pressures to reflect either the explicit or implicit expectations of others as individuals or groups (Morgan, Brandth & Kvande, 2005, p. 4). This section makes the case that diverse powers, pedagogies and technologies work upon and influence the body and embodiment by marking, regulating and even haunting particular bodies by determining the standards for what is perceived to be normal and abnormal. It is thus vital to briefly examine the ways in which the female body and embodiment as opposed to the male body and embodiment have been marked and shaped outside as well as inside the realm of elite sports. These discussions may in turn reveal the deeper meanings behind why contentions and anxieties emerge when athletes in female sports disturb female body and embodiment idea(l)s.

Drawing from Bordo’s work, female embodiment is represented through an ideal set of characters such as “clothes, body shape, facial expression, movements and behaviour” implying that femininity is taught, through the cultural habitus (1997, p. 94). Bordo asserts that women are encouraged to be slim and slender to the point of being anorexic and men are encouraged to be bulky and muscular (1997, pp. 96-98). But do the same rules apply to female athletes, considering that individual sports ‘shape’ bodies (Kane, 1995)? I am interested to understand the extent to which the rules of embodiment condition female athletes to be more ‘feminine’ and the nature of the power relations which result in the marking, regulation, disciplining and praising of certain bodies and not others in female sports.

Bartky (1997) proposes that femininity is something women ‘perform’ through the normative body:

Normative femininity is coming more and more to be centred on woman’s body – not its duties and obligations or even its capacity to bear children, but its sexuality, more precisely, its presumed heterosexuality and its appearance (pp. 148-149).

Bartky points out that perceptions about women’s bodies have taken a higher place in the common definition of normalcy than the actual function or product of the body itself. If we apply Bartky’s ideas to the various reactions to female athletes who have been sex and gender questioned, we find a likely explanation for the contentions and anxieties which emerged. Were their bodies so disturbing to accepted truths and knowledges about idea(l) female bodies and how they should perform, that the consequence was regulation or even punishment through sex/gender questioning?

Butler in a similar way to Bordo tries to explicate bodily autonomy and the (non)ownership we have over our own bodies. When the body enters the public domain it
becomes dependent on others because others define it (Butler, 2004). The public sphere thus has the power to define and engender our bodies, for others primarily (Butler, 2004). For Butler (1999), as the body is gender marked by others it must follow certain norms in order not to be penalised. Hence, dominant relations of power constructing gender not only produce normative bodies but also regulate diverse bodies that then materialise as, and are marked as abnormal (Butler, 1993). What then counts as a real and female (athlete) is to a large extent up to the watching public to determine (Butler, 2004). The public, in the context of female athletes, may be the IOC/IAAF, other female athletes, spectators, coaches, funders etc. Building on this, I am interested in the role female athletes have in marking and regulating bodies of others and whether intersex organisation representatives also take part in this process, and if so in what ways.

On the topic of ‘disciplining’ bodies, Foucault contends that the disciplinary powers of media and medicine produce, circulate, maintain and contest ideas and expectations about the ideal body and embodiment, especially what they should look like. (1980a; 1980c) As Foucault does not explicitly consider the discourse of the female body (McNay, 1992), or bodies within elite sports in his work, this study intends to extend that work to consider the effects such disciplinary powers have upon the female body and embodiment, in particular. In further keeping with Foucault’s convictions, this study will examine the power dynamics involved in the exclusion/inclusion process for any body that comes in contact with the IOC/IAAF, and how these processes affect the body of female athletes, and those with intersex variations in particular.

For the first time, the IAAF made available in 2011 images and scales to assist medical teams, female athletes and others reading the HA policy (2011a) to detect what an HA variation may look like. Drawing on Foucault (2003) and his conceptions of how the body may be regulated and controlled through political power relations (i.e. biopolitics and biopower) is useful in analysing these images and scales to the roles public opinion, or the opinion of female athletes, play in shaping and regulating the female body in elite sports.

Valerie Harwood (2009, p. 24) exhorts us to explore how truths and knowledges about the body and life are circulated by critically interpreting “what instructions… are being given?” and who are “the ‘authorities’ that give the instructions”? Because the IAAF HA policy is the first sex/femininity/gender/HA policy of its kind in modern sports administration to employ images and scales which produce, circulate, deploy and justify how non-normative bodies might look, I am also interested in exploring who the biopedagogues behind such powerful policies are, as well as the images and scales.
Hence “the status of those who are charged with saying what counts as true” (Foucault, 1980f, p. 131) is of importance for this study. Female athletes such as Ewa Klobukowska (Tearful Eva, 1968), Maria José Martínez-Patiño (Martínez-Patiño, 2005), Santhi Soundarajan (Mitra, 2012), Caster Semenya (Ginnane, 2011) and the sisters Salimata and Bilguisa Simpore (Smith, 2010) were all accused by those who challenged them to be tested of being something other than women. Why did this occur? Was it because of the shape of their bodies or maybe how they carried themselves? Was it their voices or their postures, their muscle mass or their hair development that were the reasons why they were accused of being something other than women? As all the female athletes above were sex/femininity/gender verified, I am also interested in the ways in which their particular bodies and embodiment specifically resulted in concrete accusations against them and I seek to trace those accusations back to the biopedagogues whose truths ultimately lead to the investigations being initiated. In other words, I ask the question; whose knowledges, truths and instructions count when examining the logic behind developing and institutionalising particular sex/femininity/gender/HA policies in female sports?

Because the mandatory gender verifications were suspended in 1999, it is today up to each sport organiser to determine whether a female athlete should be HA tested on a ‘case-by-case’ basis. Concerning the female body and embodiment, I ask again how will they determine whether a female athlete needs to be HA verified, and on what grounds? From the perspectives of biopower and biopedagogy, I seek to investigate to what extent the newly incorporated images and scales of women in the IAAF HA (2011a) policy assist in pointing out what to identify, and to determine whether these images and scales will lead to the continuation of the justification and maintenance of particular truths and knowledges about specific bodies in (female) elite sports.

Biopower includes a perspective of “one’s embodied cultural location” (Morland, 2009a, p. 194) or as Rabinow and Rose put it (2006), “modes of subjectification, through which individuals are brought to work on themselves” (p. 197). These frameworks and that of Foucault discussing the “social body”, the “docile” body and “materiality of power” (1980a, pp. 55-62, 1980b, pp. 137-138) will be drawn on when considering to what extent female athletes define and regulate their own bodies and those of others.

Morgan Holmes argues that those with sex and gender variations, such as intersex variations, are “haunted” (2009, p. 6). The “haunting” arises when there is a clinical assertion of perception of “defect” and this is used to justify the further intervention premised on the insistences of the prevailing sex/gender system (Holmes, 2009, p. 6). Holmes suggests that if intersex bodies were instead welcomed, embraced and celebrated rather than being “haunted”
by the pressure to fit the ‘either/or’ category, those who take the lonely road away from ‘normalness’ would not feel like human failures. (2009, p. 6) In the case of the female athletes mentioned on the previous page, who have all been sex/femininity/gender questioned and subsequently disqualified from further competing, I believe Holmes’ theory about being “haunted and haunting” may help explain some of the angsts and angers that arose with these sex and gender testing controversies. The concept of “haunting” disturbing bodies creates an insight which is helpful in the examination of how idea(l)s of gendered bodies and embodiments are produced, circulated, deployed, justified and contested within the IOC/IAAF medical commissions, among intersex organisation representatives and among women athletes.

Continuing with the idea that athletes with intersex variations may be “haunted”, both Kessler (1990, pp. 4, 16-26) and Creighton et al. (2009, pp. 251-52) highlight that the bodies of individuals with intersex variations are deemed ‘undeveloped’, ‘maldeveloped or ‘unfinished’ bodies by the medical sphere. And as Nikki Sullivan laments (2009), what has been seen and accepted as the panacea to any and all such biological mistakes is ‘corrective’ surgery:

We are surrounded by, and have embodied, the idea that while the vast majority of bodies may not be ill, they are nevertheless “wrong” in one way or another: they have too few (or too many) limbs or digits; they (or parts of them) are the wrong size, the wrong age, the wrong color; they are “sexually ambiguous”; they bear the wrong ethnic markers; they inhibit particular identities and/or aspirations; they simply do not seem “right.” Surgery, then become a means of correcting things, of restoring order. (Sullivan, 2009, p. 313)

As there are always particular bodies that are deemed “right” and “wrong”, the quote by Sullivan proposes that the acceptance of modificatory practices on the body by society as a ‘corrective’ or ‘normalizing’ measure for the body characteristics we or others may not like, may go a long way to explaining why the IOC/IAAF feel and continue to feel justified in the development and implementation of these testing policies in female sports. On the other side of that, this study asks: what do intersex organisation representatives and women athletes have to say about the ways in which the IOC/IAAF target one particular group of women as potentially having bodies that produce “wrong” levels of functional androgen? Further, how can this discussion by Sullivan be related to the rules and regulations which the IOC/IAAF medical commissions have developed and which potentially coerce HA athletes to undergo medical treatments in order to eligibly compete? If they do not comply with whatever rules the IOC/IAAF have designed, what are the consequences? And what do intersex organisation representatives and female athletes think about these rules and potential penalties?
Applying Sullivan’s notion of *somatechnologies* to the diverse and multifaceted ways in which the intersex body is (re)produced “not only by the surgeon’s knife, but also by the discourses that justify and contest the use of such instruments” (2009, p. 314) is also helpful in ascribing a proper value to the complexity of how the female athletic body is marked and regulated by those who participate in the conversation about it. Sullivan argues “that the conceptions of, debates around, and questions about specific modifier practices are themselves technologies that shape corporeality at the most profound level” (2009, p. 314). Through the lens of somatechnologies, one may thus “engender more-nuanced understandings of and critical responses to the complex and multifaceted technés in and through which embodied being(s) come to matter in situated contextually specific ways” (Sullivan, 2009, p. 317). Hence, the application of this theory to help understand how “bodily being (or corporealities) as always already technologized and technologies as always already enfleshed” (Sullivan, 2009, p. 317) may provide new insights when exploring the ways in which the IOC/IAAF, intersex organisations and female athletes “justify and contest” the testing technologies and talk about athletes who disturb body and embodiment idea(l)s. Again, this framework troubles the phantom category of ‘intersex’ and the ways in which the participants continue shaping and limiting their own bodies simply by virtue of partaking in the debate.

The final section of this chapter is a consideration of how certain defining characteristics within elite sport such as athletic performance, fairness and physical prowess are referenced in the assessment of specific disturbances to sge norms in female sports and how this connection ultimately leads to the act of sex/femininity/gender/HA questioning of athletes in female competitions. I am inquiring into how these debates can be useful when examining athletes with intersex variations that have been femininity questioned, tested and eventually disqualified compared to those who have not.
Athletic Performance, Fairness and Physical Prowess in Female Elite Sports

Outward signs of gender are already triggers that raise suspicion about a female athlete’s sex... Yet even if outwardly visible markers of gender were not triggers, the manner through which suspicions about sex are reported and acted on will inevitably come to public attention. Indeed, the fact that anyone can make their concerns about an athlete known to an IAAF medical director may mean that leaks of private health information or a whisper campaign about an athlete exists prior to the beginning of an investigation or even triggers an investigation. (Karkazis et al., 2012, p. 13)

As pointed out by Karkazis et al. the fact that others may through whisper campaigns prompt an HA investigation implies that a multiplex and complex power-relation within and around the sphere of elite sports trigger these investigations. This study intends to further explore the history behind the ways in which this encouragement by the IOC/IAAF to ‘tell on others’ has evolved.

The rationales for introducing sex controls in women’s competitions frequently refer to the rumours of the 1950s and the 1960s, where it was argued that “hermaphrodites” or men disguised as women were participating in female-only sporting events (Hay, 1974, p. 120; IAAF, 2006, p. 9; Simpson & Ljungqvist, 1992, p. 850). According to medical practitioners and the IOC/IAAF at the time, the introduction and standardisation of sex tests (and doping tests) were linked to these rumours. Other stories such as those suggesting that the former Soviet Union and other Eastern European nations, during the mid-1950s and early 1960s, were willingly using illegitimate performance enhancing drugs and ordering men to masquerade as women, also affected this debate. A number of ‘cases’ where female athletes had transitioned to become men also troubled the IOC and its ISFs. That said, it is important to clarify that women were challenged for their non-feminine appearance long before the Cold War period and that medical certificates on a national level were an accepted and standard procedure before the IOC introduced their mandatory sex tests in 1968. (Ferguson-Smith & Ferris, 1991, p. 17; Heggie, 2010; Ritchie, 2003, p. 87)

As there is sparse and conflicting information about when female athletes were initially challenged for not being feminine enough (Heggie, 2010), this study believes it is important to examine the evolution of the sex/femininity/gender/HA tests from a genealogical perspective (Foucault, 1977, 1980f, 1988; Grosz, 1994, p. 145), from a lens exploring these tests from a 32

“history of the present” standpoint (Foucault, 1979, p. 31). This way one may appreciate the historical context in which the first female athlete was accused of being something other than a woman, and when the first known policy stipulating that women had to be medically examined (and men not) in order to compete in women’s sports, was produced.

Kevin Wamsley (2008, p. 7) and Mary Jo Kane (1995, p. 191) argue that sport has historically played a fundamental role in enforcing and upholding patriarchal ideologies and hierarchies with respect to gender. Martine Rothblatt (1995, p. 71) and Mairne Haig-Muir (2002, p. 54) similarly suggest that the world of elite sports has long treated female athletes’ bodies which do not fit the binary sex and gender norms unjustly and this even more so since the invention of sex/femininity/gender tests in female-only sporting events. Haig-Muir writes that female athletes who “play or behave ‘like men’, that is take their sport seriously, train hard, develop visible muscles, display physical prowess and determination” will with greater probability have their sex, gender and sexuality questioned than those who do not (2002, p. 54).

Considering these questions and understandings the debates surrounding them may help us to appreciate why female athletes, like Semenya, the Salimata sisters, Soundarajan and others who have been judged as disturbing female athletic performance ideals have had their sex and gender questioned. Examining how the IOC/IAAF, female athletes and intersex organisation representatives consider the relationship between female performance ideals and looks and, which of the two measures is more likely to be the potential reason for a female athlete to be challenged and tested are thus of great value. Do looks weigh more heavily than athletic performances, or the other way around? Or are there even more compelling answers to what ‘triggers’ an investigation, and have these ‘triggers’ changed over time?

In keeping with this, Kane (1995) suggests that in order for any female athlete to be taken seriously, they have to earn the crowd’s respect by performing well. Whether this implies for one to be big, small, heavy, light, flexible, muscular, tough, and fast or powerful, these characteristics are largely determined by the type of sport in question. These characteristics can however at certain times, conflict with the idea that women should still perform in certain ‘female’ ways (Kane, 1995). For example, what is the limit for how committed and well women are allowed to be in their sport, before their sex and/or gender is brought into question? Also, how are they expected to meet the rigours of competition and to excel against themselves and others without potentially rising to a level of physical prowess and power at which socially constructed idea(l)s about femininity and masculinity are challenged? (Messner et al., 2003)

Part of the scope of this research is also to query how a suspicion towards an athlete can evolve and still come to “public attention” (Karkazis et al., 2012, p. 13), especially when the IOC/IAAF have stressed, and still do, that an athlete’s challenge and testing procedures should
remain “confidential” (IAAF, 2006, p. 6, 2011a; IOC, 2012a). This study aims to look deeper into the confidentiality rhetoric of the IOC/IAAF for obvious conflicts with how their testing policies are designed. Also, is their promise of keeping investigations and results confidential in conflict with their policies allowing athletes to report and challenge someone who is suspected as having an HA variation? And from the perspective of “one’s embodied cultural location” (Morland, 2009a, p. 194) and biopower, what role do other female athletes have in further marking and limiting particular bodies and athletic performances in female sports as normal versus abnormal which may ultimately trigger an investigation? And if such an influence indeed exists, how central a factor would it be to the keeping or breaking of these confidentiality promises of the IOC/IAAF?

Further, as continuities and discontinuities (Foucault, 1970, p. 50; Grosz, 1994, p. 145) of language, knowledge and technologies seem to be identifiable themes in the IOC/IAAF testing culture, this study is also interested in the logic used to determine the different nomenclatures adopted for these tests when it seems that the ideology supporting testing regimes has remained the same (Heggie, 2010; Schultz, 2012). Jamie Schultz (2012) for example states that:

…let’s not equivocate. Identifying hyperandrogenism in female competitors does the same thing as the “nude parades” and gynecological examinations of the 1960s, the Barr body tests of the 1970s and 1980s, and the SRY gene detection of the 1990s: It identifies (and usually excludes from sport) those women who do not meet the IAAF’s protean standards for femaleness. (p. 33)

In keeping with Schultz, this work further explores why the names for the testing technology have been changed first from sex then to femininity to gender and now to HA testing. Similarly, why does it seem as if there is a discrepancy in time between when the names of the testing policies changed from when the testing technologies changed? In this study I am interested in the ‘real’ reasons behind the name and technology modifications while the ideology seemed to remain the same (Heggie, 2010; Schultz, 2012). And to what extent these changes comply with internal and/or external pressures. Foucault’s (1970) and Grosz’s (1994) genealogical idea of considering the reasons behind the continuity and discontinuity of different taxonomies and testing technologies in constructing a particular truth and ideology is something this study is interested in further examining.

On the topic of body, performance and fairness, Tara Magdalinski introduces the idea that female body builders challenge what is deemed accepted female forms as they are often rejected as unnatural and even perceived as “monstrous” beings. (2009, p. 11) Magdalinski states that female bodybuilders are often perceived to be monstrous manipulations as it is
widely believed they take some form of performance enhancing substances, such as anabolic-androgenic steroids (AAS), to build up their muscular tissue (2009, p. 11). Hence, the widely held belief that women whose body and athletic performance disturb female sex and gender norms must somehow have attained that shape and athletic superiority through moral wrongdoing is a powerful, self-perpetuating idea (Magdalinski, 2009, p. 11).

Building on this idea, Laura Hercher (2010, p. 552) writes that “taking an excess of testosterone is cheating. Producing an excess of testosterone is a genetic advantage, and there is nothing inherently wrong with that. Genetic advantages are the norm and not the exception in competitive sports”. Reeser (2005) stresses that sport has acknowledged unique inborn variations since its inception, and in certain sports these variations could seem to some to afford unfair competitive advantages, such as longer arms, longer legs, greater height, bigger feet or larger hands (p. 698) or other genetic ‘conditions’. Within these debates I believe it is important to distinguish between athletes who willingly and not so willingly take performance enhancing substances in order to improve their performance and probable chances of success and those athletes who may have competitive advantages which have occurred outside the discourse of ‘artificial manipulation’ (and simultaneously may disturb binary sex, gender, body and embodiment norms).

Continuing on the topic of ‘fair’ athletic performance in elite sports and its connection to HA, the IOC (and the IAAF) have argued that “androgenic hormones have performance-enhancing effects, particularly on strength, power and speed, which may provide a competitive advantage in sports” (2012a, p. 1). However, as argued by both Fausto-Sterling (1985, pp. 216-217) and Karkazis et al. (2012, pp. 8-12) this discussion may be less straightforward than it seems. And an athlete’s functional versus non-functional levels of testosterone may not be the sole reason explaining why an athlete performs well or poorly in their category. Karkazis et al. (2012) elaborate:

…the link between athleticism and androgens in general or testosterone in particular has not been proven. Despite the many assumptions about the relationship between testosterone and athletic advantage, there is no evidence showing that successful athletes have higher testosterone levels than less successful athletes. (p. 8) (Emphasis in original)

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33 AAS is an intake of testosterone which is believed to build up muscular tissue.
34 Such as marfan syndrome which is a ‘condition’ that may feature long arms, long legs, tall and slim physique, flexible joints and flat feet (National Marfan Foundation, 2013), which may be advantageous for an elite swimmer.
If what Karkazis et al. propose is accurate, that there is no conclusive scientific evidence which shows that high levels of testosterone result in superior athletic performance or conversely that low levels of testosterone result in poor athletic performance, why then should athletes with HA variations pose any larger threat to the ‘level-playing field’ in women’s sports than those with any other genetic advantages? Can the IOC/IAAF continue arguing that HA variations pose a particular threat if it has not been scientifically proven that testosterone is the clear and definite reason for the success of athletes, both male and female? These debates provoke further discussion about whether it is scientific or even fair to focus on functional levels of testosterone production in isolation when classifying an athlete’s eligibility to compete in women’s sports and consequently whether functional testosterone levels should be regulated in women’s competitions at all. This study will examine logical inconsistencies with regard to biology, diversity, technology, performance, prowess and fairness within the listed discourses and describe what bearing those inconsistencies have on the debate about natural versus artificial competitive advantages within elite sports.

With all that being said, Tim Noakes (in Ginnane, 2011) argues that outstanding performance is understood and treated differently in women’s sports from men’s sports. Juxtaposing the treatment of Usain Bolt’s athletic performance with that of Caster Semenya Noakes suggests that female athletes’ superiority is penalised while male athletes are seen as athletic wonders. Noakes thus wonders “So why should a male [athlete] be treated that way? But when a female comes along, she is abnormal; we got to take her out. But that is the whole point with sports: the best are genetic freaks” (in Ginnane, 2011). For Noakes, high male achievers like Usain Bolt, are treated as heroes while a female athlete with a comparable “biological advantage” must be ‘taken out’ because her “abnormality” threatens the norm of ‘normality’ in female sports. Does that imply that women who simply seem ‘too good to be women’ must be removed?

Ian Ritchie (2003) and Susan Cahn (1994) both provide some explanations for this disparity and clarify that athletes who transgress sex and gender norms do not as easily follow the same system of acceptance if they embody qualities of athletic superiority. Shani and Barilan (2012, pp. 27-28) further elaborate: “There are good reasons to suspect that the ongoing attempts to regulate the gender division in sport are related less to fairness and the spirit of sport and more to a strong drive to ‘normalize’ gender identities and conditions”. The logic behind this disparity can be further linked to Oudshoorn’s discussion on the development and history of the sex hormones and “sex hormone blood tests” (1994, p. 145). Oudshoorn provides further insights to this discussion by suggesting that since the turn of this century sex endocrinologists have through “locating sex in chemicals”, i.e. hormones, been able to suggest
“that there can be too much or too little of these substances in the organism. Sex thus becomes an entity that can be measured, quantified and manipulated with the laboratory techniques” (1994, p. 145). As a consequence, sex endocrinologists have, through sex hormone blood tests, not only been able to “actively intervene in the lives of women and men”, but also offer “diagnostic and intervention techniques” that have influenced the practice of medicine and distinguished ‘normal’ from ‘abnormal’, and pathological levels of sex hormones (Oudshoorn, 1994, p. 145):

In addition to the introduction of diagnostic techniques, sex endocrinology provided the medical profession with a new class of drugs that were developed to cure newly constructed category of diseases: hormone deficiency diseases. Sex endocrinologists defined low levels of hormones as deficiencies. In this manner, they transformed the hormonal model of sex into a model of disorders and pathologies. The concept of hormonal deficiency disease implies that this category of diseases can be treated with the administration of hormones to make up for the lack of these substances …this hormonal model of diseases became integrated into medical practice. (Oudshoorn, 1994, p. 148)

This medical intervention is particularly interesting, when examining the ways in which the IOC/IAAF have introduced a ceiling of how much functional androgen female athletes are allowed to produce before it is stipulated abnormal or even pathological. This thesis is notable, as Oudshoorn argues that the introduction of ‘sex hormone blood tests’ and diagnostic techniques have had a greater impact on women as it was “the female body that became increasingly subjected to medical intervention”, rather than the male body (1994, p. 149).

These are all interesting theories for the discussion of fair performance and “biologic advantage” in male and female sports; especially if “genetic advantages are the norm and not the exception in competitive sports” (Hercher, 2010, p. 552). This study will thus investigate what the IOC/IAAF, intersex organisation representatives and female athletes have to say about why fair athletic performance is constituted and limited differently among female athletes as opposed to male athletes. And what do intersex organisation representatives and female athletes have to say about what they believe are the underlying reasons for why ‘female’ intersex variations in particular, seem to be categorised as possessing “biological advantages” in elite sports? (Noakes in Ginnane, 2011)

Caroline Symons and Dennis Hemphill state that society’s hesitance in accepting any biological advantages which occur as a result of an intersex variation stems from a heterogendered structure combined with the pathologisation of intersex by the fields of science
and medicine (2006). Institutions of elite sports have as a result “been very slow in responding to the rights and challenges presented by the existence of… intersexed persons” (Symons & Hemphill, 2006, p. 116). This research project will consider this argument further in relation to the Semenya controversy which seems to have opened up the ‘rights’ discussion. Arne Ljungqvist, the medical chair of the IOC, stated in 2010 that human rights and legal inputs are necessary when drafting the HA policy on the management of HA athletes (IOC, 2011, 2012a; Lehourites, 2010). As one intersex organisation was included in the HA policy drafting talks (IOC, 2011), I am curious as to what role it and other intersex organisations have had in the processes of producing, circulating, deploying, justifying and contesting sex, gender, body, embodiment and fair athletic performance norms in women’s sports.

In all of the oppositional language evaluating whether female athletes with intersex variations are afforded unfair competitive advantages, there is little mention of the potential “inter[sex]phobia” (Spurgas, 2009) they may endure in their chosen field of endeavour. Do any intersex organisations make use of this language to express how intersex athletes have been depicted, treated and managed through time? And how have the IOC/IAAF and female athletes talked about ‘intersex’ variations in elite sports through time? The potential inter[sex]phobia that female athletes with intersex variations may endure is thus a topic this study wishes to explore.

Arising out of these issues of identification, diagnosis, regulation and treatment is a question which defies a commonly held assumption: Is participation in elite sports a privilege or a right? (Pierson, 2010, p. 323) The right versus privilege debate becomes relevant when considering that the IOC/IAAF have stipulated that they may reserve the right to oblige female HA athletes with particularly high levels of functional androgen to undergo medical treatments in order to eligibly compete (IAAF, 2011a; IOC, 2012a). This conversation becomes further relevant if rules and regulation are only taking place in the female camp and if obliging athletes to undergo the medical treatments not only results in the athlete becoming worse but also having a negative impact on the athlete’s physical and psychological health and wellbeing (Karkazis et al., 2012; Viloria & Martínez-Patiño, 2012). This study will further investigate to what extent the IOC/IAAF seem to consider, as a duty of care, any negative side effects of the medical treatments imposed on HA athletes and whether competing in women’s sports is a privilege and not a right.

**Conclusion**

This study queries how knowledges and truths about how disturbing versus ideal sex, gender, body, embodiment and athletic performances are produced, circulated, deployed, justified and
contested within the IOC/IAAF, among intersex organisations, and among female athletes. A central tenet of this research is to maintain that there is no single truth about how to understand these concepts; rather there are clashes of truths and knowledges as well as continuities and discontinuities about how athletes with intersex variations have been conceptualised, limited and managed in women’s sports through time.

A number of theorists\textsuperscript{35} have written extensively on the habitus of intersex in science and medicine, providing insights which are very helpful in understanding how the issue of intersex is conceptualised in medicine and popular culture. Few have however, thoroughly expanded on these conceptions within the realm of elite sports and examined how the habitus of intersex in medicine/science may have informed, influenced and structured the habitus of intersex in elite sports. These frameworks are perhaps necessary in furthering our understanding of the contexts in which the IOC/IAAF, intersex organisations and women athletes may establish their understandings regarding normal versus abnormal sbge and thus about athletes with intersex variations.

As little scholarly attention has been paid to the changes in testing nomenclatures used by the various sporting bodies, such as the changes in terms from sex, to femininity, to gender and then to HA tests, I will examine this area along with the discontinuities of testing technologies. This will also contribute to better comprehending the reasons behind, mainly, international sporting institutions’ shifts regarding testing names and technologies, and why these discontinuities do not seem to occur simultaneously. This study will also investigate the extent to which the ideology for testing continued or discontinued through ruptures in the testing names and technologies. This analysis will also bring a better understanding to the continuous and discontinuous participation of scientists and IOC/IAAF medical commissioners’ use of the tests. Put differently, it will identify who justified the tests, who opposed them and who they were influenced by.

Examining how body-related powers and technologies, especially those which draw on biopower, biopedagogy and somatechnology have been used to convey certain truths and knowledges about the body and athletic performance in women sports also forms a portion of this work. Thus, individuals born with intersex variations are an important focus of this study as their lives and stories have been underrepresented in assessing how truths and knowledges about sex, gender, body, embodiment and fair athletic performances emerge and take shape from their own subjective understanding about ‘intersex’, their bodies and others. This research

project endeavours to further consider these “subjugated knowledges” (Foucault, 2003, p. 7) from a perspective drawing on “one’s embodied cultural location” (Morland, 2009a, p. 194).

This novel insight may imply that some intersex organisation representatives may have different views from the IOC/IAAF medical representatives about how to depict and manage particular intersex variations in elite sports. Equally, some of them may in fact agree with some parts of the IOC/IAAF procedures. As the same is probably true when it comes to binary sex, gender, body and embodiment norms, we can reasonably say that some of these discourses will overlap, have an impact on each other, as well as contradict each other. Similarly, when it comes to physical prowess and higher production levels of androgen, there may be differences between intersex organisations about how they approach and think about the issue of maintaining a ‘level-playing field in’ women’s sports or in elite sports in general. This is to say that some intersex organisations may disagree about whether distinctions should be drawn between performance enhancements rooted in HA variations as opposed to other biological traits deemed to provide competitive advantages.

Female athletes are also marginalised in assessing how truths and knowledges about how normal versus abnormal sex, gender, body, embodiment and fair athletic performance are produced, circulated, deployed, justified and contested in female sports. Examining their individual experiences is thus another move in “the insurrection of subjugated knowledges” (Foucault, 2003, p. 7). As their voices further contribute to the discourse of how female athletes from their “embodied cultural location” (Morland, 2009a, p. 194) signify how they too continue taking part in marking and regulating bodies and athletic performances by merely participating in conversations “justifying or contesting” particular modificatory procedures on the body (Sullivan, 2009, p. 314). In addition to this unique reflection, some female athletes might argue that in order for female athletes with certain intersex to be allowed to compete as women, they need to conform to the IOC/IAAF rules. These women may be in favour of the idea that intersex/HA women should conform to treatments as they perhaps view such ‘differences’ as disadvantageous for non-intersex/HA women. Some may also be opposed to the idea of enforced medical treatments as a means to determine a person’s eligibility to compete. They might assert that elite sports are about eliminating gender discrimination and promoting inclusion, and that by conditioning certain athletes to undergo some form of treatment to gain inclusion is a form of discrimination. Again, this suggests that some female athletes may disagree on whether distinctions should be drawn between performance enhancements rooted in HA variations and other biological features giving competitive advantages such as those presented earlier.
In order to proceed with this study I need to explain more carefully the theoretical lenses that will be considered in this research. The focus of the following chapter is thus to clarify which epistemological frameworks I will draw on in this study and to lay out the reasons for making use of interviews, collecting autobiographical accounts and referencing archive and policy material. I then describe the methods of analysis used in the project, particularly focusing on the techniques used to ‘open up’ texts, conversations and images and that of a Foucauldian discourse analysis. I then move on to summarise the various approaches taken in interpreting the different data, followed by detailing the Monash University recommended ethics process which guided the research. I then describe the recruitment process and present the three cohorts of participants followed by a short piece on limitations and researcher quandaries.
Chapter Two: Working with ‘Disturbing’ Bodies and Athletic Performances in Female Sports

[W]hat might be called the insurrection of subjugated knowledges [or] the “returns of knowledge” [is] the reappearance of these [subjugated] knowledges...of the psychiatrized, the patient, the nurse, the doctor, that is parallel to, marginal to, medical knowledge, the knowledge of the delinquent...a knowledge that is local, regional, or differential, incapable of unanimity and which derives its power solely from the fact that it is different from all the knowledges that surround it...it is the reappearance of these disqualified knowledges, that ma[kes] the critique possible (Foucault, 2003, pp. 6-8)

Nationally and internationally, academic research is growing in the area of sex, sexuality, gender, body, embodiment and fair performance in women’s sports. Some of this research centres on the challenges trans* male to female (MTF) and lesbian athletes, along with female athletes with intersex variations encounter around inclusion, exclusion and discrimination. While a growing selection of research exists on the aims of sex/femininity/gender testing in female sports, internationally there is very little that relates to this discourse from the perspectives of intersex organisations and female athletes. This research project expands on the existing body of work and aims to fill the aforementioned gap in the academic literature by addressing one broad objective. This is to examine how knowledges and truths about normal versus abnormal sex, gender, body, embodiment (sgbe) and performances in female sports are produced, circulated, deployed, justified and contested within the IOC/IAAF, among intersex organisations and among female athletes. In order to consider these knowledge and truth processes in women’s sports among these participants, I interviewed representatives of two cohorts: 1) two medical representatives, one representing the IOC and the other an NOC, with extensive experience regarding sex/femininity/gender/HA tests; and 2) eight intersex organisation representatives from five organisations that had made public remarks about the ways in which the IOC/IAAF depict and manage athletes with certain intersex variations. In further considering this broad aim I examined archival material from the Olympic Museum in Lausanne, Switzerland on the history of sex/femininity/gender tests in female sports and examined the continuing and discontinuing verification policies within the IOC/IAAF and one National Sport Federation between 1938 and 2012. Lastly, I analysed female athletes’ lived experiences of sgbe in elite sports as told in various autobiographical materials.
In the consideration of these aims, the research mainly draws on the work of Michel Foucault; Nikki Sullivan; Pierre Bourdieu; Valerie Harwood; Paul Rabinow and Nikolas Rose; Judith Butler and Nelly Oudshoorn, and so is a post-structuralist enquiry that attempts to tease out social relations of biopower, somatechnics, habitus, and truths about sgbe and fair performance in female sports. From a Foucauldian perspective of what appears to be “subjugated” versus non-subjugated knowledge processes of truth and power, I have sought to gain the perspective of three groups of participants. These are medical representatives of significant sporting institutions such as the IOC/IAAF, intersex organisations and female athletes. By examining their responses and subjective understandings of normal versus abnormal sgbe I consider their role in the production, circulation, deployment, justification and contestation of the matters.

The perceptions of these three groups are pivotal as medical commissioners of the IOC and the IAAF produce policies which regulate athletes classified with intersex variations. Intersex and non-intersex female athletes are subsequently affected by these policies. Intersex organisations may then act as a political force in between the IOC/IAAF and female athletes on behalf of female athletes with intersex variations. All these groups thus have insight into the processes of power, knowledge and truth about sgbe and athletic performance in women’s sports. This research is novel and important as nobody has attempted to consider all these issues in one study.

The most suitable approach to consider how these processes of knowledges and truths take shape was to use a qualitative research methodology. This research attempts to explore social relations (those between the IOC/IAAF, female athletes and intersex organisations) and to consider truths and “realities” as understood and experienced by these groups (Sarantakos, 1998, p. 6). And it is important to declare that some of the intersex organisations were chosen purely on the relationship they had established with the IOC/IAAF. That said, it was not my intention to investigate what the different intersex organisation representatives had to say about their individual relationships with particular IOC representatives or vice versa. Rather, my intention was to better understand how these processes of knowledges and truths were considered in these settings.

In this I first elaborate on why this research needs to draw on selected theories from critical feminist and gender studies in order to productively respond to the aims of the research. I then go on to the methodology where I clarify why I chose to make use of interviews, collect autobiographical and archival material as well as policy material. I then describe the method of analysis used in the project which draws on how to ‘open up’ texts, conversations and images as well as a Foucauldian discourse analysis. Then I summarise the approaches taken to interpret
the different data followed by an explanation of the ethics process that the research project followed. The three cohorts of participants are then presented followed by a section on the limitations and researcher quandaries.

**Epistemology**

To examine how knowledges and truths about normal versus abnormal sex, gender, body, embodiment and fair athletic performance ideas are produced, circulated, deployed, justified and contested (mainly) within the IOC/IAAF, among intersex organisations, and among female athletes, a theoretical approach that examines the construction of knowledges and truths is necessary. This can be done through the practice of *genealogy*, a term coined by Foucault but inspired by Nietzsche. In *Nietzsche, Genealogy, History* (Foucault, 1977) Foucault credits Nietzsche with originating the process whereby one can analyse accepted concepts of knowledges and truths and also recover concepts of knowledges and truths which are no longer accepted or accepted as such. This is done through the procedure of genealogy which provides a “history of the present” (Foucault, 1979, p. 31, Foucault, 1977). By looking also at *continuities* and *discontinuities* (Foucault, 1970, p. 50) of power, languages and terms, knowledges and technologies one may disturb certain truths which currently define particular sgb and fair performance in female sports as normal or abnormal.

Foucault argues that “truth…includes regular effects of power” and “each society has its regime of truth, its general politics of truth” where “the status of those who are charged with saying what counts as true” are in a position of privilege and power (Foucault, 1980f, p. 131). Foucault further argues that “the things which seem most evident to us are always formed in the confluence of encounters and chances, during the course of a precarious and fragile history” (1988, p. 37). Therefore, “what different forms of rationality offer as their necessary being, can perfectly well be shown to have a history; and the network of contingencies from which it emerges can be traced” (Foucault, 1988, p. 37). This does not mean that “these forms of rationality were irrational”; rather it suggests “that they reside on a base of human practice and human history, and that since these things have been made, they can be unmade, as long as we know how it was that they were made” (Foucault, 1988, p. 37). Foucault suggests that what seems to be an obvious truth to us today has had a history and has been shaped to become the truth we know of today primarily by “those who are charged with saying what counts as true” (Foucault, 1980f, p. 131). Hence depending on who has been in control of defining what constitutes the truth, truths and the power-relations connected to them, have been revised, updated and out-dated. The knowledges, truths and technologies of particular sgb and understanding of fair performance in female sports today may thus be the truth of the past
tomorrow. As long as we know that they were made, how they were made and when they were made, this approach will help us to better grasp how things are done presently: thus, a “history of the present”. This does not imply that we can reorganise the present, however, it may give us some strategies for unsettling and intervening in the present.

Foucault’s important notions of the continuity and discontinuity of power-relations, knowledges, truths and techniques, are also significant in unravelling the history of why particular sgbe and performances in women’s sports have been coined normal and abnormal. Foucault argues that the notion of discontinuity is “the fact that within the space of a few years a culture sometimes ceases to think as it had been thinking up till then and begins to think other things in a new way” (1970, p. 50). Conversely, continuity is defined as:

…not the visible wake of a fundamental history in which one same living principle struggles with a variable environment. For continuity precedes time. It is its condition. And history can play no more than a negative role in relation to it: it either picks out an entity and allows it to survive, or it ignores it and allows it to disappear… as a whole, it can be drawn only as a simple line, which is that of time itself (and which can be conceived as straight, broken or circular). (Foucault, 1970, pp. 155, 149-150)

Continuity is thus something that can co-exist with other truths and knowledges, in part, in a broken fashion or completely, while other power-relations, knowledges, truths and techniques discontinue. For example, the ideology of the sex/femininity/gender/HA tests potentially continues even though the testing nomenclatures and the testing techniques may discontinue. Or the testing technique may remain the same while the testing name changes, and by extension the continuity and discontinuity of focusing on particular ‘intersex’ variations which again trouble the logic of the phantom category of intersex in elite sports through time.

In further considering how truths about athletic performance idea(l)s are produced, circulated, deployed, justified and contested within and among these three groups of participants, theoretical approaches which examine technologies and powers around the body from a subjective perspective are essential. Jan Wright, for example argues that biopower is the “governance and regulation of individuals and populations through practices associated with the body” (2009, p. 1). In the same way, Paul Rabinow and Nikolas Rose suggest that biopower includes “modes of subjectification, through which individuals are brought to work on themselves, under certain forms of authority in relation to truth discourses” (2006, p. 197). The same authors further argue, similarly to Foucault, that these discourses of knowledges and
truths “about the ‘vital’ character of living human beings” can be put forth by “an array of authorities considered competent to tell the truth” (Rabinow & Rose, 2006, p. 197).

From the perspectives that “all bodies are always already marked in so far as they are significant cultural entities” (Sullivan, 2005, p. 363) it is also important to ask whose knowledges, truths and instructions count when examining the logic behind developing and institutionalising these testing policies in female sports. Valerie Harwood (2009) prompts those who are seeking to understand how truths and knowledges about the body and life are circulated by asking “what instructions…are being given?” and who are the biopedagogues, that is, who are “the ‘authorities’ that give the instructions” and “what are the biopedagogies of truth”? (Harwood, 2009, p. 24) Drawing on Rabinow and Rose, Sullivan and Harwood, this research examines both how subjective understandings inform the way certain sbge and performances are more acceptable in female sports than others, and the policies of those who are in a position to form these truths then shape them into tools of practice.

As explained earlier, Pierre Bourdieu (1977, 1990, 1999) also provides a theoretical framework useful in examining how and why truths, knowledges and technologies in developing and institutionalising testing policies aimed at regulating certain female athletes from competing, are considered logical or necessary. Drawing on Bourdieu’s notion of *habitus* which is “the structures constitutive of a particular type of environment” that “can be objectively “regulated” and “regular” without in any way being the product of obedience to rules, objectively adapted to their goals” and “without presupposing a conscious aiming at ends or an express mastery of the operations necessary to attain them” (1977, p. 72). Embodying this, Bourdieu stresses that the rules and regulations (accepted ideas) of the habitus are “collectively orchestrated without being the product of the orchestrating action of a conductor” (1977, p. 72).

As the habitus is “the product of history” and “collectively orchestrated” Bourdieu stipulates that it “produces individual and collective practices” suggesting that history is “engendered” by its historical “schemes” (1977, p. 82). Inspired by this, I am interested in the norms, rules and regualtions concerning the heterogendered binary, which we know of in elite sports today. I thus seek to unravel the ways in which these structures are “products of historical practices” that are “constantly reproduced and transformed by historical practices” (Bourdieu, 1977, p. 83). And lead by those homogenous “agents possessing the schemes” transforming the practicises within the habitus as “a taken for granted” (Bourdieu, 1977, p. 80). Employing the framework of habitus also enables me to re-articulate and interpret the history that intersex debates have had within the larger contexts of society as a whole and more pointedly, in the policies and treatment of female athletes with intersex variations by the IOC/IAAF.
The use of the notion of habitus may clarify the ways in which intersex issues are understood and handled in elite sports, among female athletes and among intersex organisations by explaining how they each reflect and reproduce the ways in which intersex is represented and treated within the larger context of popular-culture, science and medicine. That being said, there may be habituses that are in opposition, where ideas and logics are in conflict. These habituses are often in contention as their logics “have been produced by different modes of generation” which have produced “different definitions of the impossible, the possible, and the probable” (Bourdieu, 1977, p. 78). This implies that one group of people may find one particular idea/action “as natural or reasonable” while another may find it “untinkable or scandalous, and vice versa” (Bourdieu, 1977, p. 78). This is where the idea of somatechologies and its application becomes relevant, as some may find particular technologies on the body as reasonable and natural while others may find them unthinkable and even scandalous.

Through the use of somatechologies, Sullivan affords an additional theoretical lens through which to understand the justifications of, or challenges to the use of technologies which identify, mark and regulate some bodies and athletic performances within the IOC/IAAF, among intersex organisations and among women athletes. Sullivan argues that the notion of somatechnics is “to think through the varied and complex ways in which bodily-being is shaped not only by the surgeon’s knife but also by the discourses that justify and contest the use of such instruments” (2009a, p. 314). Iain Morland adds that “one’s embodied cultural location makes…certain somatechnologies intelligible as body modification…prior to any conscious judgment about whether such modifications are right or wrong” (2009a, p. 194). Hence, irrespective of whether one agrees or disagrees with the ways in which certain truths, knowledges and technologies are applied to particular bodies and related athletic performances in order to identify and regulate certain female athletes, mere participation in the debate has a profound and formative influence itself (Sullivan, 2009, p. 314). For the purpose of this study, somatechologies can be readily applied to examine the ways in which “one’s cultural embodied location” affects how technologies police, identify and regulate certain bodies, lives and athletic performances in female sports, marking them as either “right” or “wrong” (Sullivan, 2009, p. 313).

Morland (2001) and Morgan Holmes (2011) further expand and trouble the use and understanding of the category ‘intersex’. Because ‘sex’ is socially, biologically, mentally, genetically and medically disputed, so is ‘intersex’. The fact that ‘intersex’ is contested as an identity and includes of host of biological and physical compositions suggests that the phenomenon, its understanding and its application in elite sports are similarly in question. This study thus intends to further expand and consider the conceptualisation of intersex in elite
sports and the ways in which the participants continue and justify or discontinue and contest the use of it as a phenomenon.

The notion of somatechnologies further invites the discussion about the extent to which the body of the female athlete is her own or in the hands of others. Judith Butler (2004), for example argues that “[a]lthough we struggle for rights over our own bodies, the very bodies for which we struggle are not ever only our own. The body has its invariably public dimension; constituted as a social phenomenon in the public sphere, my body is and is not mine” (p. 21). Because the body of the female athlete is in the “public sphere” and constantly judged by others, including herself, her body is “the site where “doing” and “being done to” become equivocal” (Butler, 2004, p. 21). This theoretical lens is useful in considering the connections between how subjective knowledges and truths about disturbing bodies and athletic performance are further constituted in women’s sports.

**Methodology**

In the following sections I discuss why I chose interviews and autobiographical material as the main methods for collecting the data and why I decided to use a semi-structured method of interviewing. Following this, I explain why I visited the Olympic Archive in Lausanne, studied diverse sex/femininity/gender/HA policies and chose to analyse particular images from the current IAAF HA policy. I then describe the method of analysis and its application in this study which draws chiefly on Foucauldian discourse analysis and an approach in ‘opening up’ texts, images and conversations. It should be noted that the dissertation attained its ethics approval (CF10/1674 – 2101000929) from the Monash University Human Research Ethics Committee (MUHREC) on 17 September 2010 (see Appendix One) and on 21 September 2010 I commenced my field work.

**The Interviews**

My first method for gathering material was dependent on interviews, which I relied upon for three reasons. First, in order to consider how knowledges and truths about normal versus abnormal sgb and athletic performances in women’s sports are viewed by intersex organization representatives, I could not have relied simply on examining their websites. Although many intersex organizations have commented on several intersex controversies in elite sports over time on their websites, these remarks do not capture enough in-depth reflections about the production of these normal and abnormal understandings of how these concepts are produced in female sports. Second, as these matters are not well documented, I had to find out what roles representatives themselves play in the processes of producing, circulating,
deploying, justifying and contesting these norms and as such, I needed to converse with them to hear their side of the story.

In order to consider how knowledges and truths about disturbing and ideal sgbe and athletic performances in women’s sports are reflected upon by IOC/IAAF medical officials, I felt it also insufficient to rely upon official IOC/IAAF statements, policy documents or archival material. Again, these documents do not always capture in-depth elaborations exposing how normative and non-normative understandings of these concepts are produced, circulated, deployed, justified or contested within those organisations. In order to capture these undocumented and unofficial knowledges and truths, I needed to perform interviews. Even though I could have relied solely on the material from the archives and the diverse policies, I wanted to better understand from their perspective how, as Margaret Lock (2002) argues, “classification of diseases is regularly revised and modified in light of new knowledge” (p. 191).

The policies and the material in the archives may not have discussed in detail the “continuities” and “discontinuities” (Foucault, 1970, p. 50) concerning policy revisions and which intersex variations to focus on. Locke (1982, p. 277) further argues that “when analysing medical traditions in literate societies” (like the IOC/IAAF testing policies) it is important “to make a clear distinction between textual knowledge and practice”. Because the policies and the archival material cannot be understood as a sufficient representation of what goes on behind closed doors, it was important for me to at least have one or two semi-structured interviews with medical representatives of these sporting institutions to help weigh their respective understandings on the need for these policies and the justifications for applying several different testing technologies and testing nomenclatures throughout the history of testing women’s sex/femininity/gender/HA.

Concerning the choice of interview style, semi-structured interviews were found to be the most appropriate for this purpose. Steinar Kvale (1996, p. 124) argues that semi-structured interviews are “a sequence of themes to be covered, as well as suggested questions. Yet at the same time there is openness to changes of sequences and forms of questions in order to follow up the answers given and the stories told by the subjects”. As this research attempts to explore social relations and describe particular “realities” (Sarantakos, 1998, p. 6), truths, knowledges and power-relations, the semi-structured interviewing method was ideal as it allowed me to guide the participants towards which topics we were to cover. It also gave me the opportunity to structure the conversations towards themes and topics and to collect “the unexpected” which permitted me to clarify things, pose follow-up questions and expand on responses otherwise outside the common framework (O’Toole & Beckett, 2010, p. 132).
The structured aspect of the interview process was also necessary as I wanted to capture specific realities and experiences of the informants in which understandings and truths about normative and non-normative sbge and fair performance are produced, circulated, deployed, justified or contested in female sports. That being said, the flexible part was equally important. It permitted the informants to explore and elaborate freely on how their individual experiences had affected the way they understood these concepts through a lens of intersex. The combination of structuring the conversation and covering particular themes whilst also allowing them to speak freely provided a good balance between a ‘made’ and ‘unmade’ dialogue. The semi-structured interviews were generally structured around seven questions which are provided in Appendix 4 (also see the main research questions outlined in the introduction, p. 2).

These questions generally clarified how far the intersex organisation representative and the IOC/NOC representative agreed with or contested the historical need to verify the femininity, gender or an HA variation in female athletes and why. The answer to this question was then contrasted with the apparent disparity in the policy toward male athletes who are not masculinity or gender verified in order to be eligible to compete in male sports. Comparing these justifications and oppositions thus suggested how these participants read and marked male and female bodies, performances and participations in elite sports. By specifically narrowing down on each component of sex, gender, body and embodiment, the participants were able to clarify what, in their understanding, constituted femininity and following from that, what qualities set it apart from definitions and conceptions about masculinity so as to identify where to draw the line and how intersex fits into this. Their reflections about sbge also provided information about how they read and marked their own sex, gender, body as well as embodiment.

**Autobiographical Accounts of Female Athletes**

When structuring the autobiographical accounts relating to the female athletes it is important to clarify that even though I was not able to discuss the seven questions with the female athletes, I was seeking to structure and analyse their accounts around five questions which can also be found in Appendix 4. Structuring the autobiographical statements around these five questions provided insights into how the femininity and gender verifications had affected the athletes personally, physically, psychologically, financially and from a career perspective over time. These questions also took into consideration the idea that “bodies as sites of embodied subjectivity…are always already marked in so far as they are significant cultural entities” (Sullivan, 2005, p. 363). Hence, when analysing how these athletes understood normal from abnormal sbge and athletic performance ideas in female sports, their “embodied cultural
location” (Morland, 2009a, p. 194) not only marked and regulated bodies and the athletic performance of other female athletes, but further conceptualised and limited their own. The subjective and the subjugated understandings of the body and athletic performance were thus essential throughout this interpretation.

I chose autobiographical narratives as I realised that meeting female athletes in person was a risky, difficult and expensive task to undertake if I was to manage responsibly the funding, time and grants that I had been allocated. In order to interpret autobiographical accounts that were produced in the past within a framework of the past, it was crucial that I read this material and these accounts historically and not through a lens of today. Through the procedure of genealogy I was provided a “history of the present” (Foucault, 1979, p. 31, Foucault, 1977) which was a useful lens when analysing accepted concepts of knowledges and truth and also recovering concepts of knowledges and truth which are no longer accepted or accepted as such. By exploring the continuities and discontinuities (Foucault, 1970, p. 50) of power-relations, language, knowledges and technologies in conveying particular truths about the testing procedures in female sports through time, I have been able to elucidate the “history of the present” and to show that the present has historically experienced ruptures to convey the idea(l)s of today.

The IOC Archive and the IOC/IAAF Policy Material
In order to better understand how truths and knowledges about how normal versus abnormal sex, gender, body, embodiment and athletic performance ideas have been produced, circulated, deployed, maintained, justified and contested within the IOC/IAAF through time, the interviews with the two IOC/NOC medical representatives mainly focused on events between the 1990s and today, and not those earlier than that. With the purpose of reading the testing technologies genealogically, I had to visit the archives at the Olympic Museum in Lausanne. As stated above, in order to interpret the archive and the policy material that has been produced in the past within a framework of the past I needed to consider the material from a “history of the present” perspective. Again, this lens enabled me to also consider continuing and discontinuing power-relations when conveying particular truths and knowledges before others. A genealogical interpretation of the present was thus used in thinking about contemporary debates about female athletes with HA variations.

In further interpreting the archive and policy material from a lens of “the history of the present” I was also interested in “describing” the particular truth and knowledge “transformations themselves” (Foucault, 1970, p. xiii) as well as “the very rules that e[a]me into play in the very existence of such discourse” (Foucault, 1970, p. xiv). Conversely, from a lens
of habitus (Bourdieu: 1990, p. 53) I also wanted to examine why certain concepts and theories about particular testing technologies and nomenclatures appeared in the IOC/IAAF testing discourse in the first place and why they changed over time.

As most of the historical materials I was interested in examining were not accessible online and there was a strong likelihood that there was extant material which even the IOC/NOC medical representatives were unaware of which was not easily retrievable, I needed to travel to the archives and search for relevant material myself. This way I could search and review any material the IOC/NOC/ISFs/NSFs and their medical representatives had produced regarding the testing processes first-hand and uncensored. Although the IOC classifies any material that is less than 30 years old, which greatly limited what material I was allowed to examine, visiting the archives still allowed me to review all the minutes of IOC Sessions and any other unofficial discussions before the year of 1980 that related to the development of the testing policies and the reasons behind revising and suspending them. Most of this material was not accessible anywhere else than at the archives, so going there was necessary to explore the genealogy of the testing process. The archive at the Olympic Museum was also a place where perhaps unnoticed and/or forgotten material could be found that no researcher had encountered before. Such discoveries might also be invaluable to better understand how issues around femininity, athletic performance and fairness were talked about in women’s sports within the walls of the IOC/ISFs at the time. Hence, visiting the archive was a must. My time there also proved to be very beneficial as it occasioned a meeting with the outgoing Medical and Scientific Director of the IOC.

Reviewing any ‘case-by-case’ inspired gender and HA policies by the IOC/IAAF, post 2000, was easily done on-line outside the periphery of the archives. In further exploring “the history of the present” and the continuities and the discontinuities of testing technologies and nomenclatures, I chose to examine two IAAF policies and two IOC consensus statements on gender verification and Hyperandrogenism (HA). The latter IAAF policy on HA was especially useful as it not only included text which justified the agenda for performing HA tests, but also contained images of what an HA variation may look like if and when the tests were performed. The IAAF 2011 HA policy was particularly important for this study as it is the first policy of its kind to employ images, which further produces, circulates, deploys and justifies how non-normative sbge may be identified visually. The policy is also the first of its kind to discuss how much functional androgen women are allowed to produce in order to stay within the limits of fair female athletic performance.
Analysing the Data
The process of analysing the data involved several stages and different levels of analysis. These different analytical processes were anchored in and guided by the ultimate aims of the research project. The analysis took into account four sets of data from 1) archive and policy texts and images produced by the IOC/IAAF/one NSF and its medical commissions; 2) conversations with one IOC and one NOC medical representative; 3) conversations with eight intersex organization representatives; and 4) autobiographical accounts by nine female athletes. In doing this I have utilised two main methods of analysing the data; a discourse analysis and an approach in ‘opening up’ texts, conversations and images.

In analysing the data, I employed discourse analysis. Discourse analysis was relevant for this study as it considers complex discourses that intimately shape and organise themselves around external factors such as knowledge, truth, social relations as well as identity, power relations and cultural footprints. This research project mainly follows a Foucauldian understanding of discourse and I was looking principally at how discourses are formed through “power relationships and subjectivity” (Lichtman, 2013, p. 259). Foucault emphasises that discourse is a set of “practices that systematically form the objects of which they speak” (1972, p. 49) and conveys the complexity and mutability of the term ‘discourse’ by arguing that instead of

...gradually reducing the rather fluctuating meaning of the word ‘discourse’, I believe I have in fact added to its meanings: treating it sometimes as the general domain of all statements, sometimes as an individualizable group of statements, and sometimes as a regulated practice that accounts for a number of statements. (Foucault, 1972, p. 80)

In this context, discourse analysis refers to general texts, conversations, and articulations that have a deeper meaning and affect the social world that we are part of. It also examines specific articulations and power relations confined to a topic/subject/sphere such as the discourse of knowledges and truths about disturbing versus ideal sgbe and athletic performance ideas in female sports through a lens of intersex. It is important to note that just as discourses produce practices, they can also regulate, control, eliminate and discipline certain practices, articulations, texts and conversations by creating and re-articulating certain abiding social rules and structures. As Sara Mills (1997) argues, discourses can both implicitly and explicitly include and exclude certain texts, dialogues and articulations:
...discourse is not a disembodied collection of statements, but groupings of utterances or sentences, statements which are enacted within a social context, which are determined by the social context and which contribute to the way that social context constitutes its existence. Institutions and social context therefore play an important determining role in the development, maintenance and circulation of discourses... [They] do not occur in isolation but in dialogue, in relation to or, more often in contrast and opposition to other groups of utterances... Discourses are also principally organized around practices of exclusion. (1997, pp. 11-12)

Mills argues through a Foucauldian lens, that when we try to unravel and examine diverse discourses the troika of truth, power and knowledge are essential elements in doing so (1997, p. 18). Truth is not something that arises in ‘isolation’; instead, it is generated through diverse cultures, societies and institutions. In keeping with the philosophy of Foucault, Mills (1997) posits that the main reason for analysing data through a discourse approach is not to uncover the truth or the origin of a report, but rather to discover the support mechanisms which keep it in place.

In relation to power and knowledge, Foucault explains in The Order of Discourse (1981) that “as history constantly teaches us, discourse is not simply that which translates struggles or systems of domination, but is the thing for which and by which there is struggle” (pp. 52-53). In The history of sexuality, volume 1: An introduction, Foucault (1990) clarifies the knowledge and power relation in discourse:

Indeed, it is in discourse that power and knowledge are joined together. And for this very reason, we must conceive discourse as a series of discontinuous segments whose tactical function is neither uniform nor stable – we must not imagine a world of discourse divided between accepted discourse and excluded discourse, or between dominant discourse and the dominated one; but as a multiplicity of discursive elements that can come into play in various strategies. (1990, p. 100)

Foucault here clarifies that discourse in itself is not a tool that spells out diverse power relations; instead it clarifies the subject and the object of power relations which helps me in considering how certain idea(l)s about sgbe and athletic performances are produced, circulated, deployed, justified and contested within and among the three cohorts of participants through knowledges, truths and power-relations. Drawing on Foucault’s definition of discourse, this study investigates how these discourses come together, how they are organised, how they attain
a position to police, identify and regulate or alternatively approve, celebrate and commend certain articulations and behaviours.

Maggie MacLure’s (2003) set of questions to “open up” texts was also factored into analysing the data. Again from a Foucauldian lens, MacLure invites the researcher to pose some basic questions to “open up” the texts they intend to analyse. Even though MacLure talks about opening up “texts”, the questions below were equally helpful when analysing the IAAF HA policy images, the transcribed conversations with the IOC/NOC medical representatives and the intersex organisation representatives. Some of the questions that were useful in this context were:

- How are different knowledge claims established and defended?
- Where does this text get its authority?
- How does this text persuade [or not persuade]?
- Where does power reside in this text?
- Whose ‘voices’ are privileged in this text? Who is silenced?
- How are subjects drawn in this text? Who gets agency?
- Where are the gaps, silences and inconsistencies in this text? (MacLure, 2003, p. 82)

I found these questions very useful as they allowed me to examine and interrogate the texts, images and the conversations with an increased speed and intensity. The ‘power, knowledge and truth’ relationship in the texts, images and the conversations also became more apparent, as these questions went to the core of how certain knowledges, truths and power-relations may be produced, circulated, deployed, justified and contested within and amongst the three groups of participants. These questions also brought into sharper relief those who were made subjects in these texts and conversations, that is, athletes who may disturb binary sgeb idea(l)s, such as female athletes with certain intersex variations. The matter of what constitutes worthy knowledge or competent and subjective knowledges made to appear as the “truth” (Foucault, 1980f, p. 131) could be further unravelled with the help of these questions.

Concerning the archive and policy texts and images produced by the IOC/IAAF/one NSF and their medical commissions, I was, with the help of MacLure’s questions, also able to: 1) examine why the policies were needed; 2) how the IOC/IAAF viewed and described sgeb and fair performance in female sports; 3) how the IOC/IAAF treated and advised on the management of athletes ‘disturbing’ female sgeb and performance norms; 4) how and from where these understandings and conceptions emerged from; and 5) whether and if so how, the IOC/IAAF conveyed to the public that their knowledges and truths were the most reliable.
When analysing the individual conversations and the autobiographical accounts of all participants, MacLure’s questions were helpful in also considering: 1) their understanding of what constitutes normative versus non-normative sgbe and athletic performance in female sports; 2) how to treat and manage female athletes who disturb these norms; 3) what effect their views may have on athletes born with particular intersex variations; 4) how and from where these understandings and conceptions emerge; and 5) how these normative and non-normative understandings and conceptions of sgbe and athletic performance may have affected their own bodies, identities and if applicable, their own athletic performance.

MacLure’s questions were also helpful when I compared the individual conversations and autobiographical accounts within each group. Of particular interest here was comparing the knowledges and understandings the participants in each group had concerning sgbe and fair performance. I was interested to know if there were significant differences within these individual groups regarding their understandings and experiences about how to view, treat and manage female athletes disturbing sgbe and fair performance idea(l)s? How were different truths and knowledges justified and contested? And whose “voices” seemed more “privileged” in justifying or contesting certain truths and knowledges about sgbe and fair performance in female sports? (MacLure, 2003, p. 82) It was anticipated that the commonalities and differences within the groups would bring valuable insights into how continuities and discontinuities concerning whose knowledges and truths about these concepts were “privileged” and whose were “silenced” based on where this “voice” sat in the discourse.

Lastly, concerning the comparative analysis between groups of the conversations that took place, McLure’s questions were further helpful in teasing out commonalities and differences between the different groups’ participants. Were there any surprising and thematic commonalities between the groups that were not anticipated? And were there any thematic differences that stood out more than others and if so, why? It was anticipated that the commonalities and differences between the groups would provide a deepened understanding of where “power reside[s]” in the texts, images, conversations or the accounts and “whose voices are privileged…[or] silenced” in these materials (MacLure, 2003, p. 82). This analysis would clarify the continuities and discontinuities of how knowledges and truths about normal versus abnormal sgbe and athletic performances are conceptualised in women’s sports through diverse forms of power-relations.

**Recruiting Intersex Organization Representatives**

For the cohort of intersex organisation representatives, I was predominantly seeking organisations that had either approached the IOC/their NOC and/or had publicly expressed an
opinion on the topic of athletes with intersex variations and fairness. I was particularly interested in organisations whose representatives either agreed with or contested the IOC/IAAF’s knowledges and truths with regard to depicting, policing, regulating and managing particular female athletes, while not others. After recruitment, the area of interest shifted to analysis of how these participants understood the ways in which the IOC/IAAF describe, treat and manage these athletes.

There are many ways in which bodies challenge normative sex, gender and body norms, ranging from chromosomal makeup, hormone production levels, internal and/or external genitalia (in combination or independently) which are “atypical” of “standard” male and female anatomy (Fausto-Sterling, 2000a) and fluid gender identity. A person can also challenge these norms by embodying “atypical” secondary sex characteristics in their muscular physique, hair distribution, voice and stature (OII Australia, 2011). For the purpose of this research, I did not present a formula of what normative or non-normative sgbe and fair performance implied; this was left up to each participant to determine. However, all of the organisation representatives were outspoken about the intersex human rights sphere and openly saw themselves as challenging one or several criteria concerning normative sgbe and athletic performance idea(l)s.

After coming to a decision about which intersex organizations and which individual participants to ideally interview, I then needed to decide whether I was going to contact them directly or utilise a web based forum that connects diverse interest groups. Keeping in mind the ethical concerns surrounding the researcher when conducting a study on sensitive matters related to sex, gender and minority groups, I needed to position myself before deciding which line of communication to make. Was I going to contact the intersex organisations directly or contact LGBTI organisations that challenged sgbe ideas more broadly? I decided to contact the intersex organisations directly, as I did not support the idea of there being “insider” or “outsider” researchers (Breen, 2007, p. 163), but instead that we are all, in Foucauldian terms, interconnected (1990, p. 100). And as put forth by Sullivan, anyone who has an opinion concerning particular technologies marking and regulating certain bodies as normal or abnormal, is actively participating in the production and the continuation of marking bodies (2009, p. 314). I recognise I am also participating in the discourses that analyse how intersex organisations either justify or contest particular modificatory practices about the female body in elite sports.

Let me also clarify that even though my research examines the construction of normative and non-normative sgbe and athletic performance issues in female sports, I did not contact any transsexual/transgender/gender queer organizations. The reason for this is that I wanted to conduct an analysis of how the IOC/IAAF and their medical establishments have
conceptualised and policed binary sge and performance norms over time through the lens of intersex variations. It is also important to clarify that intersex is often lumped into the T of the LGBT\textsuperscript{36} umbrella, which is a concern to many intersex organizations. Intersex is seen as a biological sex variation, whereas individuals who define themselves as transsexuals/transgendered/gender queer are not necessarily born with ‘atypical’ sex characteristics/developments, but instead have a gender variation (ISNA, 2008a). As Curtis Hinkle, the founder of Organisation Intersex International (OII), and Hida Viloria, the Director of OII USA, further argue, individuals with an intersex variation can identify as transsexual/transgendered as intersex does involve gender identification matters, but not the other way around. Lastly, it is important to clarify that for the most part, the ‘intersex movement’ and the trans* movement do have different concerns and different agendas even though they may share the struggle against the conceptualization and the policing of binary sex, gender and body norms\textsuperscript{37} (Hinkle & Viloria, n.d).

The Intersex Organization Representatives

After resolving that I was going to contact the organisations directly, I developed a letter of recruitment for the purpose of engaging these organisations which also fleshed out the aim of the study. The participating intersex organisation representatives consisted of eight people representing five intersex organisations in five countries around the world. In terms of geographical location one participant resided in Cape Town, South Africa, two in Berlin, Germany, two in Zurich, Switzerland, two in the USA, and one in Auckland, New Zealand. The choice of geographical locations was purely determined by whether an intersex organisation and its representatives had openly tried to establish a dialogue with the IOC/their NOC and/or had commented on the ways in which the IOC/IAAF depict and manage female athletes with intersex variations on numerous occasions in the popular media. Therefore, I needed to follow their geographical location rather than choosing where to go. Thus, the findings from the research do not speak to a certain city, country or even culture, even though most of them are considered to be situated in the ‘Western’ and industrialised parts of the world. As the findings shall demonstrate, despite the fact that the majority of the organisations representatives were situated in these parts of the world, they had different understandings and approaches concerning normative and non-normative sge and athletic performance idea(l)s in female sports.

\textsuperscript{36} LGBT or sometimes also referred to as GLBT refers to individuals labelling themselves as lesbians, gay, bisexual and transsexual/transgendered.

\textsuperscript{37} Read more about misconceptions between intersex and trans* issues on OII’s website: \url{http://oiiusa.org/ten_misconceptions} (Hinkle & Viloria, n.d.)
Table 1 lists the basic information of each intersex organisation representative. With the exception of one participant, I have not used pseudonyms as participants clearly expressed that they wanted the organisations with which they were associated to be named and their contribution as a participant to be named. Participants see their participation in this study as a part of their political advocacy/involvement on this issue. As the table suggests, most of the representatives were either a founder, president or a spokesperson for their respective organisation. Most of them were committed to the work close to full time even though they had another occupation that was not necessarily related to their intersex organisation activities.

As is evident from Table 1, I have not included age, outside occupation, whether they identified as being within or outside the binary structure or details of whether or not they had had surgical interventions performed on them as children. This information is not included as this research was not about considering their individual and private experiences in creating an identity or how non-consenting surgery had impacted their lives and formed their identities. The majority of the informants knew that they had an intersex variation, while two expressed they did not. Though, as Hinkle and Viloria articulate, most people may not know that they have an intersex variation, as these can be present in ways that do not question the person’s sex or gender identity (n.d.) or affect their ability to have children (Bodies Like Ours, 2002).

### Table 1. The Intersex Organisation Representatives

<table>
<thead>
<tr>
<th>Name</th>
<th>Residing</th>
<th>Organisation</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sally Gross</td>
<td>Cape Town, South Africa</td>
<td>Intersex Society of South Africa (ISSA)</td>
<td>Founder and President</td>
</tr>
<tr>
<td>Ins A Kromminga</td>
<td>Berlin, Germany</td>
<td>Die Internationale Vereinigung</td>
<td>Spokesperson</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Intergeschlechtlicher Menschen (IVIM) – affiliated with OII</td>
<td></td>
</tr>
<tr>
<td>Ulrike Klöppel</td>
<td>Berlin, Germany</td>
<td>As above</td>
<td>Spokesperson</td>
</tr>
<tr>
<td>Daniela Truffer</td>
<td>Zurich, Switzerland</td>
<td>Zwischengeschlecht.org</td>
<td>Founder and president</td>
</tr>
<tr>
<td>Seelenlos</td>
<td>Zurich, Switzerland</td>
<td>As above</td>
<td>Campaign manager</td>
</tr>
<tr>
<td>Curtis Hinkle</td>
<td>South-East of USA</td>
<td>Organisation Intersex International (OII)</td>
<td>Founder and president</td>
</tr>
<tr>
<td>Hida Viloria</td>
<td>California, USA</td>
<td>Organisation Intersex International, USA</td>
<td>Director</td>
</tr>
<tr>
<td>Mani Bruce Mitchell</td>
<td>Auckland, New Zealand</td>
<td>Intersex Trust Aotearoa New Zealand (ITANZ)</td>
<td>Founder and president</td>
</tr>
</tbody>
</table>

All of the intersex organisation representatives had worked with and against medical institutions in contesting some of the medical practices still taking place regarding the
management of children born with ‘atypical’ genitalia. Their level of collaboration with medicine, science and other intersex organisations varied depending on their political agenda and ideology.

At this point it is important to clarify that even though I contacted the intersex organisations directly, the organisation representatives were thereafter self-selected as I urged the head of the organisations to invite whomever they found to be the best fit for taking part in the research project. I also figured that these participants may have been invited as they were likely to be able to articulate well a particular organisation’s beliefs about the IOC/IAAF testing procedures. The stories told by the eight representatives from five different countries, do not represent the views of all intersex organisation representatives in those specific countries and may not necessarily represent what all the organisation representatives think or indeed even represent what the organisation believes.

**Recruiting IOC and NOC Medical Representatives**

Having established which intersex organisations to meet and which countries to travel to, my initial goal was to meet with the medical representative of the same countries’ NOCs and hopefully one IOC medical commissioner. This would ultimately have meant meeting with five NOC medical representatives and one IOC medical commissioner, all experienced in talking about their institution’s sex/femininity/gender testing policies. I anticipated that this group of medical practitioners would have represented diverse specialities such as sports medicine physicians, endocrinologists, gynaecologists, psychiatrist, and general practitioners.

As the IOC and the NOCs publicise their contact details on their websites, I set out to draft a recruitment letter addressed to the head of the organisation describing the research project and my interest in discussing their understandings and use of these testing policies. I contacted five NOCs in my first recruitment round. From this group I received four replies, one from each NOC in South Africa, one in Europe, the USA and New Zealand. I only interviewed one of these medical representatives, the one appointed by a European NOC. The NOC in the USA informed me that they could not assist unless the NOC in Australia connected me with them. When I was in South Africa, the medical representative of the country’s NOC informed me that we could no longer meet unless I was willing to fly to another city in South Africa the same day. Unfortunately, I did not have the funding to do this. The head of the NOC in New Zealand who had previously confirmed their participation also pulled out the week before our meeting in Auckland.

While at the archive of the Olympic Museum in Lausanne, I established some relationships there which assisted me in my second recruitment round to meet with the then
current Medical and Scientific Director of the IOC. This meeting could not take place in my first five month fieldtrip; rather it had to take place as a separate trip four months after I had returned to Australia from my initial fieldtrip. Manifestly this was not an easy, cheap or straightforward process of recruitment. It ended being much more time-consuming, costly and bureaucratically frustrating especially when compared with the recruitment process of the intersex organisation representatives.

When it comes to anonymity, this field is small, which meant that NOC medical representatives or specialists in the area of sex/femininity/gender/HA verifications may be easily identified by other IOC/NOC members (and others). As the recently outgoing IOC Medical and Scientific Director of the IOC had an official position and was happy to be named, his anonymity was not protected. In order to protect the anonymity of the other NOC representative of a European nation, I have at their request intentionally used a pseudonym. I have not presented the clinic, city or even the country from which the NOC member works or their workplace environment. I have only identified their area of expertise, and to the best of my ability, changed or omitted those aspects of their professional history which may identify that individual.

The IOC and NOC Medical Representatives

As mentioned, I was only successful in recruiting one IOC and one NOC medical representative, one residing in Switzerland and the other in a European nation. As this research field is small, the geographical location of the NOC representative has not been provided in order to protect her identity. As is evident in Table 2 both of these practitioners have had direct contact with female athletes who have been femininity/gender tested and subsequently suspended based on their test results. Even though I was only successful in meeting two representatives, they both had significant experience within the field and have influenced how the testing technologies have “continued” and been “discontinued” in female sports for more than twenty years respectively. (Foucault, 1970, p. 50; Grosz, 1994, p. 145)

<table>
<thead>
<tr>
<th>Name</th>
<th>Position/Specialisation</th>
<th>Institution</th>
<th>Years of Experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr Patrick Schamasch</td>
<td>Former Medical and Scientific Director (retired Dec 2012)</td>
<td>International Olympic Committee</td>
<td>27</td>
</tr>
<tr>
<td>Dr Hermina Schneider</td>
<td>Sports Medicine Expert</td>
<td>National Olympic Committee of a European Country</td>
<td>22 +</td>
</tr>
</tbody>
</table>
The point needs to be made that the small yet significant cohort of medical practitioners from the IOC and a European country was, as in the case of the intersex organisation representatives, a self-selected group. These informants are experienced in the field of sex/femininity/gender verifications in female sports, both from a national and an international perspective; an area that many medical practitioners have very little knowledge or experience in. It is important to highlight that due to the intensified focus on Caster Semenya, these two medical practitioners went out of their way to take part in this research project even though doing so yielded no direct or evident benefits for them. Furthermore, as they have individually been part of the sporting industry for more than twenty years each, they have discussed the testing technology in both individual and cross-border settings and have been in contact with women who have been tested as well as suspended from further competing. Thus, they both have rich “insider” knowledge to share. Lastly, it is of relevance to clarify that the stories told by these medical representatives do not represent the views of all medical commissioners within the IOC, among NOCs or even other ISFs or NSFs – nationally or globally.

**Accounting for Elite Female Athletes**

Due to the limitations of time, resources and logistics I decided not to recruit female athletes who had been sex/femininity/gender verified and who had either agreed with the technology or contested it. Though it was an option to pursue phone interviews, I found them to be too impersonal and not intimate enough when discussing such personal and perhaps even traumatic experiences. I believed that if I wanted to conduct interviews, a personal encounter was the optimal way to go. Alternatively, I could have discarded the idea to include the stories of female athletes all together, but to me that was not ethically viable. As the research examines how female athletes have been depicted, treated and managed in women’s sports through time regarding the testing technologies, not including their stories and experiences was not sensible in my opinion.

Because of the already available autobiographical material I assessed that including this narrative material would be the best available substitute to conversing in person. In my search for this material I wanted diverse accounts reflecting the current situation throughout the history of testing. Consequently, I was interested in accounts that either supported or contested the testing technology. Among these narratives I also wanted to hear stories from women that had been tested, suspended and not suspended and women who had not been tested but had pushed the agenda for someone else to be tested and ideally suspended. This way I was able to account for both “the insurrection of subjugated knowledges” and those knowledges that had all along been deemed qualified knowledges (Foucault, 2003, pp. 6-8).
I was principally looking for female athletes representing diverse accounts. Some of the women had been tested and some not, and some had been tested but not suspended while some had. This material originated from three areas: First, I explored news reports where female athletes had discussed and commented on the topic of the tests, stretching from 1967 to 2011. Second, I studied autobiographical accounts in journal articles written by female athletes who had been tested and suspended and who had told how these experiences had affected their lives. Lastly, I examined audio-visual documentaries where female athletes who had been tested and suspended openly reflected upon these experiences. In all these accounts the female athletes also discussed how they viewed their bodies, gender identities and performances as these were all under interrogation. These accounts were thus used to consider how the tests had marked their subjective understanding of their bodies, identities and athletic performance.

The female athlete participants consisted of nine women. In terms of geographical location three resided in the United States of America, three in Europe, one in India and two in Africa. There was no geographical bias or preference in how they were picked. I was principally looking for people who: 1) had an opinion about the tests; 2) had or had not been tested; and 3) if tested, had been suspended as a result. These people needed to be able to speak knowledgeably about the tests from its trial period till today. Hence, the stories cover incidents between 1964 and 2010.

Table 3 on following page lists some of the basic information concerning the female athletes. As these female athletes have talked openly in news reports, produced their own autobiographical accounts in journal articles or participated in autobiographical audio-visual documentaries, I have not used pseudonyms in protecting their identity. As is further evident from the table, the majority of the female athletes have been sex/femininity/gender verified, except for one, who instead lobbied for a group of female athletes to be gender verified. One athlete only had to present a medical certificate confirming her femininity at the Olympic Games in Tokyo, 1964, whilst the rest were tested. Approximately half of the female athletes have, in addition to their testing experience, also been suspended – half of those regained their license to compete, while the other two remain permanently suspended. Three women athletes discussed the trial periods of the sex tests, that is before testing became a mandatory and institutionalised procedure in 1968. Two women discussed the tests when they were a mandatory and institutionalised practice (1968-1999) and two discussed their experiences after the tests were abolished and only performed on a ‘case-by-case’ basis (2000-2009). Additionally, one athlete discussed the testing experience when the IOC/IAAF were in the midst of producing their new policy on Hyperandrogenism (HA).
<table>
<thead>
<tr>
<th>Name &amp; Country</th>
<th>Sport Affiliation</th>
<th>Performed femininity/gender verification</th>
<th>Discusses femininity/gender verification in relation to</th>
<th>Suspended from competing</th>
<th>Regained licence to compete</th>
</tr>
</thead>
<tbody>
<tr>
<td>Willye White USA</td>
<td>Long jump &amp; relay</td>
<td>Had to present a medical certificate certifying her femininity under IAAF Article 17, paragraph 3</td>
<td>Olympic Games in Tokyo, 1964</td>
<td>No</td>
<td>N/A</td>
</tr>
<tr>
<td>Mary Peters Great Britain</td>
<td>Pentathlon</td>
<td>Yes</td>
<td>Commonwealth Games in Jamaica, 1966</td>
<td>No</td>
<td>N/A</td>
</tr>
<tr>
<td>Maren Seidler USA</td>
<td>Shot putter</td>
<td>Yes</td>
<td>Pan-American Games in Canada, 1967</td>
<td>No</td>
<td>N/A</td>
</tr>
<tr>
<td>Eva Klobukowska Poland</td>
<td>Sprinter</td>
<td>Yes</td>
<td>European Cup in Kiev, Ukraine, 1967</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Jane Frederick USA</td>
<td>Pentathlon</td>
<td>Yes</td>
<td>Olympic Games in Rome, Italy, 1975</td>
<td>No</td>
<td>N/A</td>
</tr>
<tr>
<td>Maria José Martínez-Patiño Spain</td>
<td>Hurdler</td>
<td>Yes</td>
<td>World University Games in Kobe, Japan, 1985</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Santhi Soundarajan India</td>
<td>Sprinter</td>
<td>Yes</td>
<td>Asian Games in Doha, Qatar, 2006</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Caster Semenya South Africa</td>
<td>Sprinter</td>
<td>Yes</td>
<td>IAAF World Championships in Berlin, Germany, 2009</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Osinachi Ohale Nigeria</td>
<td>Soccer player</td>
<td>Unlikely</td>
<td>Qualifying game for the Women’s World Cup in South Africa, 2010</td>
<td>No</td>
<td>N/A</td>
</tr>
</tbody>
</table>

It is important to clarify that none of these female athletes were contacted to approve of me using their information in this research project; as such it is not a self-selected group of participants. Nevertheless, these women represent a group of female athletes who want their stories and truths to be heard due to the autobiographical nature of their published accounts. The narratives drawn from these women from seven different countries, also, do not represent how women with or without intersex variations generally understand and talk about sgbe and fair performance in female sports nor are they specifically related to their geographical
locations. As the accounts were recorded between 1967 and 2010, these stories do not suggest that certain opinions were more prevalent or thriving between or among these women during certain periods of the testing history.

**IOC Archive and IOC/IAAF Policy Material**

In the interests of finding out how the IOC, its medical establishment and its ISFs have talked about disturbing sgbe and athletic performance through the lenses of ‘intersex’, ‘hermaphroditism’ and ‘disorders of sex development’, I visited the historical archives of the Olympic Museum in Lausanne, Switzerland. For four weeks between October and November of 2010, I reviewed the following material mainly produced by the IOC and its Medical Commission:

- medical brochures for the Olympic Games;
- letters written between IOC/NOC/ISF members regarding sex/femininity/gender tests;
- reports on sex/femininity testing;
- survey targeted at female athletes on their opinion about gender verifications in women sports (at the Lillehammer Games in 1994);
- female medical examination policy by one NSF produced in 1938;
- sex/femininity/gender verification policies between 1968 and 1998
- minutes of the IOC sessions (until 2008);
- minutes of the IOC executive board meetings (until 1979);
- Olympic Game reports (1936 – 1998); and
- IOC press releases.

In addition to this, I also examined the ‘case-by-case’ inspired IOC/IAAF policies on gender and HA verifications between 2000 and 2012 (and body images if included in the policy), which were all accessible on their websites. The reviewed materials were produced any time between the 1930s when anxieties related to disturbing sgbe and athletic performance in female sports appeared on the IOC/NOC/ISF agenda, and June of 2012. The historical archives of the Olympic Museum also had databases of medical and sport journals in which medical delegates of the IOC/NOC/ISF discussed ways to view, treat and manage athletes who they believed disturbed femininity and female athletic performance idea(l)s. This material complemented the official material and the two interviews.
Researcher Quandaries and the Continuation of Producing Truths and Knowledges about Bodies and Athletic Performances

Whether it is a qualitative or a quantitative study all research projects experience limitations and quandaries through the research process. The total number of interviewed participants in this study is relatively small, but perhaps not so small in relation to the number of women who have endured the sex/femininity/gender testing. From the three cohorts of participants, I met and interviewed ten people and drew on autobiographical accounts from another nine. As clarified earlier, the accounts and statements should not be seen as entirely or officially representative of the positions that the different people and organisations represented hold. Further, even though a truly international cross-section of intersex organisation representatives and female athletes was selected, their views as reflected in this study are not to be considered as official positions of those countries’ various organisations or female athletes. Rather, the stories by the three cohorts of participants, including the policy and archival material represent some stories and some of the continuities and discontinuities of how normative and non-normative sgb and athletic performance, through intersex, have been viewed in female sports over time.

In relying on the stories which the IOC/NOC medical and intersex organisation representatives had shared with me and also on those shared by the female athletes through autobiographical accounts, it should be acknowledged that these stories and accounts are all subjective understandings of sex, gender, body, embodiment and athletic performance. They depend on the participants’ individual experiences and surrounding habituses. Implicit in this is the acknowledgement that their views on these issues in female sports are unconsciously affected by their own “embodied cultural location” and experiences as well as informed by the habitus in which they live and operate. This then resulted in whether they found “certain somatechnologies intelligible as body modifications” and if they felt they were “right or wrong” (Morland, 2009a, p. 194).

Throughout the research project, a consistent issue for me has been how I as a researcher was to build a relationship based on trust but by the same token also manage a professional research relationship with my cohort participants. I did not position myself as an “insider” or an “outsider”, as I believe that the “insider/outsider dichotomy” overlooks reality and tries to simplify it. Rather, I see myself placed on a continuum (Breen, 2007, p. 163) as are we all, in Foucauldian terms, interconnected, intermingling and affected by each other. However, that does not mean that the participants did not see me as either an “insider” or an “outsider”.

At the time I was meeting with the intersex organisation representatives and the IOC/NOC medical representatives, the topics of intersex, gender verifications and unfair
competition in female sports were being hotly contested and greatly politicised in popular media. When meeting with the participants, I was often expected to agree, disagree or voice my opinion with some of their political propositions or opinions. The fact that I was in the midst of a political space where competing or allied ideologies were being expressed, I could have easily positioned myself as an “insider” or an “outsider”. Even though I do not believe it is possible to be perfectly objective as a researcher, I had to consciously employ a more neutral political position in order for the interview to continue along the semi-structured strand.

In my meetings with the intersex organisation representatives, many of them asked where and how I positioned myself, why I was involved in this research, what type of investments I had in the research and whether I agreed or disagreed with particular discourses on technologies modifying the body. As I did not want the focus of the discussion to be about me or on ideas that we may have had in common or in opposition, I briefly clarified why I took an interest in the topic, but only agreed to clarify the other issues after the interview had taken place. In doing that I recognise that also I adopted a powerful position in how to circulate my truths and knowledges, or by not always answering the questions posed to me or deciding when they were to be discussed. I also recognise that also I took part in “the varied and complex ways in which bodily-being is shaped” by not only leading the conversation but also participating in the “discourse” when the interview was over (Sullivan, 2009, p. 314). Here, both the participant and I were made to “justify and contest the use of such instruments” and technologies (Sullivan, 2009, p. 314).

The interviews with the IOC/NOC medical representatives were quite different from those with the intersex organisation representatives. In these conversations I was seldom asked why this research interested me, if I had any investment in the research or how I positioned myself on the sex or gender continuum. Instead, they were often seeking my approval of what they were expressing or seeking to find out whom else I had spoken with in conjunction with the research. Again, I adopted a position where I did not respond to any of these questions or queries and either rephrased the question posed to them or stressed that I really valued to hear their views on the matter rather than sharing mine. This way also I took part in the production of power by choosing not to resolve the question in any particular fashion and deciding whether to share my knowledges and understandings about what was being discussed. Even though I may not have expressed my opinion, I was still participating in conversations about modificatory practices around the body and athletic performances as I posed the questions and encouraged the participants to elaborate on those posed to them.

Before I commenced the recruitment process of the IOC/NOC medical representatives, I knew that I was researching a sensitive matter as the Caster Semenya controversy was still a
case the IOC/IAAF was being criticised for. When I began the recruitment process, I quickly realised three vital issues that might clarify why the process was so energy draining, frustrating and challenging. First, because the IOC/IAAF was in the midst of producing their new policy on how to manage athletes with certain intersex variations, the NOCs may have felt that they did not want to comment on something that was in a process of change. Second, as the IOC/IAAF were being heavily criticised for how they had managed the Semenya issue, the NOCs may not have wanted to reflect on the topic and may not have wanted to cause friction with the IOC/IAAF governing bodies by making unwanted remarks concerning controversial current affairs. Third, as I am not a medical practitioner myself, or someone working with or for any of the contacted NOCs, they may have concluded that I was an “outsider” whom they did not want to speak to or accommodate. Hence, finding an NOC medical representative who was willing or available to participate was arduous. These reflections may provide some explanations as to my lack of success in recruiting these representatives. That said, when I was at the Olympic archive for four weeks I seized the opportunity to approach the outgoing Medical and Scientific Director of the IOC for an interview and was successful in doing so. This is significant in so far that Schmasch has not given many interviews on this before or after the IOC had produced their formal policy on the management of athletes with HA. Interviewing Schamasch was also significant in that he was soon to step down and for that reason perhaps chose to speak to me with some candour.

Regarding the choice of including some autobiographical accounts before others, I acknowledge my position in selecting which stories and experiences to interpret, which truths and knowledges to continue circulating and which to discard. I thus made a deliberate decision to continue and discontinue certain truths and knowledges by including the stories I selected. I could obviously have discarded the idea to include the stories of female athletes with or without intersex variation altogether, but to me that was not ethically viable. That said, I could have chosen to only focus on female athletes who had been tried, tested and suspended. But, because I was also analysing the IOC/IAAF “protection” argument about “unfair competition” in female sports (IOC Medical Commission, 1984b) I concluded that I needed to collect diverse accounts from female athletes representing and reflecting the status quo, that is, those who supported the tests and those who did not.

I also acknowledge my position in deliberately choosing which material to interpret and not to interpret and which truths and knowledges to continue circulating and which to discontinue circulating from the Olympic archive in Lausanne. As I was interested in reading into “the history of the present” about how particular truths and knowledges about the need to sex/femininity/gender/HA test in female sports and why some bodies and athletic performances
have been regarded as disturbing, I had to examine a great deal of material at the archive. This implies that I also had to exclude a great deal of material that I found interesting and important to share, but which I could not share, here, due to lack of space. I have again adopted a position where I was in control of what should and should not be included or discarded which puts me in a position of continuing and discontinuing certain truths and knowledges of the past to be genealogically considered when examining “the history of the present” regarding discourses around these tests.

Lastly, concerning the interview informants, I need to acknowledge the reciprocal influences and biases that both I and my participants may have had on each other. That said, I have, to the best of my ability, tried to take these biases and interpersonal dynamics into account while conducting the interviews and when completing the study’s analysis. Instead of seeking to minimise these facts, I have chosen to recognise them.38

Conclusion

This study considers how knowledges and truths about normative versus non-normative sex, gender, body, embodiment and fair performance ideas are produced, circulated, deployed, justified and contested in women’s sports within the IOC/IAAF, among intersex organisations and among female athletes. In order to gain this understanding I have adopted a diverse research method where I have interviewed two IOC/NOC medical representatives and eight intersex organisation representatives. I have also examined archival material from the Olympic Museum in Lausanne and analysed nine female athletes’ lived experiences as told in autobiographical material.

To interpret the gathered material this research draws on the work of several theorists such as Foucault, Sullivan, Bourdieu, Harwood, Rabinow and Rose, and Judith Butler and so is a post-structuralist enquiry that attempts to tease out social relations of biopower, biopedagogy, somatechnics and habitus regarding ideal versus disturbing sex, gender, body, embodiment and athletic performance ideas in female sports. From a Foucauldian perspective of what appears to be “subjugated” versus non-subjugated knowledge processes of truth and power, I have sought to further understand the production, circulation, deployment, justification and contestation of these concepts by examining the participants’ responses and subjective understandings on the matters. A discourse analysis, a thematic approach and an approach in ‘opening up’ texts, conversations and images have been used in interpreting and analysing the data. As a researcher I recognise that I have taken part in “the varied and complex ways in which bodily-being is

shaped” by leading and taking part in a “discourse” that produces, circulates, deploys, justifies and contests the use of particular “instruments” (Sullivan, 2009, p. 314) and technologies about the body and athletic performances in female sports. I also have taken part in the circulation of particular truths and knowledges about these concepts in women’s sports by consciously continuing the debate and through the circulation of some voices while discontinuing others.

So in what follows, the next chapter will challenge the idea that femininity tests in women’s sports initially occurred through the rumours of men masquerading in women’s sports in the 1950s and 1960s. Rather, novel data found at the Olympic archives in Lausanne, suggests that tests to examine if women were thoroughly women and fit to compete as such had already been used in the 1930s. The following section also studies the evolution of the mandatory tests on an international level and their discontinuity from ‘on-sight inspections’ to standardizing and institutionalising the tests through sex chromatin tests in 1968. I seek to explore which knowledges and truths have informed certain procedures, languages and power relations and allowed them to continue or discontinue within the evolution of these tests in female sports.
Chapter Three: ‘I Know it when I see it’: The Genesis of Mandatory Sex Testing

There has been concern for a number of years that among the more successful female competitors many would be found who exhibited male characteristics, and who might be pseudohermaphrodites. This suspicion was given substance by the case of a Polish woman who set a world record in 1934 and two women medal winners for France at the European track and field championships in Oslo in 1946, all of whom subsequently declared themselves as men… Examinations of the external genitalia were subsequently required of women competitors at the Olympic Games… (Ryan, 1968, p. 96)

Truth is undoubtedly the sort of error that cannot be refuted because it was hardened into an unalterable form in the long baking process of history (Nietzsche, 1974, pp. 265, 210 in Foucault, 1977, p. 144).

The quote above extracted from the 1968 special issue on Sport Contributions in JAMA and relating to the 1968 Summer Olympics in Mexico City, contextualises some of the concerns the IOC had regarding female ‘authenticity’ in women’s competitions through time. The rationales for introducing the sex tests in women’s competitions frequently refer to the rumours of the 1950s and 1960s, where it was argued that “hermaphrodites” or men disguised as women were participating in female only sporting events (Hay, 1974, p. 120; IAAF, 2006, p. 9; Simpson & Ljungqvist, 1992, p. 850). According to medical practitioners and the IOC/IAAF at the time, the “general politics of truth” (Foucault, 1980f, p. 131) behind introducing and standardising sex tests (and doping tests) were linked to these rumours. However, as this chapter shall examine, anxieties concerning female ‘authenticity’ became a concern as early as 1928 (Sport: Olympic Games [Concl'd], 1936), and national policies obliging female athletes to undergo thorough medical examinations before eligibly competing had already been introduced in the U.S.A. in the year of 1938 (AAU, 1938). This chapter shall thus show that the discussions concerning female ‘authenticity’ in women competitions and the procedures of testing of this ‘authenticity’ in female sports has been a contested matter producing policies on female eligibility long before the rumours in the 1950s and the 1960s.

As the quote by Nietzsche suggests, in order to investigate the truths of today we need to explore the truths of history. This chapter will contribute to the field of femininity tests in elite

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39 I will refer to The Journal of the American Medical Association as JAMA henceforth
sport from a Foucauldian (1977, 1980f, 1988) truth and genealogy research perspective in which I look into queries of today by examining the “history of the present” (Foucault, 1979, p. 31; Foucault, 1977; Harwood & Rasmussen, 2003, pp. 2-3). I do this with the intention of “unsettling established models of knowledge” and truths (Grosz, 1994, p. 145), which in turn “allows us to establish a historical knowledge of struggles and to make use of this knowledge tactically today” (Foucault, 1980f, p. 83). From a continuity and discontinuity perspective (Foucault, 1970, p. 50), I examine the ways in which the IOC, its ISFs and NSFs, have managed women athletes through their femininity tests, and how they have developed and re-developed their “general politics of [scientific] truth” (Foucault, 1980f, p. 131) between 1938 and 1967.

This chapter equally examines how “the status of those who are charged with saying what counts as true” also “includes regular effects of power” (Foucault, 1980f, p. 131). This implies that one must look into how genealogy relates to power and knowledge, as genealogy tries to unpack “what rules of right are implemented by the relations of power in the production of discourses of truth? Or alternatively, what type of power is susceptible of producing discourses of truth that in a society such as ours are endowed with such potent effects?” (Foucault, 1980f, p. 93)

This chapter is thus divided into two sections where I first trace back to the first suspicions concerning the ‘authenticity’ of women in female competitions and the policies that evolved due to those suspicions. In the second section I consider the paranoia and the “general politics of truth” (Foucault, 1980f, p. 131) prevalent in the mid-1960s leading to the development of more structured “on-sight inspections” (Larned, 1976, p. 10) which were replaced with genetic testing in 1968. Here I study the competing logics and contested convictions of truth leading up to the shift of technology from the power of the gaze to sex chromatin testing. Throughout this chapter I am seeking to examine the evolution of the standardised sex tests and the continuity and discontinuity (Foucault, 1970, p. 50) of truths and resultant power relations between science, society and elite sports leading up to this standardised process.
‘I Know it when I See it’: The Genesis of Mandatory Medical Certificates in Female Competitions

...all women athletes entered in the Olympics [should] be subjected to a thorough physical examination to make sure they... [a]re really 100% female. (Brundage in Sport: Olympic Games, 1936, p. 42)

All women desiring to take part in any event held under the sanction of the A.A.U. must submit to a medical examination, by a woman physician if possible, immediately prior to the meet, or present a doctor’s certificate, dated not more than sixty days prior to the meet, certifying to her fitness for competition. A nurse shall also be in attendance at the meet. (AAU USA, 1938, p. 86)

After reviewing some Time Magazine articles covering the Olympic Games in Berlin in 1936, it becomes clear that the discussion concerning female ‘authenticity’ in women’s competitions emerged earlier than reported before (not at the 1936 Games as reported earlier) and instead already at the Amsterdam Olympic Games in 1928. In this Olympic Games a Japanese female broad jumper was accused of being something other than a woman and later referred to as “it” in an Olympic official statement (Sport: Olympic Games [Concl’d], 1936, p. 60). This unreported material is significant in so far that it extends the genesis of when it was commonly known that the ‘first’ female athlete was questioned for being something ‘other’ than female. Following this incident another emerged at the 1936 Olympic Games in Berlin. Here the Polish team and nation raised suspicions against the “muscular” female American 100m sprinter, Helen Stephens, as she had set the world record and beaten the “most famed female sprinter in the world”: Stella Walsh (a.k.a Stella Walasiewics) (Sport: Olympic Games [Cont’d], 1936, p. 40). As Stephens beat Walsh, the Polish newspapers posited that Stephens was a “man”, a dispute the German Olympic officials claimed “they had foreseen”, and thus “investigated Sprinter Stephens before the race, [and] found her a thoroughgoing female” (Sport: Olympic Games [Cont’d], 1936, p. 40). Before it was clear that Stephens, was ‘indeed’ a woman, Avery Brundage had proposed that female athletes should undergo physical examinations to ensure that they were 100% female (Sport: Olympic Games, 1936; Medicine: Change of Sex, 1936). Brundage, who was to become a key figure in the genesis of institutionalising and

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40 A US and Canadian term for Long Jump – the act of jumping as far as possible from a running start.  
41 Vanessa Heggie reports in Testing sex and gender in sports; reinventing, reimagining and reconstructing histories (2010) that the authenticity of female athletes was first mentioned at the 1936 Games in Berlin.  
42 Avery Brundage was the Chairman of the United States Olympic Committee between 1929 and 1952, and the president of the IOC between 1952 and 1972 (Olympic Games Museum, 2001).
standardising the sex and femininity tests, had just days before been elected an IOC member at this Games. At his first committee meeting he suggested “that all women athletes entered in the Olympics [should] be subjected to a thorough physical examination to make sure they were really 100% female” because “two athletes who recently competed in European track events as women were later transformed into men by sex operations” (Sport: Olympic Games, 1936, p. 42). As male athletes were not required to prove their masculinity, the suggestion put forward by Brundage can be analysed from a “history of the present” (Foucault, 1977; Foucault, 1979, p. 31) perspective by comparing how men and women were judged in the sporting arena at the time.

In their article on Olympic men and women: The politics of gender in the modern Games (2005) Kevin Wamsley and Gertride Pfister for example, highlight that in the 1920s men were predominantly judged hierarchically: first by their performance, then their behaviour and last by their appearance, while these criteria were applied in a different hierarchical order for women. Women were first judged for their appearance, then their behaviour and last for their athletic performance (Wamsley & Pfister, 2005). Even though this matrix of judgement within the sporting arena might be somewhat simplistic, it may reflect the societal norms of women and men in the 1920s and 1930s, which are mirrored in their sporting representation as well. Whether this view has changed, been somewhat revised or stayed the same will be further considered throughout the entire thesis.

In his suggestion at the 1936 IOC committee meeting it becomes clear, through the news clip above (Figure 1) retrieved at the Olympic Archives in Lausanne, that Brundage’s suggestion was voted against at the IOC meeting. The members instead agreed “to refer the matter to the various individual sports federations for decisions” (AP, 1936). The sex tests had to wait on an international level for a few more years, while it seems Brundage’s suggestion was implemented rather soon on a national level in the USA. As Brundage was the president of the United States Olympic Committee (USOC) he seems to have had greater impact on the sex testing debate nationally in the USA in the 1930s than internationally. This would however change in the 1960s, which I will shortly discuss.
Also hitherto unreported material gathered at the Olympic Archives in Lausanne proposes that national mandatory medical tests for women to eligibly compete as women trace back to 1938. The Amateur Athletic Union (AAU) Rule Book of the USA (Figure 2), states under rule XXVI entitled Competitions for Women (Figure 3) that women participants had to “submit to medical examinations, by a woman physician if possible, immediately prior to the meet, or present a doctor’s certificate, dated not more than sixty days prior to the meet, certifying her fitness for competition” (1938, p. 86). To clarify, the AAU did not require their male athletes to provide such certificates to compete; they were only required to provide medical certificates certifying their physical ability when participating in the marathon (1938, p. 104), which suggests that the tests were probably inspired by Brundage’s sex test proposal in 1936. This material and the link between Brundage and the AAU Rule XXVI on mandatory medical examinations of female athletes have not been presented in academic material prior to this thesis.

As Rule XXVI suggests, ideally, female athletes from the USA had to be examined by a female physician or meet a physician who could produce a medical certificate “certifying to her fitness for competition”. The context in which the term fitness is used in this rule book may thus suggest that the women were tested...
if it was ‘suitable’, ‘right’ or even ‘appropriate’ to let them compete as women after their thorough medical examination. The rule also stressed that any female competitor who did not submit to these medical examinations or provide a medical certificate 60 days prior to the heat, was ineligible to compete in her chosen sport. The limitation of days suggests that the certificate had to be current and state one’s present and appropriate physique. Similar certificates were later required by the IAAF in 1946 (Rule 17 paragraph 3) (Heggie, 2010) and by the British Women’s Amateur Athletic Association in 1948 (Ferguson-Smith & Ferris, 1991, p. 17; Ritchie, 2003, p. 87). 43

Rule XXVI also informs female athletes, from a homogenous habitus and “structuring structure” perspective (Bourdieu, 1977, p. 72) that women are only allowed to take part in certain sports potentially not challenging the gender divide, such as handball, gymnastics and basketball. The Rule also informs the female athletes that they may be suspended if they try to register for sports such as “boxing, wrestling, tug of war, or weight lifting” as they are not appropriate or even ‘fitting’ for women athletes. Here we see how the AAU organisers took the liberty within the “structuring structure” to produce “practices which tend to reproduce the regularities immanent in the objective conditions of the production of their generative principle” (Bourdieu, 1977, p. 78) by telling women what they could and could not do within elite sports. And, it was ultimately up to the “Referee” to grant the woman permission to compete if “he” had been informed by the physician that the female athlete was “fit” to compete. The Amateur Athletic Union’s XXVI Rule on female participation puts forward that medical examinations of female athletes, as a prerequisite to compete, appeared before they were institutionalised on the international level in the 1960s. Even though these examinations were not called ‘sex controls’ or ‘femininity checks’, the objective of these tests was to investigate the athletes’ physique and appropriateness to compete in women’s competition, which may well have required them to undress, especially if, as Brundage declared, women entering the elite sports had to be “subjected to a thorough physical examination to make sure they were really 100% female” (Sport: Olympic Games, 1936, p. 42). Also, it should be borne in mind that this policy entered force after the IOC decision that national and international federations could implement the ‘sex tests’ if they found it fit to do so (AP, 1936).

To which level the women may have needed to undress is unclear, but only requiring these certificates from women and recommending the female athlete to visit a female physician to thoroughly examine their physique and fitness suggests that some form of examining touch

43 The debate concerning whether or not female athletes were excluded from competition in order to uphold the ideal ‘feminine image’ and heteronormativity is something I will not explore here as the discussion around the history of female participation in elite sport has been extensively researched (Spears, 1972; Handley, 1976; Ferris, 1980a, 1980b; Messner, 1988, 2007; Cahn, 1994; Kane, 1995; Rothblatt, 1995; Messner et al., 2003).
or undressing should have taken place. This proposes in line with Foucault, that the physician examining the female athlete was “charged with saying what counts as true” (1980f, p. 131) because if she did not submit to the gaze of the doctor she was ineligible to compete. In other words, “the techniques and procedures” these physicians used in examining whether the American and the British female athletes were ‘suitable’ to compete in women’s sports imply that they were “accorded value in the acquisition of truth” (Foucault, 1980f, p. 131).

Moving from the national level to international level, research also suggests that the IAAF required their female competitors to present doctors’ certificates confirming their eligibility to compete in 1946 (Heggie, 2010, p. 159). And according to the Official Report by the Organizing Committee (OC) of the 1964 Tokyo Games, female athletes were for the first time required to provide medical certificates at the Games. However, only a selected group of female athletes, those participating in “athletics”, were required to provide these certificates.44

It is important to clarify that all of these tests and certificates were by no means a standardised procedure set up by the IOC/IAAF, since neither of the organizations had scientifically defined sex or femininity. Instead, as argued by Vanessa Heggie in Endeavour (2010) “the assumption was that the social or cultural definition in any nation was acceptable for sports and that any nation's judgement could be trusted” (p. 159).

When examining the internal IOC discussions regarding the developments of standardising the sex tests and making them a mandatory procedure at the Olympics, a letter from Brundage dated back to November 1966 stressed that the IOC were now ready for this process to take place. In this letter, found at the Olympic archives, the then IOC President again initiated the sex testing debate and for its standardization on international level. He wrote to the IOC medical commission chairman at the time, Sir Arthur Porritt, that in view of the sex testing developments in other ISFs, it was now time for the IOC to develop similar procedures:

In view of the sex developments at the recent European Championships in Budapest and the action of the I.A.A.F., should we not have something in our rules on this subject. Will you be good enough to prepare a suggestion for the coming Session in Teheran. (Brundage, 1966)

Sir Porritt45, replied a week later, confirming his support for implementing the tests but was equally reticent about the IOC’s involvement in it:

44 This regulation was however, not an invention of the IOC/OC but followed “the provision of Article 17, paragraph 3 of the Regulations of IAAF” (Organizing Committee of XVIII Games, 1964, p. 170).
45 Sir Arthur Porritt was the first chairman of the IOC medical commission between 1961 and 1967 and an IOC member between 1934 and 1967, and then an honorary member till his death in 1994 (Beckett, 1976, p. 166; Olympic Movement, 1994, p. 20).
Regarding the “recognition of sex in athletes” developments of late, it may interest you to know that the first time this rule was applied was during the Commonwealth Games in Jamaica [4-13 August 1966] [sic]… The I.A.A.F. decision will, of course, cover track and field events in the [Olympic] Games but can see difficulties in trying to make this comprehensive for all sports. As for a rule on the subject, even with my medical knowledge I would find this a little difficult to compose. It would seem that such individual Federations as had an interest in the subject might follow the good example of the I.A.A.F. and the I.O.C. might reasonably keep out this very contentious field. (Porritt, 1966)

With his “medical knowledge”, Porritt advised Brundage that even though he supported him in that the sex tests should become an institutionalised practice, he also stressed that to create a rule on the “recognition of sex” is “difficult to compose”. He thus suggested that the IOC should stay out of this “contentious field” as it tries to recognise and establish the sex of athletes in women’s sports.

From a “history of the present” perspective, what may have made the sex testing procedure more “contentious” was that two separate debates co-mingled at the time of the Brundage-Porritt letter exchange. One related to the misuse of illegal substances to advance athletes’ and nations’ track record of medals and the other was about confirming whether women only were participating in female only sporting events (Westerhoff, 1966). These debates took place at the same time and may have become conflated as the IOC, its partner federations and other athletes may not from the outset have been able to distinguish between female athletes who were doped or simply ‘disturbing’ female body, embodiment and athletic performance ideals. As a result of these discussions, the IOC in particular felt the need to take control of the situation and had its Medical Commission investigate the ways in which to standardise both the sex and dope testing procedures already at the Tokyo Session in 1964. (Brundage, 1968; Hay, 1981, p. 222; IOC, 1966, p. 11, IOC, 1967, p. 13) Hence, the letters between Brundage and Porritt were being exchanged in the midst of these discussions.

The medical examinations of 1938 along with those in the 1940s, and the doctors’ certificates, constituted the truth at this time. But this bedrock of truths would, with the help of medical practitioners, lead to more systematised ‘on-sight inspections’ also helping the IOC to ponder on the best method to institutionalise the tests on an international level. Till they came to this decision, the truth regarding an athlete’s femininity still had to rely on the power of the eye, which many women did not appreciate. This is the focus of the next section.

46 The Medical Commission of the IOC was originally created in 1961 under the leadership of Sir Arthur Porritt but re-established in 1967 with the leadership of Prince Alexandre de Mérode (Beckett, 1976, p. 166).
‘I Know it When I See It’: Discontinuing the Technology of “On-Sight Inspections”47

Prior to the emergence of sex endocrinology, scientists, particularly anatomists, used to locate the “essence” of sex in one specific organ. Femininity was located first in the uterus and later in the ovaries. All through the history of the biomedical sciences, masculinity was primarily located in the testes. (Oudshoorn, 1994, p. 145)

The disciplines may well be the carriers of a discourse that speaks of a rule, but that is not the juridical rule deriving from sovereignty, but a natural rule, a norm. The code they come to define is not that of law but that of normalisation. (Foucault, 1980f, p. 106)

It now becomes clear that the random tests performed on female athletes prior to 1966 to either certify their health, fitness or their femininity on the national or international level were generally not performed by the IOC or its ISFs but rather by GPs for NSF’s. We also see that it is from 1964 onwards that the move towards standardizing sex tests emerged in elite sports on an international level (Brundage, 1966; Brundage, 1968; Westerhoff, 1966). And the 1966 Commonwealth Games in Jamaica, the 1966 European Athletics Championship in Budapest and the 1967 Pan-American Games in Canada were such institutionalising steps.

When the sex tests were introduced in Budapest in 1966, the organisers required that all female athletes be inspected. This meant that 243 female competitors underwent the tests which have been described as “on-sight inspections”, where female athletes “paraded in the nude before a panel of gynaecologists” (Larned, 1976, p. 10). In considering what the female athletes thought about the newly implemented sex tests, Mary Peters, the pentathlon gold medallist in the Munich Olympics of 1972 describes in her biography that the “on-sight inspections” at the Commonwealth Games in Jamaica were:

…the most crude and degrading experience I have ever known in my life [where I was] ordered to lie on the couch and pull my knees up. The doctors then proceeded to undertake an examination which, in modern parlance, amounted to a grope. Presumably they were searching for hidden testes. They found none and I left. (Peters in Turnbull, 1988, p. 61)

47 In Deborah Larned’s article The Femininity Test: A woman’s first Olympic hurdle in WomenSports, 1976, the first trial inspections into female athletes’ femininity are referred to as “on-sight inspections” (1976, p. 9).
Peters here describes that female athletes were subjected to gynaecological inspections in search of something that was out of the ordinary such as testes or the like. This adheres to the simplistic procedure in which scientists and gynaecologists at the time may have “located the ‘essence’ of sex” in female athletes by eliminating the possibility that they had testes (Oudshoorn, 1994, p. 145). It is also apparent here, as in the next quote, that those “charged with saying what counts as true” (Foucault, 1980f, p. 131) concerning the female athlete’s femininity/sex was in the hands of the physicians. Their knowledge, skills, eyes and touch would ultimately permit the athlete to compete or go home.

In further examining female accounts of the tests and how at this time the power of the eye circulated, I read the story of shot putter Maren Seidler, who concurs with Peters that it was not a pleasant experience. Seidler also recalls, but from the 1967 Pan-American Games how one female athlete was found ineligible to compete due to her meagre physique:

They lined us up outside a room where there were three doctors sitting in a row behind desks. You had to go in and pull up your shirt and push down your pants. Then they just looked while you waited for them to confer and decide if you were O.K. While I was in line I remember one of the sprinters, a tiny skinny girl, came out shaking her head back and forth saying “Well, I failed, I didn’t have enough up top. They say I can’t run and I have to go home because I’m not big enough.” There are always funny stories like that, but it really was hideous. I was just sixteen at the time, and thought I wasn’t really afraid of not passing, I just felt that it was humiliating. That was the worst one. Since then it’s become routine. (Seidler in Larned, 1976, p. 9)

Seidler felt “humiliated” as the panel of doctors visually inspected whether they were feminine enough to compete, which she was according to the doctors. Seidler equally experienced how another female competitor in front of her failed to meet these doctors’ femininity requirements, which she expresses as both “funny” and “hideous”. By today’s standards, it may be hard to see how ruling out a female athlete as not feminine enough could be funny and why the disqualified female athlete seemed to present little objection against being diagnosed ‘unfeminine’. This may be indicative of the more unequal gender culture of the time, in which one would not question “the general politics of truth” (Foucault, 1980f, p. 131) within medicine and science, and appears to show the power they had to shape opinions.

The general discussion concerning ‘true’ femininity within sports medicine at the time further suggests, in relation to Foucault’s discussion regarding the eye of power, the ways in which “the medical gaze was institutionalised, [and] how it was effectively inscribed in the
social space” (1980e, p. 146). Thus these practitioners represented the eyes of these sporting institutions in determining who passed to compete as a woman and who did not. The young sprinter failing the test, as she was not “big enough” “up top” and thus not considered feminine enough to compete, is an example of that. This gaze was also informing the rest of the (sporting) society and the women participating in it, the standards of femininity and what met it, and ultimately what did not. But where did the power to give this verdict come from?

Foucault suggests that “individuals are the vehicles of power” (Foucault, 1980f, p. 98). But they are not vehicles of power in nothingness; instead they are the means of acting in accordance with an already existing power-circulating-chain of beliefs, which follows certain norms, rules and regulations. These norms are already inscribed and later maintained in what Foucault argues is part of a “society of normalisation” (Foucault, 1980f, p. 107). Foucault thereby suggests that the “law of normalisation”, concerning femininity in this case, implies that there was an agreed understanding of what ‘femininity’ or a ‘normal’ female ought to look like and the physicians giving them the verdict were only the vehicle of power for an opinion that already existed in the society they functioned in. The female athletes who were judged by these ideals may thus equally have been vehicles of power by accepting the diagnosis and verdict handed down by the medical practitioners and not contesting it.

Michael Clifford in Crossing (out) the Boundary: Foucault and Derrida on Transgressing (1987), argues that the ones transgressing the laws of femininity are already conditioned before the law of transgression that caught them:

The transgressing subject, in fact, an effect of the against-ness (vis-a-viz the limit) of the transgressive act [or look], a shadow caused by and discernable in the lighting flash of transgression. Thus, the act of transgression can be said to be prior to the transgressing subject. (1987, p. 226)

This suggests, in Foucauldian terms, that the transgressing subject, the female athlete that is too meagre “up top” in Seidler’s account, was merely an effect of the inscribed structure that did not recognise these bodies as feminine, that is, “a subject position whose condition of possibility is already “inscribed” within the field” (Biesecker, 1992, p. 358). This may explain why this athlete accepted the verdict by the medical professionals instead of asking ‘what does the size of my breasts have to do with my femininity and ability to compete?’ This may equally clarify the ways in which these athletes may have been conditioned to accept authoritative power relations, agreeing with the diagnoses handed down to them and quickly embarking on a “routine” they had to get used to if they wanted to participate in elite sports. These power relations may suggest how the continuity of these tests is established among the tested athletes.
and then through the practice of policing oneself, by ‘accepting’ the routine and the verdict handed to them.48

Even though the “on-sight inspections” might have been a “hideous” “routine” women were forced to get used to in order to compete, the grand total of women were upset by the setup of the tests. A strong female voice demanding a shift in the testing procedure emerged as it created an uneasy and confrontational atmosphere between the female athletes and the physicians performing these tests (Editorial, 1966, pp. 1117-1118). The Editorial of JAMA provided a contribution to this debate in 1966 and suggested that the ISFs should find another means to test these women:

Most young ladies, we are pleased to observe, are readily identifiable as ladies. Of course, every physician knows that the visible appurtenances of femininity are less obvious in some women, who are nonetheless completely feminine… Perhaps we might suggest, following up the light-hearted remarks of Bunge, that the Federation consider using the buccal smear method of sex chromatin determination introduced by Moore and Barr. Undressing is unnecessary, the method is painless, and evaluation can be done rapidly and accurately by a trained technician… Perhaps, by using this test, the Federation could assure both dignity and integrity. (pp. 1117-1118) (Emphasis mine)

The editorial argues against the nude parades as the women’s physique may in some cases put them in question even though they may be “completely feminine” and because women have “objected” to these testing methods. The lengthy editorial goes on to suggest that sporting federations and the IOC should refrain from painful on-sight technologies in identifying the sex of the female athlete and instead make use of a sex chromatin tests that “accurately” assures the “dignity and integrity” of the athlete. The editorial justifies this proposal by referring to a 1960 JAMA article by Raymond Bunge and a 1955 article in the Lancet by Keith Moore and Murray Barr, wherein suggestions are made that sports federations should perform sex chromatin testing as a secure way of verifying the sex of human beings. The editorial suggests that buccal smear tests are the way forward for the IOC/ISFs as this method is painless in comparison to the nude parades.49 According to the authors this procedure would be more ‘humane’ and more straightforward in IOC’s attempt to standardise the sex tests (Bunge, 1960; Bunge, 1967; 79

48 This will be discussed more thoroughly in Chapter Six.
49 Bunge however, suggests that both men and women should be tested, which he admits can mean that some inaccuracies occur in both the male and the female camp, such as Klinefelter’s syndrome in men, but reassures the reader that this is less likely to occur as male individuals with Klinefelter’s are “singularly unathletic”. As will be clarified in the next section, the IOC did not adopt the idea to also test men (Beckett, 1976, p. 170), however, the editorial critique may clarify the logic influencing the IOC in adopting the Barr Body and buccal smear tests invented by Moore and Barr.
Editorial, 1966). It is important to briefly discuss the ramification of this editorial suggestion. The means by which this new proposition of testing technology came about, and later became ‘reality’, may actually have had more to do with the ways in which the IOC/IAAF and particular scientists were able to network and build alliances and ‘constructing’ a particular ‘reality’, than the IOC/IAAF ‘discovering’ a particular ‘reality’. Although my forthcoming quote is rooted in the standardisation of sex hormones, a similar link may be made with how the sex chromatin testing came to be understood and standardised in elite sports. Nelly Oudshoorn argues in Beyond the Natural Body: An Archeology of Sex Hormones (1994) that:

Scientists do not construct facts and artefacts isolated from their social context. In order to make sex hormones, scientists had to create networks with other social groups outside the laboratory. The construction of sex hormones took place in networks formed between three groups: the laboratory, the clinic and the pharmaceutical industry. These networks were of vital importance in the study of sex hormones. Had laboratory scientists not succeeded in capturing the interests of the pharmaceutical industry, research on sex hormones would have stayed inside the walls of the laboratory. (p. 81)

Oudshoorn argues that the scientists in the laboratories needed to network to apply their theories in practice. Without the help of the clinic and the interest of the market place (pharmaceutical companies), the understanding and subjectification of hormonal treatments, such as taking ‘the pill’ controlling women’s fertility, may not have developed into the mass industry it is considered today (Oudshoorn, 1994). I believe this framework is helpful in understanding the standardisation and institutionalisation of the sex chromatin tests in elite sports, as these arguments, and those that are to follow, suggest that the ISFs should discontinue the procedure of “on-sight inspections” and make use of more contemporary scientific knowledge in their hunt for frauds and cheats in female sports. Thus, this new science was not only appealing because it conformed to the constructed truth of the time but it was also appealing because it could circumvent the need for female athletes to be subject to intrusive testing, without having to do away with testing altogether.

These critical discussions against the “on-sight inspections” and the alternative testing suggestion soon reached the IOC. While at the Olympic archives, I also found an internal IOC letter criticising the “on-sight inspections”. This letter, expressing sympathy for what these female athletes had to endure, was written by the president of the Polish NOC, Włodzimierz
Reczek\textsuperscript{50} in 1967. The letter, addressed to the heads of the IOC, and the newly appointed chairman of the Medical Commission, de Mérode, stresses that:

Much improper publicity, unnecessary discussion, and controversial opinions have been raised recently by sex examinations ordered by certain [sic] international sport federation. Repeated gynaecological examinations of the young girl athletes, even several times in the course of one year, make an unpleasant atmosphere around these athletes and are a form of discrimination. (Reczek, 1967)

Rezcek echoes the “unpleasant atmosphere” experienced by female athletes subjected to these tests and argues that the tests should be terminated. He also stresses the importance, with all respect to the athlete and the medical profession, that any sex test results must remain confidential (Reczek, 1967)\textsuperscript{51}. In the same letter, Reczek (1967) also expresses that the IOC should “consult some medical psychiatrists and specialist of sports medicine” and that the tests should be a standardised procedure implemented by all Olympic Games and its Organising Committees. Pressure applied by the receipt of too many complaints from scientists and the athletes tested, eventually ceased this “unpleasant atmosphere” in 1967 and pushed the medical commission of the IOC to give “special attention” to controls regarding “sex determination” (Westerhoff, 1967). This was the end of the truth of “on-sight inspections” and the start of a new truth and era where standardised procedures of sex chromatin testing in elite sport emerged, and the European Cup in Kiev 1967 would be the first time these tests were introduced on trial (Snider, 1967).

Altogether, the 1966 editorial, the 1955 scientific sex chromatin research by Moore and Barr and the criticism directed towards the “on-sight inspections” by female athletes and scientists (such as Bunge), allowed the networking between science and elite sports to commence. And perhaps, if the IOC/IAAF had not received these complaints and alternative testing suggestions – sex chromatin testing – the laboratory work by Moore and Murray may “have stayed inside the walls of the laboratory” (1994, p. 81).

Conclusion

This chapter has clearly established that the discussions about female ‘authenticity’ in women’s sports emerged already at the Olympic Games of 1928, and the first time a woman seems to have been challenged and sex tested was at the Olympic Games in Berlin, 1936. (Sport:

\textsuperscript{50} Włodzimierz Reczek was the President of the Polish NOC between 1952 and 1973, an IOC member between 1961 and1996 and then an honourary IOC member till his death in 2004 (IOC, 2004; PKI, 2010).

\textsuperscript{51} The confidentiality issue will be discussed more in Chapter Six, see pp. 172-179.
Olympic Games [Cont'd], 1936, p. 40; Sport: Olympic Games [Concl'd], 1936, p. 60) This chapter highlights the central role the former IOC President Avery Brundage had in this medical examination process on a national and international level and the ways in which he also pushed the agenda in the 1960s for there to be standardised and institutionalised sex tests on an international level (Brundage, 1966; IOC, 1966, p. 11; IOC, 1967).

The thorough medical examinations, providing the athlete with a medical certificate allowing her to compete in female sports, were not entitled ‘sex’ tests or ‘femininity’ tests. However, the fact that the AAU policy and rules were implemented soon after Brundage’s 1936 proposition about the need to ensure that athletes in women’s competition were 100% women and only women had to undergo them, suggests that the tests had more to do with establishing female authenticity than if they were physically ‘fit’ or physically ‘able’ to compete. The discovery of this information at the Olympic archives in Lausanne, may thus suggest that we need to extend the genesis as to when the present truths emerged about when the first accusations about female authenticity. Equally we may need to extend the genesis of when, where and in what context the proposition to develop the testing technologies emerged and why the tests were rejected on an international level in 1936 but implemented on a national level in the USA already in 1938. Highlighting that Brundage is central to this development is further essential. Hence, the “history of the present” needs to be revised to acknowledge that anxieties regarding female authenticity emerged long before the rumours in the 1950s and 1960s, and were already evident in 1928.

I have also shown the internal and the external IOC call for the ‘on-sight inspections’ to cease and for the IOC to pick up some other technology in trying to determine the sex of the athlete. The discussions between the 1930s and the 1960s very much focus on making sure that women were women and thus determine their sex either through visual examinations or as they proposed in the last part of the section, through sex chromatin tests. There is thus no confusion that the IOC and its ISFs wanted to be assured that women only competed in female sporting events and took it into their hands to use technologies which they proposed determined as well as established the sex of the athlete. Going back to Nietzsche’s and Foucault’s interpretation of truth, it here becomes evident how one truth about defining sex and femininity (the gaze of the eye) is overtaken by another, more nuanced contemporary truth or technology in determining sex based on genetics and chromosomes.

Building on this chapter, the next chapter will challenge the idea that sex/femininity/gender tests have had a linear, continuous and a non-convoluted history within the IOC and the IAAF since their standardisation till their discontinuation on a mandatory basis in 1999. I shall continue investigating to what extent knowledges and truths within science, medicine and the
IOC/IAAF have challenged as well as influenced each other in the development of the testing technologies and nomenclatures used to either uphold them or dissolve them on an international level. Drawing on Oudshoorn’s investigation of what happened to the sex hormone once it left the laboratory, I will explore this idea but in relation to sex chromating determinations (i.e. what happened when sex chromatin determination left the laboratory). I seek to examine which knowledges and truths have informed certain procedures, languages and power relations to continue or discontinue within the discourse of determining the female sex or gender in their attempt to segregate sports by sex or gender.
Chapter Four: Standardised Procedures: Historical Truths about Sex and Gender Testing in Female Sports

Gender has since many years been an issue that surfaces from time to time in women’s events at athletic meets. Gender verification for the purpose of competition has undergone significant evolution since attempts were made to introduce measures aimed at ensuring fair competition amongst female athletes. The first mechanism... involved rather crude and perhaps humiliating physical examinations. This very quickly gave way to the method of determining ‘sex’ chromatin through buccal smear examination. However as there were too many uncertainties associated with this method, many experts in the field clamored for its discontinuance resulting in it being abandoned first by IAAF in 1991 and then the IOC since Sydney 2000. However a search has continued for an acceptable and equitable solution in order to be able to address the occasional anomalies that do surface either as a chance observation during the ubiquitous anti-doping controls these days or through a ‘challenge’ by a competitor. (IAAF, 2006, p. 1)

Truth is a thing of the world: it is produced only by virtue of multiple forms of constraint. And it includes regular effects of power. Each society has its regime of truth, its ‘general politics of truth’: that is, the types of discourse which it accepts and makes function as true; the mechanisms and instances which enable one to distinguish true and false statements, the means by which each is sanctioned; the techniques and procedures accorded value in the acquisition of truth; the status of those who are charged with saying what counts as true. (Foucault, 1980f, p. 131)

The IAAF quote above extracted from their 2006 Gender Verification policy contextualises some of the concerns the IOC and the IAAF have had regarding what “methods” to use and what to call them in their search for those athletes who disturb the ‘level-playing field’ in women’s sports. This chapter will contribute to the discourse on sex/femininity/gender testing in female sport from a Foucauldian truth and genealogy research perspective (1977, 1979, 1980f, 1988). Here, I again look into queries of today by examining the “history of the present” (Foucault, 1979, p. 31, Foucault, 1977). I do this with the intention of “unsettling established models of knowledge” and truths (Grosz, 1994, p. 145). This in turn “allows us to establish a historical knowledge of struggles and to make use of this knowledge tactically today” (Foucault, 1980f, p. 83) to better grasp and understand the genesis of the present testing...
technologies focusing on HA variations. From a *continuity* and *discontinuity* perspective (Foucault, 1970, p. 50), I examine the ways in which the IOC/IAAF have managed women athletes through these testing technologies, and how they have developed and re-developed their “general politics of [scientific] truth” (Foucault, 1980f, p. 131) in maintaining these tests between 1967 and 1999. The development of the sex tests will be accounted for as well as the strong scientific opposition to this somatechnology.

This chapter also examines how “the status of those who are charged with saying what counts as true” which “includes regular effects of power” (Foucault, 1980f, p. 131) do or do not influence the dominant *habitus* (Bourdieu, 1977, 1990, 1999) of intersex in elite sports that the IOC/IAAF are drawing on. Here I consider how these “truths” are affecting or not affecting the ways in which the IOC/ISF manage women in sports. For example, I study how the IOC/IAAF negotiated their standardised sex tests in the midst of the Summer of Love which represents an era of second wave feminism, sexual liberation and critique against heteronormativity. I examine to what extent the habitus the IOC/IAAF operated in was affected by these outside movements. I also do this by highlighting and analysing significant, and thus far, unreported material from the Olympic Archives in Lausanne. Here I focus on a Danish Report from 1972 which critiques the IOC for taking the liberty to define the female sex and femininity through their sex tests. In order to research the “history of the present” and the debates between the IOC, its NOCs and its ISFs, I mainly draw on material gathered at the Olympic Archives.

This chapter is thus divided into two sections where I first examine the continuing and discontinuing logics the IOC used in changing the name of the testing technology from tests verifying the female athlete’s “sex” to then her “femininity” to then her “gender”, even while the technology practically stayed the same between 1968 and 1998. As clarified, I also consider the habitus of intersex to better appreciate the habitus of intersex in elite sports and why the tests developed the way they did and focused on those they did. The second and last section investigates the logic in discontinuing the mandatory tests in 1999 and briefly presents the gender verification policy introduced post 1999.

In this chapter I will not try to prove whether these technologies are getting better or worse, but examine why these developments took place and how clashes of truths within science and society may have affected the debates and actions of the IOC/IAAF. With the help of Butler I will study what sex and gender are, what constitutes their difference and how we should define them, and more importantly, what history they have (1999, pp. 9-11) in female sports. This chapter will thus read into the history of sex, femininity and gender testing in female sports – their continuities and discontinuities between 1968 and 1999.

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The Continuity & Discontinuity of Taxonomies & Techniques: From “Sex Testing” to “The Investigation of Femininity” to “Gender Verifications”

Genealogy makes no presumptions about the metaphysical origins of things, their final teleology, the continuity or discontinuity of temporally contiguous elements, or the causal, explanatory connections between events. Instead, genealogy can be seen as the study of elements insofar as they are already interpreted, a study aimed at unsettling established models of knowledge and epistemological presumptions involved in the production of history, philosophy, and morality. (Grosz, 1994, p. 145)

As elucidated, “on-sight inspections” in women’s sports were discontinued after a great amount of criticism had been directed at them, and were replaced by a new truth and technology determined by genetics and chromosomes – sex chromatin testing. This section will consider the ways in which knowledges and truths regarding how to test female athletes’ sex, femininity and gender shifted several times between 1968 and 1999. I draw on Foucault’s and Grosz’s discussion concerning continuity and discontinuity in how knowledges and truths shift regarding the tests. As clarified in the methodology chapter, continuity is something that can co-exist in part, in a broken fashion or completely while other knowledges, truths and techniques are discontinued or discontinuing. This continuity manifests because the tests continue to exist even though the technique may change.

Figure 4. Letter from Brundage to General Clark on the topic of sex testing (Brundage, 1968)
This logic helps me to structure the following section as it aims to “unsettl[e] established models of knowledge” concerning sex, femininity and gender tests from the rise of the sex chromosome testing till its end in 1999. To consider the continuity and discontinuity of knowledges, languages, truths and techniques regarding the tests and their “temporally contiguous elements”, the *habitus* (Bourdieu, 1977, 1990) of intersex in (sports) medicine at the time will be considered. In other words, I wish to consider the ways in which intersex, as a phenomenon in society and medicine at large, has been “socially constituted” in elite sports by a “system of cognitive and motivating structures” in society and (sports) medicine conditioning “the socially structured situation in which the agents’ interests are defined, and with them the objective functions and subjective motivations of their practices” (Bourdieu, 1977, p. 76).

As stipulated earlier, it is believed that the European Cup in Kiev was the first time this technology was used, but as the letter suggests (Figure 4) these tests may have already gone on trial at the Tokyo Games in 1964. Unless Brundage implies that the “procedure” was the IAAF rule where female athletes in ‘athletics’ had to provide medical certificates to ensure their femininity.

In analysing the objective behind these tests (the ways in which these technologies and nomenclatures functioned, the messy ways in which they were upheld and what ultimately dissolved them as a mandatory procedure), I have produced Table 4, starting on next page, which is a useful point of reference. A comparable table has been produced by James Rupert in a work entitled *Genitals to Genes: The History and Biology of Gender Verification in the Olympics* (2011, p. 353). This table gives, similarly to Rupert’s, detailed information of when and where the tests were performed, the nomenclature used at the time and the technique of testing at the time. What this table does differently from Rupert’s is the bringing forth in an original and detailed fashion, how many female competitors participated and how many were tested in all the Games. Where possible it also gives detailed information of how many presented previous certificates, were retested and how many were found irregular. These additions are mainly drawn from my research at the archives.

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53. The IOC have granted me the permission to use Figures 4 and 6-14.

54. According to the Official Report by the Organizing Committee (OC) of the Tokyo Games only a selected number of female athletes were required to provide medical certificates and it is unclear if they also had to undergo the sex chromatin tests. According to the Tokyo OC, medical certificates (form no. 10) were “required of female participants in athletics under the provision of Article 17, paragraph 3 of the Regulations of IAAF” (Organizing Committee for XVIII, 1964, p. 170). How many women had to submit medical certificates at the Tokyo Games is not clear, but it is estimated that around 280 certificates had to be presented (Organizing Committee XVIII, 1964, pp. 89-104). Before the sex chromatin testing went live at the Olympic Games, the IOC evaluated how these tests performed at the Kiev Cup in order to trial them at their Games in Grenoble 1968. Even though the IOC was implementing the Grenoble sex tests, Brundage stresses in his the letter to General Clark, in preparation for the Summer Games in Mexico 1968, that the IOC will not be responsible for organizing the sex tests, instead it is the responsibility of the ISF and the OC of the particular Games. The IOC would only produce the ruling frameworks to follow.

55. This issue was discussed in the previous chapter, see pp. 72-74.
From a Butlerian perspective concerning the *history of sex, femininity and gender* (1999, pp. 9-11), and a Foucauldian perspective of *continuity and discontinuity*, the table also gives a unique indication of what history “sex controls” versus “femininity testing” versus “gender verifications” have in the realm of elite sports. It also provides insights into the continuity and discontinuity of ideology, language, knowledge and technology. With the help of the official Olympic Games Reports, the table examines the mandatory testing at the Winter and Summer Olympic Games with its start in Grenoble 1968 until its end in Nagano 1998, as these reports disclose quite detailed information about these issues. However, where the official reports have lacked in information, reports produced by the IOC, medical commissioners and journal articles have filled the gaps. The headings have been arranged in a fashion to suggest the systematic continuity of ideology within the testing alongside obvious discontinuities concerning which technology and nomenclature were applied. From the table we can see that the technology changes once, while the taxonomy changes twice between 1968 and 1999. The last table heading “women found irregular” also troubles the IOC confidentiality measures as the information regarding how many are found irregular/not irregular is continuously revealed – 9 times out of 17.

**Table 4. Mandatory Sex/Femininity/Gender Tests – Summer & Winter Games, 1968-1998**

<table>
<thead>
<tr>
<th>Year &amp; Location</th>
<th>Test Classification</th>
<th>Form of Testing</th>
<th>Total Women/Total Tests</th>
<th>Women found irregular</th>
</tr>
</thead>
<tbody>
<tr>
<td>1968 Grenoble</td>
<td>Sex Verification</td>
<td>A sex chromatin test (body of Barr) for X-chromosomes and a fluorescent body test for Y-chromosomes were conducted</td>
<td>250/50</td>
<td>None57</td>
</tr>
<tr>
<td>1968 Mexico City</td>
<td>Sex Control</td>
<td>As above</td>
<td>803/803+ (first time all women were tested, and several re-tested)</td>
<td>No info provided58</td>
</tr>
<tr>
<td>1972 Sapporo</td>
<td>Sex Checks</td>
<td>As above</td>
<td>205/217 (some presented certificates &amp; some re-tested)</td>
<td>None59</td>
</tr>
<tr>
<td>1972 Munich</td>
<td>Sex Control</td>
<td>As above</td>
<td>1059/960 (114 presented previous certificates)</td>
<td>360</td>
</tr>
<tr>
<td>1976 Innsbruck</td>
<td>Sex Checks51</td>
<td>As above</td>
<td>231/241</td>
<td>No info provided62</td>
</tr>
</tbody>
</table>

56 Summer Olympic Games are shaded in light blue.
57 (IOC, 1968a, p. 2; Thiébault, 1968, p. 4)
58 (OCXIX, 1968, pp. 521-525; Hay, 1968, p. 2; IOC, 2012c, p. 4)
59 (OCXI, 1972, pp. 383, 386; IOC, 2012b, p. 5)
60 (OCXX, 1972, pp. 115, 376; Schwiniger, 1980, pp. 72-80; Ferguson-Smith & Ferris, 1991, p.19; IOC, 2012c, p. 4)
61 In the IOC Medical Control Book the IOC are already referring to “Femininity controls” (1976, pp. 1-13).
62 (OCXII, 1976, p. 195; IOC, 2012b, p. 6)
<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
<th>Method</th>
<th>Details</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1976</td>
<td>Montréal</td>
<td>Femininity Testing</td>
<td>As above</td>
<td>2018/1800 (some presented certificates &amp; some re-tested)</td>
</tr>
<tr>
<td>1980</td>
<td>Lake Placid</td>
<td>Femininity Testing</td>
<td>As above</td>
<td>232/232+/- (some presented certificates)</td>
</tr>
<tr>
<td>1980</td>
<td>Moscow</td>
<td>Femininity Tests</td>
<td>As above</td>
<td>1115/995 (200 presented certificates &amp; some re-tested)</td>
</tr>
<tr>
<td>1984</td>
<td>Sarajevo</td>
<td>Femininity Control</td>
<td>As above</td>
<td>274/262 (some presented certificates &amp; some re-tested)</td>
</tr>
<tr>
<td>1984</td>
<td>Los Angeles</td>
<td>Gender Verification</td>
<td>As above</td>
<td>1566/1610 (220 presented certificates &amp; approx. 18 were re-tested)</td>
</tr>
<tr>
<td>1988</td>
<td>Calgary</td>
<td>Gender Verification</td>
<td>As above</td>
<td>301/296 (some presented certificates &amp; some re-tested)</td>
</tr>
<tr>
<td>1988</td>
<td>Seoul</td>
<td>Gender Verification</td>
<td>As above</td>
<td>2194/2305 (255 presented certificates &amp; some re-tested)</td>
</tr>
<tr>
<td>1992</td>
<td>Albertville</td>
<td>Gender Control/Testing</td>
<td>Polymerase chain reaction (PCR) detects the presence of the Y-chromosome (SRY and/or DYZ-1)</td>
<td>488/488+/- (some presented certificates &amp; some re-tested)</td>
</tr>
<tr>
<td>1992</td>
<td>Barcelona</td>
<td>Gender Tests</td>
<td>As above</td>
<td>2704/2406 (some presented certificates &amp; some re-tested)</td>
</tr>
<tr>
<td>1994</td>
<td>Lillehammer</td>
<td>Gender Testing</td>
<td>As above</td>
<td>522/522+/- (some presented certificates &amp; some re-tested)</td>
</tr>
<tr>
<td>1996</td>
<td>Atlanta</td>
<td>Gender Verification</td>
<td>As above</td>
<td>3779/3091 (296 presented certificates &amp; 379 competed in open competitions &amp; some were re-tested)</td>
</tr>
<tr>
<td>1998</td>
<td>Nagano</td>
<td>Gender Verification Test</td>
<td>As above</td>
<td>815/679 (136 presented certificates)</td>
</tr>
</tbody>
</table>

64 (OCXIII, 1980, pp. 187-189; IOC, 2012b, p. 6)
65 (OCXXII, 1980, pp. 193-194; IOC, 2012c, p. 5)
66 (OCXIV, 1984, pp. 91, 148; IOC, 2012b, p. 6)
67 (OCXXXIII, 1984, pp. 358-359; Ferguson-Smith & Ferris, 1991, p.19; IOC, 2012c, p. 5)
68 (OCXV, 1988, p. 373; IOC, 2012b, p. 7)
69 (OCXIV, 1988, p. 788; IOC, 2012c, p. 5)
70 (OCXVI, 1992; Elsas, Hayes & Muralidharan, 1997, p. 50; IOC, 2012b, p. 7)
71 (Elsas et al., 1997, p. 50; IOC, 2012c, p. 6)
72 (OCXVII, 1994, p. 93; IOC, 2012b, p. 8)
73 (Elsas et al., 1997, p. 52-54)
74 (OCXVIII, 1998, p. 295)
This table shows that the terms “sex control” and “sex checks” were used in the official reports of the Olympic Games between 1968 and 1976 (eight years). In 1976 the term “sex” was replaced with “femininity” and used until the Los Angeles Games in 1984 (eight years), when “femininity” was replaced with “gender”. The term gender then became the common terminology till 2011 (27 years) when female athletes with HA became the new target.

As the table suggests, the name changes in 1976 and 1984 do not imply that the technology of the tests themselves changed. Instead, the technology effectively continued and remained the same. As the table also shows, the number of female athletes being tested did not always represent the number of female athletes participating in the Games, as many brought certificates ‘establishing’ their sex, femininity or gender from previous competitions. The table also highlights that many of the tests had to be executed more than once as the test results were not always complete or definitive the first time around. In better understanding the reasons behind the name changes, I must also examine the debates within medicine, science and the IOC between 1968 and 1999. In considering these influences I need to introduce the IOC architects behind the standardization and implementation of the “sex controls”.

In 1968, the IOC Medical Commission consisted of Mr Arpad Csandi, Dr. Albert Dirix, Prince Alexandre de Mérode, Professor Ludwig Prokop, Professor Arnold Beckett, Dr. Eduardo Hay, Dr. Pieter Van Duk as well as Professor Guiseppe La Cava, Professor Herbert Reindell and Dr. Jacques Thiébault (The Work of the Medical…, 1968, p. 267). All of them are men, Caucasian, well educated, mostly medical practitioners, part of the upper- or upper-middle class and are generally in the senior part of their career. As the habitus section on page 95 shall further analyse, these men were having these sex testing conversations regarding female athletes at the height of the Summer of Love (1967) which often represents an era when people of the general population questioned gender discrimination, sex morals and demanded more sexual freedom (Anthony, 1995; Helms, 1997). The ways in which this competing habitus may have affected their habitus will be discussed throughout this section.

The three key figures behind the standardization and implementation of the sex tests at the 1968 Winter Games in Grenoble and Summer Games in Mexico were IOC Medical Commission Chairman Prince Alexandre de Mérode the chief medical officer of the Grenoble Games, Dr Jacques Thiébault (also Thibault), and the chief medical officer at the Mexico Games, Dr Eduardo Hay. When the tests were introduced for the first time in Grenoble, Table 4 (on pp. 88-89) indicates that out of 250 women, only 50 were tested. Even though de Mérode wanted as many female athletes as possible to undergo the test, only 50 went through as it was

75 Due to IOC image copyright regulations, I am not allowed to present pictures of these commissioners, unless they, or their family members if they are deceased, approve that I portray their image.
too expensive to test all and the laboratory facilities could not even accommodate them all. (Thiébault, 1968: 4) As only women were tested\textsuperscript{76}, due to the concern and pressures about unfair competition, one may wonder how the IOC picked which 50 athletes were to be tested. The Chicago Tribune (Figure 5) published an article on the matter. As the article suggests, an “electronic computer” picked who was to be tested and, faced with the task of presumably being equitable, decided that the fairest choice was a man. This male contestant was not tested, but this example suggests that relying fundamentally on technology to provide the right answers may only be as good as the data we give it. It seems then that 50 female athletes were “drawn” to undergo sex chromatin testing to establish a 46, XX chromosome make-up which would allow them to compete eligibly as a woman (IOC 1968a, p. 2; Thiébault, 1968, p. 4). And in the Olympic Review Newsletter following the Grenoble Games, the IOC medical commission positively summarised the test results:

The sex tests took place before the Opening of the Games and were carried out with the greatest respect for human rights and with absolute secrecy – after having learned how simple the procedure is, the athletes submitted themselves to it with a smile. In this case, the tests consisted of taking a buccal smear in order to determine the sex chromatin granules. The results obtained were so clear that it was not necessary to undertake any supplementary test… (1968, p. 72) (Emphasis mine)

As the passage captures, the IOC wanted to inform its former sceptics that the sex chromatin test was far from the “unpleasant” experience of parading nude and submitting to gynaecological examinations. Instead, the female contestants agreed to the sex controls with “a smile”. The IOC also emphasised that the tests provided rapid and unambiguous results making the ‘sex determining’ procedure less troublesome and more effective than its predecessor. Due to the Grenoble results, the sex tests were scaled up at the same year’s Summer Olympics in Mexico, but this time under the leadership of Dr Hay. Instead of lots being drawn to be tested,  

\textsuperscript{76} Arnold Beckett, member of the IOC medical commission in 1968 stipulates in 1976 that “the purpose of the control is to protect women against unfair competition. In men’s sports, individuals who are not truly male do not have an advantage over the truly male in competition, and therefore those who are not truly either male or female are not barred from competing in men’s events” (p. 170).
it was now compulsory for all female athletes to perform the sex chromatin test. (Hay, 1968, pp. 2-4; IOC, 1968b, p. 6)

In 1968 the Medical Commission of the IOC had both Dr Thiébault and Dr Hay produce individual reports on the sex testing procedures at the respective Games, which were presented at their January meeting in 1969. De Mérode argued in his opening statement for the importance of the meeting as it was “to explain and make known to all those concerned, the methods and scientific means used to accomplish [their] activity” (1969, p. 1). At this meeting Dr Thiébault (1968, p. 1) emphasised the aim and the importance of sex testing and that the tests were partially mandated to verify whether “so-called women, built like navvies [manual workers] and breaking records”, belonged in female sports and to discourage “hybrids” from participating:

…it was a matter of making our aims understood and especially persuading “hybrids” not to compete in the Games… [however,] if we find such hybrid beings, we must if possible treat them and at the very least, help them to accept their fate as we ourselves do when we discover a shortcoming of some kind in ourselves…[F]rom the medical point of view, I think that discovering certain sexual anomalies earlier, i.e. when the person is very young, could only be of great assistance, and I fail to see for what obscure reason it would be preferable to ascertain a hybrid sex at 20 years old rather than at 13. On the contrary, it seems to me that at 20, everything is already “fixed” and that it is very late to take action, while at 13, all therapeutics are still possible, and in particular, it is not too late, if necessary, to reintegrate a person psychically into his real sex. (1968, pp. 2, 5)

Locating “hybrids” is according to Dr Thiébault, one of the key reasons for institutionalising these sex tests and the objective for detecting these athletes was two-fold. First, it was important to inform them of their ineligibility due to their “shortcoming”. The word “shortcoming” can be interpreted in various ways, but in this context the shortcoming is not a road-block on the way to excellent health, but rather linked to “certain sexual anomalies” as opposed to sexual normality. Sexuality here refers to the biological sex make-up rather than acts driven by one’s sexuality. Second, it was important to provide “therapeutic” assistance in normalising and reintegrating the ‘impaired’, at an early stage, into “his real sex”, rather than

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77 Prince Alexandre de Mérode, born in Etterbeek in 1934, was not a member of the Belgian Royal family, rather his hereditary title of “prince” had been passed down for generations (Abrahamson, 2002). De Mérode did not have a medical background but studied Greco-Latin classics, philosophy and law. (IOC Medical Commission, ca. [1970]) After his studies he became an IOC member in 1964 and spent a large part of his career within the IOC. Besides being the Chairman of the IOC Medical Commission, he was also the Vice President of the IOC between 1986 and 1990 and again between 1994 and 1998 (Litsky, 2002).
later in life. The “his real sex” argument first, suggests that a female “hybrid” ought to be understood as a man, and second, supports the belief that there are only two real sexes that are genetically, hormonally and genitally fixed. These fixed sexes are further immutable and mirrored in two sets of genders.

Similarly to Oudshoorn’s discussion on “locating the ‘essence’ of sex in chemical substances”, the IOC is in search of ‘locating the essence of sex’ in the athlete’s chromosomal make-up (1994, p. 145). This ‘search’ further suggests “that sex is an entity that can be identified and isolated from the organism” (Oudshoorn, 1994, p. 145). Locating sex with the help of chromosomes and chromatin implies, in a like manner to sex hormones, that there can be too many or too few Xs or Ys in this chromosomal make-up, and “sex thus becomes an entity that can be measured [and] quantified… with the laboratory techniques” (Oudshoorn, 1994, p. 145). This hunt for the ‘appropriate’ sex chromatin model, also implies that sex chromatin definitions in elite sports “became a science that actively intervene[d] in the lives of women… introducing diagnostic and intervention techniques that… profoundly shaped medical practice” (Oudshoorn, 1994, p. 145), especially in female elite sports.

Dr Thiébault also suggests that it is important to intervene and do whatever they can to “treat them and at the very least, help them to accept their fate…and sexual anomalies” which, again, can be linked with Oudshoorn’s discussion on sex hormones. As these scientists and medical commissioners of the IOC in collaboration defined too many or too few Xs or Ys in the chromosome make-up “as deficiencies”, they simultaneously “transformed” the chromosomal model of sex “into a model of disorders and pathologies” (1994, p. 148). Akin to the hormonal deficiency diseases, this model suggests, “that this category of diseases can be treated” (Oudshoorn, 1994, p. 148) with the help of practitioners like Dr Thiébault and his colleagues, in order to “reintegrate” these athletes “psychically into” their “real sex”. The sex chromosome model, which was “actively” constructed as a “reality” in the labs (Oudshoorn, 1994, p. 4) was ‘actively’ sold and bought as a useful model in elite sports in pointing out “shortcomings” and “sexual anomalies” in female elite athletes. This ‘active’ networking between the lab, medicine and the IOC allowed the sex chromatin/chromosome model to ‘become’ an integral part of the IOC in their ‘hunt’ for “hybrids”, rather than something that was ‘discovered’ or even unanimously agreed on in science as a whole (which section “The Discourse of Discontinuing Sex Chromatin Testing in Female Sports” on page 99 will further examine).

Dr Thiébault, further stresses that the “hybrid” athlete is believed to put the ‘real’ female athlete in danger as “these so-called women, built like navvies and breaking records” are armed with unfair competitive advantages (1968, p. 1). Again, his medical and scientific knowledge “includes regular effects of power” as Dr Thiébault is “charged with saying what counts as
true” (Foucault, 1980f, p. 131) and establishes the way forward concerning the management of “hybrid” female athletes. Saying this, Dr Thiébault recognises the importance of not mixing the discussion of “hybrids” with doping or not accusing a hybrid athlete of doping because:

…in doping, there is an evident attempt at fraud; in feminine checks, it is only a natural irregularity which comes to light, and these people are to be pitied, for through their lives they will be inadapted [sic] and thanks to sport, they probably tried to achieve a difficult assimilation into an often hostile, and even stupid, society. (1968, pp. 1-2)

It now becomes relevant to examine the habitus of intersex in (sports) medicine to understand why Dr Thiébault speaks the way he speaks about “hybrids” and how society at large depicted and treated them at the time. Habituses here are understood as “the structures constitutive of a particular type of environment” that “can be objectively ‘regulated’ and ‘regular’ without in any way being the product of obedience to rules, objectively adapted to their goals” and “without presupposing a conscious aiming at ends or an express mastery of the operations necessary to attain them” (1977, p. 72). Bourdieu, as I indicated earlier, also stresses that the rules and regulations (accepted ideas) of the habitus are “collectively orchestrated without being the product of the orchestrating action of a conductor” (1977, p. 72). This is possible “because subjects do not, strictly speaking, know what they are doing that what they do has more meaning than they know” (Bourdieu, 1977, p. 79). In other words, “the habitus is the universalizing mediation which causes an individual agent’s practices, without either explicit reason or signifying intent, to be none the less ‘sensible’ and ‘reasonable’” (Bourdieu, 1977, p. 79). Inspired by this, I am interested in the norms, rules and regulations concerning the heterogendered binary and those concerning performance idea(l)s, which we know of in women’s elite sports today. I seek to unravel the ways in which these structures are “products of historical practices” that are “constantly reproduced and transformed” by those homogenous “agents possessing the schemes” and transforming the practicises within the habitus as “a taken for granted” (Bourdieu, 1977, pp. 83, 80).

I thus suggest that the habitus Dr Thiébault and his colleagues are functioning in, which Dr Thiébault seems to be aware of, is a society and a medical culture that “pity” hybrids and are “hostile” towards them. This is so because these “hybrid” athletes exist, as Dr Thiébault stipulated, in a “stupid society” intolerant to their presence. To further analyse Dr Thiébault’s language and views of hybrids, one must study the general perception scientists and medical practitioners had towards individuals with intersex variations (or hermaphrodites as they were also referred to back then). This is the focus of the following section.
The Habitus of Intersex in (Sports) Medicine

...scientists belonging to the same discipline share a general approach to the analysis of similar problems. They have reached a certain degree of consensus about problem definitions, the acceptability of solutions, and appropriate techniques and instrumentation...Scientists belonging to the same discipline are socialized in similar educational settings. (Oudshoorn, 1994, p. 12)

During the time Dr Thiébault and his colleagues drafted the IOC sex test policies, the general perception was that intersex was a deformity and an abnormality that could be fixed and made normal.\(^{78}\) The dominant habitus of intersex in medicine at the time suggests that the ways in which scientists/medical practitioners viewed “hybrids” mirrored an already established view about intersex variations (Oudshoorn, 1994). Nevertheless, as Ellen K. Feder argues, conflicting and “competing habituses” may exist in the same macro culture but may not necessarily affect one’s own micro culture (2006b, p. 192). Or as put by Bourdieu, there may be habituses that are in opposition, where ideas and logis are in conflict. These habituses are often in contention as their logics “have been produced by different modes of generation” which have produced “different definitions of the impossible, the possible, and the probable”, implying that one group of people may find one particular idea/action as plausible or credible while another group of people may find it unreasonable and irrational (Bourdieu, 1977, p. 78). Indeed, at the time Dr Thiébault and the rest of his male Caucasian colleagues discussed sex testing policies, a competing habitus was taking shape.

A very different habitus influenced by the “Summer of Love”, critiquing the wide-spread gender discrimination against women, the control of one’s sexuality, and heteronormativity was forming.\(^{79}\) The birth of the second wave of feminism (Echols, 1989; Humm, 1986, 1989), the move towards sexual liberation (Allyn, 2000; Escoffier, 2003) and gay liberation (Bullough, 2002; Carter, 2004; Todd, 2008) were now in the zeitgeist. However, this form of critique against gender and sexuality norms was perhaps not customary in the circles the IOC Medical Commissioners operated in. Rather it was a competing habitus, as the dispositions that were extant in their habitus were “structured in the sense that they unavoidably reflect the social conditions within which they were acquired” (Thompson in Bourdieu, 1991, p. 12 [Emphasis in original]). Hence, the people behind the social movements questioning heteronormativity had acquired dispositions which were “different in certain respects from those acquired by” the IOC

\(^{78}\) Read further in Money et al., 1957; Dewhurst & Gordon, 1969; Money & Ehrhardt, 1972; Money & Tucker, 1975.

Medical Commissioners “who were brought up in a…[different] milieu” (Thompson in Bourdieu, 1991, p. 12).

It is important to be familiar with these occurrences and conflicting habituses, and to note that Dr Thiébault and his colleagues, as well as other medical practitioners introduced later in this chapter, did not talk about “hybrids” or hermaphrodites in vacuum, but rather in a “structured structure” (Bourdieu, 1990, p. 53) having very definite ideas about intersex variations. Hence, the “hybrid” athlete’s “condition of possibility” (Biesecker, 1992, p. 358) and difficulty in being permitted to assimilate and partake in elite sport were possibly already inscribed in the structure that Dr Thiébault and his associates functioned in.

In protecting his habitus, Dr Thiébault then defends the technical procedure of sex chromatin testing female athletes, by being sceptical about how some were negatively inclined to it given it was one of the “surest” ways of “determining” the sex of an individual:

In anticipation of Mexico, I would like to point out that certain arguments advanced by opponents of this investigation of femininity seem weak. I do not exactly know why, some personnages [sic] are unwilling to tolerate this examination; the main obstacle would seem to be the fear of seeing the young adolescent’s, psychism [sic] traumatized. Considering the harmless nature of the swab, I fail to understand where the traumatism comes in and what the essential difference is between a mouth swab and, for instance, an electrocardiagram [sic]; in any case, there is nothing in our methods which could shock. On the contrary, during the puberty or pre-puberty periods, the sexual chromatin or the karyotype are among the surest examinations for determining the sex. (Thiébault, 1968, pp. 4-5) (Emphasis mine)

Dr Thiébault is quick to defend the habitus of sex chromatin investigations, as it is one of the “surest examinations for determining the sex”, which the IOC medical commission must have found equally convincing as they continued to perform them till 1999. The stipulation that the sex chromatin tests without doubt “determined” the sex of female athletes, partially as an act to defend the IOC/ISF standardisation of the sex chromatin determination in elite sports also suggest, in line with Oudshoorn’s discussion on the history, development and massmarketisation of the ‘sex hormones’, that the research on sex chromatin determination may have without the interest and trust in it by the IOC/ISFs “stayed inside the walls of the laboratory” (1994, p. 81). The trust the IOC/ISFs seemed to have in the system and the networking success between the IOC/ISFs and the sex chromatin scientists/laboratories may thus have been crucial for the success in “striving for universal knowledge” (Oudshoorn, 1994,
This actively signified that the sex chromatin tests were “among the surest examinations for determining the sex” of female athletes.

Dr Thiébault also seems to miss the logic in comparing the potential trauma of an electrocardiogram to a sex test. It seems naïve to assume that being told that one may not be a ‘normal woman’ may result in the same reaction to not having a ‘normal heart’. Rather, these realisations will most likely affect the person in different yet traumatising ways. Dr Thiébault, is however open with his dislike of the terminology “sex control” as it implies that both men and women are investigated when “it is meant only for the feminine sex” (1968, p. 1). Dr Thiébault thus prefers “investigation of femininity” as the term “control…has a slight flavour of the police” (1968, p. 1).

In comparison with Dr Thiébault’s report being replete with his views, the report by Dr Hay only discusses how the mandatory sex testing went in Mexico and does not reveal any personal or professional views on the execution or the reliability of the sex chromatin test. Dr Hay instead points out that out of the 803 women that were tested, all were found sex chromatin positive and were eligible to compete. Figure 6 on the next page showcases how the sex testing certificate looked at the 1968 Games in Mexico.

Not everyone within the IOC agreed with Dr Thiébault and Dr Hay concerning the ideology as well as the technology by which sex was defined and how female athletes were determined eligible to participate. Again, the president of the Polish NOC, Reczek disagreed that sex was a straightforward matter that can be established with the help of laboratory tests. He notes that sex is complex, as no single criterion generally determines the constitution of it:

There are no generally accepted criteria of sex for woman athletes and the light minded arbitrariness in the interpretation of the results of examinations may harm the examined persons. Considering that all I think that the Medical Commission of the International Medical Committee [sic] should be asked about its opinion on the criteria of sex for women athletes and the regulations of the examination. I hope there might be necessity to consult some medical psychiatrists and specialist of sports medicine. The criteria and regulations established by the Medical Commission of the International Olympic Committee should be discussed by the International Olympic Committee and should be carried as being in force for all competitors of the Olympic Games. (Reczek, 1967)

80 In 1974, however, Dr Hay discusses more in detail his personal and professional opinions about femininity test in a journal article entitled “Femininity tests at the Olympic Games”. This article will be discussed more in detail on p. 106.
Reczek believes that specific biological sex criteria need to be established as constituting the female sex, as sex is too complex, vague and diverse to be reduced to a laboratory analysis. Reczek also stresses the need to consult with medical specialists both inside and outside of sports medicine, i.e. further network within the habitus – in determining the best criteria for establishing the female sex. A medical psychiatrist should also be part of this evaluation process. This should then become an institutionalised and a standardised procedure, endorsed by the IOC, appearing at each Olympic Games. Reczek was not alone in thinking that sex cannot be reduced to one single criterion. However, recognising the complexities associated with the technologies paradoxically also seemed to make them more complex, as he did not attempt to abolish them, but motioned that the tests needed to mirror the intricacy of sex.

Examining the genealogy of sex chromatin testing in elite sports – the IOC’s language of “determining sex” and the scientific discourse proposing to discontinue these tests – elucidates how some were in favour of the tests and others opposed to them, while both parties project their version of the discussion as the truthful way forward. I will now look into the further historical truths which may have politically affected (Foucault, 1980d, p. 64) the

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*Figure 6. “Certificate of Tests of Sexual Chromatin” issued at the Mexico Games in 1968 (Hay, 1968)*
continuous and discontinuous elements (Grosz, 1994, p. 145) of the tests and the ways in which different versions of truth lead to political debates regarding the tests. As I will clarify, these discussions take place both inside and outside of the IOC wherein I examine “what is the history of this ‘will to truth’? What are its effects? [and] How is all this interwoven with relations of power?” (Foucault, 1980d, p. 66)

The Discourse of Discontinuing Sex Chromatin Testing in Female Sports

...females have been declared ineligible for athletic competition for no other apparent reason than the presence of an extra chromosome, presumably in the sex chromosome complex. This seems grossly unfair if other criteria of sex conform with the person's social sex. (Moore, 1968, pp. 787-788)

One of the reasons why science succeeds in convincing us that it reveals the truth about nature is that the social contexts in which knowledge claims are transformed into scientific facts and artefacts are made invisible. Science makes us believe that its knowledge claims are not dependent on any social context. (Oudshoorn, 1994, p. 139)

A quite different version of truth regarding the sex chromatin tests was brought forth by Keith Moore after the 1968 Games in Grenoble but before the Mexico Games. In his JAMA article and quote above Moore believes that the IOC is in the wrong by executing sex tests that are only based on sex chromatin results. He further argues that “doubtful cases” will most likely stay at home, and assumes that there is a common understanding of how these “doubtful cases” look (1968, pp. 163-164). This rhetoric of discontinuing the sex chromatin tests and determining what sex is based on is echoed in an unreported Danish report in 1972 that I retrieved at the

Figure 7. Brundage’s letter to de Mérode regarding the Danish Report on Sex Testing (Brundage, 1972)
Olympic Archives. Here a group of scientists conveyed the same truth and criticised the contemporaneous sex chromatin tests. As the letter from Brundage to de Mérode suggests (Figure 7 on previous page), Brundage was troubled by the report and advised de Mérode to take the report seriously.

Brundage clarifies to de Mérode that the Danish report does not approve of the technology of sex chromatin testing and that maybe they should reconsider going back to the ‘power of the eye’, or as a Foucauldian perspective would put it, “the medical gaze” (1980e: 146). In short, the Danish Report entitled *A memorandum on the use of sex chromatin investigation of competitors in women’s divisions of the Olympic Games* stresses that the IOC aim of eliminating female athletes with other genetic make-ups than 46 XX, is scientifically, medically and ethically troublesome and not up to date with ‘modern’ science:

One implication of this decision is that the International Olympic Committee has made its own definition of sex, defining a female as a sex chromatin positive individual and excluding sex chromatin negative individuals as non-females…Initially we want to point out that no medical or legal definition of sex exists in man… For the individual the important thing is the psychological sex which is determined, to a large extent, by environmental factors, and which is sometimes in disagreement with the chromosomal and/or the somatic sex… Sex chromatin investigation is a coarse way of getting information about the chromosomal sex, as it gives information about the number of X chromosomes only, and no information about the somatic or psychosocial sex. Therefore, use of the test in the proposed way is open to severe criticism for scientific reasons.

(_Strömgren, Jielsen, Ingerslev, Petersen & Therkelsen, 1972, pp. 1, 6_

As this critique by Strömgren et al. has not, to my knowledge, been officially discussed in English speaking circles of medicine and science, it appears to be the first time that the significant impact this report may have had on the IOC Medical Commission’s sex test debate is being considered. Strömgren et al. (1972) argue that there is no legal or scientific definition of sex. Hence, it would be improper for the IOC to go ahead and believe that they can *define* sex without taking into consideration what the general medical and scientific spheres have to say about their definition of sex. Strömgren et al., in line with Oudshoorn, stipulate that whatever ‘truth’ the IOC is trying to convey in collaboration with the sex chromatin scientists and laboratories, needs to be challenged as this man-made ‘truth’ does not reveal “the truth about nature” because the “social contexts in which [these] knowledge claims are transformed into scientific facts and artefacts are made invisible” (1994, p. 139). Strömgren et al., thus argue
that the science IOC promotes – the sex chromatin model in defining sex – “makes us believe that its knowledge claims are not dependent on any social context” (Oudshoorn, 1994, p. 139). Thus Strömgren et al. (1972) suggest that the IOC are not “charged with saying what counts as true” and instead imply that they themselves are more entitled in “saying what counts as true” (Foucault, 1980f, p. 131) and therefore equate the IOC procedure as unscientific and untrue.

From the perspective of “relations of power” (Foucault, 1980f, p. 93), the report also suggests that the IOC is taking the liberty and power of defining sex into their own hands. This is worrying for Strömgren et al. (1972) as they feel that significant accounts from medicine and science are absent. The team goes on to state that if sex is to be locked down to some specific components, the individuals’ psychosocial sex (gender), and also their somatic sex (gonadal sex, genitals and the presence of breast and body hair development) must be factored in. Hence, defining sex solely on the basis of chromosomes is, according to Strömgren et al. (1972), not only scientifically incorrect and unethical but also very harmful:

To use the test in the way proposed by the International Olympic Committee, i.e. in women and not in men, is a discrimination against women in general; and use of the test in both sexes would involve that e.g. 46, XX and 47, XXY males should compete with women. Used in women only, the test discriminates against a minority of sex chromatin negative women in a way that may lead to serious psychological disturbances in the individuals discriminated against. Therefore, the use of the test is also irresponsible from a medical point of view, and unethical. We therefore propose that the decision of the International Olympic Committee to use the test should be cancelled. (p. 7)

The authors, representing a “competing habitus” (Feder, 2006b, p. 192) to those truths that ‘rule’ the IOC, conclude the report by arguing that if the IOC continue to adopt this model it is discriminatory against women, as men are not tested. If the tests would be used in both male and female camps, the researchers stress that the IOC would quickly realise the illogicality of the tests as 46, XXY males would then be competing in female competitions and women with men. In light of this, the Danish team argues that the IOC sex chromatin tests are thus not only discriminating against women, but a particular group of women who often identify as women. The “structuring structure” of their habitus, as Bourdieu would state it, thus represents ideas that find the habitus of the IOC and the sex chromatin scientists both “unthinkable” and “scandalous” (1977, p. 78) This strong criticism against the dominant habitus of the IOC and its logic of only sex testing women may highlight why the IOC in fact was reluctant to test men as it would further complicate the logic of their tests. And perhaps, further fuel the idea that they
have “actively construct[ed] reality rather than discovering reality” (Oudshoorn, 1994, p. 4). The Danish criticism suggested that non-normative sex make-ups exist in both gender camps and are perhaps more common than the IOC wished to acknowledge.

IOC’s hesitance against this criticism and Brundage’s suggestion of potentially going back to ‘on-sight inspections’ may further highlight how conservative the habitus was in which the IOC were operating. This quite conservative and heteronormative habitus may further clarify the reason why the director of public information of the United States Olympic Committee (USOC) sent Brundage, as a gesture of support, a cartoon (Figure 8) on how to solve their “sex test problems”. This cartoon was contributed by the IOC medical commissioner Dr Dan Hanley81, also the chief physician of the USOC (Litsky, 2001). When the USOC director of public information, Robert Paul, sent the cartoon he hoped it would “get a chuckle” (1972), which it probably did as Brundage’s reply in Figure 9 confirmed that the IOC would have had many candidates lining up for this particular “position of [sex] tester”.

This cartoon and the letters of correspondence may appear amusing to some, but can equally be found disturbing to others as this cartoon suggests that one way of solving the sex test issue would be to have female athletes undergo sex tests in the form of a (hetero) sexual activity. This cartoon and the jocular correspondence further demonstrate the ‘macho’, heteronormative and sexist habitus

81 Dr Dan Hanley was the chief physician of the USOC (1964-1972) and an IOC medical commissioner (1968-1980). (Litsky, 2001)
they were trying to evoke. This was a very different habitus to that which flourished post the Summer of Love – a habitus very much in opposition to this gender normative and heteronormative thinking which would most likely find the IOC suggestions both "unthinkable" and "scandalous" (Bourdieu, 1977, p. 78).

That said, Brundage and de Mérerode seemed to take the Danish scientists’ criticism seriously. As recorded in the minutes of the 1972 IOC Executive Board Meeting on Figure 10, de Mérerode agreed that the IOC were not theoretically trying to define sex or femininity through their sex tests, but trying to catch "frauds" disturbing the ‘level-playing field’:

**REPORT OF COMMISSIONS**

**c/ Medical Commission**

Prince de Mérerode was called to the meeting to report on the subject of the latest developments with the sex control tests.

He stated that he had had some very worthwhile discussions with several Danish professors with regard to femininity. He had met with the IFs and expressed the IOC's point of view, i.e. the control was not to define sex but to call a halt to certain frauds which reduce the fair chances of other participants. He said that the IFs had applauded this report. He did not think there would be any difficulties with the Federations.

There were now two positions that could be taken:

- **i/ The scientific side, which everyone is in agreement with, but is purely theoretical.**

- **ii/ The practical problems which are not well-known and with which the Danish doctors had expressed their surprise.**

Prince de Mérerode added that he did not think the problems regarding the second point were too serious and he thought that there should be further discussions with the Danish doctors. From their point of view, there was no difference between the sexes. He did not think, however, that the rules should be changed.

President Brundage said that he had read the report and had also seen a very explicit letter from Dr. Hay, which covered the point. He agreed that the problem of the Danish doctors being purely theoretical was very different from that of the IOC's which was practical.

*Figure 10. De Mérerode and Brundage discuss the Danish Report (IOC, 1972a, pp. 27-28)*
Although the IOC and its ISFs appeared to be in agreement with the Danish scientists that their sex tests were not theoretically attempting to “define sex” but more interested in calling a “halt to certain frauds” disturbing the possibility for “other participants” to compete fairly, there were practical disagreements. Even though the ISFs “applauded this [Danish] report” and approved the difficulty in theoretically defining sex, both de Mérode and Brundage believed that the IOC should not change their rules. This conviction was based on that the belief that they had to deal with the issue of practically catching “frauds”, and because there was not adequate research on the “practical problems” their sex tests incurred, they were more inclined to continue their tests. Thus, they agreed to keep the testing technology, but continue discussing the matter with the Danish doctors. Hence, on the one hand the truths passed on by the Danish team were something IOC/ISFs agreed with on a theoretical level, but as they had to deal with the issue on a practical level, they eventually discarded their truths. Despite all these discussions, the minutes of the 73rd IOC Session in 1972 still applied the language of “sex determination for females” when referencing the sex tests (IOC, 1972b, Annex 1, p. 118). This further suggests that “what counts as true” (Foucault, 1980f, p. 131) was what they said and determined the female sex to be and yet again took the active role of producing and constructing truths and realities rather than discovering them (Oudshoorn, 1994, p. 4). Further investigation of the genealogy and the constitution of knowledge and truth regarding sex testing in female sports and the diverse criticism the IOC received for its sex chromatin procedure reveals that Jules François and M. Th Matton-Van Leuven also contested the tests in 1973. Although these authors argued in Sexual evolution of “female” athletes, (1973, p. 8) that “The decision of ineligibility for sex reasons should not depend upon cytogenic findings only, as this is only one aspect of a person’s sexual identity, not an absolute criterion”, they expressed regret that the IOC no longer use the ‘on-sight inspections’ where “examination of the outer genitalia” were at focus:

It is a pity that this policy is no longer followed. This examination had an advantage in that it detected the individuals who did not belong among female athletes, i.e., the masquerading males…and also the hermaphrodites and pseudohermaphrodites… We want to point out explicitly that the method [sex chromatin testing] is completely unreliable for the detection of hermaphrodites and pseudohermaphrodites…, who, because of their possible muscular advantage over normal females, should be carefully searched for. It is this group that the diagnosis cannot be made with cytogenetic data. (François & Matton-Van Leuven, 1973, p. 10)
The authors write that sex chromatin tests are unreliable as they eliminate sex chromatin negative women who identify as and ‘look like women’ while not detecting “hermaphrodites and pseudohermaphrodites” with unfair competitive advantages as they are sex chromatin positive. François and Matton-Van Leuven thus posited that the sex chromatin tests should not be performed as they do not investigate the athlete’s internal/external genitalia (or their hormonal profile), and felt the nude parades should still be the testing somatechnology, so that “pseudo-hermaphrodites” and “hermaphrodites” who are sex chromatin positive but may have a competitive advantage would be barred from competing (1973, p. 6). François and Matton-Van Leuven concluded by suggesting that “Efforts should be made to obtain international agreements between medical and sport authorities about the necessity of, and the criteria for, sex typing in sports. Until this is realized, one should try to keep doubtful cases away from international events” (1973, p. 11).

On the topic of spreading scientific knowledge Oudshoorn stresses the importance of building alliances which support particular truth claims through networking:

Knowledge claims become established as scientific facts only if they become linked to relevant groups. This means that the construction of scientific facts is not restricted to the laboratory. To make science work, scientists have to leave their laboratories and create alliances with other groups. (1994, p. 10)

Through the frame of Oudshoorn’s analysis of the significance of scientific alliances it is possible to perceive François and Matton-Van Leuven’s insistence that testing technology should be based on an agreement between science/medicine and sport institutions as integral to the power dynamics of how sex is defined in elite sport. They are clearly cognisant of the need to establish an uncontested set of truths, even if these were constructed by another group of scientists. The IOC should therefore have greater trust in medicine and science, network with them and let them inform the IOC how to ‘run the show’ and determine “what counts as true” (Foucault, 1980f, p. 131). Under those terms they can collaborate in catching “doubtful cases” in female sports. Arguing that “doubtful cases” should be kept away from sports meant that anything that did not live up to their standards of femininity, judged by the eye, should be kept away from sport. And sex chromatin negative female athletes did not necessarily belong to this group of undesirables, unless they disturbed female body and athletic performance norms (François & Matton-Van Leuven, 1973).

The negative criticism towards the IOC sex chromatin somatechnology resulted in de Mérode being asked at the IOC Session in 1973 if these tests could be replaced by the former “visual tests” (IOC, 1973, p. 13). On this matter de Mérode replied “that the Commission had
chosen chromosome tests as they were less unpleasant than clinical tests” and this was the way because “Human dignity had to be respected” (IOC, 1973, p. 13). In 1974 his colleague, Dr Hay, also published, in de Mérode’s support, a journal article entitled *Femininity tests at the Olympic Games*. Here Dr Hay and the IOC slowly consider the term “femininity” instead of “sex” and stress, in the introduction, that they are not interested in or seeking “to open up a scientific discussion of the matter” (something they established after the Danish criticism in 1972) (1974, p. 119). Rather they wanted to clarify that “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 anatomic conditions” (Hay, 1974, p. 120). Hence, “in cases of hermaphroditism or intersexuality, the athlete in question must be withdrawn, in order to allow the others to compete on ‘equal terms’” (Hay, 1974, p. 120). In further troubling the category of ‘intersex’ in elite sports, Hay’s article showed inconsistency in talking about “hermaphroditism” as equivalent to “intersexuality”, as “intersexuality” comprises many genetic variations, while “hermaphroditism” is a particular few. With the help of this article we see that some IOC medical representatives up until this stage had talked about eliminating “hybrids”, such as Dr Thiébault in 1968, and that Dr Hay talked about ‘hermaphrodites’ and ‘intersexuals’. These very diverse names and variations further troubled the consistency and continuity of who and what they were trying to eliminate in ensuring that women were competing on “equal terms” in elite sports.

To clarify, the IOC and their medical commissioners were only to eliminate an athlete and pursue further tests on women who had an “obvious anomaly” (Hay, 1974, p. 123). This “obvious anomaly” was however only detected through their sex chromatin negative testing result. Hence, those athletes with ‘intersex’ variations that did not fall in that sex chromatin negative ‘trap’, but might still have an intersex variation that might affect their androgen/testosterone production and perhaps even challenge the idea that female athletes compete on “equal terms”, were consequently overlooked. This further troubles the idea that the IOC and their medical commissioners were hunting for ‘intersex’ athletes as they used several different terms in describing what variations they disfavoured and who they were trying to eliminate in providing women the opportunity to compete on “equal terms”.

The IOC did at the time not follow through with the testing technology suggestions of Strömgren et al. or François and Matton-Van Leuven; instead, the language in the IOC correspondence and that of the minutes of the 77th IOC session formally changed from “sex” to “femininity” (IOC, 1976). That said, Arnold Beckett, a member of the IOC medical commission in 1968 also echoed Dr Hay’s rhetoric that women athletes should be able to compete on “equal terms” (1974, p. 120). In a chapter of the 1976 edition of the *Olympic*
Beckett stressed that “the purpose of the control is to protect women against unfair competition” (p. 170). This ipso facto implies that the ideology of the testing seemed to somewhat shift or become clearer in their minds as the aim of the tests was to “protect” women against women with “unfair” competitive advantages in ensuring that they all competed on “equal terms”. This ideology clarification, however, did not change the fact that their eligibility was justified through determination of femininity tests.

Hence, between 1976 and 1984 (see Table 4), the OC and the IOC proposed to perform “femininity tests”. This shift also echoes some of the opinions Dr Thiébault already had in 1968. Here he contested that the term “sex control” was confusing as the tests were “meant only for the feminine sex” and “because the idea of sex is in itself physiologically quite protean” he “prefer[ed] the term ‘investigation of femininity’” (p. 1). He preferred the language of femininity tests as it “represents a group of characteristics peculiar to women, without for as much, crudely bringing to mind precise anatomical characteristics” (Thiébault, 1968, p. 1). These past opinions may also have encouraged the IOC to shift the language from “sex” to “femininity”.

By changing the nomenclature from “sex” to “femininity” the IOC confirmed that only women were to be tested. This change however, does not imply that the technology changed along with it. Instead sex chromatin tests continued to be the dominant technology till 1992 when the poly chain reaction (PCR) technology took over.82

That said, the name change seemed to open doors for new complexities, as performing femininity tests still suggested that they were defining what competitive advantages in female competitions implied and what characteristics they bore. Even though they had not formally (or even informally) established this, the 1976 IOC Medical Control Book clarified that if an irregularity of the sex chromatin test was to occur, the athlete must undergo further “physical examination… performed by [a] physician gynaecologist or one accepted by the Medical Commission… at which a physician from the team and a representative of the International Federation concerned will be present” (p. 53). These additional medical examinations observed François and Matton-Van Leuven’s suggestion that this would facilitate the objective of trying “to keep doubtful cases away from international events” (1973, p. 11). This, however, did not mean that the IOC or their ISFs ceased to exclude female athletes with XO or XY makeups from competing (even if they identified as women) – the 1985 case of Martínez-Patiño (see Chapter Seven) is a clear example of that. Rather, the femininity tests continued to seem as

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82 This is when the Polymerase chain reaction (PCR) technology took over, which detects the presence of the Y-chromosome (SRY and/or DYZ-1) which effectively performs another type of chromosome verification of the athlete. (IOC, 1992a, p. 111)
blurry as the sex tests, as the technology did not change, nor did the IOC scientifically define what competitive advantages in female sports implied.

In order to ensure that the femininity tests were consistent through all the ISFs, it was suggested already in 1971 that the IOC should publish the testing rules in a brochure for all sport institutions to follow. (IOC, 1971, p. 98) The first sex control pamphlet appeared in 1972 (IOC Medical Commission, 1972). Figures 11 to 14 on the following pages, thus exemplify some of the IOC Medical Controls Books between 1976 and 1992, which explain which controls the female athlete had to submit to – femininity or gender verifications.

Figure 11. Olympic Medical Controls, Innsbruck, 1976 (IOC Medical Commission, 1976)

Figure 12. IOC Medical Controls, Moscow, 1980 (IOC Medical Commission, 1980)
Figure 13. IOC Medical Controls, Sarajevo, 1984 (IOC Medical Commission, 1984a)

Figure 14. IOC Medical Guide, Albertville, 1992 (IOC Medical Commission, 1992)
In conjunction with the Los Angeles Games in 1984 the IOC decided again to change its terminology (see Table 4), but now from “femininity” to “gender”. This time Rule 29 of the Olympic Charter in the *IOC Medical Controls Brochure* of the Games argued that “female competitors must comply with the prescribed tests of gender verifications” (1984b, p. 16) and stated almost indistinguishably from the *IOC Medical Control Book* of 1976 in Montreal that:

> The Medical Commission of the International Olympic Committee attempts to protect women against unfair competition. The control used attempts to establish the gender with the minimum of interference with the dignity of the individual. The results of the tests are not made public… As a screening test, the determination of X and Y chromatin will be conducted on a smear of buccal mucous membrane. If the test is inconclusive, the competitor must undergo further tests as determined by the IOC Medical Commission… Should the results of these tests require it… a physical examination can be prescribed and performed by a physician gynaecologist member of or accepted by the Medical Commission. (1984b, pp. 8, 34) (Emphasis mine)

As the passage encapsulates, the IOC argued openly that the tests had two objectives. They were first “attempting to establish the gender” of the athlete and second to “protect women against unfair competition”. This is the second time the rhetoric of “protection” appears. However, it is the first time it is printed in an IOC Medical Controls Book/Guide where non-irregular women would arguably benefit from this rule. Despite the name change from “femininity” to “gender”, the technology of the tests performed were still the same (sex chromatin tests). Now the IOC wanted to clarify that it was the athlete’s gender identity that was being teased out through a myriad of tests. The focus was on gender identities and athletic/genetic advantages disturbing those ideals in the female gender camp. That said, if the IOC were now establishing the gender of the athlete, they again, seem to have opened the door to further critique as they refrained from defining gender, female gender characteristics, and athletic advantages in the female gender camp and did not include the presence of a gender identity specialist as part of their medical panel of evaluators. Rather the “physician gynaecologist” was granted the power of identifying the gender identity through the cocktail of tests performed by them (this will be examined more in detail in the next section). The next section will further elucidate the genealogy of how the era of mandatory testing discontinued but the ideology of testing continued.

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83 The discussion concerning “protection” will be revisited in more detail in Chapter Five.
Revisiting the *habitus* of the IOC Medical Commissioners, it becomes quite apparent in the above extracts that the conservative and heteronormative framework they were operating in, was not informed or influenced by current and “competing habituses” in society (Feder, 2006b, p. 192). I suggest this, as the discourses of the time around gender and sexuality in the humanities seem not to have informed their debates. What was occurring in socio-political circles regarding movements away from regulations of sexuality and heteronormativity seem to have had little impact on the work of these Commissioners. Instead, a strong absence of these competing habituses was evident.

The Abolishment of Mandatory Gender Verifications

The introduction of the concept of sex hormones not only changed the medical treatment of the human body, but also redefined the existing social configurations structuring medical practice. The story about hormones thus becomes a story about power and medicine. The field of sex endocrinology generated a set of power relations that did not exist prior to its emergence... The introduction of the hormonal model increased the medical authority of gynecologists over disorders traditionally belonging to other medical professions such as psychiatry. The hormonal model thus enabled gynecologists to draw the female body more and more deeply into the gynecological clinic. (Oudshoorn, 1994, p. 149)

Throughout the 1970s and 1980s science and medicine continued to argue that the sex chromatin tests should be discontinued and instead ensure that female athletes not only identified as women, but also looked like women (the Martínez-Patiño case was quite aggressively used in this debate).\(^{84}\) Researchers in the field also argued that what the IOC should be focusing on was proscribing that women with certain intersex variations contributing to unfair competition should not be allowed to compete in female competitions (e.g., François & Matton-Van Leuven, 1973; de la Chapelle, 1986a, 1986b). The criticism against the IOC/ISFs pushed the IOC to eventually form a working group to investigate the appropriateness of sex chromatin tests. Their first meeting was held in July 1988 (Carlson, 1991, p. 29) and in the minutes of the 96th IOC Session in Tokyo, 1990, the IOC state that “A symposium on gender verification testing in sport will take place in Monte Carlo on 10th and 11th November 1990 sponsored by the International Amateur Athletic Federation” (1990, p. 92). In the minutes of the following year’s IOC Session in Birmingham, de Mérode informed the participants about

the topic of “gender verifications” and what the previous meeting in Monte Carlo had resulted in:

The IAAF had introduced a new rule involving physical examinations. National federations were relied on to carry out this procedure. The IOC had used the same system for 25 years, but it seemed an opportune moment to take a fresh look at the problem. The Medical Commission had received the Executive Board’s approval for an international conference on the subject in July 1991 [in Lausanne]. It would be reporting to the next Executive Board meeting on the outcome. (IOC, 1991, p. 14)

The IAAF had introduced a new rule which also included “physical examinations”, suggesting that they were attending to some of the wider arguments of science that physical irregularities should be higher on the agenda than 46, XY make-ups. They also agreed that 46, XY female athletes with “gonadal and genital deformities”, brought up and identified as women, would be allowed to compete as women (Ljungqvist, 1992, p. 2494). This indicates that the knowledges of science were relevant, actively constructed (Oudshoorn, 1994, p. 4) and true enough for the IAAF to implement. To not seem as if the IOC did not take the issue seriously, they organised an “international conference” on the topic in Lausanne, July 1991. This meeting did not lead to the same “physical examinations” procedures of the IAAF; instead, the IOC agreed with the help of mainly scientists to revise the testing technology in a different manner:

This round-table discussion was attended by 23 persons that represented an international spectrum of experts in genetics, gynaecology, endocrinology, clinical pathology and sports medicine from all continental regions. There were also world class women athletes who were invited to participate in this round-table discussion. Essentially, it was recommended, by a general consensus, that gender verification tests, based on buccal smear Polymerase Chain Reaction (PCR) method should be carried out at the XVI Olympic Winter Games in Albertville and that the result of this experience should allow the same procedure at the Games of the XXV Olympiad in Barcelona. A positive PCR test would be followed by a hormonal testosterone test and, in case of anomaly, a gynaecological examination would follow. (IOC, 1992a, pp. 110 -111)

As the minutes of the 98th IOC Session suggest, the IOC had invited a range of medical practitioners and scientists to their gender verification meeting as well as “world class women athletes”. Whether any of these athletes represented women with intersex variations is unclear
and to what extent their truths and knowledges were privileged and taken into account (Foucault, 1980f, p. 131) is equally unclear as these documents are younger than 30 years and thus classified ‘confidential’ by the IOC. What the minutes do mention is that the participants of the meeting had unanimously agreed to revise the IOC gender verification technology to no longer test for sex chromatin but instead perform tests that detected the presence of the Y-chromosome (SRY and/or DYZ-1). If the PCR result was positive (46, XY), the athlete would need to undergo further tests to investigate their testosterone levels and if there was an “anomaly”, also undergo gynaecological examinations. The hormone levels and the internal/external genitalia component received, as they did in the IAAF procedures, intensified focus compared to before. It is apparent that the dual ideology of testing female athletes continued, however, the technologies used to gender verify these athletes were revised as the sex chromatin tests discontinued and the PCR technology was picked up.

In line with Oudshoorn (1994), the endocrinologists together with experts in genetics, gynaecology and clinical pathology now worked in alliance with the IOC. The fact that the IOC took an interest to include the endocrinologist before the gynaecologist, in case the chromosome test seemed ‘abnormal’, suggests that the IOC put the sex hormone model higher on the agenda than the gynaecological examination. Hence, as articulated by Oudshoorn (1994) “locating the ‘essence’ of sex in chemical substances implies that sex is an entity that can be identified and isolated from the organism” (p. 145). Putting the endocrinologist higher on the agenda in locating sex in chemicals thus perpetuates the idea “that there can be too much or too little of these substances in the organism. Sex thus becomes an entity that can be measured, quantified and manipulated with the laboratory techniques” (Oudshoorn, 1994, p. 145). As a result, “sex endocrinology” in female elite sports “became a science that actively intervenes in the lives of women” athletes and “introducing diagnostic and intervention techniques that have profoundly shaped medical practice”(Oudshoorn, 1994, p. 145).

While these technology, terminology and ideology continuities and discontinuities took place within the IOC, another competing ideology was taking place within their own habitus and one of its ISFs – the IAAF. In 1992 the IAAF decided to abolish their mandatory gender verifications (IOC, 1992b, p. 21). This was done under the leadership of its senior vice-president, Arne Ljungqvist who argued, similarly to his colleague and outspoken opponent of the gender verifications Albert de la Chapelle, that male athletes would hardly try to

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85 This new scientific technology was discovered by Karry Mullis in 1983 who also received the Nobel Prize in chemistry (1993) for this discovery. (IOC, 1994a, p. 67)
86 i.e., establish the female gender and protect women from unfair competition
87 Ljungqvist’s international career started in 1976 when he became a council member of the IAAF and was one of its vice presidents between 1981 and 1999 and senior vice president between 1999 and 2007. In 1994 Ljungqvist was elected an IOC member and became the Chairman of the IOC Medical Commission in 2003. (Lager, 2008)
masquerade as women anymore, as media (and spectators) followed the competitions with a critical eye. If any tests were deemed necessary, they involved physical examinations, in combination with hormonal tests. Ljungqvist argued that if the IAAF was to pick up gender verifications again, the procedures had to be scientifically and ethically recognised (1992).

Ljungqvist here frames the sex hormone model as the way forward and the sex endocrinologists as the new partners of the IAAF, rather than the sex chromatin scientists. Similarly to the IOC, networking with the sex endocrinologists further prompts the idea that both the IOC and the IAAF are still with the help of scientists “actively constructing reality rather than discovering reality”, and this is done with the help of introducing their ‘truths’ and ‘realities’ into specific contexts (Oudshoorn, 1994, pp. 4, 141). That is, “scientific artefacts require a specific context in which they can work, one similar to the context from which they arise. If the context is not available, scientists have to create it” (Oudshoorn, 1994, p. 141). And that is where their networking skills with the IOC and the IAAF are paramount, because without “construct[ing] the railroads…the locomotives can[not] move in the envisioned direction” (Oudshoorn, 1994, p. 141). And if the ideas about sex hormones cannot move in the intended direction, then they may not have been able to spread and become a standardised practice in (sports) medicine. Although the IAAF decided to abandon the mandatory tests, both the IOC and the IAAF started to increase their networking relationship with the sex endocrinologists.

While the IAAF abolished their mandatory gender verifications, de Mérode continued to argue the importance of them:

…the IOC had never claimed to determine whether or not someone was a woman. The purpose of the tests was to discourage an unethical practice that consisted in aggravating anomalies in individuals instead of reducing them in the interests of sports performance. The IOC tried to test tactfully. That was why the chemical screening process took place first… The IOC intended to maintain the test, as failure to do so would allow the reintroduction of the practice of cheating by aggravating anomalies to which he [de Mérode] had referred. (IOC, 1992b, p. 21)

Here de Mérode stressed that the IOC never asserted that their sex, femininity or gender tests “determine[d] whether or not someone was a woman”, however, the language and discourse used in testing up until then had very much proposed that they were either “establishing” or “determining” sex, femininity or gender. Keeping their gender verifications and posing a myriad of tests predicated on locating sex/gender in chemicals (hormones), still suggest that the tests determined whether the athletes were feminine enough for their standards of the female
gender. In fear of encouraging cheaters and frauds to enter the female sporting arena, the tests would not be abolished, despite the reality acknowledged by Ljungqvist and his colleagues that using the ‘men masqueraded as women argument’ was no longer a sustainable justification to continuing the tests on a mandatory basis.

The IOC continued to meet some resistance and were repeatedly urged to cease the tests in the 1990s. The IOC also experienced difficulties with certain scientists at the 1992 Summer Games in Barcelona and the 1994 Winter Games in Lillehammer (IOC, 1994b: 54). For instance, the medical team of the OC of the Winter Games in Lillehammer refused (in October 1993) to work under the IOC gender verification rules and arguably, the Finnish professor de la Chapelle was behind their refusal (IOC, 1994a, pp. 66-67). Due to the difficulties in Norway, the IOC had to replace the Norwegian team with that of Bernard Dingeon’s from Albertville (IOC, 1994a, pp. 66-67). Even though the IOC met with great criticism regarding their PCR technology in gender verifying female athletes, the Medical Commission wanted to point out that they also had a host of scientists who still believed in their procedures. The Medical Commission thus stressed that “it has been established among scientists that the PCR test is the most reliable test in molecular genetics” (IOC, 1994b, p. 54). By referring to these scientists, the IOC wanted to maintain that their procedures and scientific knowledges were true and through the production of scientific truth, they could continue exercising power over women through gender verifications (Foucault, 1980f, p. 93). This line of rhetoric further suggested that these “knowledge claims” only became “established as scientific facts” if they were “linked to relevant groups” (Oudshoorn, 1994, p. 10). Without this loyal alliance between these scientists and that of the IOC medical commission, de Mérode in particular, this group of people may not have been able to continue constructing these knowledges, realities and truths (Oudshoorn, 1994, p. 4). When Ljungqvist was elected an IOC member in 1994, things started to change within the IOC quite dramatically, as he argued that “gender verification procedures and descriptions were no longer in accordance with medical, scientific and ethical standards and needed to be reviewed” (IOC, 1995, p. 14). Through this statement Ljungqvist challenged the truth and power relations of de Mérode, his Commission and his scientific alliances by asserting that his knowledge was more in accordance with medical, scientific and ethical standards and should be adhered to. The strong alliance between the IAAF and the sex endocrinologists implied that their collaboration was something to take after, as they were producing knowledge more real and true than that of the IOC. Next year (1997), Ljungqvist thus challenged de

88 Read further in Ferguson-Smith & Ferris, 1991; Simpson & Ljungqvist, 1992; Simpson et al., 1993.
89 Such scientists are “Dr. Charles Sultan and his team at the University in Montpellier, France, Drs. Cui, Warners, Jeffrey and Matthews at the University of Adelaide in Australia, Dr. D.C. Page and his team at the Massachusetts Institute of Technology, USA” (IOC, 1994b, p. 54).
Mérode again and argued that the genetic testing which the IOC was involved in was a very specialised science, not suited for their objective of eliminating women with unfair competitive advantages (IOC, 1997, pp. 8-9).

At the same meeting, it was reported that the team of scientists and medical practitioners performing the gender verifications at the 1996 Atlanta Summer Games had advised the IOC to “stop using the present procedure, and if deemed such testing necessary, use another method” (IOC, 1997, p. 9). Around the same time, the “Norwegian parliament had [also] passed an act banning gender testing for anything other than purely medical reasons”, which would come into force January 1998 (IOC, 1997, p. 8). The ways in which the Norwegian act impacted and troubled the IOC Medical Commission have not been brought into this debate before, and add to the already existing criticism the IOC received towards their gender testing technologies. Despite this, de Mérode was adamant to continue the tests through the PCR somatechnology, as they were not defining whether the athletes were women or men, but investigated and ensured “that competition rules were respected” (IOC, 1997, p. 9). The IOC concluded that as there was no violation against women’s human rights, they should continue performing the tests, wait until the Norwegian act had come into force and examine if the act was only applicable in Norway or if it would also apply to Norwegians competing overseas. The IOC agreed to revisit the topic in 1998 (1997, pp. 8-9, 109).

In 1998 the tone and the language used in the minutes of the 107th IOC Session became more forceful. For example, Ljungqvist argued that he and many of his colleagues around the world did not agree with the gender testing, and reminded the IOC members that the team of scientists at the Atlanta Games were also not in favour of it. He continued by also stating that “although the testing that was conducted 20-30 years ago may have been accurate, it was no longer the case today, as men might pass the test and some females might not” (IOC, 1998, p. 10). Hence, adopting the hormone testing was more scientifically appropriate for this purpose in establishing whether the female was producing too high or low levels of testosterone. Ljungqvist requested whether the IOC “Juridical Commission could consider removing the gender testing from the Medical Code” (IOC, 1998, p. 10). From a “history of the present” perspective, Ljungqvist was recognising that the testing technology that may have been the truth of the past was out-dated and did more harm than good. He thus urged them to revise their truths to those commonly accepted by (sports) medicine and science in 1998.

Things changed the following year when the Juridical Commission researched the matter and unanimously agreed that the gender verifications should cease “immediately” with full effect from the Sydney Games in 2000. (IOC, 1999, p. 80) The Juridical Commission hoped that the IOC members would agree with their proposition, which they all did at the 109th IOC
Despite the agreement, de Mérode was not pleased with the outcome:

There would be no gender testing in Sydney but a special unit would be on standby in case it was needed… This was the only test it carried out which had a 100% success rate and helped to put an end to immoral practices. [de Mérode] noted that according to the Olympic Charter the IOC had the right to carry out random testing and he found no difficulties with this. Nothing could prevent the IOC from doing this as long as it was in contact with the necessary International Federations. He said that the IOC was in control of the situation regarding gender testing and tests would be carried out if necessary. (IOC, 1999, p. 14)

This was the end of a 31 year long era of mandatory sex, femininity and gender testing, but as de Mérode suggested, the tests may only have ended on a mandatory basis as the IOC still had the right to gender test their female athletes if they deemed it necessary to do so. De Mérode’s assertion that the tests had had a “100% success rate and helped to put an end to immoral practices” further suggests the continued clashes of knowledges and truths within and around the IOC, as many would not have agreed on their 100% success rate. That said, the truth remains that the myriad of tests would continue existing after 2000 but now on a ‘case-by-case’ basis, and still under the name of “gender verifications” and using pretty much the same technology as its predecessor (IAAF, 2006).

After the 2003 production of an IOC consensus statement on sex reassignment in sports the IAAF developed a new gender verification policy that was based on examining athletes on a ‘case-by-case’ basis if there was a “challenge” or a “suspicion” against an athlete’s female gender. (IAAF, 2006) The fact that this policy tested female athletes on a ‘case-by-case’ basis resulted in further criticism. In 2009, the IAAF and the IOC would again have their policy questioned and criticised, as neither of them had qualified, similarly to earlier, what constitutes gender, the female gender and unfair competitive advantages in female sports, and thus appeared to be questioning athletes on an arbitrary basis (Dreger, 2009a-2000c, 2010; Griffin, 2010; Levy, 2009).

**Conclusion**

This chapter elucidates that with Brundage and de Mérode and their teams at the forefront, the sex tests were standardised and institutionalised at the Grenoble Winter Games in 1968 and performed as a mandatory procedure under somewhat shifting ideologies, technologies and
policy names for 31 years till their mandatory termination in 1999. During these years the tests went from “sex controls” to “femininity testing” to “gender verifications” and also experienced other discontinuities and continuities concerning the testing technique and ideology. Here the tests went from being a genetic sex chromatin test (Thiébault, 1968, p. 4) to PCR tests also checking the internal/external genitalia and hormone levels for any “anomaly” (IOC, 1992a, pp. 110-111) and post 2000 they continued, but on a ‘case-by-case’ basis. The ideology also seems to have experienced shifts from “determining sex” (Thiébault, 1968, p. 4-5) to “sex determination for females” (IOC, 1972b, Annex 1, p. 188) to “protect[ing] women against unfair competition” (Beckett, 1976, p. 170) to “determining gender” and to “protect[ing]” women from “unfair competition” (IOC Medical Commission, 1984b, pp. 8, 34). In 1992 de Mérode explained that the IOC had “never claimed to determine whether or not someone was a woman”; instead, the tests were all about “discourage[ing] an unethical practice that consisted in aggravating anomalies in individuals instead of reducing them in the interests of sports performance” (IOC, 1992b, p. 21). There are also obvious discontinuities in what to refer to these ‘unwanted’ athletes as. Dr Thiébault refers to them as “hybrids” and Dr Hay speaks of them as “hermaphrodites” or “intersexuals”. The use of different terms when referring to these ‘unwanted’ athletes and what these variations or terms imply also suggests that these medical professionals overlooked that these athletes’ observable body characteristics and internal genetics might differ. As the buccal smear testing somatechnology only searches for genetic variations that involve 46 XY women, referring to them as “intersexuals”, “hybrids” or even “hermaphrodites” is in conflict, as the phantasmal terms are either too general or too specific and assume that the whole group or the specific variation is a ‘threat’ that must be eliminated. The discontinuity in terminology of what to call the athletes thus troubles the illusion of a consistent habitus of intersex in elite sports.

What becomes clear through this chapter is that these ruptures and contentions are mainly rooted in the discontinuity of truths and knowledges, or as Ljungqvist said, what may have been the truth of the past may be the untruth of today and the IOC must thus abide by the wisdom of those to be taken seriously. The IOC thus seems to adhere to the dominant habitus (Bourdieu, 1977, 1990) they are part of, that is, medicine and science, but not to “competing habituses” (Feder, 2006b, p. 192) from other disciplines or societal movements such as those inspired by the Summer of Love or popular culture in general. It seems the ideology, knowledges and truths regarding sex testing and the view of the “hybrid”, were chiefly influenced and informed by a conservative mentality coloured by heteronormativity and sexism which did not necessarily follow the social evolution of feminism and sexuality and gender liberation. This may explain why women, and only a particular group among female athletes, continued to be the target
group, even when the target group within the target group experienced slight ruptures. That said, the tests continued even though there was a discontinuity of testing names and testing technologies as the ideology behind the testing, generally, remained the same till 1999. Now a ‘case-by-case’ inspired testing process with the same name (gender verification) the same ideology and a very similar testing technology would take over – the difference was that the tests were not performed on a mandatory basis but on a random basis. The next chapter further discusses how the case-by-case gender verification post-1999 was contested and made obsolescent and where yet again its structure, knowledges and truths were challenged and had to be revisited.
Chapter Five: Medicalisation in the Name of Fairness

Although rare, some women develop male-like body characteristics due to an overproduction of male sex hormones, so-called “androgens.” The androgenic effects on the human body explain why men perform better than women in most sports and are, in fact, the very reason for the distinction between male and female competition in most sports. Consequently, women with hyperandrogenism generally perform better in sport than other women. (IOC, 2011)

Locating sex in chemicals means that there can be too much or too little of these substances in the organism. Sex thus becomes an entity that can be measured, quantified and manipulated with the laboratory techniques. (Oudshoorn, 1994, p. 145)

There are good reasons to suspect that the on-going attempts to regulate the gender division in sport are related less to fairness and the spirit of sport and more to a strong drive to “normalize” gender identities and conditions. (Shani & Barilan, 2012, pp. 27-28)

Building on the focus of the previous chapter, which considered how the IAAF/IOC continued to gender verify female athletes on a ‘case-by-case’ basis despite discontinuing their mandatory tests in 1992 and 1999 respectively (Ljungqvist, 1992, p. 2494; IOC, 1999, p. 14), I continue to examine the genealogy and the continuity and discontinuity (Foucault, 1970, p. 50; Grosz, 1994, p. 145) of gender verifications in female competitions. These tests, again, became a contested topic in 2009, through the intensified moment of Caster Semenya. This incident cast the IOC/IAAF into stormy weather, as they realised that, as with their inability to define sex and femininity, they had no formula for defining gender, how a person must feel to acceptably pass as a female athlete or what qualified as unfair competitive advantages in the female camp. In response to their unsatisfactory attendance to these questions, they once more set out to revise the eligibility rules in female sports. In April 2011 the IOC (2010, 2011, 2012a) and the IAAF (2010, 2011a) concluded that performance driven capacities, hyperandrogenism (HA), should henceforth determine the ways in which legally recognised women may compete in female sports.

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90 This chapter partially draws on an article jointly written with Mary Lou Rasmussen.
This chapter examines the logic and ideology behind their new focus: athletes with HA. In my contribution to gender politics in elite sport, I aim to examine the rationale and justifications the IOC/IAAF employed when continuing to regulate certain non-manipulated genetic advantages while celebrating others. What is the current underlying agenda for questioning and regulating these athletes when considering that the former IOC Medical and Scientific Director Dr Patrick Schamasch stipulated a few years ago that the IOC “are not in favour of intersexuality” and that they “detect it” and then “either treat it” or not (cited in Rondot, 2008). Is this still the standpoint of the IOC? This chapter is partially inspired by Oudshoorn’s (1994) discussion on the power of sex endocrinology in pathologising and labelling certain sex hormone production levels as ‘normal’ versus ‘abnormal’. This chapter builds on this framework when examining the IOC/IAAF decision to assess whether women produce “too much” functional androgen, rather than “too little” functional androgen. And to what extent these tests and predetermined levels of ‘acceptable’ functional androgen condition female competitors to have their femininity “measured, quantified and manipulated” with the help of “laboratory techniques” (Oudshoorn, 1994, p. 145). This chapter also builds on the idea put forward by Shani and Barilan (2012) that “the on-going attempts to regulate the gender division in sport” through the marking and regulating of diverse intersex variations and now HA variations “are related less to fairness and the spirit of sport and more to a strong drive to “normalize” gender identities and conditions” (pp. 27-28). Drawing on these ideas, I am curious to identify what these new regulations involve, and whether intersex variations in male competitions are similarly conceptualised and limited. And are other genetic make-ups (in either gender camp) similarly questioned and regulated if they also provide competitive advantages?

In attending to these queries, this chapter draws on unique, unreported and unofficial accounts from Schamasch and a European sports medicine expert, Dr Hermina Schneider92. Excerpts from the IOC and the IAAF HA policies will also be presented and examined from a continuity and discontinuity perspective. In attending to these queries, this chapter is divided into three sections where I begin by examining the two expert meetings the IOC/IAAF organised to ‘solve’ the internal and external contentions regarding athletes with intersex variations after the Semenya controversy. In this section I highlight the ways in which the IOC/IAAF have discontinued the testing technology to gender verify their female athletes and the nomenclature “gender”, and to what extent the testing ideology has experienced ruptures. I then go on to investigate how good a woman can be (at her sport) in the current system of ‘case-by-case’ testing before being HA questioned. In this section I examine the reasoning of

92 This is a pseudonym - at the request of the participant.
the IOC/IAAF in establishing a hierarchy of *fair* versus *unfair* competitive advantages within the realm of non-manipulated physical advantages. Here I consider to what extent the rationale to HA verify female athletes may be influenced by the dominant *habitus* (Bourdieu, 1977; 1990; 1999) of intersex in medicine and the *somatechnologies* (Sullivan and Murray, 2009) used in these “structuring structures” to shape and regulate the body. In the last section I explore how the IOC/IAAF detect a HA variation and how the regulations set before the HA athlete may affect her health, wellbeing and career. This section considers to what extent participating in elite sports is a matter of privilege versus a right (Pierson, 2011) for HA athletes. I begin this chapter by untangling the IOC/IAAF process in developing policies aimed at identifying, diagnosing, regulating and treating female HA athletes.

**Policies on Monitoring and Regulating Hyperandrogenism**

[S]ince it is known today that there are rare cases of females with HA competing in women’s competitions, in order to be able to guarantee the fairness of such competitions for all female competitors, the new Regulations stipulate that no female with HA shall be eligible to compete in women’s competition if she has functional androgen levels (testosterone) that are in the male range. (IAAF, 2011b, p. 1)

[R]ather than try and find out what sex Semenya or anyone else really ‘is’, why don’t we think instead about standards for participation under gender categories that have the aim of being both egalitarian and inclusive? Only then might we finally cease the sensationalist witch hunt antics of finding anyone’s ‘true sex’… If the standards turn out to be... hormone levels, and it is decided that one cannot exceed certain levels of testosterone to play in women’s sports, then a competitor could still be a ‘woman’ in a cultural and social sense and, indeed, in some biological senses as well, but she would not qualify to compete under those standards. Conversely, a ‘man’ in a cultural sense may not qualify to compete in men’s sports according to the same standard, but does qualify for women’s sports – why should that be a problem? (Butler, 2009)

I now return to what the sex and gender query of Semenya gave rise to and how this intensified moment elevated the ‘intersex’ debate in elite sports to an unprecedented level of public attention. The Semenya controversy not only illuminated the complexity of intersex cases in female sports but also highlighted contradictions and inconsistencies within the IAAF gender...
verification policy. Because they were greatly criticised for how they managed the Semenya case the IAAF, along with the IOC, were pushed into examining the case and considering developing an alternative policy. (Brömdal, 2011a, 2011b; Dreger, 2009c; Fernhoff, 2010; Ginnane, 2011; Levy, 2009)

Under these circumstances the IOC, in collaboration with the International Athletic Foundation (IAF)\textsuperscript{93}, organised two expert meetings. This section considers the ways in which these meetings were aimed at drawing up guidelines on how to continue conceptualising and managing athletes with intersex variations by discontinuing the process of defining sex and gender and by focusing on those bestowed with unfair genetic advantages (IOC, 2010). I thus examine the early stages of the IOC/IAAF policy development process and the alleged importance of identifying, diagnosing, treating and regulating female athletes with HA variations. Drawing on the quote by Butler, this section considers to what extent the new target group focuses on “standards for participation” that are both “egalitarian and inclusive” (2009) versus Shani and Barilan’s idea that the HA regulations are a continued attempt to normalise “gender identities and conditions” (2012, pp. 27-28).

The Miami Gender Symposium & the Lausanne Expert Meeting on the Management of HA

The purpose of the first expert meeting – Gender Symposium – in Miami in January of 2010 was partially aimed at examining athletes with intersex variations from a scientific and medical perspective. Second, it was the beginning of the development of an IOC consensus statement setting the direction on how to identify, regulate and manage female athletes with intersex variations according them ‘unfair’ competitive advantages (IOC, 2010). In the consensus statement the IOC/IAAF agreed to refer to these athletes as suffering from Disorders with Sex Development (DSD). This could be questioned: Why was it considered important to identify, diagnose, treat and regulate female athletes with DSDs on a ‘case-by-case’ basis and how would the suggested pre-participation health examinations facilitate this hunt? (IOC, 2010) And, in what ways would a potential refusal to comply with the eligibility rules affect the lives and careers of these athletes who are DSD identified? Posing these questions at the time were relevant, especially, when most athletes with a ‘DSD’ variation\textsuperscript{94} may not actually be afforded any disproportionate competitive advantages (Brömdal, 2011b; Hercher, 2010; Viloria, 2011a, 2011b) Applying the DSD term when perhaps only a few intersex variations may contribute to

\textsuperscript{93} IAF’s primary mission is to charitably assist the IAAF and its affiliated national governing bodies in sustaining the development and promotion of athletics world-wide.

\textsuperscript{94} Intersex Trust Aotearoa New Zealand (ITANZ) argues that there are around 30 intersex variations. This number is however contested and argued to be higher within the discipline of science since the DSD nomenclature got institutionalised.
competitive advantages, such as congenital adrenal hyperplasia (CAH), androgen producing tumours and anovulatory androgen excess (IAAF, 2006), was maybe not the most logical move. The influence medicine had at this symposium and its recent shift in nomenclature from intersex to DSD may explain the IOC/IAAF logic in adopting that term. This influence facilitated the attempt to normalise and pathologise the intersex body even though many intersex variations have no effect on the person’s health or capacity to live a healthy life (Brömdal, 2011a, 2011b; Erde, 2009; Hinkle, 2011, n.d. a, n.d. b; Spurgas, 2009).

The conclusions of the first expert meeting may have aimed to move away from defining gender or sex, but the need to have a policy in women’s competitions only focusing on pathologising any intersex variation that leads to a competitive advantage is questionable. It is questionable, especially when “[p]roducing an excess of testosterone” is understood as a “genetic advantage” and by no means is seen as an exception but one of many genetic advantages that are the norm in competitive sports (Hercher, 2010, p. 552). The conclusions of the first meeting thus seemed to wish to use the nomenclature DSD in further justifying the need of medical expertise in normalising these athletes’ conditions (Shani & Barilan, 2012, pp. 27-28).

Nine months later the second expert meeting took place in Lausanne in October 2010 and examined many of the concerns raised above. It was another step towards reaching a consensus on determining who and what was threatening the ‘level playing field’ in female sports and how to manage them. This time the meeting invitees represented a broader spectrum of specialists and constituted:

…sports administrators, sports lawyers (including from the IOC Legal Affairs Department), juridical experts in human rights, experts in medical and sports ethics, female athletes and a representative appointed by the intersex community (Organisation Intersex International). (IOC, 2011)

It is important to clarify that out of close to 21 participants, only one person represented the “intersex community” and this was not an athlete, but an OII member95. As the matter concerned athletes with intersex variations, one may question the influence one single representative could possibly have on a group of 20 persons, especially if these 20 view intersex as a disorder and wish to regulate the ‘intersex’athletes’ potential genetic and competitive abilities in sports. One may further wonder why an intersex organisation, without the inclusion of an athlete with an intersex variation, was invited to participate in this meeting, especially

95 Hida Viloria, the OII USA director was invited to represent the ‘intersex community’ at this meeting in Lausanne (Viloria, 2011a).
given at least two non-sex and gender-questioned female athletes were invited to present their views on the matter (Viloria, 2011a; Viloria & Martínez-Patiño, 2012). The scientific/medical view of intersex was guaranteed a strong hearing in such a context where, already established alliances between the IOC/IAAF, science and female athletes seemed to be further strengthened. A clear aim of the alliances being to “normalize” any gender condition (Shani & Barilan, 2012, pp. 27-28).

The Need to Identify and Regulate Athletes with Hyperandrogenism

Six months after the Lausanne meeting (April 2011), the IOC published its conclusions. The IOC Executive Board “confirmed the need to set up clear rules to determine the eligibility of female athletes with hyperandrogenism in female competitions, starting with the Olympic Games in London” 2012 (IOC, 2011). In their press release the term ‘disorders of sex development’ was abandoned and discontinued. Instead, the target was athletes with Hyperandrogenism. One month after the IOC announcement, the IAAF presented a full-fledged policy on the management of HA athletes where they highlighted that “These [HA] Regulations replace the IAAF’s previous Gender Verification Policy and the IAAF has now abandoned all reference to the terminology “gender verification” and “gender policy” in its Rules” (IAAF, 2011a, p. 2). In June 2012, one month before the Olympic Games in London, the IOC presented their full-fledged policy on “Female Hyperandrogenism” (IOC 2012a).

Despite the discontinuity of terms – from gender to DSD to HA – the ideology of the first and second IOC press release and the IOC/IAAF policy on HA contained no dramatic changes from the IAAF gender verification policy. The idea continued to be a combination of identifying, treating and managing those athletes with intersex variations that accorded them any “unfair competition” in female sports (Beckett, 1976, p. 170; IOC Medical Commission, 1984b, p. 8). What the IOC/IAAF had done this time was to narrow this ideology to a set of intersex variations which fit the new agenda. Through the first and the second IOC/IAAF expert meetings, both the IOC and the IAAF further revised and narrowed down their alliance and networking partners to a particular group of scientists, legal representatives and female athletes. Together they could “actively” construct a new reality, a new truth concerning HA variations, as it was now made to believe that these variations had to be the new target group. In actively trying to convince ‘the rest of the world’ of their truths and knowledges, it could be argued that the alliance succeeded “in convincing us that it reveals the truth about nature” because “the social context in which [these] knowledge claims are transformed into scientific facts are made invisible” (Oudshoorn, 1994, p. 139). The alliance thus made ‘the rest of us’ believe that their truth and knowledge claims were “not dependent on any social context”
(Oudshoorn, 1994, 139) but a scientific truth trying to guarantee fairness in female sports (IAAF, 2011b, p. 1).

As Table 5 suggests, the IAAF clarify which particular medical “conditions” lead to HA. The first seven “conditions” are classified as intersex variations, while the last three are not (IAAF, 2011a: 27; Karkazis et al., 2012: 4).

Table 5. Conditions Resulting in Hyperandrogenism in Women. (IAAF, 2011a, p. 27)

<table>
<thead>
<tr>
<th>Conditions Resulting in Hyperandrogenism in Women</th>
<th>Classified as an Intersex variation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Congenital adrenal hyperplasia (CAH): 21-hydroxylase deficiency</td>
<td>Yes</td>
</tr>
<tr>
<td>Congenital adrenal hyperplasia (CAH): 11β-hydroxylase deficiency</td>
<td>Yes</td>
</tr>
<tr>
<td>3β-Hydroxysteroid dehydrogenase deficiency</td>
<td>Yes</td>
</tr>
<tr>
<td>5α-Reductase type 2 deficiency</td>
<td>Yes</td>
</tr>
<tr>
<td>Androgen insensitivity syndrome (AIS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Ovotesticular DSD (previously called “true hermaphroditism”)</td>
<td>Yes</td>
</tr>
<tr>
<td>17β-Hydroxysteroid dehydrogenase type 3 (17β- HSD3) deficiency</td>
<td>Yes</td>
</tr>
<tr>
<td>Polycystic ovary syndrome (PCOS)</td>
<td>No</td>
</tr>
<tr>
<td>Adrenal carcinoma</td>
<td>No</td>
</tr>
<tr>
<td>Luteoma of pregnancy</td>
<td>No</td>
</tr>
</tbody>
</table>

As Table 5 proposes, HA is medically determined and as I will further discuss throughout this chapter, the IOC/IAAF continue classifying intersex variations as disorders even if they have discontinued using the DSD term in the policy. The basis for this understanding is noted as the Consensus statement on management of intersex disorders (Hughes et al., 2006) and the American Association of Clinical Endocrinologists’ (AACE) Medical guidelines for the clinical practice for the diagnosis and treatment of hyperandrogenic disorders (Goodman et al., 2001) are used as reference material in the IAAF HA policy (2011a, pp. 10-27, 2011b). This suggests that irrespective of the removal of the DSD term, the attitudes towards these variations are still influenced by the homogenous habitus of intersex in medicine and thus continue to prevail.

With reference to the discontinuing of the terms sex and gender96, both the IOC and the IAAF stress that as long as the athlete is legally recognised as a woman in her home country, she has the right to compete as a woman. That is, “provided that she has androgen levels below

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96 Arne Ljungqvist, the Chairman of the IOC medical commission, already acknowledged in the early 1980s that sex cannot be scientifically defined with the help of a laboratory analysis (Ljungqvist in Lager, 2007, pp. 178-183).
the male range...or, if within the male range; she has an androgen resistance such that she
derives no competitive advantage from such levels” (IOC, 2011). When the IAAF published
their HA policy in May of 2011 they echoed this idea that “no female with HA shall be eligible
to compete in women’s competition if she has functional androgen levels (testosterone) that are
in the male range” (2011, p. 1). That said, if a female athlete is found ineligible to compete as a
woman, the IOC conveyed in their 2012 HA information for the Olympic Games in London
that “in the event that the athlete has been declared ineligible to compete in the female
category, the athlete may be eligible to compete as a male athlete, if the athlete qualifies for the
male event of the sport” (IOC, 2012a: 1). The IOC does not however, qualify how much
functional androgen a woman must produce to qualify as a woman, or how much functional
testosterone a man must produce to compete as a man (or as a woman if their levels are in the
female range). The motion concerning identifying and regulating functional androgen levels
seems to resemble the ideology of sex chromatin tests; rather than identifying and regulating
46, XY women, it seems the hunt is now on for women with particular levels of functional
androgen. Is this, in relation to Kessler and McKenna (1985), thus, another element in
maintaining the stability of the binary sex and gender logic as the sex chromatin tests were
between 1968 and 2000?

In trying to answer this question, Oudshoorn has stipulated that when the ‘sex hormones’
were ‘discovered’, at the beginning of the previous century, they were “conceptualized as the
chemical messengers of masculinity and femininity” (1994, p. 17). Sex endocrinologists thus
developed the idea that sex hormones were “chemical substances secreted by the gonads”
which “reinforced the cultural notion that the gonads were the seats of masculinity and
femininity” (Oudshoorn, 1994, p. 145). Although more focus was on “their secretion” (the
hormones) rather than the gonad as such, it was also later established that both men and women
produce these sex hormones, but in different quantities (Oudshoorn, 1994, pp. 145-146).
“Attaching sex to chemicals” permitted sex endocrinologists to quantify the production level
of the hormones and argue that men and women are either producing “too much or too little of
these substances in the organism” (Oudshoorn, 1994, p. 145). For those reasons sex became “an
entity that can be measured, quantified and manipulated with the laboratory techniques” and sex
endocrinologists could consequently transform “the hormonal model of sex into a model of
disorders and pathologies” (Oudshoorn, 1994, pp. 145, 149). The thought of “hormonal
deficiency diseases”, or as in this case labeling excess production of (functional) androgen as a
DSD, suggests that these categories “of diseases can be treated with the administration of
hormones to [either] make up for the lack of these substances” (Oudshoorn, 1994, p. 149) or
reduce/block them if there is an excess of them.
This shift from defining sex and gender to focusing on functional androgen production levels can also be directly related to Butler’s criticisms against the IOC/IAAF for verifying athletes’ sex and gender authenticity. In a 2009 London review blog Butler tried to provoke the readers to critically reflect on who decides who can participate and when in female elite sports. Butler stresses that defining what sex or gender are and/or what sex or gender the athlete is, will not solve the problem at stake. Butler’s, to some, provocative proposal suggests that elite sports should instead be segregated by “standards of participation” where for example, the athletes’ testosterone levels should determine which gender category they compete in. This should be the segregating mechanism instead of segregating sports by trying to determine what sex and/or gender category the athlete belongs to. In this proposal Butler is challenging the present model and is a step towards undoing the binary sex and gender divide; however, if we were to take Butler at her word, it would equally have complications. For example where would the cut-off range be of how much testosterone/androgen one is allowed to produce to compete in either category?

Even though the IOC did not indicate the ceiling of how much functional androgen the female athlete is allowed to produce, the IAAF does. They advise that the “normal male range of total testosterone is ≥10nmol/L” (IAAF, 2011a, p. 12, 2011b, p. 3) which only leads one to speculate whether this would also be the cut-off range for women competing in the Olympic Games. Regarding this ceiling, one would need to further elaborate on the effect of functional versus non-functional testosterone and contemplate to what extent the difference determines a competitor’s athletic ability. As explained in the previous chapter, athletes with CAIS\(^\text{97}\) are able to perform at an elite level despite their body’s inability to respond to androgen production. Hence the impact of functional and non-functional androgen on one’s athletic ability needs further examination and will be attended to more carefully in the next section.

Because the IOC/IAAF argue that they have moved from sex and gender verifications to identifying, diagnosing, regulating and treating female athletes with excessive levels of androgen, they have simultaneously established a de facto hierarchy of fair versus unfair competitive advantages within the realm of natural physical advantages. The next section explores why some genetic advantages are commended while others are penalised, by contrasting the innate high levels of androgen, or more specifically testosterone, with other genetic compositions advantageous in elite sports. In doing so, I specifically draw on the truths and knowledges expressed by the recently outgoing IOC Medical and Scientific Director, Dr Schamasch.

\(^{97}\) Complete Androgen Insensitivity Syndrome (CAIS).
The Fairness Debate: The Consequences of Being ‘Too Good to Be a Woman’

Taking an excess of testosterone is cheating. Producing an excess of testosterone is a genetic advantage, and there is nothing inherently wrong with that. Genetic advantages are the norm and not the exception in competitive sports. (Hercher, 2010, p. 552)

The link between athleticism and androgens in general or testosterone in particular has not been proven. Despite the many assumptions about the relationship between testosterone and athletic advantage, there is no evidence showing that successful athletes have higher testosterone levels than less successful athletes. (Karkazis et al., 2012, p. 8)

In further analysing the underlining arguments for establishing these HA policies, I examine in this section the reasoning of the IOC/IAAF in establishing a hierarchy of fair versus unfair competitive advantages within the realm of non-manipulated physical advantages, especially if, as the human geneticist Laura Hercher argues in Gender Verification: A Term Whose Time has Come and Gone (2010, p. 552), that “there is nothing inherently wrong” with producing “an excess of testosterone”. I also consider the extent to which the rationale of the IOC/IAAF may be influenced by the “structuring structures” in the dominant habitus (Bourdieu, 1977, 1990, 1999) of intersex in medicine and the somatechnologies (Sullivan & Murray, 2009) used in these “structuring structures” (Bourdieu, 1990, p. 53) to mark and regulate the body and athletic performances. I further trouble the extent to which functional androgen levels impact an athlete’s performance (Karkazis et al., 2012, p.8) to the degree that it needs to be regulated in isolation to any other genetic make-up advantageous in elite sports.

The IOC/IAAF argue that these new rules are imperative as female athletes with HA disturb the ‘level-playing field’ and are disadvantaging women possessing normal levels of androgen (IAAF, 2011a, 2011b; IOC, 2010, 2011, 2012a). Prior to the launch of the IOC policy on Female Hyperandrogenism (2012), the recently outgoing IOC Medical and Scientific Director, Dr Schamasch, also explained in an interview with me that testosterone is the major contributor to why men and women perform differently and why female HA athletes threaten the ‘level-playing field’ in women’s sports:

As you know if these females, or ladies, have functional hyperandrogenism with active receptors, [it] means that they then have testosterone in the male range. And
we have *defined* what is potentially the male range. This means that they will have an advantage because, as you know, testosterone is the hormone which boosts the muscles, so if they have more testosterone than a normal lady, they will potentially have more muscles which could lead to a better performance because muscles are directly linked with performance. That is why we think that it could be abnormal and not totally fair to allow these ladies to compete with ladies who have lower testosterone or within the female range. (Schamasch, 2011) (Emphasis mine)

Schamasch is emphatic in conveying to me that this universal truth, a truth that I should *know* and share with him, suggests that testosterone is the hormone that boosts muscles and that functional androgen levels are directly linked with competitive advantages. And if a “lady” is not within the female range, then, that production level of androgen is to be understood as “abnormal”. In line with Oudshoorn, Schamasch further recognises that they “have defined what is potentially the male range” suggesting that they “actively constructed” the male and the female range of testosterone in the body, rather than actively “discovering” it (1994, p. 4). That said, Schamasch’s rhetoric tries to convince the rest of the world, including myself, that the truths and knowledges their scientific alliance attempts to reveal about the nature of where the line between female and the male range of testosterone lies, “are not dependant on any social context” (Oudshoorn, 1994, p. 139). Rather, their truths and knowledges about our bodies and ‘normal’ production levels of hormones are merely scientific truths based on nature. This ‘nature’ logic thus tries to guarantee fairness “within the female range” and convince the world that “testosterone is the hormone which boosts the muscles” which Shamash stipulates is “directly linked with performance”. For this reason, it is important to tease out Schamasch’s conviction that functional HA results in unfair competition and that it is different from other genetic conditions benefitting elite athletes.

Similary to Hercher (2010, p. 552) who argues that “there is nothing inherently wrong” with producing high levels of testosterone and that “genetic advantages are the norm and not the exception in competitive sports”, Tim Noakes asserts that elite sport is all about athletes with unique genetic advantages making them excel at what they do. Hence, regulating this advantage and conditioning them to become worse, would according to Noakes defeat the purpose of elite sports (Noakes in Ginnane, 2011).

The present IOC HA policy seems to suggest, similarly to Schamasch’s testimony and the IAAF HA policy, that the main contributor to an athlete’s superiority is functional testosterone. And because men produce considerably more of it than women, it is a concern for them if a

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98 Note that the IOC has not officially suggested what the “male range” implies in nmol/L - it may be above/below 10nmol/L.
woman produces testosterone within the “male range” as it may have the same effect as a manipulated intake of androgen, which is considered doping and strictly prohibited within the IOC:

…intersex female athletes with elevated androgen production give rise to a particular concern in the context of competitive sports, which is referred to as “female hyperandrogenism.” In general, the performances of male and female athletes may differ mainly due to the fact that men produce significantly more androgenic hormones than women and, therefore, are under stronger influence of such hormones. Androgenic hormones have performance-enhancing effects, particularly on strength, power and speed, which may provide a competitive advantage in sports. This is one of the reasons why the exogenous administration of such hormones and/or the promotion of the endogenous production of these hormones are banned under the World Anti-Doping Code, to which the IOC is a signatory. (IOC, 2012a, p. 1)

Similarly to Schamasch’s statement on the previous page, the IOC HA policy articulates that the problem at stake is the elevated level of androgen. This is a scientific “reality” they have not “discovered”, but is a scientific assumption considered to be a well-known ‘truth’ in their circles. However, as Oudshoorn suggests, it is worth examining the ways in which science “succeeds in convincing us that it reveals the truth about nature” (1994, p. 139). For this reason, we should consider that in these truth producing processes, the social contexts are perhaps concealed for the rest of the world to see (Oudshoorn, 1994, p. 139). Digging deeper into the social context which produces the understanding that HA corrupts the ‘level-playing field’ in female sports is vital in further understanding ‘the history of the present’ concerning the threat HA variations pose to the ‘level-playing field’ in female sports.

In addition, the IOC not only compare male and female levels of androgen production, which I will shortly discuss, but also equate an unreported inborn genetic variation such as HA with manipulated intake of androgen, as they may deliver the same or a similar competitive advantage. On this contested topic Hercher analyses the relationship between natural versus manipulated competitive advantages and fair versus unfair athletic advantages. Hercher (2010) does this by comparing the act of taking hormones to improve one’s athletic ability with an excessive production level of androgen:

[I]t is important to remember that the argument against doping is not that it works, but that it is dangerous. We do not want athletes to be forced to choose between
competing on an equal basis and sacrificing their long-term health. If doping was not dangerous, it would be like taking vitamins or eating lean protein or any of a thousand other extra steps that athletes take to get an edge. (Hercher, 2010, p. 552)

Hercher asserts that it is critical to acknowledge that these matters concerning manipulated and non-manipulated testosterone intakes interact and affect each other; however one is inserted and dangerous while the other is inherently existing and not necessarily damaging.

Research suggests and confirms that testosterone does have an impact on increasing an individual’s muscle size, strength, and endurance. Conversely, a recent study in the *American Journal of Bioethics*, by Katrina Karkazis et al. (2012, p. 8) stipulates that even though it may seem sound to conclude that an individual with a higher level of testosterone will perform better than one with a lower level of testosterone, this is not inevitably the case. Before I delve into the work of Karkazis et al. (2012), Fausto-Sterling also questions in her book *Myths of Gender: Biological theories about women and men* the great credit excess testosterone holds in making or breaking the athlete:

> The belief that testosterone builds muscle strength has contributed to a controversy in the sports world. Should athletes take androgen-like drugs – paying the price in future health problems - in order to build up their bodies? …controlled studies show no significant difference in strength between men who do and do not take these drugs. Ironically, the total amount of blood testosterone has been shown to decrease in men taking the externally supplied androgen, a change mediated by the lowered blood concentration of a hormone-binding protein. Despite such studies, belief in the effectiveness of androgenic drugs remains…(Fausto-Sterling, 1985, pp. 216-217)

Fausto-Sterling’s research indicates that there is “no significant difference in strength between men who do and do not take” excess intakes of testosterone; rather a manipulated intake implies the opposite. High levels of testosterone that are either reached through manipulation or naturally occurring are thus given too much credit, especially in isolation. I would add that a host of stimuli related to one’s height, strength, fat content, oxygen transportation capacity of the blood, genetics, costumes, shoes, diet, training facilities, coach and financial situation jointly contribute to how well an athlete performs and should not be overlooked in debates about the ‘level-playing field’.

Karkazis et al., (2012) further argue that most topics researching how testosterone affects an individual’s athletic performance have been conducted in relation to men and it is assumed

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99 Read further in Bhasin et al., 1996; Storer et al., 2003; Rønnestad, Hansen & Raastad, 2011; Karkazis et al., 2012.
that the same conclusions can be drawn for athletes in female competitions. The authors disagree with this representation:

…testosterone’s effects on athletic ability are likely to be different in men and women… Many aspects of physique or athletic performance differ between males and females, often substantially; however, none of these is close to 10-fold, further underscoring the limitations of a straightforward comparison of average male – female differences in athletic performance to average male – female differences in testosterone levels. There is also no support for knowing the effect of testosterone level on any individual. While females are generally more sensitive to the effects of testosterone than males, curvilinear effects as well as great inter-individual differences make extrapolation of the effects of specific amounts in any given individual impossible. (Karkazis et al., 2012, p. 8)

Even though men may produce closer to 10 times more testosterone than women, this “10-fold gap” is not represented by men running or swimming ten times faster or jumping ten times higher than women. Rather, the difference in their performance is smaller and their performance even overlaps at times. For those reasons, the authors stress that there is little scientific value in comparing testosterone levels between athletes and less so between female and male athletes. Questioning what testosterone does and does not do regarding one’s athletic ability is thus a valid concern and in need of further study as it would alter the agenda regarding the ‘hunt’ to identify and regulate female athletes with HA.

One could further expand on this topic and discuss it in relation to other genetic and physical advantages. If athletes with functional HA are considered to be ‘too good to be women’

100 Or “too fast to be a woman” - the title of the 2011 BBC documentary on Caster Semenya (Ginnane, 2011). and therefore regulated and potentially conditioned to undergo treatments to eligibly compete as women, it is of value to consider whether other genetic advantages should be regulated and conditioned too (Dreger, 2009b, 2010, pp. 22-24).

Sport physician Jonathan Reeser argues that unique inborn variations have been accepted since the inception of elite sports even those which to some would be considered unfair physical advantages (2005, p. 698). For this reason, should a very tall basket-ball/volley-ball player born with Marfan syndrome be penalised for their height as it may increase their ability to dunk/shoot/spike and thus score more goals? Similarly, should a tall swimmer with Marfan syndrome characterised by large, flexible and flat feet, potentially performing like flippers and enhancing their competitive success, also be penalised to follow certain rules to eligibly compete?
compete in swimming tournaments? Equally, envisage a cross-country skier with a genetic condition increasing the oxygen transportation capacity of their blood, boosting their endurance and resulting in high muscle performance. Should this skier also have their genetic advantage questioned and potentially undergo treatment to eligibly compete? Lastly, consider a heavy-weight lifter with the genetic ‘condition’ ‘muscle hypertrophy’. This ‘condition’ typically characterises reduced body fat and increased muscle mass which increases the person’s muscle strength and enhances their competitive performance. Should an athlete with this ‘condition’ also have their physical superiority regulated? In principle, how do these genetic make-ups and potential athletic advantages differ from one another? And how do they differ if we cannot with certainty argue that functional levels of testosterone are the dominant source determining an athlete’s performance, and may even behave differently from men to women? On this topic Schamasch motioned that they all have to be “cured” in the long run:

My feeling is that all these people that you have mentioned will probably have to be cured, because Marfan syndrome you have to cure it, and the famous Finnish family with the high red blood clot parameters, they will probably have to be cured because you do not live with very high levels of red blood cells all your life because of the quality of your blood, or something like that. At one point or the other they will have to put you on a treatment and for me, honestly, you come back to the functional hyperandrogenism, I do not see why a female athlete within the male range will have to compete with a, so called, normal female. It is something which I do not know how to explain it, but feels totally abnormal for me. It is a really an unfair advantage. (Schamasch, 2011)

Schamasch, who has been a powerful ‘gate-keeper’ in producing policies and assessing if athletes within female competitions are eligible to compete, argues that all of the above ‘conditions’ should undergo treatments to be “cured”. This seems the most logical reply for Schamasch, which he bases on how he “feels”, but more likely influenced by the habitus he operates in (which I will shortly expand on). Differently to HA variations and despite Schamasch’s rhetoric, these other ‘conditions’ have till this day not lead to any policies being proposed for them to be identified, regulated or potentially “cured” before competing.

In an effort to try to explain this discrepancy of ‘treatment’, Jonathan Reeser (2005, pp. 698-99) and Susan Cahn (1994, p. 111) write that superior athletes transgressing sex and gender norms do not follow the same system of acceptance as other genetic and competitive

101 Such as primary familial and congenital polycythemia – PFCP.
102 Also referred to as myostatin-related muscle hypertrophy.
advantages. And Symons and Hemphill (2006, pp. 114-15) as well as Cavanagh and Sykes (2006, p. 97) propose that this intolerance is mainly rooted in the celebration of men aspiring to be “hyper-masculine” and that society, medicine and science pathologise and generally discriminate trans* people and those with intersex variations. Oudshoorn (1994, pp. 148-149) would further suggest that the sex endocrinologists’ pathologisation of too high or too low levels of sex hormones, together with the hormone therapy programs to either elevate or reduce these hormone levels, can provide further answers to these discrepancies of treatment in elite sports and between male and female athletes.

My belief is that one needs to delve deeper into the habitus of intersex in medicine to consider why female athletes with HA are depicted, treated and managed differently to other genetic conditions potentially beneficial to elite athletes. This may equally attend to why Schamasch “feels” that HA is “an unfair advantage” which he does “not know how to explain” other than that it “feels totally abnormal for” him to see an HA athlete compete with “a normal female.” Drawing on Pierre Bourdieu’s notion of habitus and Nikki Sullivan’s and Samantha Murray’s idea of somatechnics may provide a greater understanding of the ways in which present truths and knowledges towards HA variations are produced and presented by the IOC/IAAF. This may be gained by exploring further historical, medical and socio-political understandings of the intersex phenomenon.

The Habitus of Intersex and Téchnes Pathologizing and Normalizing Non-Normative Sex and Gender in Elite Sports

As the following section will build on Bourdieu’s definition of habitus, I believe it is important that I revisit this structuring structure before I move on. Because particular social environments produce particular structures, they equally produce particular habituses, Bourdieu stresses that these habituses are “systems of durable, transposable dispositions, structured structures predisposed to function as structuring structures” (1977, p. 72). In other words, habituses are principles, practices and representation of a particular generation in that structure “which can be objectively “regulated” and “regular” without in any way being the product of obedience to rules, objectively adapted to their goals without presupposing a conscious aiming at ends or an express mastery of the operations necessary to attain them” (Bourdieu, 1977, p. 72). The habitus can be all this and “collectively orchestrated” without actually “being the product of the orchestrating action of a conductor” (Bourdieu, 1977, p. 72). Hence, attending to this framework within the context of intersex and elite sports, it could be argued that established and normative socio-political structures concerning sex, gender and bodies influence and act as standardizing mechanisms concerning how the medical commissioners of the IOC/IAAF treat
and manage athletes with certain intersex variations. In other words, the manner in which truths and knowledges about female HA athletes are produced, circulated, deployed, justified and contested, may be preconditioned by how mainstream society conceptualises and idealises the binary sex, gender and body model (and simultaneously categorises that which diverges from and disturbs this model). To get a greater understanding of why the IOC/IAAF depict and manage athletes with HA as they presently do, one must examine the *habitus* of intersex, that is see how it is reflected upon within the greater realm of history, society, medicine and science.

Intersex has for the most part been regarded as a deviation from the ideal biological sex development and considered something *disorderly* and *abnormal* that can become *orderly* and *normal* with the help of science and medicine. As a result, the discourse on intersex has since the early 1950s been isolated within the profession of medicine and science (Chase, 1998b, p. 190; Holmes, 2009). The idea that intersex is a deviation from what appears normal, and that parents and family members would react with distress in the event of an intersex birth, also fostered the introduction of *corrective genital surgeries* around the 1950s (Dreger & Herndon, 2009, p. 202). This parental distress is captured in the book *The intersex disorders* by the English physicians John Dewhurst and Ronald Gordon who argued in 1969 that:

One can only attempt to imagine the anguish of the parents. That a new-born child should have a deformity of any magnitude is a distressing thing, but that so fundamental an issue as the very sex of the child should be in doubt is a tragic event which immediately conjures up visions of a hopeless psychological misfit doomed to live always as a sexual freak in loneliness and frustration. (p. 1)

This description of an intersex birth is not unique to Dewhurst and Gordon, but reflects the general idea physicians had at the time which has equally influenced how mainstream society perceives the phantom category of intersex. As few parents would want to give birth to a “sexual freak” or a “psychological misfit” suffering from isolation their whole life, the likelihood of normalizing the child and suggesting corrective sex surgeries to the parents positioned the medical establishment with a great amount of power in determining the future of these children. It is important to stress, as put forth by Fausto-Sterling (2000b) that most physicians at the time believed “that an intersexual child is ‘really’ a boy or a girl” (p. 51). For that reason, John Money “and others trained in his approach, specifically banned the word *hermaphrodite* for use in conversation with the parents” (Fausto-Sterling, 2000b, p. 51). Instead, physicians adopted “more specific medical terminology – such as ‘sex chromosome anomalies’, ‘gonadal anomalies’, and ‘external organ anomalies’” indicating that the intersex child was “just unusual in some aspect of their physiology, not that they constitute a category
other than male or female” (Fausto-Sterling, 2000b, p. 51). These sex anatomy expressions were preferable rather than using terms that would further ‘freak’ out the parents. Notably, these terms were also adhering to the binary sex, gender and body model.

The power of diagnosing what is abnormal from normal can be translated into a powerful societal role and position as ‘gate-keepers’ who create a hierarchy of more and less desirable sex and body developments (Karkazis, 2008, p. 11). The role and the views of these gate-keepers in turn enforce their perceptions onto the parents, family members, and the wider society. This further motivates the procedures and beliefs of the gate-keepers, which then, explained by Sullivan (2009), implies that we have come to the conclusion that any body that is deemed “wrong” in their original state can be restored through surgery. Hence, “surgery…becomes a means of correcting things, or restoring order” (Sullivan, 2009, p. 313).

Correspondingly, corrective genital surgeries for the purpose of normalizing intersex infants/children became a standardised practice in the mid-1950s that still lives on till this day. The engineer and mastermind behind this practice was the psychologist John Money. In collaboration with a host of psychologists and psychiatrists interested in the evolution of sex, and the development of gender identities/roles these genital surgeries became institutionalised (Dreger & Herndon, 2009, p. 202). This procedure is today known as the “OGR model” for optimum gender of rearing. Money and his associates suggested that these genital corrective surgeries had to be completed as early as possible, before the child reached the age of 18-24 months.103

Philosopher and bioethicist Ellen Feder (2006b) similarly argues that the societal “structuring structures” theorised by Bourdieu thus produce parents who wish to have children with normal looking bodies that do not deviate from the normative and binary idea of sex and genitalia. They dread what the consequences may be if these norms are disturbed (p. 191). In further considering the habitus of intersex, Feder proposes that medicine cannot alone be held responsible for pathologising intersex bodies and for wishing to normalise them as the dominant habitus works through them:

The concept of habitus marks this realm of taken-for-granted, what is not questioned, what might be understood, in philosophical terms, as a kind of implicit normative order – a normative order that nowhere spells out the rules, that nowhere commands obedience to rules, but works, at the same time, to regulate practices in conformity with a prevailing social order. If the management of intersexed children suggests that there are in fact rules of normality that must be followed, these rules

are not the rules of mere social convention, but something more along the lines of what might be described as a “cultural unconscious”, conventions that are not considered and weighted, thoughtfully enacted by individuals but conventions that could more precisely be understood to work *through* individuals. (Feder, 2006b, pp. 191-192) (Emphasis in original)

As these socio-political ideals, norms and standards are so deeply and culturally embedded in us and our societies they have unconsciously influenced the need to medically intervene in light of an obvious intersex birth. The ideas of atypical genitalia and disturbing sex development thus go beyond the influence of medical teams performing these surgeries and setting the agenda; instead, the agenda concerning normative sex, gender and bodies is already prescribed in and by us as it works *through* the society it operates in. Hence, if we return to the habitus of intersex in elite sport, a passage from my conversation with Schamasch illustrates, less surprisingly, how also he as a physician has been taught *through* his profession to fix whatever is deemed abnormal to become normal. This normative “structuring structure” thus travels *through* him and his world of sports:

…if you have something abnormal in the body, which means hyper production of testosterone in a female body, which is not normal, you should find why she has this hyper production and once you have found why, try to treat this why. You know that ladies have testosterone in their bodies, but not in the male range, so if they have hyper production, it means that they have a reason and we need to find the reason and treat the reason. And to bring the lady, in what may be called a normal lady range. That is my understanding as a physician, if you have something abnormal in the body, you try to find why that is abnormal and you try to put it back to normal. That is what I have learned as a physician. (Schamasch, 2011)

As a powerful veteran within the IOC medical commission and setting the standards for its ISFs, Schamasch clearly articulates that female HA is “abnormal”, and as a physician, he has been trained to normalise and “treat this reason…back to normal.” Hence, the schooling of Schamasch, possibly his IOC/ISF colleagues, and other scientific alliances equally influence and are influenced by society’s understanding of intersex bodies and the “abnormality” it may represent in comparison with non-interruptive sexes and bodies. Because “scientists belonging to the same discipline are socialized in similar educational settings” they are according to Oudshoorn (1994, p. 12) more prone to reach “a certain degree of consensus about problem definitions, the acceptability of solutions, and appropriate techniques and instrumentation”
which strengthenes their habitus and makes it more homogenous. This line of thought may thus clarify why Schamasch, his colleagues and alliances within and outside of science agree that HA variations are a threat to the ‘level-playing field’ in female sports, and the way to tackle this problem is to eliminate them or force them to undergo hormone therapy programs to put them “back to normal” (I will examine this latter perception in the next section).

Schamasch further explains in 2008 that the IOC “are not in favour of intersexuality” and that they “detect it and then” they “either treat it or…[they] don’t” as “it is certain that there will be a certain time where the athlete’s performance will be enhanced” (in Rondot, 2008). This comment together with his current position of “curing” HA athletes, strengthen the established norms of what disturbing bodies and unfair competitive advantages entail. That said, his views of “curing” and “treating” “intersexuality”, or HA variations, and understandings of ‘disturbing sex, gender and body politics are not isolated within elite sports nor medicine and science; the heritage of these ideas is complex and they have socio-political and religious roots (which I will shortly further investigate) which validate each other.

Sullivan further troubles these medically standardised procedures, through the lens of somatechnology, by also suggesting that medical practices and procedures for normalizing disturbing bodies are falsely seen as “technologies separate from the bodies they seek to modify. [And] the body is a fleshly substrate that simply is prior to its enhancement or mutilation by the technologies that transform its original state” (2009: 314). Sullivan and Murray rather suggest that one cannot distinguish between bodies, technologies and associated discourses but rather see “bodily being (or corporealities) as always already technologized, and technologies as always already enfleshed” (2009: 3). The idea that HA athletes must be identified, diagnosed, regulated and treated can thus not function without ideas and beliefs concerning normal versus abnormal sex development, ‘sex hormone’ levels, genitalia and unfair competition. This technology framework also shapes, if not dominates, how Schamasch and the IOC/ISFs categorise what is deemed normal from abnormal sex, gender, body and athletic performance in female elite sports. Athletes in female competitions categorised as intersex/HA can thus not be understood as separate from, or somehow outside the somatechnologies of medicine, science or sporting institutions, and the alliances they create, that regulate their bodies. Instead, their “bodily-being” is shaped by the discourses that justify and contest the use of such regulations and act as more powerful gate-keepers in maintaining this structure. As Schamasch and I continued our talks, he noted that his religion also influenced his view on how to view intersex/HA athletes and somatechnologies that continue gender segregating sports:
For the moment, I will come back to the good book [the Bible]. God has created the male and the female. For me, I am not at all against a third sex or a fourth sex, but when it comes to sports we should keep two categories, I do not think it is feasible to introduce new categories. That is my feeling, and I do not have any explanation, because that is my old Christian belief. I totally change my approach on gay and lesbianism, I was very fundamentalist when I was young and things have changed a little bit on that, but society has two categories and I do not see the need to have a third one or a fourth one. I do not have any explanation in my brain, in my mind, sorry. (Schamasch, 2011) (Emphasis mine)

Schamasch acknowledges that his view on disturbing sex, gender, body and athletic performance in female sports is not only influenced by his medical schooling, his alliances and the habitus it operates in, but also by the religious structure he was brought up in and functions in. Therefore, a successful physician, such as Schamasch, is someone who has not only been influenced by the professions of medicine and sports medicine but also by his religious habitus, which now also work through him (Feder, 2006b, p. 192). His religious habitus further justifies why he “feels” that sports must be gender segregated followed by tests enforcing this through the rationale that “God has created the male and the female”. Hence, when entering the HA debate, Schamasch and his colleagues had to follow the somatechnologies of the space(s) they occupied, so that they did not seem “out of place” or non-loyal to those dominant habituses (Bourdieu, 1999, p. 128).

As clarified in the literature review chapter, current debates concerning intersex still revolve around the ways in which the medical and scientific establishments manage intersex variations. Topics addressing the need to and how to improve the health care of people with intersex variations are still in focus.\(^{104}\) The 2006 taxonomy revision from intersex to disorders of sex development (DSD) has also been a contested debate as it has been argued that intersex classifications are further confined within the medical and scientific establishments where medical practitioners and scientists hold the authority in determining the management of these categories of people.\(^{105}\) Here parallels can also be drawn to the IOC/IAAF regarding the ways in which they classify these athletes.

As explained earlier in this chapter, the IOC/IAAF Gender Symposium in 2010 posted a press release stating their drafting process of a policy on the management of athletes with DSDs

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(IOC, 2010). The IOC statement is significant insofar as it demonstrates an alignment between sports medicine, scientists and practitioners. Even though the IOC have removed the DSD term in their policy, the IAAF still refer to HA variations as a disorder in their HA policy. In their *Regulations governing eligibility of females with hyperandrogenism to compete in women’s competition* (2011a: 10-27) and their *HA regulations explanatory notes* (2011b) they state that HA is part of the DSD umbrella and they base this understanding on the *Consensus statement on management of intersex disorders* (Hughes et al., 2006) and the American Association of Clinical Endocrinologists’ *Medical guidelines for the clinical practice for the diagnosis and treatment of hyperandrogenic disorders* (Goodman et al., 2001).

Drawing on an understanding of the somatechnologies working through the dominant habituses of intersex both complicates and illuminates some of the justifications the IOC/IAAF and their medical commissioners use in identifying, diagnosing, regulating and treating HA athletes. The understanding helps to clarify why, in the view of the IOC/IAAF, a policy on their management is necessary. As they are abnormal they can only become normal and eligible if they follow the somatechnologies set by the socio-political and religious structures in alliance with the binary sex, gender and body ideals of medicine. The next section investigates the procedures the IOC/IAAF employ to identify and regulate HA athletes, what tests and treatments they must undergo to become eligible and what penalties they may endure if they do not comply with the IOC/IAAF rules.
Telling “a Lady that She is not a Lady”\textsuperscript{106}: The Hunt for Female Athletes with Hyperandrogenism

\textit{Each NOC shall ensure that its athletes are eligible for selection in accordance with IOC rules and regulations. As a consequence, each NOC shall, as appropriate, prior to the registration of its national athletes, actively investigate any perceived deviation in sex characteristics and keep complete documentation of the findings, to the extent permitted by the applicable law of legal residence of the concerned athlete. (IOC, 2012a, p. 2)}

\textit{...let’s not equivocate. Identifying hyperandrogenism in female competitors does the same thing as the “nude parades” and gynecological examinations of the 1960s, the Barr body tests of the 1970s and 1980s, and the SRY gene detection of the 1990s: It identifies (and usually excludes from sport) those women who do not meet the IAAF’s protean standards for femaleness. (Schultz, 2012, p. 33)}

For the 2012 Olympic Games in London, the IOC policy on female HA stated that it is the responsibility of the National Olympic Committees (NOC) to ensure that they know the genetic make-up of their athletes, especially their female athletes. Issues concerning HA should, ideally, be resolved before the athlete takes part in the Olympic Games. As an ISF, the IAAF argues that athletes who are aware of their functional HA diagnosis must report this to them and have their androgen levels evaluated. In this section I further explore with the help of the IOC and the IAAF HA policies what the eligibility criteria are for HA athletes and what the consequences may be if an athlete does not meet them. In relation to Schultz, I consider to what extent the ideology behind the HA policies correlates with the history of sex/femininity/gender verification in women’s sports and whether participating in elite sports remains a right open for everyone or is, and has been, a privilege for the exclusive few (Pierson, 2011, p. 323). In order to consider these concerns, I partially draw on interview material from Dr Schamasch and a European sports medicine expert, Hermina Schneider\textsuperscript{107}.

In attempting to identify an HA athlete, the IAAF state that an athlete may have their androgen levels questioned by the IAAF medical manager (who they assume at this day and age is a he) if:

\textsuperscript{106} This expression was articulated by Dr Schamasch when outlining his dilemma when confronting female athletes whose bodies are in question due to the clinical results of the sex/gender tests.

\textsuperscript{107} This is a pseudonym on the request of the participant.
…he has reasonable grounds for believing that a case of HA may exist. Reasonable grounds for belief may be derived from any reliable source, including an athlete approaching the IAAF or her National Federation for clarification on an associated medical condition, the results for a routine pre-participation examination, the results from a routine drug test showing an abnormal profile within the athlete’s Athlete Biological Passport or confidential information that is received by the IAAF Medical Delegate or IAAF Medical Manager. (IAAF, 2011b, p. 2)

This ‘case-by-case’ approach resembles that of the former IAAF Gender Verification policy as it would seem that any HA suspicion would arise first by someone disagreeing with their ‘disturbing’ feminine body and embodiment (I will explore this idea further in Chapter Six). Also, if an athlete was questioned at the 2012 London Games, the IOC HA policy states that the athlete had to submit to a number of tests revealing the athlete’s medical history. This included the athlete’s sex hormone levels, the diagnosis given and what treatment the athlete is suggested to undergo or undergoing108 (2012a). The information and findings have to be submitted to the IOC Medical and Scientific Director (previously Schamasch) who then provides it to the IOC medical committee Chairman (currently Arne Ljungqvist) who determines if the athlete needs to undertake further tests and if so, an Expert Panel is appointed. This medical panel consists of “one gynaecologist, one genetic expert and one endocrinologist” and additional specialists may be appointed to the Expert Panel as well (IOC, 2012a, p. 2). The IAAF policy adds that a “psychological assessment” will be conducted (IAAF, 2011a, p.10). This panel, with the scientific knowledge of the sex endocrinologists, then determines if the athlete’s levels of androgen are in the “male range” (IOC, 2012a, p. 4), in other words, concludes whether there is “too much” of this ‘sex chemical’ in the organism (Oudshoorn, 1994, p. 145), and then deliberate as to whether it falls in the functional or non-functional category. The IOC clearly articulates that an athlete who refuses to submit to these tests or share their medical records will be provisionally suspended from competing in the Olympic Games by the IOC Executive Board (2012a, pp. 3-4). The length of their suspension is not revealed, but the IOC declares that if an athlete is found ineligible by the IOC Expert Panel, the ruling can however be appealed to the Court of Arbitration of Sport (CAS).

Concerning the panel of experts that the IOC would seek advice from, I asked Schamasch while the IOC policy was being drafted, if an intersex organisation representative would also be part of this panel. Schamasch firmly replied:

108 If this information already exists it has to be provided by the athlete or their team physician (IOC, 2012a).
No, I do not think so. The medical panel will only consist of medical people – that is my feeling. It is clear that at game time if we have to deal with such a problem, medical, including psychological, but no intersex. I do not know how an intersex body may ease the decision at the level of what we have to reach. (Schamasch, 2011)

Schamasch did clarify that if it was on a national level or on the ISF level, it would be up to their discretion whom to include in their medical panel, however, from his perspective he could see no value of including “an intersex body” representing the HA athlete, such as an intersex organisation. Oudshoorn’s (1994, p. 12) explanation that “scientists belonging to the same discipline share a general approach to the analysis of similar problems” may thus clarify why Schamasch does “not know how an intersex body” can possibly help in resolving the issue at stake. Because “scientists belonging to the same discipline are socialized in similar educational settings” they are more prone to reach “a certain degree of consensus about problem definitions, the acceptability of solutions, and appropriate techniques and instrumentation” (Oudshoorn, 1994, p. 12). It may thus come as no surprise that an intersex organisation, according to Schamasch and his alliances, does not fit the description of an alliance member who can uphold and even strengthen the already homogenous habitus (Bourdieu, 1977, p. 80).

Another sports medicine expert working with a European NOC, Dr Schneider, interviewed during my stay in Europe, rejects Schamasch’s suggestion. She strongly supports the idea that an intersex body should be part of the expert panel assessing the situation:

It must be, if there is nobody in there, then you can just throw the expert panel away. No, it cannot be that a person is not in there…that is [a] so called intersex person. If they would have done that then that is like having an ethical committee at a hospital without a patient. No, they cannot do that, but it is possible. It is absolutely possible. But I hope really, for them, because otherwise they will be attacked. (Schneider, 2010)

Schneider rejects the idea of having a panel of medical experts ruling the future for the HA athlete without the presence of an “intersex person”. She makes the parallel of having an ethical committee at a hospital without the presence of a patient representative. The absence of either the patient or, in this case an “intersex person” would be constituted as ethically problematic and lead to the IOC/IAAF being “attacked”. Attacked or not attacked for not including an intersex voice as part of the expert panel, the IOC has the power to choose who will have the right to an opinion concerning what is considered a fair and not so fair competitive advantage;
similarly they have the power to choose who will take part in assessing the athlete under investigation. That is, they will choose who they believe best fit the description of an alliance member that does not find their values “unthinkable or scandalous”, and potentially challenge their homogenous habitus (Bourdieu, 1977, p. 78).

As the HA policy seems to investigate an athlete’s HA levels, not gender status, I asked Schamasch to clarify why the inclusion of a psychologist was deemed necessary. On this matter he made it clear that athletes with HA variations may equally experience gender “problems”:

> It is not very easy to tell a lady that she is not a lady, or that she has some problems. So it is complicated. It is maybe to investigate to see how this lady feels in her body already. Because you may have some ladies with this kind of problem, and even in their mind may not feel like a lady. Maybe they may, in the deeper part of their brain have something that says “I’m not totally normal”. So I think this psychological approach is for me very very important. Before, and for sure after the potential result, to see how they might truly feel inside. I think that a psychologist, he or she always has a mean to turn around a potential situation to find a way to see what the person really feels inside. (Schamasch, 2011) (My emphasis)

This quote illuminates how Schamasch imagines himself, and his relationship with the female athletes with whom he comes into contact with in the process of conducting HA tests. He also stresses the importance of a psychologist with gender dysphoria expertise to examine the HA challenged athlete. He outlines a dilemma, a confrontational encounter with which he is confronted through this process of verification. Such encounters do not appear to provoke a questioning of his own thinking about sex and gender. Rather, in his telling of the story the role he plays in the process is beyond his control – he has not created the problem, he has merely identified it – a difficult task, but necessary, and, ultimately even therapeutic for the concerned athlete.

This quote also gives insight into how little attention is paid to the IOC’s role in constructing this dilemma. Oudshoorn’s outline (1994, p. 139) that “the success and failures in scientists’ striving for universal knowledge are…related to the extent to which they are successful in creating networks” is vital in successfully convincing the rest of the world that they as a homogenous group have the answers to this “problem.” By naming particular levels of androgen/testosterone as problematic and by labelling particular bodies as abnormal Schamasch, the IOC and their alliances thus appear to be taking upon themselves the power to determine who is, and is not, a lady. His performance is that of physician, drawing on the skill of psychologists to counsel women whose bodies are in question due to the clinical results of
gender verification. He is also speculative, suggesting that “ladies” who undergo testing are possibly already questioning themselves, their minds and their bodies, knowing that something is wrong, “not feel[ing] like a lady”.

As most elite sports are gender segregated, where only legally recognised men and women are allowed to compete in either gender category, Schamasch also appears to strategically confuse athletes categorised as ‘transsexual’ with those born with intersex variations and to believe that they both may have gender “problems”. If the link between HA variations and gender dysphoria can be proven, then this is another way of disqualifying the athlete. This further suggests, in line with Shani and Barilain (2012), that “the on-going attempts to regulate the gender division in sport are related less to fairness… and more to a strong drive to “normalize” gender identities and conditions” (pp. 27-28).

This is when the discussion and atmosphere of “transphobia” and intersexphobia in sport may be applicable. Heather Sykes argues that “transphobia” haunts trans* athletes, especially male to female athletes, as it is believed that these athletes are afforded competitive advantages over non-trans female athletes (2006a, p. 8). Similarities emerge in how HA athletes are being haunted and equally may be experiencing an atmosphere of intersexphobia (Spurgas, 2009). In all of the oppositional language evaluating whether female athletes with intersex variations are accorded unfair competitive advantages, there is little mention of the potential intersexphobia that these athletes may endure.

Jamie Schultz argues in New Standards, Same Refrain: The IAAF’s Regulations on Hyperandrogenism (2012) that the IAAF (and I would add the IOC) may have repackaged their policy differently by not referring to sex and gender verifications, but their hunt for HA athletes by testing, coercing and regulating them, is purely a rhetorical change. What has not changed is the binary bias towards “those women who do not meet the IAAF’s protean standards for femaleness” (p. 33). Looking at testing over time it is possible to see how binary bias has changed contours over time:

- The tests have gone from on-sight inspections and gynecological inspections during the trial period; to sex chromatin tests between 1968 to 1992;
- To Y chromosome between 1992 to 1999 with the help of sex hormone tests;
- To then gender verify suspicious athletes on a ‘case-by-case’ basis with a focus on sex hormone tests till the Semenya controversy; and finally
- The HA tests, which simply marked a new era (Schultz, 2012, p. 33). This epoch introduces athletes with HA as the new target of their “witch hunt” (Butler, 2009). What this history demonstrates is that practitioners of medicine/science are strong gate-keepers in determining the future of athletes who disturb the binary sex, gender and body ideal. But as
suggested earlier, they function in and through an already “structured structure” (Bourdieu, 1977, p. 72; Feder, 2006b, pp. 191-192) where structures of power are “collectively orchestrated without being the product of the orchestrating action of a conductor” (Bourdieu, 1977, p. 72) and thus allow a hierarchy of natural versus unnatural bodies to be reproduced and maintained. This empowers Schamasch to opine that “it is not very easy to tell a lady that she is not a lady, or that she has some [lady] problems” (2011) and it places him in a position where he, and his alliances, have the power to select who is and who is not “lady” enough to compete as a “lady”. The new policy may not officially argue that certain bodily characteristics are more acceptable than others. However, because, it defines acceptable and non-acceptable levels of androgen production it seems in line with Schultz’s desire to make a statement about what distinguishes a “lady” from someone with a “lady-problem.” The objective of the IOC/IAAF HA policies thus still appears to focus on those who do not meet the requirements of their “protean standards of femaleness” (2012, p. 33). How these ‘case-by-case’ suspicions are filed in formal complaints may however, still, unofficially be based on to what degree one’s body and embodiment disturb those of the ideal.

Whichever way the IOC/IAAF wish to dress up unfair and prohibited competitive advantages, it seems all the same underneath as they justify it by arguing that sport is all about rules and that it is not compulsory to partake in it (Schamasch, 2011; IOC, 2011). The justifications they produce link certain intersex variations with gender and regulate them in the hope of “normalizing” gender roles and HA variations (Shani & Barilan, 2012, pp. 27-28). Rationales as such are however expressed too easily with poor consideration of how sexist or discriminatory the regulations may be. Whether one accepts or rejects the new HA policies by the IOC/IAAF, I will examine below what the repercussions are if a female athlete proves to produce androgen levels in the “male range” (IOC, 2012a, p. 4) and from an intersex lens tease out the extent to which participating in elite sport is a democratic right versus an exclusive privilege (Pierson, 2011, p. 323).

109 I will consider the influence of biopower and biopedagogy in reading and marking the HA body more thoroughly in Chapter Six.
...sex endocrinology became a science that actively intervenes in the lives of women and men, introducing diagnostic and intervention techniques that have profoundly shaped medical practice...sex endocrinology provided the medical profession with a new class of drugs that were developed to cure newly constructed category of diseases: hormone deficiency diseases. Sex endocrinologists defined low levels of hormones as deficiencies. In this manner, they transformed the hormonal model of sex into a model of disorders and pathologies (Oudshoorn, 1994, pp. 145, 149)

Although Oudshoorn’s quote above mainly focuses on the ways in which sex endocrinologists have defined low levels of ‘sex hormones’ as “hormone deficiency diseases”, we have thus far witenessed how they have equally defined and actively linked high levels of ‘sex hormones’ as disorders and pathologies as well. Through these sex chemical definitions the pathologisation of “too much or too little of these substances in the organism” (Oudshoorn, 1994, p 145) sex endocrinologists together with the IOC/IAAF have also provided solutions to these “disorders and pathologies”. If a female HA athlete is found ineligible to compete, the IOC state that the athlete will be provided an opportunity to become eligible by adhering to a list of conditions:

Should an athlete be considered ineligible to compete, she would be notified of the reasons why, and informed of the conditions she would be required to meet should she wish to become eligible again; If an athlete fails or refuses to comply with any aspect of the eligibility determination process, while that is her right as an individual, she will not be eligible to participate as a competitor in the chosen sport. (2011)

The IAAF clarify the conditions by adding that:

These conditions may necessitate the athlete undergoing treatment by her personal physician to normalise her androgen levels and, in such a case, it would be the athlete’s responsibility, in close consultation with her medical team, to decide on the advisability of proceeding with such treatment. If an athlete does decide to undergo treatment as a means to continue participating in women’s competition, before returning to such competition, her case would be referred back to the Expert Medical Panel to satisfy itself that the conditions previously imposed had been met. The IAAF would then be responsible for monitoring the athlete’s compliance with
the conditions on an ongoing basis by conducting regular testing of the athlete, including on an unannounced basis. (2011b, pp. 2-4) (Emphasis mine)

The IOC/IAAF recommendations clearly state that too high levels of androgen will be regulated and both organisations will do the initial evaluation and recommend what the athlete must do to become eligible. The IAAF clarifies that they “will not be involved in” the diagnosing or the treatment process, rather this “will always be carried out by medical experts at specialist reference centres” independent of the IAAF (2011a, p. 4). The athlete and team physician are then responsible for the implementation of this normalizing treatment. Before returning to the competition, the IAAF will evaluate whether the athlete has met the requirements imposed on her. These two extracts raise further questions which need clarification. For example, who will pay for the diagnosis and the potential ongoing treatments? More importantly, what may happen if the athlete does not comply with the conditions set before her? The IAAF writes that:

Although there is a consensus within the scientific community that early diagnosis and treatment of females with HA is critical to an effective therapeutic strategy, athletes cannot be forced to undergo medical assessment and/or treatment. However, if an athlete declines, fails or refuses to undergo assessment or is otherwise not compliant with the Regulations, she shall not be eligible to compete in women’s competition… The IAAF will pay for athletes to attend a full examination and diagnosis at the nearest specialist reference centre to which they are located. If an athlete requires on-going treatment following such diagnosis, however, this would be the athlete’s financial responsibility. (2011b, p. 4)

The IAAF policy informs that a potential refusal to comply with the eligibility rules will result in ineligibility. Neither the IOC nor the IAAF clarify especially what type of medical “treatments” the athlete may need to undertake. Though the IAAF firmly stress that it is in the interest of the athlete to be diagnosed and undergo treatment, they do not clarify what health consequences these (most likely oestrogen supplements, androgen blockers and surgeries such as removal of their gonads) may have on the athlete’s health and career. As minimal information is provided, this suggests that these procedures cannot be investigated in the open nor can outside reviewers hold this host of policy developers and implementers accountable for any harm that may arise from suggested “on-going treatment”.

The IAAF explain that they will pay for the initial cost of diagnosing the athlete, but any on-going treatment following such diagnosis is something the athlete themselves or the team have to pay for. To clarify, the athlete would have to visit a Research Centre in Australia,
Sweden, France, Japan, the USA or Brazil (IAAF, 2011a, p. 25, 2011b, p. 3), as there are no centres in India or in Africa, which seems at the very least inefficient considering that the last controversial intersex debates in elite sports (known to the general public) were linked to the Salimata sisters from Equatorial Guinea, Semenya from South Africa, and Soundarajan from India. Hence, when it comes to athletes in Africa and India, who may come from poorer social-economic backgrounds, the cost of travel to undergo further tests in any of these countries and then to undertake any on-going treatments may not be something the individual athlete can afford. To assume that the team will pay for these extra expenditures is naïve as the team would presumably already operate on a tight budget. It would possibly also contradict their agenda to win if they assisted one of their female athletes to potentially become ‘worse’. Do the IAAF believe that this is in the interests of the team? Probably not. This suggests that this is another method in an attempt to systematically keep athletes who disturb female sex, gender, body and athletic performance ideals away from elite sports. Adding a financial burden to the athlete and her team, again, reinforces Schultz’s argument that the IAAF/IOC HA regulations are merely a “new standard” but with the “same refrain”, as the target and the objective for their policies principally remain the same (2012, p. 33).

The IAAF stipulate that “early diagnosis and treatment of females with HA is critical to an effective therapeutic strategy” (2011b, p. 4) and the IOC contend that “in order to protect the health of the athlete, sports authorities should have the responsibility to make sure that any case of female hyperandrogenism that arises under their jurisdiction receives adequate medical follow-up” (IOC, 2011). One may thus assume that the diagnosis and treatment of an athlete with HA are unquestionably more beneficial than harmful to the athlete. There is no doubt that some athletes may benefit from the diagnosis and the applicable treatments provided. However, the statement implies that it is medically necessary for the health of the athlete to undergo these treatments, which again, in line with Oudshoorn, promotes the idea that “a scientific fact exists only by virtue of its social embeddedness” (1994, p. 10). That is, “knowledge claims acquire the status of universal facts by virtue of the extent to which they become interwoven with the institutional settings and practices of scientists and their audiences” (Oudshoorn, 1994, p. 10). For that reason, “knowledge claims become established as scientific facts only if they become linked to relevant groups” (Oudshoorn, 1994, p. 10) such as the IAAF and the IOC in this case who must attain the ‘level-playing field’ in female sports. This means that the athlete’s own objective of participating in sport – to win – may be compromised as the athlete is treated into becoming less of a threat to the ‘level-playing field’ on the female arena (Coggon, Hammond & Holm, 2008, p. 14).
As the IOC is not as clear as the IAAF where the level of androgen production enters the “male range” or is no longer within the female range, different practitioners who are part of the expert panel may provide inconsistent suggestions about the point at which the level of androgen production is too high. According to WomenSport International, women usually produce anywhere from 0.208 – 2.982nmol/L (6 – 86ng/dl) while men produce anywhere between 9.361 and 38.139nmol/L (270 – 1110ng/dl) (WSI, 2010: 4) Therefore, some may find that 3.8nmol/L is no longer in the female range while others may argue that 5.5nmol/L is still in the female range as it is not in the “male range” (below 10nmol/L) (Karkazis et al., 2012, p. 12). This may create inconsistencies concerning who gets treated and who does not, which again cannot be investigated by outside reviewers, as this information is required to be strictly confidential. This potential deviation of who may be subjected to treatment and the difficulty in openly questioning the ways in which certain IOC practitioners treat and manage female HA athletes is worrying due to the lack of accountability. Further, if 10nmol/L is the cut-off range for athletes to eligibly compete in women’s sports, this may be found contradictory as it regulates testosterone production diversities in the female range, but allows great diversities in the male range. There is no ceiling for how little or much testosterone one can produce to eligibly compete in the male category.

Medical experts appointed by the medical commissioners of the IOC and its ISFs reproduce and reinforce hierarchies of acceptable and non-acceptable testosterone productions where “[t]he new ideal of ranked order is powered by the imperative of the norm, and then is supplemented by the notion of progress, human perfectibility and the elimination of deviance, to create a dominating hegemonic vision of what the human body should be” (Davis, 1995, p. 34). That said, one may wonder if the IOC/IAAF therapeutic message in detecting a HA variation holds much scientific truth when suggesting that “if the condition remains undiagnosed or neglected, [it] can pose a risk to [their] health” (IAAF, 2011a, p. 3).

It is important to clarify that an excessive production of testosterone may result in excessive hair growth, acne, menstrual irregularities or “dysfunction”, infertility or some metabolic and cardiovascular complications (Goodman et al., 2001, p.128). Further, it is also common knowledge within medicine/science that HA may result in ovarian, adrenal and gonadal tumours, albeit not all malignant (AISSG, 2012; Goodman et al, 2001, p. 128; Lee et al., 2006: e462). In the case of malignant testes the common treatment is gonadectomy, or orchidectomy, to be specific (AISSG, 2012; Karkazis et al., 2012, p. 12; Lee et al., 2006, p. e492). In light of this, HA risks are not established in an absolute fashion and it is not always apparent when it is appropriate to perform surgeries or whether these surgeries, androgen blocker treatments and oestrogen replacement therapies, as a rule of thumb, are always
medically necessary (AISSG, 2012; Karkazis, 2012, p. 12; Viloria & Martínez-Patiño, 2012, p. 18). What seems certain is that these intricate and on-going tests are not only investigating the athlete’s body, but also reveal some of the most private information concerning their DNA and genetic make-up which may disclose facts such as “infertility, mutations, and other conditions that have little bearing on eligibility” (Karkazis, 2012, p. 12).

The potential negative side effects of the removal of one’s gonads may also result in one becoming irreversibly sterile for the rest of one’s life and continuously experiencing uncomfortable ‘hot flashes’, depression and mood swings (Karkazis, 2012, p. 12; AISSG, 2012). Further, the androgen blockers designed to treat HA may also be physically challenging for an elite athlete as it may cause inflammation of the stomach (gastritis); damage of the liver (hepatotoxic); headaches; nausea; diuretic effects; excessive thirst (polydypsia); passing of excessive quantities of urine (polyuria) as well as damage to one’s carbohydrate metabolism – glucose intolerance and insulin resistance (Archer & Chang, 2004, pp. 742-48; Karkazis et al., 2012, p. 12). It is important to acknowledge that there are athletes who may benefit from these tests and treatments. That said, it is equally important to highlight that the IOC/IAAF may need to openly consider the overall positive and negative side effects these treatments have on the health and wellbeing of the athlete and critically analyse to what extent these medical procedures are medically necessary for continuing an athletic career (Karkazis et al., 2012, p.12). In short, the medical treatment athletes with functional HA are recommended to undergo in order to become eligible is hotly contested, and is in need of further examination.¹¹⁰

As mentioned earlier, the IOC/IAAF state that it is the female athlete’s right to not comply with the rules set before her, as participating in elite sports is optional. However, the ways in which the IOC/IAAF have developed and rhetorically framed their policy may lead one to wonder what other options the athlete has than to submit to the medical tests and treatments to eligibly compete? Both organisations officially write that the athlete by no means is obliged to undergo tests or treatment, but in not doing so the consequence is ineligibility (IAAF, 2011b, p. 4; IOC, 2011, 2012a, p. 4). Schamasch echoed this position by unofficially stressing that it is not compulsory to compete in either the male or the female camp; however “if the lady who has these problems…wants to compete, he/she has to accept the rules” (2011). Schamasch suggests that HA variations are the “problems” but I argue that is it less the problem of the HA athlete in question than the problem of those around her. Schamasch is also very clear that if the athlete does not follow these rules, which do not exist in male competitions, the athlete simply cannot compete. The fact that men with the intersex variation Klinefelter are provided testosterone

¹¹⁰ Read further in Karkazis et al., 2012; Viloria & Martínez-Patiño, 2012; O’Connor & Dasgupta, 2012; Schultz, 2012; Shani & Barilan, 2012; Wahlert & Fielster, 2012.
boosters if participating in elite sports under the World Anti-Doping Agency’s (WADA) “therapeutic-use exemptions” waiver, (Dreger, 2009b, 2009c)111, is a noteworthy contradiction. This seems to further suggest that it is every man’s right to compete in elite sports with healthy levels of testosterone while a female athlete with HA generating too high levels of androgen is subject to penalties or exclusion. This discrepancy is significant and troubling.

**Conclusion**

In this chapter I set out to examine the logic and ideology behind the IOC/IAAF deciding to revise their gender verification policy, post the Semenya controversy, to instead focus on female athletes with HA. In this chapter we see that the IOC/IAAF adopt two new terms when referring to the ‘unwanted’ athletes by temporarily using the term *Disorders of Sex Development* to then only focus on athletes with *Hyperandrogenism*. Again, this shift in *what* to call the ‘undesirable’ athletes and *what* variations, specifically, to focus on, trouble the idea that there is a consistent habitus of intersex in elite sports due to these shifts in nomenclature and testing someatechnology.

In this chapter I have also troubled the idea that functional testosterone levels, in isolation, determine whether an athlete succeeds in athleticism or not. This is the representation of the IOC/IAAF while others (such as Hercher, 2010) have stipulated that there is a difference in producing and taking excess of testosterone. The on-going efforts to identify, diagnose, regulate and treat female athletes and the gender divide has less to do with upholding a ‘level-playing field’ and promoting fairness, and more with a strong drive to mark and regulate particular bodies, hormone production levels, identities and athletic performances in female sports as disturbing and disorderly. Schultz (2012) has further troubled the IOC/IAAF idea that HA verifications is all about fairness when in fact the pursuit of identifying, diagnosing, regulating and treating HA has the same ideology as the sex/femininity/gender verifications which identified and regulated women on the basis that they did not “meet the IAAF protean standards of femaleness.” Functional HA may thus be another or a new element in maintaining the stability of the sex and gender divide and logic in elite sports.

Others, such as Karkazis et al. (2012) and Fausto-Sterling (1985) have also argued that linking high levels of functional testosterone with high achievements in sport is a concern as there is little scientific evidence supporting the case that the two are connected. Karkazis et al. go on to stress that there is little scientific value in comparing testosterone levels between athletes and less so between women and men. How other stimuli related to one’s height, strength, fat content, oxygen transportation capacity of the blood, genetics, costumes, shoes,

\[111\] I will further examine this issue in Chapter Six.
diet, training facilities, coach and financial situation collectively contribute to an athlete’s performance may further complicate this debate. And, this discourse should not be overlooked as it could alter the agenda regarding the hunt to identify and regulate HA athletes.

Accounting for the alleged continuation of “normalizing” the gender divide and HA variations by punishing those who do not meet the IOC/IAAF standards of femininity, Bourdieu’s (1977) concept of *habitus* and Sullivan’s and Murray’s (2009) notion of *somatechnologies* have also provided helpful insights into why the IOC/IAAF continue to identify and test women perceived to have HA variations. I have demonstrated how certain truths and knowledges about intersex variations and HA work through (Feder, 2006b, pp. 191-192) society at large and the alliances the IOC/IAAF medical commissioners. The truth discourse will be further considered in the following chapter, where I investigate the ways in which biopower and biopedagogy shape knowledges and truths about normal versus abnormal bodies and athletic performances in female sports, which perhaps motivate the continued targeting of certain athletes in female sports to identify, diagnose, regulate and treat them.
Chapter Six: The Use of Biopower and Biopedagogy in Regulating and Disciplining Intersex Bodies in Female Sports

The Medical Commission of the International Olympic Committee attempts to protect women against unfair competition. The [femininity] control used attempts to establish the gender with the minimum of interference with the dignity of the individual. The results of this test are not made public. (IOC Medical Commission, 1984b, p. 24)

The mechanisms introduced by biopolitics include forecasts, statistical estimates, and overall measures. And their purpose is not to modify any given phenomenon as such, or to modify a given individual insofar as he is an individual, but, essentially, to intervene at the level at which these general phenomena are determined, to intervene at the level of their generality... And most important of all, regulatory mechanisms must be established to establish an equilibrium, maintain an average, establish a sort of homeostasis, and compensate for variations within this general population and its aleatory field. (Foucault, 2003, p. 246)

This chapter substantially focuses on how biopower and biopedagogy operate through various technologies to “discipline” and “regularize” (Foucault, 2003, p. 253) female athletes and to identify athletes with intersex/HA variations. This chapter shines the spotlight on a little known survey produced by the IOC at the Winter Games in Lillehammer (1994). In the survey female athletes were asked to provide their opinions about the need for gender verification in female sports. This survey was administered in the hope of receiving support from female athletes for continuing gender verification procedures of women on the basis of “protecting” them against “unfair competition”. This chapter uniquely shows how biopower (Foucault, 2003; Harwood, 2009; Rabinow & Rose, 2006) operated in influencing the survey structure and results.

The chapter also examines how the IAAF in their current HA policy (2011a) make use of two specific technologies developed in the 1960s about the body: one on female hirsutism (Ferriman & Gallwey, 1961) and one on breast and pubic hair development (Marshall & Tanner, 1969). These are used as contemporary technologies in “regulating” and “disciplining” bodies into normalcy (Foucault, 2003, p. 253). The notion of biopedagogy then helps in forming and disseminating meaning concerning the scales around hirsutism, and breast and pubic hair
development as it teaches the “art and practice” of life and the body in this “biopower mode” (Harwood, 2009, p. 21). Drawing on the ways in which the pedagogy of “teaching” which lives and bodies have the “right to life” and “death” (Foucault, 2003, p. 240) in “the name of conserving the very life of [the dominant] population” (Harwood, 2009, p. 16), this chapter aims to complicate these scoring sheets/scales. Drawing on Valerie Harwood’s useful argument in *Theorizing biopedagogies* (2009) that Foucault’s suggestion that “the right to life” is “always tipped in favour of death” (2003, p. 240) does not imply that the objective of biopower (the architecture of power) aims in “taking life” but instead in “preserving life”. Hence, through the lens of biopdedagogy, I seek to investigate which bodies are lawfully suggested to have the “right to life” while others are regulated and policed in “preserving life” through the scoring sheets/scales. The third and final section examines the ways the IOC/ISFs have, from the inception of sex testing until the present HA tests, negotiated their confidentiality measurements “out of deference to the human rights of the individual” (IOC Medical Commission, 1984b, p. 32). Here I investigate the IOC/IAAF confidentiality measures and trouble these commitments, arguing that technologies to police, “discipline”, “regularize” and identify athletes with “abnormal” (Foucault, 2003, pp. 253, 255) bodies may complicate the intention of the confidentiality procedures. I now turn to considering the ways in which biopower may have operated through the Lillehammer survey of 1994 in legitimising a continued need to “protect” women against women who did not present “average” female embodiment.

The Use of Biopolitics and Biopower in “Protecting” Women from Unfair Competitive Advantages

*Biopower includes m*odes of subjectification, through which individuals are brought to work on themselves, under certain forms of authority in relation to truth discourses, by means of practices of the self, in the name of their own life and health, that their family or some other collectivity, or indeed in the name of the life or health of the population as a whole. (Rabinow & Rose, 2006, p. 197)

*Biopower includes o*ne or more truth discourses about the ‘vital’ character of living human beings, and an array of authorities considered competent to tell the truth. (Rabinow & Rose, 2006, p. 197)

The IOC have, since the introduction of the sex controls until today, argued that one of their key objectives in introducing the tests was to safeguard and “protect” female athletes against
women with unfair competitive advantages.\textsuperscript{112} In this section I examine the extent to which the IAAF/IQC were and are not alone in advocating and promoting the “protection” ideology, but are influenced by female athletes who were/are also complicit in the maintenance of the testing technologies. Here I consider the ways in which the IOC/IAAF, their scientific alliances, female athletes and coaches are all part of a system of biopower, where “the governance and regulation of individuals and populations [operate] through practices associated with the body” (Wright, 2009, p. 1). In this system I suggest that some athletes are privileged and therefore seen as “competent to tell the truth” regarding which female athletes should be policed and identified “in conserving the very life of [the dominant] population” (Harwood, 2009, p. 16): those stipulating that they are in need of “protection” (IOC Medical Commission, 1984b, p. 24). For the purpose of this study Harwood’s lens concerning “the right to life” becomes helpful as it then suggests that the system of biopower motivates a system where women are “disciplined”, “regularized”, policed and identified through technologies about the body in preserving the life of the dominant population.

As discussed in Chapter Four, the IOC and its ISFs received copious criticism for these mandatory tests from 1968 on, but mainly for the reason that the sex chromosome tests\textsuperscript{113} disqualified female athletes with a 46, XY make-up who otherwise would have passed the ‘on-sight testing’ and identified/been identified as women.\textsuperscript{114} That said, the IOC/IAAF still believed that those “considered competent to tell the truth” (Rabinow & Rose, 2006, p. 197) (besides themselves in collaboration with their scientific alliances) were female athletes who believed they were in need of “protection”. To also exemplify the power female athletes have in upholding and reproducing the “protection” rhetoric, I draw on Elizabeth Ferris’ study, \textit{Attitudes to women in sport} (1980b). Her study draws attention to how female athletes themselves push the “protection” agenda against those whom they fear disturb the female ‘level-playing field’ through their disturbing bodies and athletic performances. Hence this section shines a light on how body and athletic performance idea(l)s are “not only [held and pushed] by the general public but by the top women athletes themselves” (1980b, p. 31). To this end, I will recount some stories of female athletes who argue in line with the idea that they were in need of rules “protecting” them from females who they considered suspect.

\textsuperscript{112} Read further in Thiebault, 1968, p. 1; Hay, 1972, p. 998; Beckett, 1976, p. 170; Tutko in Larned, 1976, p. 11; IOC, 1994b, p. 54; IAAF, 2006, 2011a; IOC, 2012a. However, the official language of “protection” did not emerge until in the mid-1970s.\textsuperscript{113} Sex chromatin tests were performed between1968-1992 and the PCR tests performed between1992-1999.\textsuperscript{114} In addition to this, these women were neither deemed to have had any “unfair” competitive advantages. (Editorial, 1966; Moore, 1968; Strömberg et al., 1972; de la Chapelle in François & Matton-Van Leuven, 1973; François & Matton-Van Leuven, 1973; de la Chapelle, 1986a; 1986b) This however, did not imply that women were not in the need of “protect[ion]” against those women who may have enjoyed innate, but nevertheless “unfair” competitive advantages. Some renowned names within the field who believed that there were other genetic make-ups that could imply “unfair” competitive advantages were François and Matton-Van Leuven and de Chapelle. They particularly believed that genetic make-ups that are marked by higher of testosterone/androgen production levels, such as congenital adrenal hyperplasia (CAH) (François & Matton-Van Leuven, 1973; de Chapelle in Turnbull, 1988, pp. 62-63) was of a concern (revised to only include HA today – see Table 5 on p. 126).
Willye White, a five-time American Olympian and twice Olympic silver medallist\textsuperscript{115} is one such athlete. White argued in 1976 that she would have been a world record holder had she not competed against a “man” who stole her victory at the 1964 Olympics in Tokyo:

My record in 1964 lasted just long enough for this woman [Schelkanova] to warm up and break it again, and she was a man. Don’t ask, you just know these things. Had it not been a man, I would have been a world record holder. (in Larned, 1976, p. 41)

White not only suspected that Tatyana Shelkanova was a “man”, but was certain of it, presumably because she had scanned Shelkanova’s body and physique and disagreed with its feminine appearance. It is likely that an athlete like White would have welcomed sex/femininity tests of such “men”, given the apparently bitter nature of these remarks.

The specific context of the situation is that White set the world record in long jump in 1964 and this record was then promptly broken by Schelkanova. Even more tellingly, White was not only beaten by Schelkanova, who took the bronze medal, but by an additional ten contestants including silver medallist Irena Kirszenstein, and gold medallist Mary Rand (OCXVIII, 1964b, pp. 99-100). So why was Schelkanova targeted even though she did not win the gold medal? One can assume it is because White thought she looked like a “man”. As all female contestants in “athletics” at the time had to present medical certificates certifying their femininity\textsuperscript{116}, implicit in White’s comment is the suggestion that Schelkanova’s certificate was not genuine. White’s comments are an example of how a disaffected athlete took part in the production and circulation of biopower by stressing that she was more entitled to be that world record holder and “let live” (Foucault, 2003, p. 241) as she was more feminine than the woman who had taken it from her. White equally represents a position that she had “the right to take [the] life” (Foucault, 2003, p. 241) of Schelkanova in “preserving the life” of herself as Schelkanova did not represent the type of true femininity that White no doubt portrayed herself as possessing.

The IOC benefited from comments such as White’s in upholding their biopolitical agenda to “establish an equilibrium, maintain an average, [and] establish a sort of homeostasis…within the general population” of women athletes (Foucault, 2003, p. 246). As power “is produced from one moment to the next” (Foucault & Hurley, 1978, p. 93), it circulates within and outside the IOC/IAAF periphery, and thus among female athletes. This production of biopower continued among and through women when White compared her own femininity with that of

\textsuperscript{115} In long jump 1956 and in 4 x100 meters relay in 1964 (Litsky, 2007).

\textsuperscript{116} This was “under the provision of Article 17, paragraph 3 of the Regulations of IAAF” (OCXVIII, 1964, p. 170).
Schelkanova. White not only used “regulatory” powers in “disciplining” Schelkanova, but she also used these same “regulatory” powers in “disciplining” herself as distinct from Schelkanova.

Paul Rabinow and Nikolas Rose illuminate this mode of “regulating” oneself in *Biopower today* (2006) where “modes of subjectification” are “brought to work on themselves, under certain forms of authority in relation to truth discourses, by means of practices of the self, in the name of their own life and health” (p. 197). Subjection is the key word in analysing White’s notion of what appears to be feminine about her body and herself, and what appears to not be feminine in Schelkanova’s body and embodiment. White’s comments are indicative of how some female athletes took part in the *continuity* of “the (imaginary) body politic” (Stryker & Sullivan, 2009, p. 52) in establishing normal versus “abnormal” (Foucault, 2003, p. 255) female bodies. She was distancing herself from those athletes whose perceived “abnormalities” provided a justification for her to call for them to be excluded from female competitions.

Someone who did not concur with White’s comments and who rejected the idea of sex/femininity tests, was the American Olympic Gold medallist in pentathlon (Rome, 1975), Jane Frederick. In 1976 she candidly differed with the official explanations of the IOC/IAAF proposing to “protect” women from imposters and revealed how her own coach had warned her from deviating from the norm of femininity as that could have directed suspicions against her:

> The official explanation of this test is to protect us from imposters and from women who are really men, whatever that means. No, I don’t believe it. I think they’re really saying, ‘You’re so good, we just can’t believe you’re a woman. So prove it… It comes to everybody’s mind, that when a woman takes advantage of her size and her body build in sports and gets national recognition, she must be more of a man than a woman... Even my own coach told me jokingly that I better be careful about getting too strong or else people will think I am taking steroids (male hormone). It can’t be natural talent or hard work – you’re taking drugs or your chromosomes are funny or whatever. (Frederick in Larned, 1976, pp. 9, 41)

As an open opponent of the tests, Frederick was sceptical about the “protection” rhetoric, believing rather that the underlying objective for testing was the idea that women cannot possibly be as good as they sometimes appear to be without there being something suspicious about it. Hence, if women do well they have to either be men or alternatively they must be pumping testosterone into themselves. Frederick went on to say that even her own coach took part in the circulation and reproduction of the biopower that policed particular feminine bodies as abnormal by discouraging his female athletes from becoming “too strong” or even too good.
That the tests were held out to be a “service” was refuted by Frederick who rather suggested that this “service…just hurts women” (Frederick in Larned, 1976, p. 41).

It is arguable that these technologies were pernicious for all women athletes because they forced them into silently accepting and mimicking the biopowers and somatechnologies of the dominant habitus in identifying and policing female bodies. The testing procedure also hurt women because it provided conditions which encouraged them to turn on each other and especially on women whom they may have felt were less feminine than themselves. This suggests that they also became the subject as they “regularized” and “disciplined” their own bodies and lives in Harwood’s terms (2009, pp. 22-26).

**Wanting Protection but Lacking Information about the Gender Verifications**

Due to the competing ideologies concerning the “protection” argument among female athletes and the increased scientific disapproval of the sex chromatin and PCR tests throughout the 1970s till the early 1990s¹¹⁷, the IOC felt the need to organise a survey to try to better understand female athletes’ opinions about the tests. Did they still perceive that they were in need of “protection” and did they understand the specifics about the testing technology? This survey, organised by the IOC, interviewed 115 female athletes from 42 countries in nine different sports at the Olympic Winter Games in Lillehammer 1994. In Table 6 below, extracted from the minutes of the 103rd IOC session in Paris in 1994, the IOC medical commission presented in a heading format what they perceived were some of the reflections the women had concerning the tests.

<table>
<thead>
<tr>
<th>Statements the female athletes had to reflect on</th>
<th>Agrees</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female participants find it reassuring to have gender certificates at the Games</td>
<td>87%</td>
<td>13%</td>
</tr>
<tr>
<td>Considers the test necessary</td>
<td>87%</td>
<td>13%</td>
</tr>
<tr>
<td>Had a suspicion that they had competed against male athletes</td>
<td>13%</td>
<td>83%</td>
</tr>
<tr>
<td>Considered that the gynaecological test for gender verification was humiliating</td>
<td>75%</td>
<td>25%</td>
</tr>
<tr>
<td>Wished to only be tested by the IOC and not by their national governing bodies</td>
<td>71%</td>
<td>25%</td>
</tr>
<tr>
<td>Knew nothing about the gender verification test</td>
<td>10%</td>
<td>90%</td>
</tr>
</tbody>
</table>

This survey shines a light on the power female athletes had in upholding and reproducing the “protection” rhetoric as suggested by Ferris (1980b). In addition to the findings on the previous page, the IOC Medical Commission, also found that 71% of the female athletes believed that the IOC should accredit gender testing centres to be set up where they could conduct tests themselves at any time (IOC, 1994b, p. 54). The female athletes (no percentage provided) also “had a strong feeling about having only one gender certificate, the IOC certificate, which should be recognised by all IFSs” (IOC, 1994b, p. 54).

As the IOC classifies any material that is less than 30 years old (except for the minutes of IOC Sessions), I was unable to research the specifics of the questions: how they were posed, how the IOC may have rephrased the women’s answers and which questions and answers the IOC did not choose to publish. Regardless of this, the IOC Medical Commission wanted to show that the vast majority of female athletes supported these tests and that a respectable portion (13%) of them believed they had competed against someone other than a woman. This was certainly in favour of the IOC “protection” ideology. Whether this other was believed to be a man or a person with an intersex variation is hard to interpret, as most of the female athletes acknowledged that they were poorly informed about the specifics of the tests. That said, most of them recognised that they were more familiar with “the problem of doping in sport” (IOC, 1994b, p. 54). This highlights that they probably had little or no knowledge about intersex variations, that is, how common they were and how blurry the sex divide might be. This further suggests a wilful ignorance on the part of the women regarding the tests’ objective, logic and how the survey may have affected women in various ways.

The survey results ultimately meant that the IOC needed to push the agenda that female athletes had the “right of life” and “protection” and this could only be accomplished through “disciplinary effects and regulatory effects” (Foucault, 2003, p. 252). That said, as proposed by Harwood, Foucault’s suggestion that “the right to life” is “always tipped in favour of death” (2003, p. 240) does not imply that biopower aims at “taking life”, but rather, that it aims at “preserving life”. The fact that 87% of the women found it “reassuring to have gender certificates at the Games” and found them “necessary” may have legitimised the IOC ideology of “protecting” and therefore “preserving [the] life” and body of women athletes who followed the physical and visual codes of femininity and did not disturb its ‘level-playing field’. This meant that the outcome of this “protection” logic was that those who did not follow these body and embodiment rules and norms had to have their athletic career “killed”. This was the justification of the IOC in “protecting”, “preserving” and “conserving” the “life of the [dominant] population” (Harwood, 2009, p. 16).
Despite the conclusive support for gender verification that was confirmed via the Lillehammer survey, stronger forces within both the IOC and science arguably pushed the organisation to discontinue the tests on a mandatory basis in 1999. That said, both the IOC/IAAF still continued to mandate the need to test the gender of female athletes on a ‘case-by-case’ basis till the Semenya controversy when things shifted again (IOC, 1999, p. 14; Ljungqvist, 1992). As the process of questioning a female athlete could no longer be raised through mandatory testing, this procedure now had to rely on “another athlete”, “team” or an “antidoping control specimen” controller (IAAF, 2006, p. 3) using their knowledges and truths about the feminine body and fair athletic performance in “challenging” or raising “suspicions” against a particular athlete (IAAF, 2006). Other ISFs, like the international governing body of football (FIFA) also applied this ‘case-by-case’ testing system post 1999. This leads me to the next example of how “modes of subjectification” (Rabinow & Rose, 2006, p. 197) worked in the realm of gender verifications among non-questioned female athletes before the IOC/IAAF launched their new HA policies.

A less well known intersex controversy at the international level (in comparison to the Semenya debate), centring around two members of the women’s national soccer team of Equatorial Guinea (EG). This emerged after their disqualification from the Women’s World Cup (WWC) in Germany, 2011. In November 2010 at the qualifying games in South Africa, three of the team’s soccer players, Genoveva Anonma (team Captain) and the siblings Salimata and Bilguisa Simpore, were accused of being “men” masquerading as women or of being “intersex” (CAF, 2010; Smith, 2010). The rival countries Cameroon, Ghana and Nigeria brought forth the accusations but Nigeria alone filed the formal complaint to the African Football Confederation (CAF) in November of 2010 (CAF, 2010).

The ways in which biopower travels from one female athlete to another can be further analysed through this controversy. Here, apparent “modes of subjectification, through which individuals are brought to work on themselves under certain forms of authority” also privilege certain women who are “considered competent to speak that truth” (Rabinow & Rose, 2006, p. 197) to turn on “suspicious” looking women and push for them to be tested and ideally suspended.

In an online article entitled Nigeria/Equatorial Guinea: The rage over boy-girl, posted on the website of allAfrica, the defender of the Nigerian team, Osinachi Ohale suggested that one of the Simpore sisters was a man: “I had to be on her all the time. But there was nothing female about him. He was strong and even smells like a guy” (Ubani, 2010). The words and the

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118 allAfrica is “a voice of, by and about Africa - aggregating, producing and distributing 2000 news and information items daily from over 130 African news organizations and our own reporters to an African and global public” (allAfrica, 2013 – http://allafrica.com/). They operate from Cape Town, Dakar, Lagos, Monrovia, Nairobi and Washington DC.
concerns of Ohale and the Nigerian team were “considered” true enough as their formal complaint relating to the three EG players lead to a formal gender investigation (CAF, 2010). As there was no formal policy that clarified which physical attributes other female players should look for in raising a “suspicion” against another female (which will be discussed in the next section), CAF found the concerns of the Nigerian women legitimate enough to go ahead with a formal gender investigation. The “modes of subjectification” becomes central in the comment by Ohale as it “brings attention to the role of the subject in the vital practices of life” (Harwood, 2009, p. 24). Here “subjects work on themselves qua living beings” (Rabinow & Rose, 2006, p. 215) in concluding that someone else is not as feminine as they are themselves. Also, for Ohale to argue that the Salimata sisters and Anonma were not feminine enough and should be gender verified, suggests that Ohale compared them with herself and “disciplined” and “regulated” them for not reaching her level of feminine embodiment, feminine scent and feminine strength. This highlights how Ohale and her team mates also worked “on themselves” and their femininity. They were also “considered competent to tell the truth” about who is and who is not feminine, as they distanced their femininity from that of the Salimata sisters and Anonma. These mechanisms of who is privileged to speak the truth – including working on one’s feminine presentation – reproduce the “mechanism that allows biopower to work” (Foucault, 2003, p. 258) through women and female athletes. That said, are Ohale and her teammates also aware that their accusations and open questioning of the EG players’ femininity also invite criticism towards themselves, as they, individually and collectively, outperformed those whom they argued are ‘too good to be women’?

As noted by Ferris (1980b), “top women athletes themselves” push for a “protection” rhetoric, which implies that this agenda still functions as “a primary contributing factor in preventing women from achieving their maximum sporting performances” (p. 31). Ferris’ reasoning helps to clarify how the comments by White, the 115 women surveyed in Lillehammer and Ohale contribute to the continuation of the “protection” logic and “who is considered competent to speak the truth” (Rabinow & Rose, 2006, p. 197) about whose participation should be “protected” against what and whom. This is central to the reproduction of biopower among and between female athletes in “disciplining” and “regularizing” non-normative bodies in female sports. This rationale also helps to clarify the somewhat hostile environment among and between female athletes in terms of accepted ways of embodying femininity.

The comments by the women in the Lillehammer survey, White, Frederick and Ohale also align closely with those of Rosalyn Diprose. In her text, The bodies of women: Ethics,
Diprose proposes that the cost of upholding the dominant idea(l)s of femininity and masculinity is the exclusion of bodies that are not supported or found “socially viable” within the sphere they are constructed in. Thus, in order to maintain and uphold these dominant femininity and masculinity idea(l)s, the technologies of biopower are recycled, which implies that some have to be made to suffer by being labelled as ‘abnormal’ and/or ‘non-feminine’. This helps to explain how people are policed through somatechnologies, and how these “normalising mechanisms…segregate and manage” (Harwood, 2009, p. 19) female athletes in sports. It is thus important to emphasise that female athletes are complicit in this practice where biopowers are reproduced in policing and identifying non-normative female bodies. However, as in the case of Frederick, there are those who reject this flow and openly oppose the technologies of biopowers.

Moving to 2011, when the IOC/IAAF agreed to re-evaluate their procedures of “protecting” women from unfair competitive advantages, they decided to no longer use the description of “sex”, “femininity” or “gender” when verifying female athletes, but chose to test female athletes for HA. (IOC, 2011, IAAF, 2011a) Watching this change in nomenclature and testing practice. I wondered how female athletes would now go about knowing whom to challenge and whom to “suspect” (IAAF, 2011a, p. 18) within female competitions. And how would the IOC/IAAF pedagogically indicate who has an HA variation and who does not, especially when the IAAF claim that athletes with HA variations “have an uncommon athletic capacity in relation to their fellow female competitors” (IAAF, 2011a, p. 1). This is the focus of the next section.
The Use of Biopower and Biopedagogy in Policing and Identifying HA Athletes

... in a biopedagogical relation, we need to ask what are the instructions that are being given? Who are the ‘authorities’ that give the instructions, or more precisely, who are the pedagogues? (Harwood, 2009, p. 24)

In better understanding the use of biopower and biopedagogy in policing and identifying female athletes with HA, this section draws on Harwood (2009, p. 24), in critically elucidating what “instructions...are being given” in identifying an HA body and who are the “authorities that give the[se] instructions”. In other words, who are the “pedagogues” and “what are the biopedagogies of truth” that guide people to be on the lookout for HA bodies? (Harwood, 2009, p. 24)

As with the IAAF Gender Verification policy of 2006, the IAAF HA policy (2011a) stipulates that the medical manager is able to initiate a “confidential” investigation of any female athlete if there are deemed to be reasonable grounds to do so. The reasonable grounds can be derived from any reliable source such as coaches, medical managers, doping control officers or an athlete. They can all make an approach to the IAAF or their NSFs (IAAF, 2011a, p. 3). However, the IAAF does not explicitly state anywhere in their HA policy what female athletes or any other reliable source should be on the lookout for. Instead, the IAAF advise the HA policy reader that athletes with HA variations “often display masculine traits” (2011a, p. 1), which may be a straightforward statement for some, but equally confusing to others. What those “traits” may involve is clearly subjective as those “traits” are left up to each individual to interpret. Following on from this, how does the IOC/IAAF now indicate what physical characteristics people privileged to challenge or “suspect” someone to be HA, should be cognisant of? What criteria would raise a valid suspicion under this new HA regime?

In an attempt to reduce confusion, the IAAF, with the help of their scientific alliances, have provided in combination with “masculine traits” statements regarding some “key points”, graphs, scales and pictures for the medical teams investigating an HA case. These may biopedagogically equally clarify for any female athlete, coach, spectator, doping control officer and medical commissioner what an HA variation, visually, may incorporate. Some “key points” advising the concerned “which clinical signs” are linked with “pronounced” HA (IAAF, 2011a, p. 20) are summarised in Table 7 on next page.
Table 7. Clinical Signs Suggesting Pronounced & Chronic Hyperandrogenism (IAAF, 2011a, p. 20)

<table>
<thead>
<tr>
<th>Key Points</th>
<th>Clinical Signs Suggesting Pronounced &amp; Chronic Hyperandrogenism</th>
<th>Clarifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deep voice</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Breast atrophy</td>
<td></td>
<td>Loss of tissue in the breast</td>
</tr>
<tr>
<td>Never menstruated (or loss of menstruation since several months)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increased muscle mass</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Body hair of male type (vertex alopecia, &gt;17 years)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tanner score low (I/II)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ferriman &amp; Gallwey score (&gt;6/ ! minimized by the beauty)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No uterus</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clitormegaly</td>
<td></td>
<td>Enlarged clitoris</td>
</tr>
</tbody>
</table>

Through these “key points” the IAAF try to “demonstrate how these [clinical] ‘truths’ become re-contextualised” within the context of female sports “to inform and persuade people on how they should understand their [and others’] bodies” (Wright, 2009, p. 5) biopedagogically. With the help of this list of “key points” the IAAF position themselves, with the help of science and medicine, as an authority that speaks the “truth” concerning how to potentially distinguish an HA body from a non-HA body. The “key points” also push female athletes to subjectively “understand their bodies” in certain ways and others to distinguish between a normative and a non-normative female body. The IAAF also provide a list of images at the end of their HA policy (Figures 15 and 16) and a table (Table 8) of how to interpret Figure 15. These are again, all intended to be used as a guide for the gynaecologist/sport physician conducting the examinations. Here, the table and the images can also be used as biopedagogical tools in proposing what female athletes, coaches and spectators should be “suspicious” of and what female athletes themselves should be watchful of in their changing rooms and showers.

The “hirsutism scoring sheet” (Figure 15 and Table 8) – both the explanatory sheet and the sheet with the pictures – were originally produced by Ferriman and Gallwey in 1961 in an attempt to map out “clinical problems associated with hirsuties [sic] in women” (p. 1440). The authors stressed in their publication *Clinical assessment of body hair growth in women* that their study of 430 women, all “attending a general medical out-patient clinic” in the UK, “is suitable in clinical use” to assess if a woman is considered to suffer from hirsutism by summing up “the gradings obtained” of women’s hair growth (1961, p. 1441). The Ferriman and Gallwey scale however, does not draw the connection between hirsutism and HA. The IAAF instead
collaborate with endocrinologists in convincing the rest of the world that their “knowledge claims are not dependent on any social context” but lie in nature (Oudshoorn, 1994, p. 139). They do this by making use of the American Association of Clinical Endocrinologist (AACE) Medical guidelines for clinical practice for the diagnosis and treatment of hyperandrogenic disorders (Goodman et al., 2001) in establishing that connection.

Table 8. Hirsutism Scoring Sheet in IAAF HA Policy according to Ferriman and Gallwey, (IAAF, 2011a, p. 21) (originally in Ferriman & Gallwey, 1961, p. 1442).119

<table>
<thead>
<tr>
<th>C - Scores and schemes</th>
<th>Hirsutism scoring sheet according to Ferriman and Gallwey</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>[Grade 0 at all sites indicates absence of terminal hair]</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper Lip</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>A few hairs at outer margin</td>
</tr>
<tr>
<td>2</td>
<td>A small moustache at outer margin</td>
</tr>
<tr>
<td>3</td>
<td>A moustache extending halfway from outer margin</td>
</tr>
<tr>
<td>4</td>
<td>A moustache extending to mid-line</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Chin</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>A few scattered hairs</td>
</tr>
<tr>
<td>2</td>
<td>Scattered hairs with small concentration</td>
</tr>
<tr>
<td>3 et 4</td>
<td>Complete cover, light and heavy</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Chest</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Circumareolar hairs</td>
</tr>
<tr>
<td>2</td>
<td>With mid-line hairs in addition</td>
</tr>
<tr>
<td>3</td>
<td>Fusion of these areas, with three quarter cover</td>
</tr>
<tr>
<td>4</td>
<td>Complete cover</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper back</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>A few scattered hairs</td>
</tr>
<tr>
<td>2</td>
<td>Rather more, still scattered</td>
</tr>
<tr>
<td>3 et 4</td>
<td>Complete cover, light and heavy</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower back</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>A sacral tuft of hairs</td>
</tr>
<tr>
<td>2</td>
<td>With some lateral extension</td>
</tr>
<tr>
<td>3</td>
<td>Three-quarter cover</td>
</tr>
<tr>
<td>4</td>
<td>Complete cover</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper abdomen</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>A few mid-line hairs</td>
</tr>
<tr>
<td>2</td>
<td>Rather more, still mid-line</td>
</tr>
<tr>
<td>3 et 4</td>
<td>Half and full cover</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower abdomen</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>A few mid-line hairs</td>
</tr>
<tr>
<td>2</td>
<td>A mid-line streak of hair</td>
</tr>
<tr>
<td>3</td>
<td>A mid-line band of hair</td>
</tr>
<tr>
<td>4</td>
<td>An inverted V-shaped growth</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Arm / Thigh / Leg</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Sparse growth affecting no more than a quarter of limb surface</td>
</tr>
<tr>
<td>2</td>
<td>More than this; cover still incomplete</td>
</tr>
<tr>
<td>3 et 4</td>
<td>Complete cover, light and heavy</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Forearm</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Complete cover of dorsal surface</td>
</tr>
<tr>
<td>2</td>
<td>Light growth</td>
</tr>
<tr>
<td>3 et 4</td>
<td>Heavy growth</td>
</tr>
</tbody>
</table>

Score interpretation according to Abraham

<table>
<thead>
<tr>
<th>Score value</th>
<th>Score interpretation according to Abraham</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>&lt; 8</td>
</tr>
<tr>
<td>Light hirsutism</td>
<td>8 to 16</td>
</tr>
<tr>
<td>Moderate hirsutism</td>
<td>17 to 25</td>
</tr>
<tr>
<td>Frank hirsutism</td>
<td>&gt; 25</td>
</tr>
</tbody>
</table>

119 The IAAF have granted me the permission to use table 8 and figures 15 and 16.
Figure 15. Hirsutism scoring sheet in IAAF HA Policy according to Ferriman and Gallwey, (IAAF, 2011a, p. 22) (originally in Archer & Chang, 2004, p. 740 who modified the Ferriman-Gallwey hirsutism scoring system for eleven body areas).
As the “hirsutism scoring sheet” indicates, the IAAF have biopedagogically chosen to focus on eleven areas of the body in determining if the female hair growth is considered “normal; light hirsutism; moderate hirsutism; [or] frank hirsutism” (2011a, p. 21). These eleven body sites are the upper lip; chin; chest; upper back; lower back; upper abdomen; lower abdomen; arm/thigh/leg; and forearm, and for each body site a grade from one to four can be given depending on the site’s hair growth (IAAF, 2011a, p. 21). This suggests that a female athlete can have scores anywhere between 0 and 44. A score below eight is suggested as “normal”; a score between 8 and 16 as “light hirsutism”; a score between 17 and 25 as “moderate hirsutism” and a score above 26 as “frank hirsutism” (IAAF, 2011a, p. 21). Through the use of biopower, the IAAF with the help of endocrinology, also stress that if the score is above 16 a “biological investigation should be performed” (IAAF, 2011a, p. 21).

The IAAF is, with the help of these scoring sheets and images, biopedagogically assisting the medical team investigating an HA case, and any other readers, in teasing out whether the female athlete is in the zone of being Hyperandrogenic. Before I analyse the combined effect of the body images, the scoring sheets and the “key points”, let me introduce the last scale of body images in the IAAF HA policy.

![Image](image-url)

**Figure 16.** Female breast and pubic-hair development scale in IAAF HA Policy, according to Marshall-Tanner, (IAAF, 2011a, p. 23) (originally two ‘live’ photographs in Marshall & Tanner, 1969, pp. 292-293).
The picture above has been modified, but was originally published as two pictures (one focusing on the pubertal hair development and the other one on the breast development) by Marshall and Tanner (not Tanner and Whitehouse as the IAAF state) in *Variations in pattern of pubertal changes in girls* (1969). Here the authors investigated 192 “white British girls…[with] no physical abnormalities” in determining “the various stages of development of the breast and of the pubic hair” (1969, p. 291). As the images indicate, the breasts and the pubic hair follow five pubertal stages of development which the authors stressed would assist medical practitioners in “making a clinical distinction between normal and abnormal puberty” development (1969, p. 303). The IAAF biopedagogically instruct the medical teams investigating an HA case (or any other policy reader) to be observant if the female athlete embodies features representative to grades I or II on the Marshall-Tanner scale (2011a, p. 20).

The Ferriman-Gallwey hirsutism scoring system, the Marshall-Tanner breast and pubic hair development scale and the “key points” (Table 7), all instruct the medical examiners, female athletes, coaches and spectators biopedagogically, on how a non- questioned body, that is an “ideal [female] body” (Wright, 2009, p. 8), should look to not attract any unwelcomed attention. They also instruct how a non-normative and not so ideal female body should look if they have not followed the “normal” pubertal development of a female body. The latter would prompt a “biological investigation” (IAAF, 2011a, p. 21). These guides invite the idea that less developed and less curvy female phenotypes in combination with hair production summing up to more than 16, together with having a “deep voice”, an enlarged clitoris and “increased muscle mass” indicate, biopedagogically, reasons to be “suspicious”. This “suspicion” should then be reported to the medical manager of the competition.

Even though the IAAF do not explicitly state in the HA policy that the bodies in Figures 19 and 20 are the ones female athletes should be suspicious of, their biopedagogical presence in a hierarchical and normative fashion, openly inform and instruct the reader what an HA variation may look like and thus what female athletes should be on the lookout for. The women who then express the need of “protection” then justify the “the norm [as] something that can be applied to both a body one wishes to discipline and a population one wishes to regularize” (Foucault, 2003, p. 253). Such values also foment a McCarthyist environment of distrust where athletes are encouraged to be suspicious of and tell on each other.

Because of the biopedagogical reinforcement of the dominant habitus, those female athletes who do not fall in the suspicious category are left with few options other than to follow the rules and obligations. Within this framework and with the help of such scales and images, they may feel as if it is their duty to report any irregularities to the IAAF medical manager. This
yet again positions them in a “subjective” power dynamic where they establish a continuity of what count as femininity and the female body within the dominant habitus. This further highlights whose “truth” concerning establishing these idea(l)s weighs more among women athletes.

The reality that the IAAF have not made use of any of these scales or pictures before 2011 may reside in the fact that the IOC/IAAF have not until 2011 narrowed down their focus on one set of intersex variations, which implied the difficulty in previously physically characterising them. However, the IOC/IAAF move to include these materials now, may equally suggest that the IOC/IAAF have put greater trust in the knowledge claims of sex endocrinologists concerning HA variations. Similarly, these new alliances may have pointed them to what scientific material and what scientific knowledge claims are necessary to adopt in convincing the rest of the world that the IOC/IAAF HA claims lie in nature, rather than being dependant on a social alliances built in a social context (Oudshoorn, 1994, p. 139). That said, both these scales of the 1960s refer to participants of Caucasian background, more specifically of UK descent. The scales do not recognise that the bodies presented are “entangled with deeply subjective and stereotypical Western definitions of femininity” (Karkazis et al., 2012, p. 13) and thus fail to acknowledge that the bodies in the scales as particular bodies, among many varied bodies. Instead, the Caucasian body development is biopedagogically presented as the normative body. As the IAAF also fail to recognise that women’s hair development may vary depending on one’s ethnic background, the IAAF is further recycling the idea that Caucasian body hair development represents the normative body idea. By re-using these bodies and scales in their HA policy, it not only stipulates that “these practices produce the truths” (Wright, 2009, p. 9) and that they are informed by endocrinologists associated with HA variations and HA bodies, but also “accentuate the force of normalization in contemporary society” (Harwood, 2009, p. 27) and that of elite sports.

These normative body images are then further recycled by the “protection” argument and by female athletes subjectively working on themselves as living beings (Rabinow & Rose, 2006, p. 215) by scanning their bodies against the ideal and normative body. These same female athletes then stress the need to be “protected” against those female bodies that do not fit that category of “true” female embodiment, which again justifies the need for the IAAF to produce identifiable images of what an HA variation may look like. This cycle of biopower and biopedagogy is thus recycled, sustained and maintained.

There is therefore no single and straightforward pedagogue handing down the “instructions” and taking the role of chief biopedagogue. Instead, the IOC/IAAF, their medical committee members in collaboration with their scientific alliances, coaches, female athletes,
doping control officers and spectators in combination with the scientific findings and claims of the American Association of Clinical Endocrinologists (Goodman et al., 2001), Ferriman and Gallwey (1961) and Marshall and Tanner (1969) represent a circulating web of biopower handing down the instructions as biopedagogues. All these parties are part of the same system of biopower that operates in technologies that normalise, organise and police populations and bodies in distinguishing HA athletes from non-HA athletes.

Given that many intersex controversies in elite sports have leaked out to the press in various ways and have had traumatising effects on the concerned athlete and their families, the next section investigates the IOC/IAAF confidentiality measurements. I consider how the circulation of biopower complicates this mission of confidentiality when anyone can be the biopedagogue. In problematizing the confidentiality procedures I mainly focus on the cases of Eva Klobukowska, Maria José Martínez-Patiño and Caster Semenya.

Problematising the IOC/IAAF Confidentiality Procedures

*The right of life and death is always exercised in an unbalanced way: the balance is always tipped in favour of death. Sovereign power’s effect on life is exercised only when the sovereign can kill. The very essence of the right of life and death is actually the right to kill: it is at the moment when the sovereign can kill that he exercises his right over life. (Foucault, 2003, p.240)*

*Outward signs of gender are already triggers that raise suspicion about a female athlete’s sex... Yet even if outwardly visible markers of gender were not triggers, the manner through which suspicions about sex are reported and acted on will inevitably come to public attention. Indeed, the fact that anyone can make their concerns about an athlete known to an IAAF medical director may mean that leaks of private health information or a whisper campaign about an athlete exists prior to the beginning of an investigation or even triggers an investigation. (Karkazis et al., 2012, p. 13)*

*There is no mandatory testing but on a suspicion or if there is a challenge maybe of the gender, the IAAF has the right to ask discretely for a test. (Davies in Ginnane, 2011)*

The key word in the quote by Nick Davies, an IAAF spokesperson at the time of the Semenya controversy, is *discretely*. Yet when the IAAF and other ISFs have chosen to publicly talk about
different intersex incidents; they have been far from discreet. Before I examine any particular incidences, this section will genealogically trace back to when the IOC started to use the rhetoric of “confidentiality” and made the decision not to discuss sex/femininity/gender verification cases in the open. This section also considers why the IOC/IAAF seem to unceasingly fail in keeping their confidentiality measures and to what extent they will continue to fail doing so as long as “the manner through which suspicions about sex are reported and acted on” prevails (Karkazis et al., 2012, p. 13). If non-HA questioned female athletes, their coaches and the IOC/ISFs collectively reason that “the more abnormal individuals are eliminated, the fewer degenerates there will be in the species as a whole, and the more I – as species rather than individual – can live, the stronger I will be, the more vigorous I will be” (Foucault, 2003, p. 255) the HA hunt will continue. So, as long as there is an understanding that one group of women needs to be “protected” against another group of women through the implementation of somatechnologies aiming to “discipline” and “regularize” (Foucault, 2003, p. 253) and consequently identify and police HA athletes, the “whisper campaign” will continue being triggered (Karkazis et al., 2012, p. 13).

The confidentiality debate was originally raised within the IOC after the first intersex scandal around Eva Klobukowska was openly talked about in 1967. The president of the Polish NOC, Włodzimierz Reczek, wrote a letter to the heads of the IOC and the newly appointed chairman of the Medical Commission, de Mérode, in which he raised this critique of confidentiality:

Much improper publicity, unnecessary discussion, and controversial opinions have been raised recently by sex examinations ordered by certain [sic] international sport federation…Unfortunately it happened also that facts were published openly, that should be protected by the discretion of the medical profession. That all fills one with indignation because it disaccords with elementary ethics [sic]. (Reczek, 1967)

Reczek critiqued the ways in which the European Championships organisers disqualified Klobukowska in the open, and how medical delegates, in the open, discussed which intersex variation she had (and the possibility that she had undergone medical procedures back home in Poland prior to the competition in Kiev) (Larned, 1967, p. 11). The Klobukowska controversy probably moved Reczek to action because he was not only a compatriot of Klobukowska but also represented the country within the IOC as the head of the Polish NOC, which also supported her career. The IOC president, Avery Brundage, highlighted in the letter on next page, Figure 17, to Reczek that the IOC too did not want any further athletes to have their privacy invaded. Brundage was understanding of Reczek’s concerns and confirmed that he, as well as
de Mérode would not only give “due attention” to the subject but were interested in avoiding further critiques against their organisation or harm to the athlete in question. As a consequence the IOC pamphlet on sex controls for the 1972 Olympic Games in Sapporo informed the readers in reference to their sex testing policies that “Neither the fact of this examination nor its results will be made public out of deference to the human rights of the individual” (IOC Medical Commission, 1972). Due to limitation of space I will not go into discussing each case the IOC/ISFs have revealed and discussed in the open\textsuperscript{120}, but will focus on two incidences, namely that of Maria José Martínez-Patiño and Caster Semenya.

A controversy that appeared in the world press after the World University Games in Kobe 1985 was that of Maria José Martínez-Patiño (2005, p. s38) who was found ineligible to compete due to her chromosome testing results. When it became known that she was still trying out for the 1986 national championships in Spain, she was “told to feign an injury and to withdraw from racing quietly, graciously, and permanently” (Martínez-Patiño, 2005, p. s38). But she refused:

When I crossed the line first in the 60m hurdles, my story was leaked to the press. I was expelled from our athletes’ residence, my sports scholarship was revoked, and my running times were erased from my country’s athletics records. I felt ashamed

\textsuperscript{120} Other cases that have been discussed by the IOC/ISFs are those of Stella Walsh, Sarah Gronert, Santhi Soundarajan, Genoveva Anonma and the siblings Salimata and Bilguisa Simpore.
and embarrassed. I lost friends, my fiancé, hope, and energy. (Martínez-Patiño, 2005, p. s38)

The power-relations between Martínez-Patiño and the organisers of the national championships (and perhaps even her coach) become apparent here when she refused to “quietly, graciously and permanently” withdraw from the competition by feigning an injury. The consequence was public insult to ‘put her in place’ and according to her, the loss of everything that was significant to her. She refused to feign injury as she “knew” she “was a woman” but from a Foucauldian perspective, the organisers and those who leaked the story to the media may instead have reasoned that as she did not meet the femininity criteria and norm of 46, XX at the time, it was their “right to take [her] life” and to “let [her career] die” (Foucault, 2003, p. 241). Athletes like her had to be “disciplined” and “regularized” in a fashion that would “kill” her sporting career in order to “guarantee life” (Foucault, 2003, pp. 240-253) for those female athletes in need of “protection”.

To further analyse how biopowers may travel through other significant players influencing the flow of biopower through women, coaches need to be considered, as they are also complicit in the production of these biopowers. The next example thus illustrates how the possibility that female athletes “can make their concerns [known] about an [intersex/HA] athlete” (Karkazis et al., 2012, p. 13) to their coaches, may increase the likelihood that a whisper campaign starts (and even leaks out to the media). Hermina Schneider121, my European NOC informant who has also been involved with female cross-country skiers and female ice-hockey players, sympathised with her non-questioned female athletes when they had concerns about their own team player’s ‘masculinity’, body, size or athletic performance:

I am involved in cross-country skiing and I am involved in female hockey, and in both sports you sometimes have athletes that really look like [a] ‘male’. In hockey you have big girls, strong and sometimes at the age of 14, 15, 16 so different to the others that there is always suspicion. They are always talking (the others in the team) is she is she not, something like that…they are saying ‘what is wrong with her’? (Schneider, 2010)

Schneider expressed sympathy for the female athletes with whom she worked expressing how “big”, “strong” and “male” the suspected athletes were. These are “common concern[s], particularly in girls’ and women’s sports” as it is assumed that female “athletes who appear too masculine [also] have an unfair advantage” (Krane & Sullivan Barak, 2012, p. 41). This attitude

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121 This is a pseudonym - at the request of the participant.
underscores the suspicion amongst female athletes against those who do not embody femininity idea(l)s. Schneider suggests that this concern is elevated when a female athlete is qualifying for “the world championship or the Olympics [because] then it is worse to have someone who is better than you in your team competing at your position” (2010). Statements like these serve as a reminder “that there are in fact rules of normality that must be followed” (Feder, 2006b, p. 192) and because a female athlete may ‘disturb’ female gender and body idea(l)s, it is by default assumed that she also embodies a competitive advantage. Observations like these may surreptitiously encourage individual athletes to “leak” personal and “health information” or establish a “whisper campaign about an athlete” and even one of their own team mates as in this case, to trigger an investigation (Karkazis et al., 2012, p. 13) so that their own position may be secured.

The quote by Schneider can also be analysed using Harwood who highlights a vital question in further teasing out which “authorities” are privileged to instruct the “truth”. Harwood asks “in the struggles for life in the biopower mode, what are the biopedagogies of truth, and who tells them?” (2009, p. 24) In this instance, as well as in those told in the first section of the chapter, the women contending that they are in need of “protection” could be argued to be one group of “authorities” privileged to instruct the “truth”. They are some of the biopedagogues who work with the IOC/IAAF in order to make the “protection” argument something tangible and identifiable with the help of the IAAF HA policy, its pictures, scales and “key points”. However, explanations like those presented by Schneider also suggest how coaches are complicit in the production of these biopowers and because they are heavily invested in their athletes’ success and careers, they are likely to see these technologies as the means of potentially furthering their athletes’ capacity to act against other female athletes. That said, not everybody is complicit in the practice of reproducing these biopowers; some people push back and reject the circulation of these powers and technologies. Fredericks, from the first section, is one of them, and many of the women who have been tried, tested and suspended from female sports (which will be discussed in Chapter Seven) are others.

After the Martínez-Patiño scandal there were other cases of privacy violations such as that of two European girls in cross-country skiing who were declared as “males” by the medical delegates at the Winter Olympics in Albertville 1992 (Schneider, 2010). These athletes were later confirmed females, as the open fax stating that they were “males” in fact had concerned some other female athletes. Nevertheless, someone at the office where the fax was received had leaked the information to the media, which then went viral (Schneider, 2010). Another example is that of Santhi Soundarajan, who was also openly commented on by the chief doctor of the Indian Olympic Association (IOA) when he declared that her “gender is not female, but male”
and consequently disqualified her from competing (Soundarajan in Sportspegeln, 2009; Soundarajan in Mitra, 2012). The list of examples that have been openly commented on by national or international sport federations (NSF or ISF) or leaked to the media thus far is a list longer than it should be. And since 2005, the IAAF has admitted to eight gender verification issues where four of the women have (Ginnane, 2011), as in the case of Martínez-Patiño, been asked to “quietly, graciously and permanently” (2005, p. s38) end their careers. None of them have, however been named (Ginnane, 2011).

Let us therefore revisit the last gender controversy which the IAAF publicly commented on, that of Caster Semenya. After Semenya had won the 800m in Berlin in August of 2009, Nick Davies, the IAAF spokesperson spoke publicly on the gender allegations against her:

> It is seen as a medical condition, it is another point to stress, it is not necessarily, or clearly not her fault. It is who she is physically… There is no mandatory testing but on a suspicion or if there is a challenge maybe of the gender, the IAAF has the right to ask discreetly for a test… In this particular case there were suspicions and rumours that there were some doubts really about her gender. (Davies in Ginnane, 2011)

The IAAF had, according to their gender verification rules at the time, the right to ask Semenya to be gender verified; however the fact that they went public and commented on the issue goes against their own confidentiality measures. Previously, the former IAAF gender verification policy had adhered to the IOC Statement of the Stockholm consensus on sex reassignment in sports where the ‘case-by-case’ “evaluation” should be “confidential” (IAAF, 2006, p. 6).

Albeit the IAAF never revealed what type of intersex variation Semenya had, or whether she had been put on a hormone therapy treatment post the introduction of the IAAF HA policy, the sex and gender query still leaked out to the press. In addition, the IAAF commented on the case on several occasions, even though this goes against the habitus of medicine.

Dr Gerard Conway, an endocrinologist at the University College of London in South Africa, stressed that these breaches of confidentiality go against the accepted practice within medicine. He remarked that confidentiality “is natural to anybody in the medical profession [and] none of the medical details need ever be allowed out and should never be allowed out (Ginnane, 2011). So why do the IOC and its ISFs/NSFs repeatedly fail to follow their own rules, especially when confidentiality also seems to be the rule within the medical profession?

Karkazis et al. (2012) motion that “Confidentiality is an admirable goal, but as long as these testing policies persist, the potential for grave harm to athletes’ lives and careers is nearly undeniable and unavoidable” (p. 13). Karkazis et al. (2012) assert that as long as the IOC and
its ISFs/NSFs grant power for effectively anyone to pass on private information to them about an athlete’s possible HA variation, then confidentiality remains wishful thinking. Pictures of the “hirsutism scoring sheet” by Ferriman and Gallwey and the breast and pubic hair development images by Marshall and Tanner (Figures 19 and 20) in combination with the “key points” of having a “deep voice”, “increased muscle mass” and an enlarged clitoris thus continue to legitimise and may even increase such “whispers” and allegations against those who are deemed unwelcome in female sports. Furthermore, if women in female competitions continue stipulating that they are in need of “protection” the policies will continue to exist, and for the policies to continue, the female athletes who feel that they are in need of “protection” need to know what an HA variation aesthetically looks like. The biopower that operates in the somatechnologies and mechanisms to identify HA athletes are thus empowered, recycled and maintained, and this in turn continues forming and maintaining the habitus.

Foucault’s biopower and “evolutionist” arguments on racism and warmay clarify this issue further. Foucault argues that “war will be seen not only as a way of improving one’s own race by eliminating the enemy race..., but also as a way of regenerating one’s own race. As more and more of a number die, the race to which we belong will become all the purer” (2003, p. 257). This may equally be so in female sports. Perhaps, female athletes, coaches and sporting organisers want female sports to be “pure” – and the only way to do that is to “eliminate” the group of athletes that are deemed impure. Through this logic, female elite sport becomes more “pure” as the contestants are compelled to fulfil ‘purity’ standards. Foucault further argues that racism, [or perhaps inter[sex]phobia within this context (Spurgas, 2009, p. 108)] is:

…bound up with the technique of power, with the technology of power…We are dealing with a mechanism that allows biopower to work. So racism is bound up with the workings of a State that is obliged to use race, the elimination of races and the purification of the race, to exercise its sovereign power. The juxtaposition of – or the way biopower functions through – the old sovereign power of life and death implies the workings, the introduction and activation, of racism. And it is, I think, here that we find the actual roots of racism. (Foucault, 2003, p. 528)

If we replace the word racism with intersexphobia, this quote by Foucault becomes clearer within the context of how biopower may work through female athletes, coaches, IOC/ISFs and spectators in policing and identifying HA athletes. The ways in which the IAAF currently may be using the presented images, scales and “key points” in combination with the “protection” argument, suggest that intersexphobia is “bound up” with both the somatechnology and the technique of power. Hence, the mechanism of intersexphobia “allows biopower to work” which
implies that the IOC/ISFs are “obliged to use” ideal femininity arguments and “protection” rhetoric in “eliminating” certain intersex variations from sports in its quest to ‘purify’ women’s sport and those bodies participating in it. The “let live” and “letting die” (Foucault, 2003, p. 247) argument thus arguably “introduces”, “activates” and “reproduces” intersexphobia in elite sports, which is the result of the binary sex and gender norms. In other words, intersexphobia is the result of the “root” idea rationalising that there are normal and abnormal female bodies in elite sports (Foucault, 2003, p. 247).

The public/spectator interest in catching those who are not “pure” (as Foucault suggests), or those with HA variations, equally pressure the IAAF to act according to the dominant habitus, which may explain why their spokesperson, Davies, appeared so often in the media commenting on the issue of Semenya and assuring its viewers, followers and sponsors that:

> Obviously we are working flat out quietly behind the scenes to resolve it. So fingers crossed now that we will be able to get there very quickly. And as soon as we do have information that we can conclude it, obviously I will be saying that, immediately. But until then I cannot speculate. It might take days, weeks or months; I just do not know. (Davies in Ginnane, 2011) (Emphasis mine)

The IAAF did in fact inform the general public “immediately” after they had “concluded” the matter, that is, as soon as they realised that they were not willing for Semenya’s lawyers to try their gender verification tests in court (Ginnane, 2011). The immediacy of their response also shows that the general public was hungry for information and were keenly interested to know what future Semenya had in elite sports. That the IAAF was publicly so forthcoming in feeding the media, its sport spectators, female athletes, coaches, et cetera, with this information indicates how “the power of regularization” (Foucault, 2003, p. 247) “is produced from one moment to the next” (Foucault & Hurley, 1978, p. 93) and worked through all these agents. The placating of the general public in the dominant habitus thus seemed more important than caring for and about Semenya’s, and others’ privacy and human rights, and consequently lead to breaching their own confidentiality procedures.

**Conclusion**

Since the implementation of the tests, the IOC/IAAF have rather consistently maintained that the tests have existed to “protect” women from “unfair competition” (Beckett, 1976, p. 170; IAAF, 2011a, 2011b; IOC Medical Commission, 1984b, p. 24; IOC, 2012a). Having identified this “protection” ideology, I have examined how biopower and biopedagogy operate through various technologies to discipline and regularise female athletes and to identify athletes with
intersex/HA variations. From the “protection” logic, this chapter has considered how certain truths and knowledges about identifying and regulating disturbing bodies in female sports have been produced, circulated, deployed, justified and contested within the IOC/IAAF and among female athletes themselves.

In doing so, this chapter has focused on a little known survey produced by the IOC at the Winter Games in Lillehammer (1994) and the extent to which biopower operated in influencing the survey structure and its results. Here, 115 female athletes were asked to provide their opinions about the need for gender verifications in female sports. In this survey the IOC stipulated, in their words, that 87% of the women found it both “reassuring to have gender certificates at the Games” and considered it “necessary” to perform the tests (IOC, 1994b, p. 54). The irony about the survey is that a large proportion of the participants also recognised that they lacked information about the particulars of the tests (IOC, 1994b, p. 54). This suggests that they probably had little or no knowledge about intersex variations, how common they are and how blurry the sex divide may be. This further proposes a conscious ignorance on the part of the women, concerning the objective of the tests and how they may have affected the career and wellbeing of other female athletes. This ignorance also shows that some of these women may have had, without their knowledge, an intersex variation or another genetic variation that either advanced or disadvantaged them in their sport category. However, because they may not have disturbed female body idea(l)s, they felt the tests and their specifics did not concern them. Despite this, the survey results enabled the IOC to continue stipulating that women were in need of “protection” which ensured continuance of the biopowers of policing, identifying and disciplining particular female athletes who were challenging the level playing field.

This chapter thus suggests that the IOC and the IAAF have, in symbiosis with female athletes produced, circulated and maintained the idea that women must be “protected” against unfair competition. In maintaining the ideology while discontinuing the testing techniques and testing nomenclatures, the IAAF have for the first time in history produced a policy that, with the help of images and scales, tries to articulate what ‘disturbing’ visual characteristics one should be mindful of when maintaining this fairness ideology. With the help of Caucasian images originating from the 1950s and 1960s suggesting what abnormal hair production, breast and pubic hair development look like in all women, these somatechnologies further promote the idea that all women have to follow a particular body development. The policy promotes this idea despite the awareness that bodies come in various shapes and forms regardless of one’s ethnic heritage. The images, scales and the “key points” also create a milieu where whispering campaigns against women and a culture of telling on each other is encouraged (Karkazis et al., 2012). In the name of fairness, this milieu opens up the door for spectators, coaches, medical
representatives and women to collectively act as biopedagogues in maintaining the testing culture against particular female bodies. This chapter concludes by considering that the dominant habitus projects who the biopedagogues are in the production and circulation of powers marking and regulating female bodies in elite sports. These conclusions are important when I now move on to the last analysis chapter which examines how intersex organisations and female athletes also take part in the continuation of producing normal versus abnormal bodies by either agreeing with or contesting particular somatechnologies.
Chapter Seven: Intersex Organisations and Athletes Telling their Story of ‘Intersex’ in Elite Sports

[Subjugated knowledges refer] to a whole series of knowledges that have been disqualified as nonconceptual knowledges, as insufficiently elaborated knowledges: naïve knowledges, hierarchically inferior knowledges, knowledges that are below the required level of erudition or scientificity. (Foucault, 2003, p. 7)

In the last 20 years or so the notion of the body as a biological, pre-cultural or natural entity has been replaced…with an understanding of bodies as the material effects of historically and culturally specific discourses, discursive practices, and regulatory regimes. For these writers, bodies are not simply neutral matter overlaid with culture, nor are they ideal constructed objects. Rather, bodies as sites of (embodied) subjectivity are lived in particularised yet heterogeneous ways. In other words, all bodies are always already marked in so far as they are significant cultural entities... (Sullivan, 2005, p. 363)

From the perspectives of intersex organisations and female athletes who have been sex/femininity/ gender tested, this chapter considers how their truths and knowledges about female athletic bodies are produced, circulated, deployed, justified and contested. More precisely, how do female athletic bodies “as sites of (embodied) subjectivity” (Sullivan, 2005, p. 363) further shape and mark these bodies, especially those classified with HA variations? Building on the previous chapter, which considered how biopower and biopedagogies operate in technologies that identify and regulate intersex/HA athletes, this chapter turns to conversations involving intersex organisations and female athletes challenging binary sex, gender, body, embodiment and athletic performance idea(l)s. Rather than viewing their truths and knowledges as “subjugated” and thus “disqualified as nonconceptual… naïve… hierarchically inferior…[or] below the required level of erudition or scientificity” (Foucault, 2003, p. 7), their knowledges and truths are deemed sufficient. These truths and knowledges are thus viewed as equally sufficient, conceptual and qualifying as those brought forth by the IOC/IAAF, their medical representatives and other academics considering this topic. This chapter thus focuses on the “insurrection of subjugated knowledges” (Foucault, 2003, p. 7).
In the first section I attend to official and unofficial discourses and activities by five intersex organisations across the world. Here I consider how their representatives may have impacted the intersex debate in elite sports. My attention turns to how truths and knowledges about disturbing versus normal bodies and embodiments are produced, circulated, deployed, justified and contested within and among these intersex organisations. How does the body as a site of “embodied subjectivity” and a “cultural entity” shape the ways in which these organisation representatives read, contextualise and judge how intersex/HA bodies are depicted and managed by the IOC/IAAF? In the second section I explore how knowledges and truths about fair versus unfair athletic performances are formed. Here I examine how the representatives subjectively reflect on the IOC/IAAF rules and regulations intersex/HA athletes have to abide by to eligibly compete. By comparing the organisation representatives’ official and unofficial conversations, this section expands on current understandings of the ways in which these organisations may not always agree on how to best manage intersex issues or how to view fair athletic performance in elite sports. In the final section I examine how “bodies as sites of embodied subjectivity” inform how four athletes with intersex variations respond to the regulatory frameworks they have been compelled to endure. These athletes are Eva Klobukowska, Maria José Martínez-Patiño, Santhi Soundarajan, and Caster Semenya. They also represent different eras in the history of sex/femininity/gender testing.

This chapter draws on Nikki Sullivan who uses the term somatechnology to think through the diverse and multifaceted ways in which bodily-being is (re)produced “not only by the surgeon’s knife, but also by the discourses that justify and contest the use of such instruments” (2009, p. 314). Sullivan (2009, p. 314) contends “that the conceptions of, debates around, and questions about specific modificatory practices are themselves technologies that shape corporeality at the most profound level…” Expanding on somatechnics, which does not differentiate between bodies, technologies and related discourses, I see “bodily being (or corporealities)” of particular female athletes “as always already technologized and technologies as always already enfleshed” (Sullivan, 2009, p. 314). Athletes categorised as intersex/HA can thus not be understood as separate from or somehow outside the somatechnologies of medicine’s, intersex organisations’ or the athlete’s own sites of subjectivity. Instead, these collectively contribute to the interpretation, regulation and marking of their bodies, athletic performances and participation in female sports. Utilizing Sullivan, I argue that this approach may “engender more-nuanced understandings of and critical responses to the complex and

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122 These organisations are, as mentioned in the methodology chapter, spread across Germany, New Zealand, South Africa, Switzerland, and the USA, where I talked to eight people from these five organisations.
multifaceted technés in and through which embodied being(s) come to matter in situated contextually specific ways” (2009, p. 317).

By closely analysing these testing technology discourses of intersex organisation representatives and female athletes, this chapter provides novel insights into how these participants play a part in the continuation of contextualising and limiting bodies and athletic performances in (female) elite sports.

Fear of ‘Unreal Women’ – The Disciplining of Disturbing Bodies in Female Competitions

...one’s embodied cultural location crucially makes certain somatechnologies intelligible as body modification in the first place, prior to any conscious judgment about whether such modifications are right or wrong. This challenges us to think about the embodiment of all agents [including intersex organization representatives]. (Morland, 2009a, p. 194)

When you make anything on a ‘case-by-case’ basis it means that you do not have clear guidelines. And how are they even going to think that there is an issue? I am afraid that it will be women that look way too masculine for what the other women think is too masculine. (Hinkle, OII USA, 2011)

In this section I examine how knowledges and truths concerning the testing technologies are produced, circulated, deployed, justified or contested by intersex organisations. How did their representatives’ “embodied cultural location” (Morland, 2009a, p. 194) contribute to the continuation or discontinuation in marking and regulating particular bodies of female athletes? Thus, talking with these representatives was a valuable component when considering how their subjective positions influenced their imagined notions of why there is an anxiety against intersex/HA bodies in the first place. It was important to consider their reflections on how power-relations have contributed to promoting somatechnologies in idealising certain female bodies while “disciplining” and “regularizing” (Foucault, 2003, p. 253) those of other female athletes.

One of the key issues discussed when I met with the different intersex organisation representatives centred around how the IOC/IAAF depict and manage bodies of athletes classified as intersex. The second quote above by Curtis Hinkle, the founder of the largest
intersex organisation of the world, OII\textsuperscript{123}, argues that the somatechnologies of gender/HA verifications imply that the IOC/IAAF, athletes and spectators will judge and rank female athletes’ \textit{femininity} by scanning their bodies on a ‘case-by-case’ basis. Hinkle thus stipulates that “sites of embodied subjectivity” will continue suggesting who calls and does not call for suspicion and who challenges the suspect in the first place.

Daniela Truffer and Seelenlos\textsuperscript{124}, the founder and co-founder of the Swiss intersex organisation Zwischengeschlecht.org, further stress that ‘this case-by-case chase’ of intersex interlopers is perfectly encompassed by the infamous statement which came out of the 1940’s American Senate debate on the definition of pornography: “I know it when I see it.” The “I know it when I see it” rationale used to define and restrict pornography, is similar to this ‘case-by-case’ technology by the IOC/IAAF (Seelenlos, 2010). Dealing with the problem as it occurs instead of having clear guidelines which prevent these contradictions and controversies from occurring generates, according to both Truffer and Seelenlos, subjective assumptions regarding the ‘genuine’ female body and its appropriate embodiment.

In further promoting the “insurrection of subjugated knowledges” and considering “bodies as sites of embodied subjectivity” and “significant cultural entities” (Sullivan, 2005, p. 363), Iain Morland (2009a, p. 194) helps to untangle the ways in which these organisation representatives’ own system of beliefs make gender/HA testing intelligible or unintelligible as somatechnologies. Morland proposes that depending on one’s own body and embodiment experiences and how these are understood and marked by others push one to draw certain intuitive conclusions about particular body modificatory procedures. Hence, these representatives will draw particular conclusions about how specific bodies and embodiment should be understood, debated and questioned subject to their own experiences (Morland, 2009a, p. 194). It is central to note that all these conclusions, whether they support or contest certain modificatory body politics, are technologies that continue marking and regulating bodies (as is this thesis) (Sullivan, 2009, p. 314).

Ins Kromminga and Ulrike Klöppel, two spokespersons for the German intersex organization IVIM\textsuperscript{125}, thus argue from their “embodied cultural location” that subjective and normative stereotyping will lead to some being questioned while those who resemble “Barbie dolls” will go unnoticed. This is troublesome for them:

\textsuperscript{123} Organisation Intersex International (OII) has 22 member countries in six continents. (Karin, 2012)
\textsuperscript{124} This particular pseudonym was requested by the participant.
\textsuperscript{125} Die Internationale Vereinigung Intergeschlechtlicher Menschen (IVIM) is affiliated with OII.
Again, it is stereotyping – that is how females have to look like. And if you do not look like a Barbie doll, maybe you might become the victim of such harassment. (Kromminga, IVIM Germany, 2010)

Somehow they try to restore aesthetics to sports. An ideal aesthetic normative of looking at male and female and try restore sports to these cultural ideal male or the ideal female body. If they would only follow the logic of the best performance this would not be of interest, but if they always re-connect it to an ideal masculine or a feminine body image, it is all about aesthetics, at the moment. (Klöppel, IVIM Germany, 2010)

Both Kromminga and Klöppel elaborate on the influence subjective socio-political values have on the body/embodiment and reasons that those who do not resemble Barbie dolls may be questioned and affected by the somatechnologies of the IOC/IAAF. Klöppel further suggests that the logic of who performs best is not the sole assessment criterion. Rather, the criteria are drawn from a combination of performance and aesthetics. Hence, from their subjective position, they recognise that female athletes’ athletic performance is not viewed in an objective fashion but always through a prism of ideal and non-ideal feminine body images.

Despite these normative somatechnologies, Kromminga juxtaposes that individual sports organisations are nevertheless also responsible for creating particular bodies for the purpose of the sport:

They [sports organisers] are only focusing on a certain group of people that just do not fit into this certain idea of clear cut male and female idea. It is their problem. It is the problem of the whole society - of how we look at the human body and how we separate it into two groups… But sports themselves in their different fields also create certain body types that are very unnatural let us say… like from sumo wrestlers to body builders to swimmers to runners. If they would switch their fields, you would realise that they are highly streamlined to one sport. So they are already creating bodies that are not normal in the way of what we expect as the ideal of the human body. (Kromminga, IVIM Germany, 2010) (Emphasis mine)

Kromminga argues that the body and embodiment of the female athlete are evaluated by a socially and culturally charged visual scanning where binary and normative body ideals dominate. These somatechnologies imply that when certain female athletes do not visually resemble or behave like a “Barbie doll”, the normative aesthetic scanning kicks in. This then
provokes anxieties about whether the female athlete is feminine ‘enough’ or could even possibly be hiding an HA variation. This maintains a continuity of doubts and anxieties that have resulted in suspected athletes being tested for their sex/gender in the past and those who are said to have an HA variation today.

By the same token, Kromminga argues that these standards are arbitrary given that the nature of the athletic body is changed and shaped from its natural state to fit the particular sport the athlete competes in. Despite this, the body is judged on a hierarchy of ‘naturalness’. There is an apparent paradox here, where female athletes on the one hand want to be taken seriously by performing well and earning the crowd’s respect, while on the other, they should not disturb the body norms in this dominant habitus. It becomes an oxymoron when individual sport categories may define and streamline how big, heavy, flexible, muscular, tough, fast, loud and aggressive the female athlete is tolerated or expected to be, which then may differ from the normative codes of femininity in the dominant habitus (Messner et al., 2003). This clearly exemplifies a clash of “competing habituses” where “responses to given situations” can be in “conflict” and not in agreement with the dominant habitus (Feder, 2006b, p. 192). The modificatory somatechnology that produces and marks bodies subject to the needs of the sport thus clashes with the technology demanding that female athletes should look and behave in certain ways irrespective of their sport category.

Another topic that was discussed with my informants concerned why male athletes and female athletes are treated differently when it comes to considering athletic performance, fairness and body/embodiment idea(l)s. The objectives behind the different treatment of women’s and men’s bodies and athletic performance, and the punishments for not adhering to the dominant habitus are, according to Hinkle, linked to the celebration of virility and masculinity in elite sports:

I am convinced that one of the major reasons for sport is the celebration of virility, and this is what stigmatises athletes. And I feel like that they would be shocked if they knew how many men would have to compete with women, and psychologically, that would be de-masculinising athletes because there is a jock man mentality among athletes…. So we realise the whole sexist foundation of this segregation – de-masculinisation. We are not worried about de-feminisation in sport; we are worried about de-masculinisation. (Hinkle, OII USA, 2011) (Emphasis mine)

Hinkle stresses that sport organisers and men would be “shocked” if they knew how many men would not qualify to compete in men’s sports if they had to follow the same rules women have had to follow through time till today, that is not having a 46, XY chromosome make-up,
producing functional testosterone levels below ≥10nmol/L or not having typical male genitalia (internal and/or external). If they acknowledged this “virility” discrepancy, Curtis stresses that it would also “de-masculinise” these male athletes. So in consciously avoiding this from happening, only women are tested, regulated and “de-feminised”. This further suggests that only female athletes are and can be classified as cheaters or ‘unreal women’ if they challenge or threaten the powers of “virility” and “masculinity” in elite sports. For fear of having men’s virilising powers diminished or having men suffer from “de-masculinisation”, sport organisers uphold these somatechnologies. These then shape and recycle the idea that men are always “virile” and “masculine” and that only women can challenge gender idea(l)s. This further punishes female athletes who challenge or threaten these binary constructs. That said, by contesting the use of such somatechnologies, Hinkle is nevertheless also taking part in marking and shaping the body “at the most profound level” (Sullivan, 2009, p. 314).

Inter[sex]phobia – Phobia Against Athletes with Intersex Variations

When I discussed with the participating organisation representatives what they believed is the underlying or even ‘hidden’ logic behind developing and institutionalising the testing technologies, Kromminga explained that interphobia is one key motive behind the hostile attitudes:

It is about interphobia. It is like saying to someone, “she is not a woman”, or something, “she is a man”. That person does not even have to be intersex, it is just gender phobic. It is generally sexist. You have to look a certain way – women have to look a certain way. And women saying to other women that “you are not a woman”, is sexist. It is an insult. (Kromminga, IVIM Germany, 2010)

Klöppel further highlights that interphobia in elite sports helps to “purify” female bodies and female sports from those who are not considered “pure” enough to be there:

You could also say that all these rules are meant to keep these people out of sport – to purify sports from these freaks. We do not want to see you on our screens… I think they are already struggling with these freaks who are doped – they probably say that this is enough of a problem and we do not need these trans- and inter-freaks so we cannot deal with that either… Anyway, I believe that the idea of purity never worked and they always tried to re-install it in order to get rid of too much problems disrupting their ideal notion of sports. (IVIM Germany, 2010) (Emphasis mine)
This sex and gender angst against female athletes with intersex variations/HA – inter[sex]phobia – that Kromminga and Klöppel are describing is however only taking place within female sports, not male competitions. Kromminga and Klöppel suggest that this “phobia” and “purifying” somatechnology against these female athletes are rooted in the desire of the IOC/IAAF, spectators, donors and other female athletes to not need to see these “freaks” on the arena or on their screens. If so, what is the underlying logic for this “phobia” and “purifying” somatechnology against female intersex athletes as it seems that the IOC/IAAF are consciously avoiding investigating intersex variations in male competitions? Perhaps, as suggested by Klöppel, similarly to Hinkle, one way for the IOC/IAAF to “purify” female sports is by regulating trans- and intersex “freaks” as they assumedly challenge the ‘level-playing field’ in women sports. I will consider this debate further, in the next section.

Klöppel stresses that the “purity” logic has never worked as the IOC/IAAF have always tried to revise their “purity” standards, by discontinuing the name and the testing technology four times while the ideology to “purify” women’s sports through the identification of female athletes with intersex variations has continued. The shift concerning which intersex variations to identify and classify as impure thus highlights the ways in which the “purity” idea has continued but the specifics of the “purity” ideals have shifted. The hostile environment in turn confirms the need to revise the somatechnologies that gave these impurities prominence.

This is when the discussion and atmosphere of “transphobia” and intersexphobia in sports become applicable again. Cavanagh and Sykes (2006) argue that “transphobia” haunts male-to-female (MTF) trans* athletes, as it is believed that through their transformation, they are afforded competitive advantages over non-trans* female athletes. Whether this competitive advantage is similar or comparable to female athletes with HA has not been extensively researched. It may even be questionable whether it is fair to compare them. In all of the oppositional language evaluating whether female athletes with intersex variations are afforded unfair competitive advantages, there is little mention of the latent intersexphobia they may endure in sports medicine and elite sports.

That said, I do see similarities between trans* athletes and athletes with certain intersex variations/HA and how they both are being “haunted” (Holmes, 2009, 2011) and caused to experience an atmosphere of phobia due to their difference. Certain intersex athletes, like MTF trans* athletes, may be policed and regulated for the overt reason of ‘unfairly’ challenging the ‘level playing field’, but for the covert reason of threatening the dominant habitus of sex, gender and body status (Cavanagh & Sykes, 2006, pp. 79, 92; Wahlert & Fiester, 2012, p. 20). Nevertheless, it is equally important to complicate the notion of intersexphobia and the ways in which it is understood and applied by intersex organisations within and around the context of
elite sports, especially when the category of intersex is phantasmal – a socially as well as genetically constructed figment (Holmes, 2011, pp. 394, 404; Morland, 2001, p. 542).

The IAAF/IOC have maintained that the objective of their somatechnologies identifying and regulating certain intersex variations/HA in women sports, is to “protect” woman against “unfair competition” (IOC Medical Commission, 1984b, p. 24). This is because they “give rise to a particular concern in the context of competitive sports” (IOC, 2012a). The next section will flesh out to what extent the intersex organisations share their fairness concern, and to what extent their advantage is viewed similarly or differently to other genetic make-ups advantageous in elite sports.

Too Good to Be a Woman – Conform or Vanish

[S]omatechnics [is deployed] to think through the varied and complex ways in which bodily-being is shaped not only by the surgeon’s knife but also by the discourses that justify and contest the use of such instruments... [T]he conceptions of, debates around, and questions about specific modificatory practices are themselves technologies that shape corporeality at the most profound level... (Sullivan, 2009, p. 314)

...we understand and endorse the legitimate concerns that intersexed athletes with an unfair physical advantage shouldn’t be allowed to compete with “regular” female athletes, we also feel strongly that those intersexed athletes who do not have any unjust advantages should have the right to enter female competitions without fear of being excluded “on suspicion” and without due process. (Truffer, Zwischcengeschlecht.org, Switzerland, 2009)

The second passage above is taken from an open letter written by Zwischcengeschlecht.org to the IOC in response to the Semenya controversy in 2009. Its content invites discussions about the somatechnologies legitimating the regulation of athletes with intersex/HA variations based on the assumption that their genetic make-up increases their athletic superiority. What symbolises or determines an inborn, nevertheless unfair, physical advantage is central to this debate. As elite sport is partially about the constituting of rules for athletes to follow so as to create a ‘level-playing field’, the need to understand where the line between fair and unfair competitive advantage begins and ends, is relevant. Whether drawing such lines resolves or creates further problems is also a significant consideration. These enquiries are by no means clear-cut, and as this section will examine, intersex organisations are not always of the same
mind in how they approach these somatechnologies or unravel these anxieties. This section thus considers the ways in which these organisation representatives are through their own subjective advocacy also “shaping corporeality”, whether they agree with or “contest” the technologies deployed by the IOC/IAAF.

When meeting with Truffer and Seelenlos I asked for them to clarify the statements in the open letter to the IOC posted on their website in 2009. Seelenlos highlighted that the ways in which Semenya and the Indian 800m runner Santhi Soundarajan were questioned promoted unaccountability and inconsistencies as these athletes were questioned on a ‘case-by-case’ basis. Seelenlos instead suggested a somatechnology open for scrutiny but through which a small number of female athletes would also be disqualified and unable to compete:

We would have no problem with “that much and that much testosterone you can have in your body to pass, but what is more, you fail”. But you also have to take into consideration the ability of the body to absorb the testosterone [functional testosterone]. Our stance is that there have to be regulations which are transparent, and which are declared, then you have something like a due process… [and] the consequence would be that this person is not allowed to compete as a female in female sports. And yes, this is a tough call and of course you will probably not be able to find regulations that are fair in an absolute way and to everyone. But we feel that it is better to have something which is less than perfect, but which is in the open and can be criticised in the open and can be ameliorated when substantial criticism arises. (Seelenlos, Zwischengeschlecht.org, Switzerland, 2010)

This proposal suggests that a female athlete’s sex and gender reading should not lie in the hands of a panel of experts. In lieu of that, if an athlete identifies as a woman then they are eligible to compete as a woman, so long as their functional androgen levels are within the ‘female range’. Anything above that range would result in ineligibility. It is important to clarify that in this view, ineligibility cannot be transformed into eligibility through a cocktail of medicines or medical interventions, as Zwischengeschlecht.org believe these technologies harm the athlete (Seelenlos, 2010). This proposal, open to criticism, instead suggests that if some women are born with elevated functional androgen, these athletes are understood as genetically superior. Thus their participation should be limited as their presence disturbs the ‘level playing field’. How these levels of functional androgen would be detected and where to draw the line, remain somewhat vague. Since the organisation is against the technology of testing female athletes on a

126 The case of Santhi Soundarajan will be discussed in more detail in last analysis section of this chapter.
127 Which the IAAF has determined is below 10nmol/L (IAAF, 2011a, p. 12, 2011b, p. 3)
case-by-case’ basis, the suggestion may be that all female athletes should be tested before competing.

This proposal underpins a continuation of the IOC/IAAF somatechnologies reasoning that some genetic make-ups in the female camp interrupt the ‘level playing field’ and should consequently be eliminated from female sports. Similarly to Foucault’s discussion on biopower (2003, pp. 253-260) and Diprose’s discussion on the “common good” (1994, p. 131), their motion suggests that a small number of female athletes will have to suffer ineligibility to create and maintain a consistent and transparent policy. These somatechnologies would continue producing ‘normal’ as distinct from ‘abnormal’ corporealities in female sports. This proposal would also allow a continued discrimination against how fairness and inborn genetic make-ups are interpreted, produced and disciplined in female sports juxtaposed with how they are viewed and managed in male sports. Zwischengeschlecht.org’s proposal is thus a technology that would continue to only target female athletes and to ‘limit’ how good they are allowed to be, which “justifies” and reproduces, to some degree, the current somatechnologies put in place by the IOC/IAAF.

Before the OII human rights representative, Hida Viloria, was invited to present her views on the intersex and elite sports discourse in Lausanne (October 2010), Viloria had elaborated on the issue of fairness in a 2010 OII petition, and questioned why female athletes were singled out when male athletes can also benefit from natural competitive advantages:

The issue which intersex female athletes present is one of “fairness.” However, as many have pointed out, unfair physical advantages are endemic to sports. Men with low testosterone levels have been muscled out of medals since sports began without calling for their rivals to be banned from competition. In addition, many male athletes have been shown to possess physical conditions that give them advantages in their particular sport. The only fair solution is for the IOC to celebrate, not regulate, “masculine” women’s physical talents, just as it does men’s. (Viloria, OII USA, 2010)

Viloria essentially questioned how strong female athletes are allowed to be before somatechnologies question their participation and why, simultaneously, male athletes do not have their superiority questioned at all. Viloria argued that whichever way a body is constructed, whether affording competitive advantage or not, that body and what it can achieve should be commended, not punished. The somatechnics Viloria applies to this scenario is that the “physical talents” produced by ‘natural’ female bodies should be “celebrated” equally to men’s. After all, elite sport is the hub where genetic and physical advantages should be celebrated – in
both gender camps. When it comes to certain competitive advantages related to female intersex variations, however, other rules and technologies seem to apply, as these advantages are disciplined by the norms of the “normalizing society” in power (Foucault, 2003, p. 253).

Sally Gross, the founder of the Intersex Society of South Africa (ISSA), similarly to Viloria, questions why only female athletes with certain intersex variations are tested and why this soma-technology is not also used on male athletes with certain intersex variations. Gross stresses that if the IOC/IAAF pursue this ‘hunt’ in the name of ‘fairness’ they should do it in both gender camps:

This is something I find difficult. If they are going to discriminate and exclude and make decisions, why not make it on each side?… These individuals [male athletes] are not even tested – but why not? If you are going to be discriminating… why not do it thoroughly? (Gross, ISSA SA, 2010)

After the IOC came out with their press release on the management of HA athletes, (April 2011) Viloria continued to contest against how gender biased their somatechnologies were:

…many athletes have conditions that give them physical advantages, and that seeking to remove the advantage of only women with Hyperandrogenism is discriminatory. This is demonstrated by the fact that men with the intersex variation Diplo, a.k.a. XYY, produce higher levels of testosterone than other men and could also be said to have an “unfair physical advantage” over their peers. Yet no one is insisting they lower their testosterone levels to the “normal” male level. (OII USA, 2011b)

Both Gross and Viloria reason that if the IOC/IAAF argue that they are identifying and regulating HA athletes from a “fairness” perspective, then they are contradicting themselves as male athletes with a host of genetic make-ups also have competitive advantages over other male athletes. Why are these compositions not scrutinised or eliminated on the same basis? Viloria and Gross critique how the technologies used by the IOC/IAAF are favouring male athlete's genetic make-ups, potentially contributing to “unfair physical advantages” while disciplining and regulating women in similar situations. According to both Gross and Viloria, the IOC/IAAF should either use somatechnologies that consistently “discipline” and “regularize” both male and female bodies and “unfair physical advantages” or consistently use technologies that celebrate them in both camps. Through this example, it becomes clear that the IOC/IAAF
use different somatechnologies in justifying why female intersex variations/HA should be identified and regulated, while allowing male intersex variations such as Diplo, to go unnoticed.

Tim Noakes has also expounded the differences in the fairness and biological advantage politics between female and male athletes. While female athletes’ superiority is penalised, male athletes are seen as athletic wonders:

What if a male athlete has a biological advantage? You know what we call him? We call him “Usain Bolt”. This man Usain Bolt is a complete biological freak there has never been an athlete like him, so he is genetically different. But do we expel him? No. We say that he is the greatest athlete ever. So why should a male be treated that way? But when a female comes along, she is abnormal; we got to take her out. But that is the whole point with sports: the best are genetic freaks. (Noakes in Ginnane, 2011)

Noakes critiques the logic of casting female athletes who perform ‘too well’ as “abnormal” and subject to punishment whilst men with genetic make-ups which advance them in sport, like Usain Bolt, are celebrated as heroes. This inconsistent logic which is contested by Noakes and further analysed by myself is thus again a continuation of the “modifieratory practices” (Sullivan, 2009, p. 314) that keep on shaping and marking and positioning female bodies against male bodies and female performances against male athletic performances.

Complicating Fair versus Unfair Competitive Advantages

The topic of fair versus unfair competitive advantages becomes further complicated when the components of natural versus synthetic athletic advantages are added to the mix. Mani Bruce Mitchell, the founder of Intersex Trust Aotearoa New Zealand (ITANZ) claims that the IOC should be accepting and celebrating inborn genetic advantages in elite sports while regulating manipulated advantages:

We are talking about a genetic birth condition, we are not talking about someone who is artificially enhancing their bodies – we are talking about someone working on the raw machine that they were delivered as a result of genetics. …if you were going to, in some way, be punitive of people who had a birth condition which advantaged them, then you would have to say that Ian Thorpe128 is this swimmer who could no longer swim unless he made his feet normal – they would have to be

128 Ian Thorpe, a.k.a. Torpedo, is a multi-Olympic and World Championship Gold medallist, mainly in freestyle, from Australia. (Wikipedia, “Ian Thorpe”, 2012)
cut down. He could not have as big feet... That is the nonsense of it. (Mitchell, ITANZ NZ, 2011)

Mitchell proposes different somatechnologies for athletes who are born with a “genetic birth condition” that may advantage them juxtaposed with those who are “artificially enhancing their bodies”. For Mitchell it is vital to distinguish between athletes who willingly and not so willingly (forced or manipulated by a coach) enhance their bodies “artificially” to increase their chances of success, and individuals who are born with a genetic make-up which may give them a head start.

Mitchell is privileging the ‘natural’ over the ‘unnatural’ body and body enhancement, which is a somatechnology that would further complicate the situation for other athletes such as those categorised as trans* as they are dependent on either boosting or reducing their testosterone levels to fit their new gender category. This technology would similarly imply difficulties for athletes like the double below-knee amputee Oscar Pistorious who could only run and take part in elite sports by “artificially enhancing” his body through the use of prosthetic legs. Mitchell’s stance on somatechnology would thus complicate impaired and trans* athletes’ possibility to participate in elite sports as their “artificial” enhancement could imply unfair advantage over able-bodied athletes and those born with “genetic birth conditions”.

People also seem to be buying into the Olympic dream and vision of a ‘level playing field’ without considering whether this dream is realistic and without taking into account the potential discrepancy that exists between athletes depending on which social status and country they come from. It is of importance to note that the dream about fairness and a ‘level playing field’ undermines the discrepancies between athletes who are financially well off and not so well off and from the global north or global south. Their financial and geographic situation may promote or hinder their access to resources, from the most advanced training facilities, training technologies, equipment, clothes and trainer to the most nutritious food. These all have an impact on the ‘level playing field’ and thus shake the Olympic illusion about a realistic ‘level playing field’. Match-fixing also seems to further trouble this dream, where sporting organisations, sport officials and criminal betting organisations have worked together in scamming the ‘level-playing field’ in soccer, cricket and tennis games/tournaments (Ashton in AP & AFP, 2013; Norman-Culp, 2013).

As discussed in Chapter Five, the debate about genetic and inborn competitive advantages is not as clear cut as the IOC/IAAF may want it to appear. Functional versus non-functional levels of testosterone are equally not the sole reason why an athlete does well in their sport category (Fausto-Sterling, 1985, pp. 216-217; Karkazis et al., 2012, pp. 8-12). Viloria recounted
similar debates at the IOC meeting in Lausanne (October 2010). Here Viloria highlighted that “medical and scientific experts present were unable to demonstrate that hyperandrogenism results in athletic superiority. Rather, a presentation analysing a recent study (Healy et al., 2005) revealed that there is a substantial overlap between serum testosterone levels in male and female athletes” (Viloria & Martínes-Patino, 2012, p. 17). The participants in the meeting of experts further agreed that female athletes with the intersex variation CAIS\textsuperscript{129} were often performing exceptionally well in their individual sport category – despite being insensitive to their androgen production and thus, arguably, unable to make use of it due to it being non-functional (Viloria, 2011a). This further highlights the discontinuities within the official IOC/IAAF policies and those unofficial discussions taking place behind closed doors. It does so as these meetings acknowledge that the functional androgen production levels may have less influence in affecting an athlete’s athletic performance than non-functional androgen production levels (i.e. there may be other characteristics in athletes that foster athletic performance, and these may not be linked with functional androgen levels) (Karkazis et al., 2012, pp. 8-12; Viloria, 2011a; Viloria & Martínes-Patino, 2012).

Viloria also commented that male athletes have lower functional testosterone levels than the average female athlete, which again suggests that non-functional and functional testosterone levels may be a smaller factor than others in an athlete’s superior or non-superior athletic performance (Viloria, 2011a; Karkazis et al., 2012, pp. 8-12). For that reason, considering to what extent testosterone affects athletic ability in conjunction with a host of other variables is a valid question to pose. It is especially important within a framework challenging the Olympic ‘level playing field’ illusion, as this may alter the agenda regarding the hunt to identify and regulate athletes with functional HA.

When interviewing representatives of intersex organisations I asked the participants what they believed the reasons were for the IOC/IAAF to keep pushing the unfair competitive advantage agenda in only female competitions, even when it seems questionable ethically and scientifically. Hinkle (OII USA, 2011) and Klöppel (IVIM Germany, 2010) argued that one of the reasons why women are sex and gender verified and men are not lies in the history of elite sports. Klöppel, for example stressed that the hormone (testosterone) was originally defined around the same time that the first suspicions against ‘fraud’ female athletes were being voiced (in the early 1930s) and this historical event has continued to stereotype the notion of testosterone and superiority (IVIM Germany, 2010). Hinkle contends that elite sport is about reaching a level of excellence – a pursuit which is strongly linked with masculinity and manhood. This ideal of reaching for perfection puts men and their gender role at the centre of

\textsuperscript{129} Complete Androgen Insensitivity Syndrome (CAIS)
elite sports and athletes who make it to the male category can thus be nothing but men and do not require being tested:

So what you are really dealing with is not the categories of male and female…you are dealing with people who have achieved manhood and the rest of the people… Because I think that if you are an exceptionally good athlete then you are not a real woman. I think that there is a task understanding within the sports community that once you reach a certain level of achievement, how can you be a woman? (OII USA, 2011)

Hinkle suggests that the continuous and discontinuous testing somatechnologies of female athletes are connected with the idea that elite sport is about celebrating and achieving masculinity, which implies a key difference between male and female athletes. Hence men who achieve masculinity are not in need of technologies assuring their manhood. On the contrary, as women are incapable of achieving such excellence whilst holding on to what it means to be a woman, if they by any chance get close to the territory of achieving what a ‘man’ achieves, they cannot be women and must thus go through the somatechnologies of being tested.

Similarly to Hinkle, both Kessler and McKenna suggest that the male gender is the “primary construction” in the social construction of gender (1985, p. 159), which here invites an obvious parallel: that excellence in elite sports has only one role model – the male and masculine athlete while the rest are second grade. Hinkle goes on to suggest that female athletes who disturb this superior ideal and representation will have their femininity questioned because ‘genuine’ female athletes cannot and are not meant to reach these levels of excellence. This may further explicate why female athletes who indeed demonstrate exceptional prowess are questioned, as it is problematic for a female athlete to be too good and still remain a woman. A female athlete who interrupts and challenges what is considered a male attribute, must therefore be engaged in foul play either through the use of performance enhancing substances, or by having an HA variation (as the vexed situation of men masquerading as women is no longer deemed a concern in elite sports\(^\text{130}\)).

Like Hinkle, Mitchell supposes that if female athletes come close to “achieving” and performing like men, they challenge that which only male athletes are considered the owners of:

…there is something about a female athlete who… is running nearly as well as male athletes – has a physicality that is very masculine. So that challenges that whole

binary construct... The interesting thing with Caster, the press commented that she was too masculine and that she had an advantage over her competitors. My hunch would be that if her gender had been male, they would not be running around being worried about her not being masculine enough. She only comes to attention, because she is winning. We are not running stories about people who do not win, who are not male enough or not female enough. It is only because of her exceptional ability that she comes to the attention. (ITANZ NZ, 2011)

For Mitchell, Semenya’s anxiety-provoking body only came into range for sex and gender verification when she won the 800 meters. Mitchell questions whether or not Semenya would have been tested had she not won. This notion further emphasises the continuity of the idea that female athletes who challenge the binary body and embodiment idea(l)s and win must somehow be ‘too good to be women’. As a penalty, their eligibility, legitimacy and belonging must be questioned by the somatechnologies endorsed by other female athletes, spectators and sports organisers alike.

On this issue, Viloria differs from Mitchell and argues that the way the athlete looks weighs heavier than whether they win or not, as non-questioned female athletes often outperform those who are questioned and tested:

The real issue is thus not one of unfair advantage, but of some people’s inability to accept women who appear masculine. This is evident by the fact that, although some claim it was only Caster Semenya’s stellar performance that called her into “suspicion,” runner Pamela Jelimo, who sports long hair, has outperformed Semenya and was not forced to undergo gender verification testing. (Viloria, OII USA, 2011b)

As the runner Pamela Jelimo outperformed Semenya and has not been, to Viloria’s knowledge, scrutinised by the IOC/IAAF gender/HA testing technologies, the case is made that looks weigh more than whether one wins or not. By drawing on the arguments made by Mitchell and Viloria, it becomes apparent that they have different understandings as to which somatechnology “disciplines” the female athlete first. In other words, is it the female athlete’s non-normative body and looks that prompt an investigation or her non-normative athletic performance? Perhaps it is not either or, but a combination of them both.

The ‘hidden’ agenda and the ‘official’ discourse of why a female athlete gets tested, can be further complicated by Noakes who observed in relation to Semenya that she was not faster than the fastest female 800m that had ever run. Hence, “how could it be possible to argue that
Semenya has an ‘unfair’ competitive advantage?” (in Ginnane, 2011). Semanya’s personal best was recorded at 1:55.45 in Berlin 2009 while the Czech runner Jarmila Kratochvílová recorded 1:53.28 in Munich in 1983. In between them there are a host of female 800m runners who have recorded better times than Semenya. (IAAF, n.d.a, IAAF, n.d.b) These speculations about why certain female athletes may be tested and others are not further help me to consider how these soma-technologies are institutionalised.

The Somatechnology of ‘Reverse Doping’

Whilst the IAAF/IOC HA policies stipulate that refusal to comply with the eligibility rules may result in ineligibility, they fail to clarify what complying exactly means, especially what type of medical and/or surgical treatments the athlete may need to undertake in order to become eligible. The condition to undergo medical treatments in order to eligibly compete met with a great amount of criticism in my talks with the intersex organisations. Klöppel, for example stressed that “the chance to have a competitor who has an advantage because of being intersex is so minor that, in my opinion, there is no real reason to complain about these intersex cases” (IVIM Germany, 2010). Klöppel further highlighted that the potential “problems” female HA athletes may have to endure due to the HA rules and regulations would with great certainty be more problematic on the HA athlete’s health and career, than the “problems” non-HA athletes may endure for accepting HA athletes’ presence in female sports. For this potential reason of harm, Klöppel urged that non-HA athletes should “show solidarity with intersex athletes” (IVIM Germany, 2010) rather than facilitating the process whereby HA athletes are identified and compelled to be medically treated.

Klöppel here draws attention to perspectives which the IOC/IAAF and non-HA female athletes seem to fail to examine. This highlights a potential irony of the current narrative, where the body and athletic performance of the athlete representing the majority of the population is “counted as socially viable” (Diprose, 1994, p. 131) and thus being treated as the victim whose right to ‘fair play’ has been compromised by the HA athlete. Maintaining this illusion of a ‘level playing field’ and in establishing a “common good” they come “at the cost of denigrating and excluding others” (Diprose, 1994, p. 131), which in this case is the HA athlete. Klöppel here turns the argument and instead proposes that the “common” can be sympathetic to the minority as the somatechnology of normalization may harm them more than their presence in female competitions. To achieve a fair view, what may need to be further teased out is why there seems to be a discrepancy in how male intersex athletes with low levels of testosterone are

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131 This title is inspired by Hida Viloria’s article (2011b) Gender rules in sport - Leveling the playing field, or reversed doping?
provided “testosterone boosters” to reach healthy levels of testosterone while female athletes with AIS variations are not.

Alice Dreger has for example stressed that the current recommendations on HA are contradictory as male athletes producing too low levels of functional testosterone can have their testosterone levels increased under the World Anti-Doping Agency’s (WADA) “therapeutic-use exemptions” waiver. This is seen as acceptable as it is claimed the existence of too low levels of testosterone is a health concern for men. Dreger gives the example of men born with the intersex variation Klinefelter’s syndrome (XXY make-up) and confirms that WADA has provided athletes who have Klinefelter’s syndrome testosterone boosters to help them reach healthy male testosterone levels while participating in elite sports (Dreger, 2009c, 2009d). The contradiction here seems clear: instead of leaving the athletes as they were born, the IOC/IAAF improve the health and the athletic ability for the male athletes with Klinefelter’s syndrome while possibly harming the health and the athletic ability for the HA athlete. The justifications for using the different somatechnologies stems from different ideologies, suggesting that it is every man’s right to compete with healthy levels of testosterone, while a woman can only compete with a level that the IOC/IAAF have decided is their ceiling.

This discrepancy in identifying, regulating, marking and normalising androgen/testosterone production levels in bodies competing in either male or female sports also seems contradictory when juxtaposed with the argument delivered by Klöppel. In this case, the minority population (the male athlete with Klinefelter’s syndrome) seems to be treated as a victim in not producing high enough or healthy levels of functional testosterone and is compensated for it by being provided “testosterone boosters” to become better and healthier. However, when we are looking at female athletes born with AIS, CAIS or PAIS who allegedly do not respond to their androgen production, there is no indication of the levels of androgen improving their athletic abilities. From a principal fairness perspective, again, why this discrepancy?

In those cases where athletes with functional HA choose to comply with the rules and undergo treatment, it is worth examining what side effects these treatments may have on their health, wellbeing and career. Kromminga points out that the various procedures for suppressing hormones, taking androgen blockers or removing gonads, may involve life-long implications:

It is never as healthy, as you take chemicals and there are no long-term studies of what it does to your body. From my own personal experience and from others I know, it leads to health issues if you have to, and the earlier you have your gonads removed the worse the health issues are later in your life. And if you are a
professional athlete it has to do with your muscles with your bone structure, even for your brain, it is not only for building up muscles, but for daily survival. (IVIM Germany, 2010)

Kromminga suggests from her own experience, that removing the gonads may have harmful effects on health later in life. Being on a replacement therapy may do more harm than good as there are few reliable long-term studies investigating this phenomenon. This highlights how a somatechnology that serves to “protect” the “common good” affects the bio of the HA athlete in a disadvantageous fashion. Here a ‘natural’ production of androgen is now being artificially replaced. And this, according to Viloria is a somatechnology of “reverse doping” (2011b).

Hinkle echoes Kromminga’s concerns and wonders what, specifically, the athlete has to submit to in order to compete, and whether the athlete is fully informed about the potential consequences the treatments may have on their health:

- Feminisation procedures, androgen blockers that would reduce the levels of functional androgen within your system, could be very disturbing to someone. Androgen blockers are a medication that actually suppresses the production of androgens, so it would actually lower the amount of testosterone or androgen being produced and I am hoping that that would be the only requirement. But I still feel that that would be very upsetting to many women… because it is not just something that affects your body; it is something that affects you psychologically as well… I do not see anything wrong in giving people options and informing them about their body; it is when you make a requirement to make alterations that are not medically necessary to compete that is where the human rights issue comes in to play. (OII USA, 2011)

Both Hinkle and Kromminga posit that androgen blockers, in combination with an increased intake of oestrogen, can have negative impacts on one’s health and wellbeing all of which can affect one’s athletic ability. Recent research also suggests that a raised intake of oestrogen over a longer period of time may increase the likelihood of mortality from breast cancer, as well as other health disadvantages (Chlebowski et al., 2010, pp. 1684, 1690; Karkazis et al., 2012; Viloria & Martínez-Patiño, 2012, pp. 17-18).

Through these discussions, it becomes evident that all these voices represent “subjective” views about which bodies and performances should be identified and regulated and which should not. This again implies that “all bodies are always already marked” (Sullivan, 2005, p.

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132 Zer is a gender neutral pronoun.
depending on their own “embodied cultural location” (Morland, 2009a, p. 194). These subjective experiences and positions in reading the body and performance thus make “certain somatechnologies intelligible as body modification” and others not (Morland, 2009a, p. 194). And this “challenges us to think about the embodiment of all agents” (Morland, 2009a, p. 194), including those who represent intersex organizations.

Although Hinkle contests the idea of compelling someone to “make alterations that are not medically necessary to compete” or to live a healthy life, he is still open to the idea that the HA athlete can be informed by the IOC/IAAF medical representative about their body. This may result in the IOC/IAAF medical representatives imposing their subjective view of what the body should and should not do and look like on the athlete in question. The “embodied cultural location” of the IOC/IAAF medical representative may mean that the way they view the body and athletic performance is different to that of the HA athlete. This may then compel the HA athlete to submit to the somatechnology without it being understood as a “requirement”. For this very reason, it is important to consider the ways in which subjective views of the body and athletic performance of people in powerful positions may alter the agenda of which bodies, genetic make-ups and athletic performances are considered to be marked and regulated by rules to benefit the “common good” and which are not.

As the voices of these intersex organisation representatives may not represent those of the athletes who have been classified as intersex or tried and tested by the IOC/ISF testing technologies, in the next section I explore stories and experiences by these female athletes. Here I will also make out how their subjective understandings of their bodies and athletic performances have influenced how they felt about the ways in which they were treated by various sporting organisations and other female athletes. These athletes are Eva Klobukowska, Maria José Martínez-Patiño, Santhi Soundarajan, and Caster Semenya, who all represent different eras in the history of sex/femininity/gender testing in female elite sports.
Personal Accounts of Women Tried and Tested\textsuperscript{133}

The body implies mortality, vulnerability, agency: the skin and the flesh expose us to the gaze of others but also to touch and violence. The body can be the agency and instrument of all these as well, or the site where “doing” and “being done to” become equivocal. Although we struggle for rights over our own bodies, the very bodies for which we struggle are not ever only our own. The body has its invariably public dimension; constituted as a social phenomenon in the public sphere, my body is and is not mine. (Butler, 2004, p. 21)

It’s a dirty and stupid thing to do to me. I’m FED up with it all. I’ve worked very hard for my victories. I know what I am and how I feel. I’ve been very aware of all the unhealthy sensationalism in the press but I wasn’t expecting anything like this. I think it’s a hypocritical and dirty business. I object to officials engaging in this kind of thing, maybe because they have nothing better to do. (Klobukowska in Tearful Eva: Medal stripping dirty stupid, 1968, p. 35) (Emphasis in original)

This section further focuses on the “insurrection of subjugated knowledges” (Foucault, 2003, p. 7) and considers how the “embodied cultural location” (Morland, 2009a, p. 194) of female athletes that have been tried and tested have marked the ways in which they read and regulate their bodies and athletic performances as well as those of others. This section examines, in line with Butler, the ways in which the female athlete who has been tried and tested is and is not in possession of their body as the reading and understanding of their body is influenced by socio-political, medical and subjective technologies that collectively regulate and police their bodies and athletic performances.

Eva Klobukowska. This name is repeatedly cited as the first female athlete to be disqualified from female competitions after the introduction of the sex chromatin tests at the European Cup in Kiev 1967 (Snider, 1967). As a result, the IOC and the IAAF\textsuperscript{134} stripped her of all her medals and had all her records erased from the record books in 1968 (Larned, 1976, p. 11). As the quote above suggests, the sprinter Klobukowska did not accept the verdict or the findings of the sex tests suggesting that she was something \textit{other} than a woman. Instead, she described the chromosome examination a “dirty business” especially when she knew what she was and what she identified as.

\textsuperscript{133} This title is inspired by that of Martínez-Patiño’s account in Lancet (2005, p. s38).
\textsuperscript{134} Klobukowska won a gold medal in the 4x100m relay and a bronze medal in the 100m sprint at the Tokyo Olympics in 1964. (OCXVIII, 1964b, pp. 90, 97) She also won three medals at the European Championships in Budapest 1966 – gold in the 4x100m relay, gold in the 100m sprint and silver in the 200m sprint. (Athletix.org, 2012)
Klobukowska, who had passed the ‘on-sight inspections’ of 1966 and 1967, informed the Chicago Daily News reporter that she “was in favour of a visual test but not more” (Tearful Eva: Medal stripping dirty stupid, 1968, p. 35), no doubt because she had previously passed these testing technologies and approved of their findings. However, somatechnologies which revealed deeper and perhaps more private information, such as her genetic make-up, was something she did not support as those findings did interfere with her own and “subjective” understanding of what constituted a female identity. Klobukowska’s vituperative objection to her femininity being rejected by the European Championships organisers likely indicated her feeling that the medical delegates believed they held the real “truth” concerning her sex and femininity. This “truth” was handed to them with the help of sex chromatin tests.

This is also where a real-world example of Foucault’s articulation of the disciplinary and regulatory effects of medicine through biopowers takes form:

…[m]edicine is a power-knowledge that [has] both disciplinary effects and regulatory effects… [T]here is one element that will circulate between the disciplinary and the regulatory… [:] the norm… The normalizing society is therefore… a society in which the norm of discipline and the norm of regulation intersect along an orthogonal articulation. (Foucault, 2003, pp. 252-3 in Cadwallader, 2009, p. 20)

As medicine took over in providing the ‘truthful’ answers regarding Klobukowska’s sex and femininity, in opposition to her own assertions, the power-knowledge influence of medicine not only regulated and nullified her subjective and “embodied cultural location”, but also disciplined her through the lever of disqualification. This way her own outlook concerning her sex and femininity became untrue and irrelevant. The logic of trusting science in this case lies in the sex chromatin technology following a rational, testable formula whereas, asking someone for their feeling or belief about whether they are a woman/man cannot be scientifically tested or proven and therefore cannot easily be measured or regulated.

In the 1968 Chicago Daily News, Klobukowska also lamented that she would find it unfair if her medals and records from 1964 were to be taken away from her, as the sex chromatin tests had not yet been introduced (Tearful Eva: Medal stripping dirty stupid, 1968, p. 35). In 1964, under the IAAF ruling in which all of the female athletes in athletics had to provide certificates confirming their femininity at the Tokyo Games (OCXVIII, 1964, p. 170), she had passed as a woman: both in her own eyes and those of the medical practitioners. Thus, the 1967 ruling against her could be seen as sending a rather contradictory message: the “truth” about her sex and femininity shifted as the somatechnology shifted.
Another athlete disqualified for similar reasons to Klobukowska – not having a 46, XY make-up – was the Spanish hurdler Maria José Martínez-Patiño. She had successfully passed a sex chromatin test in Helsinki (1983), but forgot to bring this certificate to the 1985 World University Games in Kobe, Japan where she was a competitor. Martínez-Patiño has talked in several academic journal articles about her tests and trials in Kobe, where she had to re-perform the tests. She explains below how the team doctor informed her, in front of her team mates “that there was a problem” with her femininity test results and that:

I would be unable to compete in that day’s race. Our team doctor advised me to consult with a specialist when I got home and urged me in the meantime to fake an injury, so that no-one would suspect anything untoward. I was shocked, but did as I was told. (2005, p. s38)

The fact that she had successfully passed the same tests in Helsinki not only troubles the scientific accuracy and “truth” about the sex chromatin testing technology, but also raises questions about the swiftness of the team coach and herself to accept the results in Kobe instead of critiquing them as potentially inaccurate. Similarly to “the tiny, skinny girl” (Seidler in Larned, 1976, p. 9) who was disqualified at the ‘on-sight inspections’ in 1967 (in Chapter Three p. 75), Martínez-Patiño obediently accepted the test results and criticised herself instead of rationalising that there was something wrong with the testing technology, even though she had passed the tests in Helsinki two years earlier. The confusion and despair expressed by Martínez-Patiño, guessing at the findings of the test results as possibly diagnosing AIDS or leukaemia indicate (2005, p. s38) that she also lacked information about the specifics of the femininity tests, in the same way as did the questionnaire informants at the Games in Lillehammer 1994 (Chapter Six p. 147). This may clarify why she simply accepted the verdict rather than rejecting it. Her acceptance of the test results and the authority of medicine over athletes further show how the somatechnologies worked and subjectively continued through her.

When Martínez-Patiño returned to Spain, she underwent a range of tests to come to grips with why she had not been allowed to compete, especially when she, her family and her loved ones had never imagined that she “was anything other than normal” (2005, p. s38). This would be a logical conclusion for someone who identified as a woman, was engaged to a man, subjectively described herself as having “breasts and a vagina” and had thus never had a cause to question her femininity before. When the tests were revealed, Martínez-Patiño explained the results, in one of her personal accounts. She stated: “I have androgen insensitivity [syndrome

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135 Read further in Martínez-Patiño, 2005; Martínez-Patiño et al., 2010; Viloria & Martínez-Patiño, 2012.
AIS], and don’t respond to testosterone. When I was conceived, my tissues never heard the hormonal messages to become male” (Martínez-Patiño, 2005, p. s38). She continued that the AIS “genetic difference gave me no unfair physical advantage” implying that from a fairness perspective she should not have been disqualified because her AIS condition meant that she could not take any advantage from her androgen production. This statement distinguished her from those female athletes who might have benefited from their intersex variations, which the IOC/IAAF still maintain is a concomitant side-effect of all HA variations.

In the article “Reexamining rationales of “fairness”: An athlete and insider’s perspective on the new policies on Hyperandrogenism in elite female athletes” (2012) Martínez-Patiño, together with Viloria, address the HA inclusion issue. Here, the authors argue “that all athletes who have grown up and continue to live as female [should] be eligible to compete as such without having sanctions imposed against them” (Viloria & Martínez-Patiño 2012, p. 18). This is irrespective of whether they have an HA variation or not. This is relevant in the context of contemporary HA debates as it illustrates that Martínez-Patiño does not believe that HA athletes should be ruled out or conditioned to undergo treatments to eligibly compete as women. The key argument for her is that the person identifies as a woman and has done so since childhood.

Such an approach can however, constitute problems for MTF trans* athletes or athletes with intersex variations who may have realised that they identified as females later than their childhood. The last statement by Martínez-Patiño complicates the idea of when a gender identity is constituted and when one must have realised whether one identifies as a girl or a boy, especially when the formation and construction of the binary gender identities are disputed. Fausto-Sterling for example, stresses that “the development of sex and gender in humans is layered” (2012, p. 119) and believes that the gender development, especially, is “developmental…not a fixed body – but one that changes over time” (p. 113)\(^\text{136}\). Hence, because “sex and gender will remain a moving target” (Fausto-Sterling, 2012, p. 123) this layered and developmental nature of sex and gender indicate that these concepts are too complex and contentious phenomena for scientists, anthropologists, sociologist and let alone female athletes to agree on. Thus for Martínez-Patiño to state that a person must have identified as a female since childhood, can complicate things for female intersex athletes who have established their female gender identity after childhood due to their bodily experiences caused by their “embodied cultural location” (Morland, 2009a, p. 194).

\(^{136}\) Read more about Fausto-Sterling’s gender development theories concerning the historical evolution how the color preferences blue and pink have shifted over time (2012, pp. 109-118).
When it was officially established that Martínez-Patiño had a 46, XY genetic make-up, she was disqualified in a fashion far removed from that set out in the IOC/IAAF confidentiality procedures. Despite this open disqualification, she decided to fight and not silently accept the technology that had suspended her. Between 1986 and 1988, Martínez-Patiño fought her suspension and received help and support from the Finnish geneticist, Albert de la Chapelle and the American journalist and coach, Alison Carlson who both opposed the sex chromatin technology.

As highlighted by Martínez-Patiño (2005, p. s38), the scientific support by Carlson and a Spanish medical practitioner facilitated a change in her story turn, but she had to pay a high price for that:

Coverage of my case helped to trigger the end of chromosome-based testing. In 1988, the medical chairman of the International Federation for Athletics, Arne Ljungqvist, gave me license to run again. I paid a high price for my licence – my story was told, dissected, and discussed in a very public way – and my victory was bittersweet... [M]y experience has made me stronger; having had my womanliness tested – literally and figuratively – I suspect I have a surer sense of my femininity than many women. (Martínez-Patiño, 2005, p. s38)

Martínez-Patiño reveals that regaining her licence to compete again was “bittersweet” as the ways in which her story had been “told, dissected, and discussed” meant that the most intimate and private details about her identity and her body were not only discussed in the media, but also presented as a scientific ‘problem’ for scientists to debate and agree on before her right to compete was honoured. It was bittersweet indeed. Although her own truth and understanding about her womanhood and her right to compete as a woman were ultimately heard and respected, it was achieved with the help of and through certain scientists’ somatechnologies “contesting” (Sullivan, 2009, p. 314) those of the IOC/IAAF in keeping AIS and 46, XY female athletes away from the arena. As “bodies for which we struggle are not ever only our own” (Butler, 2004, p. 21), it is likely that she would not have received her license to run again were it not for the help of scientists and journalists. This episode thus shows that Martínez-Patiño was still subject to the subjective somatechnologies of scientists and the medical commissioners within the dominant habitus.

A disqualified athlete who did not receive the same level of support as Martínez-Patiño or regain her licence to run was the Indian 800m sprinter Santhi Soundarajan. Soundarajan had her sex and gender challenged by the Indian Olympic Association (IOA) after winning the silver medal at the Asian Games in Doha, 2006 (Soundarajan in Mitra, 2012; Soundarajan in
Sportspegeln, 2009). The puzzling part of the Soundarajan case is that she had competed in six international games and a multitude of national competitions and had never previously been challenged based on her looks or athletic performance. However, after the Doha Games, she was informed that she had to be tested. As a result she was confused as to who had mistrusted her femininity and ‘told on’ her to the medical commissioners. She herself had never questioned her femininity:

I do not know, who has told them that I am not a woman. I have told them that I am a woman… Nobody has [ever] questioned me. All the other athletes treated me as a female and as a friend… I did not think otherwise. I felt like a girl, like a woman only. I want to live like a woman and stay a woman only. According to me I am a girl… (Soundarajan in Mitra, 2012)

Soundarajan who came to know about the gender verification verdict after seeing the news, felt discriminated against by the IOA officials as they did not take an interest in supporting her investigation into the gender allegations, nor did they trust her “embodied subjectivity” of being a woman. According to her own understanding of femininity, she “felt… like a woman” and others had never doubted her femininity till this incident. The incident of Soundarajan and the IOA can be seen as an example of Foucault’s biopower in action. The IOA acted in a way that indicated that their subjective knowledge and the subjective knowledge of the one who reported Soundarajan to higher authorities, were qualified knowledges or knowledges qualified enough for the “required level of erudition or scientificity” (Foucault, 2003, p. 7). Soundarajan’s subjective knowledge was instead “disqualified as nonconceptual” and considered “naïve [and] hierarchically inferior” to the knowledges of the IOA and the person who had ‘told’ on her (Foucault, 2003, p. 7). Her knowledge was thus evaluated as too subjective to reach a “required level of… scientificity” (Foucault, 2003, p. 7).

Being accused of being a “cheater” and receiving little support around the controversy pushed Soundarajan to attempt suicide:

They consider me a cheat. They have no respect for me. Even the sports people look down upon me and they do not see me as an achiever. It hurts me a lot. When I go out people pass comments. I felt that I have had enough of this life…Unable to bear this anymore; I took poison and tried to commit suicide… I also want to live like others. I am also a human being like them. I do not know why they have done this to me. It has spoilt my life completely. [The Indian] Olympic Committee rejected
me and said I am not a woman. I am thinking I will tell them ‘I am a woman’.

(Soundarajan in Mitra, 2012)

Drawing on Butler, this incident proposes that “the skin and the flesh” of Soundarajan was exposed “to the gaze of others but also to touch and violence” by others (2004, p. 21). The violence she experienced by the “gaze” of the person who ‘told’ on her to the IOA lead to further violent touches and looks by the somatechnologies of the IOA in suspending her from further competing. The suspension, in turn resulted in societal “violence” where she had to endure the “gaze” and talks of people accusing her of “cheating”, which pushed her to attempt suicide. The quote by Soundarajan also highlights how the habitus Soundarajan found herself in, and the soma-technologies that refused her body and rejected her refusal of them, collectively continued to shape and limit her “corporeality at the most profound level” (Sullivan, 2009, p. 314). But this happened in different ways than it did for others, because of other discourses in her society.

What may further explain the poor treatment of Soundarajan, besides the fact that she was interrupting normative body and embodiment idea(l)s is that she belongs to the lowest caste of Indian society – the Dalits (Shapiro, 2012) – who correspondingly experience the most socio-economic disadvantage in India. Even though the caste system has been legally banned, as has racism, it still has a strong influence on how Indians from different castes are treated socio-politically. (Rao, 2010) This may have further deepened the “violence” she endured from others. Despite the “violence” she underwent, Soundarajan’s “embodied cultural location” (Morland, 2009a, p. 194) continued to impact her ways of contesting the IOA verdict: insisting that she would perhaps “tell” the IOA once again that she indeed was a woman and identified as one.

Another 800m runner who shares the quandary of being punished for something she had no control over is the South African sprinter Caster Semenya. Semenya won gold at the World Championships in Berlin 2009 and was required to undergo a host of tests to determine her eligibility to continue competing as a woman and to keep her medals and records. Her story is different to that of Soundarajan in that Semenya had an entire nation and two pro-bono lawyers supporting her battle against the IAAF gender query (Ginnane, 2011). Semenya, differently from any of the other controversies presented thus far, had her femininity originally questioned by the South African blog, Sports24, which had speculated that she was not ‘fully’ female (Adams, 2009; Ginnane, 2011). In this case, the IAAF picked up on these speculations and demanded that Semenya be gender verified, either before or after her competition. Athletics South Africa (ASA) who had kept Semenya in the dark regarding the charges against her, did not reveal to her that they and the IAAF had agreed that she would be tested after her run
The ways in which Semenya was “challenged” highlight how spectators, in the form of bloggers, are provided a privileged position in determining whether an athlete should be tested or not. Thus, the knowledge and the “embodied subjectivity” of spectators were qualified “true” and “scientific” enough to gender interrogate her.

While the IAAF investigation was taking place and Semenya was suspended from participating in any competition, she allowed a BBC documentary team to follow her for a few months and document the process. When asked how she felt about being gender investigated and having her femininity questioned, she answered:

What makes a lady? Does it mean that you are wearing skirts and dresses, that you are a lady? No… Yeah I am a lady… I have those cards of being a lady… Yes, I have got a deep voice, I know. I might look tough so what are you going to do? Do you think you can change it? No. If someone was born the way she was born or he was born, are you going to go and blame him? Or are you going to blame God? Whose fault is that? Nobody’s! (Semenya in Ginnane, 2011)

Semenya’s position was that she was born the way she was born and there was nothing one could do about it, so it should just be accepted as she accepted it. She noted that the way she was born was neither her fault, nor the fault of God in order to address the perhaps unspoken assumption that because she was in gender ‘trouble’, there was something wrong and someone to blame. She identified as a woman and had the “cards of being a lady”, suggesting that her genitalia were feminine where her understanding of female genitalia was in line with that of society. Semenya, however recognised that her femininity may be somewhat different to others as her voice is deep and she is physically strongly built. But this did not lead to her to question her own femininity, nor did her parents (Ginnane, 2011). Therefore she did not grasp how the IAAF could question her femininity either. Proposing that the way she was born was a ‘natural’ occurrence and not someone’s “fault” is yet another subjective view that functions as a somatechnology in shaping and regulating one’s own body (Sullivan, 2009, p. 314). Hence, the ways in which Semenya contested how the IAAF read and marked her body and athletic performance was in itself a somatechnology that shaped and continue to shape her body and athletic performance (Sullivan, 2009, p. 314).

The South African sports scientist, Tim Noakes sympathises with Semenya’s confusion. He argues that female athletes who do not represent normative femininity idea(l)s and are thus questioned for not being women enough, are tired of men (such as the male Medical Commissioners of the IOC/IAAF) telling them what they should do and what they should look like in order to be accepted (in Ginnane, 2011). Noakes further reasons that “Gender is what
you perceive yourself to be, and you cannot scientifically define gender. So if Caster believes that she is female, she is female… There is no scientific test in the world that can turn that aside” (in Ginnane, 2011).

The Semenya incident is as pivotal in the history of sex/femininity/gender/HA verifications of female athletes as the story of Martínez-Patiño, because Semenya’s story discontinued any further tests conducted under the name of “gender”. The Semenya story closed the chapter in the IOC/IAAF history of sex/femininity/gender tests, leaving them to focus only on what allegedly gives athletes an “unfair” athletic advantage. Since 2011 The IOC/IAAF argue that this is excessive and functional androgen production levels in women athletes (IOC, 2012a; IAAF, 2011a). HA is consequently the new and official defining factor (IAAF, 2011a; IOC, 2012a) in the continuation of identifying and regulating women athletes.

Conclusion

In this chapter I set out to consider discourses and activities by five intersex organisations across the world concerning why particular sex, gender, body, embodiment and athletic performances of women continue to be targeted and regulated on the basis of “fairness”. In relation to their subjective and “embodied cultural location” (Morland, 2009a, p. 194) some organisation representatives (Hinkle and Viloria) suggested that ‘disturbing’ looks weigh more heavily towards being gender/HA challenged than only ‘disturbing’ athletic performance ideals for women. One organisation representative (Mitchell) however, stipulated that their ‘disturbing’ athletic performance ultimately prompts the testing to take place. Some (Hinkle) also suggested that as superior sport abilities are associated with masculinity, men are not tested for any intersex variations/other genetic make-ups advancing their athletic performance, as there is a fear that men will be “demasculinised” in the same process. Because there are no such ‘level-playing field’ concerns within male sports, there is no policing of intersex variations in male sports. Others (Kromminga and Klöppel) argued that sexism against women in combination with “inter[sex]phobia” contribute to women with particular intersex variations being the continuous targets of fairness campaigns in elite sports. By juxtaposing these representatives’ logic behind the continued regulation and marking of particular bodies and athletic performances in female sports as ‘disturbing’ and the connection of this to intersex, this chapter has problematised the idea of a consistent habitus of intersex organisations. By comparing the organisation representatives’ forms of logic, this chapter has also complicated the ways in which it is possible to understand the phantasmal idea of ‘inter[sex]phobia’ that circulates around the female body and athletic performance ideals in elite sports.
This research suggests great discrepancies about how sex, gender, body and embodiment are understood and contextualised between intersex organisation representatives and voices emerging from the IOC/IAAF. However, on the topic of fair performance, one intersex organisation (Zwischengeschlecht.org) shared the values presented by the IOC/IAAF regarding identifying and regulating female athletes who athletically profit from their variation. They even shared the idea that a female athlete’s functional testosterone production levels should determine whether they should be identified and regulated or not. Most other organisation representatives were fiercely against this idea, but stipulated that if individuals with HA variations are the new target group, then the IOC/IAAF should, in the name of ‘fairness’ identify and regulate against all genetic make-ups – intersex and non-intersex variations – in both gender camps in elite sports. But many of them believed that it would be far better to allow female athletes with HA to compete and go unnoticed just as do other women who may have genetic make-ups that are non-regulated or like other men with intersex variations/other genetic make-ups beneficial in elite sports. That said, none of the organisation representatives agreed with the IOC/IAAF in imposing medical treatments as a condition to return to sports as it could harm the athlete’s health, wellbeing and career.

These truths and knowledges reflect the ways in which intersex organisation representatives understand the body of others and themselves and how their body is perceived by others. Ultimately, the ways in which they produce, circulate, deploy, justify or contest certain truths and knowledges about particular ways of reading and marking the body, continue the practice and somatechnology of marking and limiting the body and how it performs athletically.

In the final section I turned my attention to four female athletes who have been tried and tested by different sport organiser’s testing technologies and how their individual experiences reflect their responses to the regulatory frameworks they have endured and conformed to in women’s sports. All of them disagreed with the decision of being disqualified and did not agree with the ways in which the sport organisers read and marked their bodies. Some of them may have stressed that their bodies were perhaps somewhat different to other women’s, but they were nevertheless women and identified as such. Through this chapter it becomes evident that the “embodiment [experience] of all agents” (Morland, 2009a, p. 194) may lead to different understandings of how to read and mark bodies and performances. It is thus of importance for the reader, female athletes and the general population to reflect on the ways in which female athletes’ “embodied subjectivity” informs the ways in which to “discipline”, “regularize” (Foucault, 2003, p. 257) and police how women they cannot relate to as women should be tested. It is equally significant to recognise that sex/gender/HA questioned athletes, such as
Semenya, Soundarajen, Martínez-Patino and Klobukowska also take part in creating and shaping bodies through their “embodied cultural location” (Morland, 2009a, p. 194). What they all have in common is that they all continue taking part in the process of marking, shaping and regulating sex, gender, body and athletic performance by participating in the dialogue. By taking part in the discourse, by either justifying or contesting the ways in which certain somatechnologies have marked and regulated their bodies (Sullivan, 2009: 314) they take part in the continuation of shaping and limiting their bodies, identities and athletic performance and those of other female athletes. The ownership of one’s body and what it can athletically perform thus continues to lie in the hands of others but is further policed through one-self.
Chapter Eight: Conclusions

In this study I have sought to consider four key questions concerning the role the IOC/IAAF, intersex organisations and female athletes have in the process of marking and regulating particular bodies, gender identities and athletic performances in female sports as abnormal versus normal. In summary, the research questions driving this study have been:

1. In what ways do the IOC/IAAF, intersex organisation representatives and female athletes mark and regulate particular sex, gender, body, embodiment and athletic performances as normal versus abnormal in female sports?

2. How do these knowledges and truths affect the ways in which athletes are depicted, treated and managed in female sports?

3. How do these knowledges and truths affect the ways in which these cohorts of participants read and mark their own bodies, and if applicable, athletic performances?

4. And what do the answers to these questions tell us about how normative versus non-normative understandings about sex, gender, body, embodiment (sgbe) and athletic performances are produced, circulated, deployed, justified and contested between and among these three cohorts of participants?

Through these enquiries I consider how these knowledges and truths have affected the ways in which athletes with certain intersex variations are depicted, managed and treated in female elite sports and sports medicine through time.

In an effort to attend to the research questions, most research within the discourse of intersex and elite sports has tended to examine only the ways in which medical practitioners produce particular truths and knowledges about disturbing and ideal bodies and athletic performances in female sports. In contrast to this, the findings of this research support the idea that all three cohorts of participants (female athletes, medical commissioners, members of intersex organisations) are taking part in the process of marking and regulating bodies and athletic performance (as am I). This is done through their participation in conversations and events that pertain to the justification and/or contesting of somatechnologies marking and regulating particular bodies and athletic performances in female sports.

These research questions enable an important contribution to knowledge because they look across all these three participant groups and think about the ways in which diverse continuities and discontinuities are travelling through these groups. By posing these questions, I have endeavoured to incorporate their views and understandings about whether certain body
modifications are right or wrong. I have also considered how participants in their “embodied cultural location” and lived experiences influence the ways in which they justify or contest particular ways of marking and limiting bodies and athletic performances in female sports.

In order to take account of participants’ cultural location I draw attention to the “structuring structures” in which they operate and the “modes of subjectification”, where “individuals are brought to work on themselves” and their bodies. I have asked how these structures and modes of objectification affect the ways in which participants continue or discontinue the circulating of particular truths and knowledges about ‘disturbing’ bodies and athletic performances in female sports. Through this, I have also been able to demonstrate the different and contradictory ways in which all participants exercise both biopower and biopedagogy.

**Limitations of this Study**

Clearly, this research does not and cannot conclusively represent the full scope of views, truths and knowledges held by each of the full cohort of representatives included in the study. Also, with regard to discussing sex, gender, body and embodiment in this context, this study has not examined the discourse of embodiment as comprehensively as one could have. In other words, I have not thoroughly considered the extent to which subjectivity, corporeality and identity collectively form the representation of the normal versus the abnormal body. Nor have I expansively examined the ways in which ethnic, cultural, socio-economic and class differences may contextualise the ways in which the three cohorts of participants materialise the disturbing and the ideal body – the lived experience of the female athlete.

Although the topic of sex has been greatly discussed, I have not talked about sex in terms of ‘affect’. I have talked about how sex has been viewed by the IOC/ISFs over time and used as a political tool to identify and regulate athletes who arguably disturb the ‘level-playing field’ in female sports. Thus, I have not particularly examined why women and others continue to be invested in this process in the face of a plethora of critiques of testing regimes.

Another limitation of this study was the amount of data I could access through the archives. Because the IOC classify any material that is less than 30 years old, I was greatly limited to what material I was allowed to examine. I was also limited to who I could and could not access concerning NOC medical officials. Because the IOC and the IAAF were in the midst of drafting their HA policy when I contacted the NOCs, most of the NOC medical representatives probably did not feel inclined to take part in the research as they did not know where the IOC/IAAF were heading. That I was an ‘outsider’ probably did not help the situation
either. Hence, finding NOC medical representatives that were willing or available to participate in the research ultimately limited the study.

**Contributions to Knowledge**

In order to interpret the archive, policy material and autobiographical accounts to effectively contribute to knowledge, it was crucial that I avoid as much ‘present-day bias’ as I reasonably could. By taking a genealogical approach, I sought to construct a “history of the present” illustrating how the IOC/IAAF have come to rationalise current testing technologies (Chapters Three and Four). This provided a useful lens through which to analyse changing conceptions of knowledges and truths, and also recover concepts of knowledges and truths which are no longer accepted as such today. By detailing the continuities and discontinuities in the ideology, language, knowledges and technologies used to convey particular truths about the testing technology and nomenclature in female sports through time I have been able to illustrate how influential specific ruptures have been in defining the “history of the present” regarding these tests.

Through this research I have been able to show that certain beliefs about normal versus abnormal bodies and athletic performance circulate outside of the boundaries of official sporting bodies. Hence, it would be erroneous to argue that medical practitioners within the IOC/IAAF are the sole producers of truths and knowledges about how to read, mark, police and regulate particular bodies and athletic performances in elite sports. Further, in order to contemplate why there are such hostile attitudes toward female athletes only and those with particular intersex variations especially, a reassessment of who and what holds the power in dictating these truths has been necessary. As the subheadings and the conclusions below will further demonstrate, this study has helped to identify why there is such a glaring double-standard in elite sports which allows one group of athletes with a naturally occurring, potentially advantageous genetic make-up, to be vilified and marginalised whilst other, non-sgbe disturbing genetic make-ups considered advantageous are not similarly scrutinised in either female or male competitions.

Although many studies have tried to capture the history of these tests in female sports, this study has clarified that the testing technology has experienced six shifts and five nomenclature shifts during its 73 year long lifetime. The ways in which the IOC/IAAF, their medical representatives and scientific alliances have referred to these athletes as ‘undesirable’, has also experienced five shifts. Through my analysis of the interviews with Schamasch, Schneider, the Olympic archive material and the IOC/IAAF HA policies I contribute to knowledge concerning the discourse of intersex in the IOC/IAAF and sport sociology. Through
my analysis of autobiographical material by female athletes who have been tried and tested, I also extend understanding of the “insurrection of subjugated knowledges”. This was done by clarifying the importance of the findings in relation to female athletes and their role in further marking and regulating particular bodies as normal and abnormal in maintaining a ‘level-playing field’ in female sports. In further enhancing the “insurrection of subjugated knowledges” I also discussed the novelty of the findings from the intersex organisation representatives. Here I demonstrated how their values were imperative in considering how particular truths and knowledges about normal versus disturbing bodies and athletic performances are produced. The contribution of their role in determining who should be included or excluded is analysed in detail. This extends understanding about which bodies, genetic make-ups and athletic performances athletes themselves deemed worthy of marking and regulation. By bringing these groups together I have created a dialogue that demonstrates how they all play interrelated and contradictory roles in ‘disturbing’ bodies and athletic performances in female sports.

Continuities and Discontinuities Regarding the IOC/IAAF Testing Somatechnologies and Nomenclatures

This thesis demonstrates that there is a continuous consensus among the voices of medical representatives regarding the need for policies to “protect” athletes in women’s competition from “unfair competition”. The target group of such policies has consistently been women with intersex variations – however which intersex variations and what the ‘undesirable’ athletes have been referred to has shifted five times. This dissertation also demonstrates that what the tests were trying to establish has never really been clear. However, with the help of Tables Four through Eight, I have been able to show the continuities and discontinuities of the testing technologies and the testing nomenclatures from the 1930s till the current time.

The findings from Chapters Three through Six, thus show that there is little consistency and continuation about what method to best use to perform these tests, about what exactly the tests were trying to establish and what to refer these athletes as. For example, in Chapter Three I illustrate how the ruptures regarding what the tests should establish starts with Brundage in 1936. His influential comment at the 1936 Games that all athletes in female competitions must be 100% women starts the usage of the terms “recognition”, “determination” and “establishment” of sex and femininity. And this seems to drive the theories in making sure that men masquerading as women, “hybrids”, “hermaphrodites” and “intersexual” beings are not competing in female sports. Through this thesis, I demonstrate the significance of Avery Brundage in stressing the development and the need for the tests on both the national and
international levels, and point to his pivotal role in setting the standards of what the tests were trying to establish.

In Chapter Four I have drawn attention to the way a host of sport scientists and endocrinologists (such as the Danish team in 1972, de la Chapelle and François and Matton-Van Leuven in 1973) lobbied for the IOC/IAAF to reconsider their tests and policies on the basis that it could not be claimed that they were in a position to determine or establish sex or femininity when neither had been firmly defined by either medicine or the law. This research is also the first to draw attention to the ways in which the Danish criticism seems to have affected the IOC to recognise in 1972 that they were not in a position to theoretically define or establish what the male or the female sex are or what constitutes femininity or masculinity. For practical reasons the IOC did not want to cease to test the athletes with their testing technologies. They judged that their desire to catch ‘unreal women’ was more important than the questions being raised about the rigour of their testing technology. The reluctance of the IOC to act was reflected in the fact that it took them until 1976 to further consider the criticism of the Danish team and those of de la Chapelle and François and Matton-Van Leuven.

In 1976 the IOC clarify that they are performing “femininity tests” and the reason is to “protect” women against “unfair competition” (Beckett, 1976). In other words, widespread criticism pushed the IOC to react on an ideological level to argue that they were not trying to establish or define the male or the female sex but had renamed the tests to only involve women. This way they re-qualified that they were only testing women and were interested in ensuring that women only were competing in female sports. Though the nomenclature discontinued, I have demonstrated that the testing somatechnology continued and so did the criticism toward the IOC from scientists challenging their homogenous habitus by suggesting ethical concerns about the tests (such as de la Chapelle, Genel and Ferris). These scientists continued to stress that the IOC could not claim they were performing “femininity” tests to ensure fair competition, through sex chromatin controls, since most of the women who were identified as ‘suspect’ by the tests were believed not to have any unfair competitive advantages (as they were insensitive to their androgen production – AIS-variations).

The IOC seemed to take on board some of this criticism as in 1984 they moved to the idea of “determining gender”, and continued to “protect” women from “unfair competition”. The rationale for this nomenclature move was probably to adhere to the pressures recognising that they were not trying to establish or define the female sex or femininity. Instead, they were trying to ensure that only athletes identified as female and having what they believed were female sex characteristics should be allowed to compete in female competitions. Through this repetitive act of name revision – now from “femininity” to “gender” verifications – I again
show that they actually retained the same testing somatechnology. The name had changed, but not the testing technology, which effectively suggested that they believed they were in the position to “determine gender” with the help of their scientific alliances.

The Martínez-Patiño incident of 1985 (see Chapter Seven, pp. 205-207) in tandem with the continuation of the same rebranded tests, led to greater conflicts within science, sports medicine and even within the IOC/IAAF (Ljungqvist, Genel, de la Chapelle, Simpson, Ferris, Ferguson-Smith in Chapter Four). These conflicts pushed the IAAF to suspend their mandatory sex chromatin tests in 1991, but true to form, continued the essence of the gender testing through the revision dubbed as ‘case-by-case’ inspired “gender verifications”. The IOC on the other hand, did not discontinue the mandatory testing policy. Instead they changed the testing technology, this time to locate the Y chromosome through the PCR test and an increased focus on the ‘sex hormones’. Through this shift de Mérode also rejected all the allegations that they were trying to “recognise” “determine” and “establish” sex, femininity or gender, by explaining that the tests had always been about discouraging cheats and hybrids from taking part in female sports. For both organisations, the ideology of the tests continued, albeit through slightly different mechanisms. Ultimately in 2000, after too much pressure was felt from both inside and out, the IOC followed the same path as the IAAF and discontinued the mandatory testing in favour of gender testing on a ‘case-by-case’ basis.

These examples up till 2000 demonstrate how much internal and external debate and angst there were amongst these medical practitioners, operating in the same habitus, regarding the somatechnologies used in meeting their aims. Here, I have, with the help of the material gathered at the Archives of the Olympic Museum tried to show that medical officials are often falsely portrayed as uniformly invested in the testing technologies. In this study I have tried to propose a more complex picture of what is reminiscent of the Catholic conclaves, in so far as I can only make elucidated guesses about what went on in the closed and confidential IOC/IAAF meetings. Through searching the archive I have drawn attention to those who argued for and justified the testing somatechnology and the testing nomenclatures (Brundage, Dr Thiébault, Dr Hay and de Mérode), while we also see those within the same habitus who contested them (de la Chapelle, the Danish Team, Ljungqvist, Genel, Simpson, Ferris and Ferguson-Smith). These debates and angsts about what method to use in ensuring that women only competed in female competitions would not discontinue post 2000. On the contrary, they would continue past 2000 till the current time of writing, 2013.

For example, in their 2006 “gender verification” policy, the IAAF stressed that although there had been a lot of “uncertainties” and disagreements about the right method for testing women, they now had things under control. Hence, through their official policy they wanted to
assure the policy readers that all the angst and debates in the past would remain in the past. Differently from then, they said, there was now enough “consensus” within (sports) medicine (between themselves and their alliances) to produce a new and formal policy and somatechnology for managing the issue of gender amongst female athletes. However, even though the tests were performed on a ‘case-by-case’ basis, their ideology lived on, emphasising that the tests would promote “fair” competition amongst female competitors. In this study I have tried to demonstrate that this same policy also came under scrutiny through the Semenya incident in 2009. Here again, the IOC and the IAAF agreed that they had to yet again come up with another policy. This was based on the fact that there was still no legal or medical consensus on how to “manage issues of gender” or define what constituted “unfair” competitive advantages in the female gender camp. Through this thesis I show that the Semenya controversy was yet again another element where strong voices within and around the IOC/IAAF found the policy “unthinkable or scandalous” and pushed them to revise their policy, their target group and again their somatechnologies.

Accordingly in 2011, the IOC/IAAF agreed in a consensus statement on what is likely to have been intended to be taken as an ostensibly different mission – the identification, regulation and management of a new target group. This new target group was female athletes with Hyperandrogenism because of their uncommon athletic capacity juxtaposed with their fellow female competitors. Before they came to this conclusion they were briefly considering to focus on athletes with DSDs. This term was quickly discarded due to the diverse variations it incorporated – some potentially challenging their idea of a fair ‘level-playing field’ in female sports, while others did not. It was instead argued that HA was a concern to both the IOC/IAAF and female athletes, which then lead to HA athletes being the new target group. Through their new policy, the IOC/IAAF wanted to clarify that they no longer were referring to gender verifications, even though FIFA and other ISFs still ascribe to the terminology gender verifications. Here we see how the IOC, in collaboration with their scientific alliances can propose the ways ‘forward’, but it is ultimately up to the individual ISF to implement what they deem suitable or necessary.

Hence, through Chapters Three to Five I have shown that there was a discontinuity in how the IOC/IAAF and their medical representatives have referred to these ‘undesirable’ athletes. The ways they were referred to and what their ‘undesirable’ variations implied have experienced five shifts in terminology. For example in 1968 Dr Thiébault (see pp. 92-94) expressed the importance of eliminating and treating “hybrids” in female sports, while Dr Hay used the terms “hermaphrodites” and “intersexuals” (see p. 106). These terms were used interchangeably up until the Semenya controversy when the IOC/IAAF moved towards
considering the term “Disorders of Sex Development” (see p. 123 and onwards) before they finally in 2011 officially agreed on the term “Hyperandrogenism” (see p. 125 and onwards). These shifts regarding what to call these ‘undesirable’ female athletes and what variations, specifically, to focus on, further trouble the idea that there is a consistent habitus of intersex in elite sports due to these phantasmal terminology shifts.

To summarise, although many studies have tried to capture the history of these tests in female sports, this study has contributed in extending the dates (related to the genesis of accusing women in elite sports of being ‘unreal women’). Through the findings from the IOC archive and news clips from the 1930s I have been able to establish that the allegations against women started in 1928 while the first tests were commenced in 1938. They started in 1938 with medical examinations producing mandatory medical certificates to the 1960s, proceeding then to ‘on-sight inspections’ between 1966 and 1967; to sex-chromatin testing between 1967 to 1992; to locating the Y-chromosome through PCR tests in combination with ‘sex hormone’ tests and internal/external genital tests between 1992 and 1999; to ‘case-by-case’ inspired tests that performed chromosome tests, hormone tests, internal/external genital tests and a gender identity test between 2000 and 2011; to today’s technology which is purported to aim to detect the athlete’s level of functional androgen but performs similarly to a host of earlier tests verifying the chromosome make-up, the internal/external genitalia, psychological status and hair development production. Even though the ‘scientific’ knowledge have changed between the 1930s and today, which would imply that the somatechnological aspects would change too, I have in this study and through these series of somatechnology shifts tried to illuminate that the IOC/IAAF have not been clear, or even honest, about what the ‘problem’ has been in the first place and thus, have been unable to present convincing evidence for the ‘problem’. In other words, these somatechnology shifts show the IOC/IAAF failure in defining the problem and producing ‘convincing’ scientific evidence for the ‘problem’. This evidences how they have constantly manipulated truths and knowledges about the best or ideal testing somatechnology in meeting their aims as the somatechnologies have driven the definition of the ‘problem’.

Similarly, there are severe discontinuities in what the rules/policies are trying to establish as their names have also shifted five times in these 73 years. The somatechnologies have been referred to as rules for “competitions for women” where women had to provide medical certificates that they had been thoroughly medically examined and shown fit or feminine enough to compete in women’s sports (1938-1964); to sex tests (1966-1976); to femininity tests (1976-1984); to gender verifications (1984-2011); to now testing the eligibility of females with Hyperandrogenism. In addition to this, the terms the IOC/IAAF medical commissioners have used, when referring to these ‘unreal women’, have equally shifted five times from “hybrids” to
“hermaphrodites”, to “intersexuals” to athletes with “Disorders with Sex Development” to, for now, only focusing on female athletes with “Hyperandrogenism”. Through this thesis I can show that the testing of female athletes’ eligibility has thus undergone several changes in technique, genetic makeups and nomenclature throughout its history. Such discontinuities in the light of the quite consistent continuity in the ideology of testing points, in a way similarly set out by Schultz, show that the IOC/IAAF in collaboration with their alliances seem to be merely finding new criteria to identify and exclude women who do not meet their fluctuating standards for femaleness (Chapter Five, pp. 142-152). These discontinuities also raise the possibility that the HA tests may just be a new sex/gender standard applied to only women to continue justifying the need for policies that ‘protect’ the ‘level-playing field’ in female sports. The five terminology shifts of what to call the athletes equally suggest that there is no consistent habitus of intersex in elite sports. As there are discontinuities of who arguably challenges the ‘level-playing field’ and what genetic makeups they have, this discontinuity further troubles the idea that science, sports medicine and the medical commissioners of the IOC/IAAF have consistently been in agreement on what challenges the ‘level-playing field’ in female sports through time.

That said, the therapeutic “treatment” component seems to be continuous aim as the IOC/IAAF and Schamasch, similarly to Dr Thiébault in 1968, highlight the importance to treat HA athletes as neglecting their ‘disorder’ can pose a risk to their health. Through the examples of Thiébault (see pp. 92-94) Schamasch (see pp. 129-147) and Schneider (see pp. 144, 175-176) I have tried to show that the misguided benevolence of these medical practitioners is rooted in the habitus in which they operate. Both Schamasch and Thiébault are for example trying to tell themselves and others that they are looking out for the health of the female athletes as well as preserving fairness in female sports. Here we see that the habitus of medicine and that of the IOC are influencing their fairness logics. Through these examples, I have tried to demonstrate that we should not be surprised by the conclusions they draw and the continuation of their propositions of how to mark and regulate particular bodies as disturbing and not others, despite the trouble they may be faced with. In this respect I have shown how true the discourses are to the participants and how strong the habitus has been in forming their opinions.

Further, as I was able to interview Schamasch and not only rely on public statements he has made, I was also able to distinguish contradictions in his approach. Through his talks we see that he is heavily invested in his religious beliefs where he uses the gender binary when explaining the fairness logic as he rationalised these beliefs through science. Hence through my interview with him, I can demonstrate this contradiction while others have only been able to suggest it.
This thesis has advanced the idea that the real driving forces behind the policies and rules, applied in different ways but consistently against one group of people, come from the habituses surrounding intersex. These habituses (religion, medicine, science, IOC/IAAF, socio-political values) make it feasible to accept that the IOC/IAAF and their medical commissioners cannot have been the sole “biopedagogues” producing, circulating and maintaining these varied truths and knowledges about normal versus abnormal bodies and athletic performances in female sports. Rather, this thesis shows that there are more powerful sources within the “structuring structure”; they form the habitus, that more broadly influences not only the IOC/IAAF but also female athletes, coaches, spectators and anyone else taking an interest in the spectacle to produce, circulate and maintain these truths. Hence, in advancing Schultz’s claims (2012), I have through this study tried to elucidate the roles of all such groups as “biopedagogues” in society, influencing and structuring the ways in which the IOC/IAAF in collaboration with their alliances, have depicted particular bodies and athletic performances in elite sports and in turn structuring their production of specific testing policies to accord with these influences. This argument will be further supported below.

Biopedagogy and Confidentiality Issues within the IOC/IAAF

In Chapters Six and Seven I provide examples of how the IOC/IAAF, in collaboration with female athletes, play very influential roles in the marking and regulating of bodies through the use of “biopower” and somatechnologies. The current IAAF HA policy is one such example. This dissertation can be distinguished from other research because it shows how powerful the current policy is as a biopedagogical tool in the continuation of marking, identifying and regulating particular bodies as ‘disturbing’. It is biopedagogically powerful as the IAAF are claiming through it that they are an authority regarding what is deemed as normal development and what is not. This is achieved through the use of images and scales purporting to give the user the ability to measure and define normal versus abnormal breast and pubic-hair development as well as abnormal hirsutism development in women.

These images and scales biopedagogically motivate female athletes, coaches, medical representatives and others directly involved or interested in the question, to challenge any female athlete who seems to disturb those ideals presented in the policy. Through such tools, women and others are encouraged to police and challenge those bodies which disturb ideals of femininity and taken further, to perhaps even decide who is, and who is not feminine enough to compete, and inform on. Even though my research suggests that the biopressure is produced by others and oneself, the fact that some women demand these somatechnologies, also speaks to why whisper campaigns can easily be mounted. Thus, the fostering of such attitudes in turn
creates a suspicious and hostile environment among and between female athletes. The fact that many cases have come to the IOC’s/ISFs’ attention through public controversies, such deleterious outcomes and the implementation of the ‘abnormal’ body images and scales in the IAAF HA policy raise serious questions about the ability of the IOC/ISF to uphold the confidentiality of questioned and tested female athletes. This, in addition points to the IOC/IAAF being less concerned about the upholding of athletes’ confidentiality and health than in the identifying and regulating of athletes with diverse intersex/HA variations through campaigns of ‘challenges and ‘suspicions’.

The Role of Female Athletes as Biopedagogues

The findings in Chapters Six and Seven also show that women are influential biopedagogues from more than one perspective. They challenge those women who are perceived to threaten female body, gender and athletic performance idea(1)s, but are unconsciously also subjectively working on themselves. Therefore they are also marking and regulating their own bodies and athletic performances (see pp. 156-164, 203-211) by participating in the conversations.

That women are biopedagogues who hold significant authority to define what counts as true regarding the need for testing is evident from the 1995 Lillehammer survey. Here 87% of the 115 female athletes considered the tests “necessary” and 13% of the women believed they had competed against something other than a woman (see pp. 160-164). Whether this survey was merely produced as a means for the IOC to justify and thus continue their testing ideology, and whether or not the women’s answers were re-written by the IOC before being re-presented to the board remains unknown. Which questions and answers the IOC chose not to report, if there were any, also remains unknown due to archive regulations which mean that any material younger than 30 years old must be kept confidential. What is clear, is that women athletes took an active part in the continuous production of marking and regulating particular bodies by participating in the conversations, validating the tests as “necessary” and being privileged to have their understandings validated as “true”. Through this contribution, I have been able to demonstrate that the IOC have heavily privileged a particular group of women to be reliable sources and biopedagogues instructing them what to do as if there was a consensus about the “problem definitions.” Here we see that the IOC have given them the authority to be one group of instructing experts and thus relied on their opinions in their continued mission to mark and regulate particular bodies and athletic performances as disturbing.

Through the more current example of Osinachi Ohale (see pp. 162-163) we see another athlete acting as the biopedagogue by openly questioning that one of her soccer opponents was less female than she as she was stronger than her and smelled like a guy. Through this example
I demonstrate a new contradiction. Here Ohale seemed unaware that her accusations and open questioning of Simpore and some of her team-mates implied that she was unconsciously also working on her own body, femininity and athletic performance and those of her own team-mates. Ohale seemed oblivious to the contradictory nature of the allegations as they could equally question the nature of her own femininity given that she and her teammates had outperformed those whom they argued are ‘too good to be women’. This incident thus showcases that when Ohale challenged Simpore to be gender verified, she not only staked her claim to be “considered competent to tell the truth” about who is and who is not feminine enough to compete, but also reproduced a “mechanism that allows biopower to work” through female athletes and through herself. As a result of Ohale’s claims Simpore was subjected to the gender verification procedure and has since then stepped down from competing. This underscores the continuing power of these somatechnologies over female athletes and sporting institutions.

Such stories about justifications for protection through the tests do not represent the opinions of all non-questioned athletes in female sports over time. Others have reported that there are those women who disagree with the testing technologies and contest the ways in which the IOC and some women mark and regulate particular female athletes’ bodies and athletic performances, as demonstrated in the opinions of Seidler, Peters and Frederick (see pp. 76-78, 159-160). Nevertheless, these examples also showcase that the critiques were part of the conversation about the testing technologies and ideologies, albeit in different ways, and thereby continued the practice of marking and limiting bodies and athletic performances just as did those justifying them. These examples show, per Butler, that our bodies remain the property of others as they are defined and engendered by others for others primarily. Their stories also advance Butler’s proposition that even though we are defined by others we equally define ourselves through the definition of others. Everyone partaking in the conversation therefore becomes an agent in marking and regulating bodies as normal or abnormal, including myself.

The Insurrection of Subjugated Knowledges among Female Athletes

Conversely, there are related knowledges which have experienced ruptures on the road to being seen as truthful when it comes to understanding bodies, gender and fair athletic performance in female sports. Specifically these are evident in the accounts of those women who have been tried, tested and disqualified. In most cases their stories have been completely ignored and their unique views on fairness and acceptability derogated by sporting organisations. Differently to many others, I have brought forth these examples of “subjugated knowledges” and valued their stories as equally important to conceptualise when evaluating how truths and knowledges
regarding normal versus abnormal bodies and athletic performances are shaped and limited. Such examples are from Klobukowska and Soundarajan (see pp. 203-204, 207-209). Though with a difference, their stories also showcase how they within their habitus, circulate and maintain certain ideas about normal and abnormal female bodies. By stressing that they are part of the female sex and gender they highlight the importance of considering self-marked and self-interpreted bodies and identities, and I argue that sporting institutions should privilege those voices before those who accuse them of not being feminine enough to compete as a woman.

Then we have “the insurrection of subjugated knowledges” where stories as those told by Martínez-Patiño (see pp. 205-207), and those by Semenya (see pp. 209-211) have been heard, recognised and used to challenge those technologies that suspended them in the first place. Even though these truths and knowledges circulated and contested the status quo, these athletes received help to circulate their truths, which in both cases resulted in the discontinuation and revision of the specific testing technology of the time. Even though many have considered the stories told by these athletes, few have examined how their stories, truths and knowledges symbolise ways in which they are working on themselves.

In this study I have tried to demonstrate that through their participation in the conversation, athletes who have had their right to participation questioned and tested are unconsciously shaping their own bodies and athletic performances and thus take part in the processes and somatechnologies that continue marking and regulating the bodies of others and themselves. One prominent example of this is Martínez-Patiño. She evinced that she had never thought of herself as “anything other than normal” given that she identified as a woman, was engaged to a man, and described herself as having “breasts and a vagina.” Thus, she had never had cause to question her femininity before. Semenya also declared her femininity in a similar fashion. By stressing that she indeed was a “lady” and that she had the “cards” of being a “lady” she lamented that she had to even prove it. Again, differently to other academic contributions, I have here tried to show that the subjective views of Klobukowska, Soundarajan, Martínez-Patiño and Semenya function as continuing somatechnologies which shape their own corporeality and those of others. Through the participation in the exchange about particular modificatory practices marking and regulating their bodies and athletic performances they are taking part in the process of shaping, but perhaps expanding on, a continuum of normal bodies and normal athletic performances within the female gender camp.

The Role of Intersex Organisations as Biopedagogues

Differently from many other studies, this thesis has not only focused on the voices of medical professionals or only the voices of female athletes. In evaluating the practice of marking and
regulating particular bodies as normal versus abnormal, I have judged the voices of those representing people with intersex variations as integral to the practice. Hence, by considering their truths and knowledges, this study has uniquely examined the ways in which gender, bodies and athletic performances are perceived from their lens. Through the inclusion of what is often considered “subjugated knowledges”, I have been able to show that their participation in talks with researchers such as me, the media and the IOC, they are circulating their views of how one should understand intersex and fairness in elite sports.

Just as there are continuities and discontinuities about how to understand bodies, gender and fair athletic performances in female sports within the IOC/IAAF and among female athletes, the findings of this research show that these ruptures also exist among intersex organisations. Differently to other studies, this thesis shows novel and first-hand information demonstrating that these organisations’ representatives (see pp. 182-202) are also taking part in the process of marking and regulating particular bodies and athletic performances as normal and abnormal in elite sports.

For instance regarding ‘fairness’, all intersex organisations except one agreed that female athletes should not be policed, identified or regulated regardless of whether or not they have an intersex variation. Instead, an intersex variation should be taken the same way as it is for any other potentially advantageous genetic make-up – as a natural phenomenon. Building on Hercher’s idea that there is nothing fundamentally wrong with producing high levels of functional testosterone this can equally be said of any other naturally occurring biological features which may lend an advantage to elite athletes (see pp. 190-202). The lone dissenter to this view was the Swiss intersex organisation Zwischengeschlecht.org (see pp. 190-192). They held the position that they understood and endorsed the “legitimate concerns” the IOC/IAAF and women athletes had against those female athletes with intersex variations, seeing these variations as possibly according unfair competitive advantages. This is a clear example of how members of intersex organisations do not necessarily follow, as a rule, the notion that they have to project ideas and values that are exclusively in the interests of people with intersex variations. This example discontinues the idea that all intersex organisations unanimously agree on how to read, mark and regulate particular bodies and athletic performances in elite sports, as normal or abnormal, especially among women.

The research also found that some intersex organisations (ITANZ, ISSA and OII USA) publicly wondered, whether, given athletes with HA were the new target group to be policed and regulated, why the same standards were not being applied to other genetic make-ups that may be understood as advantageous in elite sports too, such as having long arms, long legs (reminiscent of Marfan Syndrome) and those with Diplo (see pp. 192-195). And why were they
not being extended to include male athletes as well? Through their readings of fairness – an allowance of ‘natural’ diversity – which they argued the IOC/IAAF inconsistently embraced, this study uniquely illustrates that for those reasons these representatives also produce and circulate the idea that groups other than just intersex questioned female athletes should also have their bodies, genetic make-ups and athletic performances marked and regulated. Even though this marking and regulating mainly took place in pointing out the IOC/IAAF inconsistency in supporting ‘natural’ diversity in elite athletes, the marking and regulating of bodies and athletic performances nevertheless continued. Here we see that their embodied cultural location produced questions about why their genetic make-up should stand out any more than others’ genetic make-ups which pointed out the inconsistencies in permitting ‘natural’ diversities in elite athletes.

The Illusion of a Consistent Habitus of Intersex Organisations

First it is important to point out that the idea of an intersex community or an intersex movement is constantly under debate and what the ‘community’ thinks about intersex athletes is also under debate. In other words, through the “insurrection of subjugated knowledges”, the findings showed that ‘intersex’ is indeed a phantom category that would appear to have no substance, but is still the object of much anxiety and abhorrence. For example some of the organisation representatives did not agree on what the causes might be for certain athletes in female circuits to be tested. Viloria, from OII USA, contended that looks are a deciding factor (see p. 198). Mitchell, from ITANZ, held the opposite view, citing Semenya’s case in that she was only questioned because of her exceptional athletic ability (see pp. 197-198), meaning that it is the act of winning, in a ‘disturbing’ fashion, which ‘paints a target on one’s back’. IVIM’s Klöppel and Kromminga felt that “inter[sex]phobia” is the reason why these athletes are both “haunted and haunting” (see pp. 188-189) and thus suggested that the answer is complex. Building on and advancing Holmes’ idea that intersex is “haunting and haunted” and Morland’s claim, also advanced by Holmes, that intersex is a ‘phantom’ category, the habitus of intersex in sports medicine surely indicates that intersex variations have been haunted since 1928 till this day for disturbing the fairness logic and binary body logic in female sports. That said, this study also demonstrates that there is no consistent habitus of intersex organisations. This then troubles the logic of intersexphobia when the reasons for why the body and athletic performance of particular female athletes is deemed ‘disturbing’ are disputed among intersex organisations. This also challenges the logic of the intersex phenomenon, given that it is clearly disputed as an identity and conceptually represents a wide range of anatomic makeup.
Intersex Voices Deemed as Subjugated Knowledges by the IOC/IAAF

Even though one intersex organisation was invited to present their truths and knowledges about how to depict and manage athletes with intersex variations at the HA expert meeting in Lausanne (in 2010), few of their propositions were accepted and even fewer implemented. Although Dr Schneider believes in the inclusion of an intersex organisation representative as part of the panel assessing HA athletes when a case does arise (see p. 144), the IOC and the IAAF do not. Irrespective of what Schneider believes, the IOC/IAAF HA policies lack the inclusion of such a representative because, as put forth by Dr Schamasch, the IOC cannot see how such a representative can facilitate the decisions they have to reach (see pp. 133-134). This points to the idea of Oudshoorn that the IOC/IAAF will continue collaborating with those who share similar values to themselves and similar ways in which to solve the ‘problems’ they have identified. This also highlights the idea that the habitus of the IOC/IAAF and science/medicine do not value the knowledges and truths of those with particular intersex variations as “socially viable”. Instead, what this dissertation has been able to show, differently from others, is that the voices of female bodies representing non-questioned women asserting a continued need for “protection” continue to be “privileged” as credible and truthful knowledges. Thus the ideal of the ‘level-playing field’ in female sports is secured at the cost of disparaging and eliminating the truths and knowledges of particular female athletes and especially those with intersex variations. This unbalanced power-dynamic disenfranchises and marginalises women whose bodies challenge the hetero-normative norms in the dominant habitus and privileges those whose bodies do not. This further demonstrates that the IOC/IAAF may only include an intersex organisation in their talks of how to draft policies as a democratic gesture of inclusion, but when it comes to implementing the rules or when a case of HA is detected, their truths, knowledges and experiences are not useful or viable for the IOC/IAAF. As with most studies, more queries arise than are solved, hence in the final section below I have put forward some recommendations for future research.

Recommendations for Future Research Directions

As it was not possible to meet with female athletes in person to hear their personal experiences and views, it is suggested that further research could focus on their stories and views – by perhaps including voices from those who have been tested and disqualified, tested but not disqualified and those who have never been tested. This approach meant I could address in more depth how particular truths and knowledges about normal versus abnormal sgbé and athletic performances in female sports have been and are produced, circulated, deployed, contested and justified through time. Narrowing down on those who were and are the direct
targets of the policies in question, especially in light of the fact that there were and are other groups in elite sports who could be policed and regulated for similar reasons, would be a valuable contribution to studies of sport, science, medicine, gender and ‘intersex’. However, the danger of only focusing on athletes who are targetted gives neither a complete nor inclusive picture of how those categorising themselves as female athletes understand fair and unfair competitive advantages. Nor does such an approach bring forth a scrutiny of what they think is important in maintaining or not maintaining a ‘level-playing field’ in female sports or sports in general.

As the IOC only permits researchers to examine archival material that is older than 30 years, performing a similar study but focusing only on the IOC, their ISFs and NSFs in five to ten years’ time would, through the availability of new material, likely further contribute to studies of sports medicine, sports, gender and intersex and help to better expose the continuities and discontinuities of sex/femininity/gender/HA verifications in elite sports. By then it is possible and maybe even likely that the IOC may have again revised their policy by discontinuing the testing name, technology and its target group.

Bioethically, more research into the inconsistencies related to the workings of ‘fairness’ in this arena would be of great value, especially with a mind to exercising the view that the link between athletic performance and testosterone has not been proven. Included in this work might be a study of whether testosterone functions similarly in men and women and whether other components and genetic make-ups might holistically affect the ways in which athletes succeed in elite sports or not. This is to think more critically about the generative relationships between sociology of sports, ethics and the applied soma/bio-technologies. More research is also recommended for investigating the potential harm which treatments proposed to HA athletes for competition eligibility might have in order to create a rationale with which to challenge such policies, if proved to be maleficent. Lastly, it would be of academic value to further examine the extent to which elite sports should continue to be separated by gender and whether or not there could be more logical and ethical ways of dividing sports so that those with genetic make-ups or identities which disturb the existing binary system are not disenfranchised and marginalised as they so clearly have been to date.

**In Closing**

This study shows how disturbances in sex, gender, body, embodiment and athletic performance in female sports pose challenges not only for those through whom such disturbances arise but also for the medical commissioners of the IOC/IAAF and intersex organisation representatives who are faced with dealing with the consequences of such disturbances. The debates, conflicts,
continuities and discontinuities surrounding intersex variations and fairness in elite sports which have been identified throughout this research also crystallise many other issues which popular culture, medicine and the world of sports are currently faced with – such as, how to balance the truths, knowledges, concerns and requests coming from the various voices amongst female athletes with the ethical concerns of the broader community.

Through this thesis I have contributed to the discourse of disturbing bodies and athletic performances in female sports by extending the commonly known years when female athletes were being questioned and tested for their ‘genuine’ femininity in elite sports. I have uncovered that these conversations about ‘unreal women’ started already in 1928. I have also established that women were officially subjected to mandatory medical tests before being allowed to eligibly compete as early as 1938. Through my investigations I have highlighted that Brundage was a central figure in the development, standardisation and implementation of these tests, both nationally and internationally. By looking at the discourses together of female athletes, medical officials of the IOC/IAAF and intersex organisation representatives and how they relate to one another, I am the first to bring all these participants together in an extended dialogue. I have drawn attention to the biopower and biopedagogies that infuse these participants’ talk about disturbing bodies and athletic performances.

Through this dissertation I have also uncovered ‘new’ things such as the influence the Danish research team had on shaking the IOC’s theoretical logic in defining femininity through sex chromatin tests only, without considering the athlete’s individual gender identity. Revealing the importance of the Lillehammer survey (1994) in continuing the tests up until 1999 also indicates how the IOC were seeking support from women to continue the tests even though most of them admitted that they knew very little about the tests. In bringing all these participants into dialogue and uncovering new material at the Olympic Archives, I hope to have opened up new ways of thinking about the ways in which bodies and athletic performances are marked and regulated as normal and abnormal across these groups of participants through the phantasmal lens of ‘intersex’.
References

...by Mr. Włodzimierz Reczek (1969) Olympic Review, 22, 370


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Associated Press (AP) (1936, July 31). Brundage asks girls' sex test. *(Games of the XI Olympiad Berlin, Germany, 1936 Clippings Folder)*, Lausanne, Switzerland: IOC Historical Archives.


240


International Olympic Committee (IOC) (1966, October). Meeting of the Executive Board of the IOC, October 22, 1966, Mexico. (Minutes from IOC Executive Committee Hard disk) Lausanne, Switzerland: IOC Historical Archives.


International Olympic Committee (IOC) (1968a, January). Meeting of the IOC Executive Board meeting at Mon Repos Lausanne 26 and 27 January 1968, at Grenoble, 29, 30, 31 January 1968. (Minutes from IOC Executive Committee Hard disk) Lausanne, Switzerland: IOC Historical Archives.

International Olympic Committee (IOC) (1968b, September - October). Minutes of the Executive Board meeting, 30th September - 6th October, 1968, Hotel Camino Real, Mexico City. (Minutes from IOC Executive Committee Hard disk) Lausanne, Switzerland: IOC Historical Archives.


International Olympic Committee (IOC) (1972a, May). IOC Executive Board meeting minutes with International Federations, Lausanne. (Minutes from IOC Executive Committee Hard disk) Lausanne, Switzerland: IOC Historical Archives.


IOC Medical Commission (1976). IOC Medical Controls Book. IOC Historical Archives, Lausanne, Switzerland: IOC Medical Commission.

IOC Medical Commission (1980). Dr. Eduardo Hay SD1 Biographie Folder (CIO MBR HAY CORR OU MO 01 41 07). Lausanne, Switzerland: IOC Historical Archives.

IOC Medical Commission (1980). IOC Medical Controls: Games of the XXII Olympiad Moscow 1980. IOC Historical Archives, Lausanne, Switzerland: IOC Medical Commission.


IOC Medical Commission (ca. [1970]). Prince Alexandre De Merode: Company Director. SD1 Biographie Folder (CIO MBR De Merode CORR OU MO 01 41 07). Lausanne, Switzerland: IOC Historical Archives.

IOC Medical Commission (ca. [1981]). PORRITT Sir Arthur. SD1 Biographie Folder (CIO MBR Porritt CORR OU MO 01 41 07). Lausanne, Switzerland: IOC Historical Archives.


Nice Try (1968, February 8). (Chicago Tribune in X Winter Games - Grenoble, France, Clippings Folder). Lausanne, Switzerland: IOC Historical Archives.


Appendix One: Ethics Approval

MONASH University

Monash University Human Research Ethics Committee (MUHREC)
Research Office

Human Ethics Certificate of Approval

Date: 17 September 2010
Project Number: CF10/1674 - 2101000929
Project Title: Doing intersex in elite sport
Chief Investigator: Dr Mary-Lou Rasmussen
Approved: From: 17 September 2010 To: 17 September 2015

Terms of approval

1. The Chief Investigator is responsible for ensuring that permission letters are obtained, if relevant, and a copy forwarded to MUHREC before any data collection can occur at the specified organisation. Failure to provide permission letters to MUHREC before data collection commences is in breach of the National Statement on Ethical Conduct in Human Research and the Australian Code for the Responsible Conduct of Research.
2. Approval is only valid whilst you hold a position at Monash University.
3. It is the responsibility of the Chief Investigator to ensure that all investigators are aware of the terms of approval and to ensure the project is conducted as approved by MUHREC.
4. You should notify MUHREC immediately of any serious or unexpected adverse effects on participants or unforeseen events affecting the ethical acceptability of the project.
5. The Explanatory Statement must be on Monash University letterhead and the Monash University complaints clause must contain your project number.
6. Amendments to the approved project (including changes in personnel): Requires the submission of a Request for Amendment form to MUHREC and must not begin without written approval from MUHREC. Substantial variations may require a new application.
7. Future correspondence: Please quote the project number and project title above in any further correspondence.
8. Annual reports: Continued approval of this project is dependent on the submission of an Annual Report. This is determined by the date of your letter of approval.
9. Final report: A Final Report should be provided at the conclusion of the project. MUHREC should be notified if the project is discontinued before the expected date of completion.
10. Monitoring: Projects may be subject to an audit or any other form of monitoring by MUHREC at any time.
11. Retention and storage of data: The Chief Investigator is responsible for the storage and retention of original data pertaining to a project for a minimum period of five years.

Professor Ben Canny
Chair, MUHREC

cc: Ms Annette Bromdal
Appendix Two: Explanatory Statements

Explanatory Statement for International Olympic Committee Representatives

Title: Doing intersex in elite sport

This information sheet is for you to keep.

My name is Annette Brömdal and I am conducting a research project with Mary Lou Rasmussen a senior lecturer in the Faculty of Education, towards a PhD at Monash University. This means that I will be writing a thesis which is the equivalent of a 300 page book.

You have been invited by your organization to participate in this research because of your scientific expertise and knowledge of intersex variations/disorders of sex development (DSDs) and elite sports. As this participation is voluntary, you are invited to contact me if you wish to be involved, and the organisation will not know whether or not the invitation has been taken up.

The aim of this research project is to shed light on the ways in which ideas and ideals about sex, gender, body and embodiment are produced, circulated, disciplined and maintained in and around the culture of the International/National Olympic Committee (I/NOC) and its medical establishment; how these ideas and ideals about sex, gender, body and embodiment affect athletes with intersex variations; and what role individuals with intersex variations and intersex organizations play in these processes. I am conducting this research to find out more about the elements that impact these ideas and ideals and seeking to talk to I/NOC medical commissioners/representatives involved in managing the participation of athletes with sex variations/conditions.

From I/NOC’s perspective, this research offers a forum for I/NOC to clarify how the IOC manage athletes who ‘disrupt’ sex, gender, body and embodiment norms such as athletes with intersex variations/DSDs. In short, the objective of this research is to understand how the I/NOC and their medical commissioners talk about sex, gender, body and embodiment in relation to athletes with intersex variations/DSDs.

The study will involve an interview that will last a maximum of to 2 hours. To assist with the transcription of the interviews and to ensure your views are accurately recorded I would like to audio tape our discussion. However, if you are uncomfortable with this you will have the right to refuse or to stop the recording at any stage. You will also have the right to terminate the interview at any point and to review the transcripts at any stage after the interview.

As an organization and as an informant you will be offered the opportunity to review the final research and will be presented with copies of the summary if you so desire.

In relation to privacy issues, the organization and you may remain anonymous if so wished. The organization and you may also consent to be fully identified. These principles will apply to all published materials, including the dissertation and any subsequent publications. However, it is important to note that due to the nature of the IOC and NOCs and the small number of IOC
and NOC medical commissioners/representatives within the field the organization and you may be partially or fully identifiable despite remaining anonymous.

Storage of the data collected will adhere to the Monash University regulations. The data will be kept on Monash University premises and at my private office in a locked filing cabinet for 5 years. A report of the study may be submitted for publication, but, without your prior written approval you will not be identifiable in such a report.

In the unlikely event that you experiences discomfort generated by the conversation between yourself and the researcher you will have the right to terminate the interview and review the transcript. Participating in this study is voluntary and the organization and you are under no obligation to consent to participation. However, if the organization and you consent to participate, you may only withdraw prior to having approved the interview transcript.

If you would like to be informed of the aggregate research finding, please contact Annette Brömdal on or

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<tr>
<td>Dr. Mary Lou Rasmussen Senior Lecturer Faculty of Education Building 6 Clayton Campus Monash University Victoria 3800 Tel: [Redacted] Fax: [Redacted] Email:</td>
<td>Executive Officer Monash University Human Research Ethics Committee (MUHREC) Building 3e Room 111 Research Office Monash University VIC 3800 Tel: +61 3 9905 2052 Fax: +61 3 9905 3831 Email: <a href="mailto:muhrec@adm.monash.edu.au">muhrec@adm.monash.edu.au</a></td>
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Thank you.

Annette C. G. Brömdal
Title: Doing intersex in elite sport

This information sheet is for you to keep.

My name is Annette Brömdal and I am conducting a research project with Mary Lou Rasmussen a senior lecturer in the Faculty of Education, towards a PhD at Monash University. This means that I will be writing a thesis which is the equivalent of a 300 page book.

You have been invited by your organization to participate in this research because of your scientific expertise and knowledge of intersex variations/disorders of sex development (DSDs) and elite sports. As this participation is voluntary, you are invited to contact me if you wish to be involved, and the organisation will not know whether or not the invitation has been taken up.

The aim of this research project is to shed light on the ways in which ideas and ideals about sex, gender, body and embodiment are produced, circulated, disciplined and maintained in and around the culture of the International/National Olympic Committee (I/NOC) and its medical establishment; how these ideas and ideals about sex, gender, body and embodiment affect athletes with intersex variations; and what role individuals with intersex variations and intersex organizations play in these processes. I am conducting this research to find out more about the elements that impact these ideas and ideals and seeking to talk to I/NOC medical commissioners/representatives involved in managing the participation of athletes with sex variations/conditions.

From I/NOC’s perspective, this research offers a forum for I/NOC to clarify how the IOC manage athletes who ‘disrupt’ sex, gender, body and embodiment norms such as athletes with intersex variations/DSDs. In short, the objective of this research is to understand how the I/NOC and their medical commissioners talk about sex, gender, body and embodiment in relation to athletes with intersex variations/DSDs.

The study will involve an interview that will last a maximum of to 2 hours. To assist with the transcription of the interviews and to ensure your views are accurately recorded I would like to audio tape our discussion. However, if you are uncomfortable with this you will have the right to refuse or to stop the recording at any stage. You will also have the right to terminate the interview at any point and to review the transcripts at any stage after the interview.

As an organization and as an informant you will be offered the opportunity to review the final research and will be presented with copies of the summary if you so desire.

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Storage of the data collected will adhere to the Monash University regulations. The data will be kept on Monash University premises and at my private office in a locked filing cabinet for 5
years. A report of the study may be submitted for publication, but, without your prior written approval you will not be identifiable in such a report.

In the unlikely event that you experience discomfort generated by the conversation between yourself and the researcher you will have the right to terminate the interview and review the transcript. Participating in this study is voluntary and the organization and you are under no obligation to consent to participation. However, if the organization and you consent to participate, you may only withdraw prior to having approved the interview transcript.

If you would like to be informed of the aggregate research finding, please contact Annette Brömdal on [contact information] or [contact information].

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| Dr. Mary Lou Rasmussen  
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Thank you.

Annette C. G. Brömdal
Explanatory Statement for Intersex Organization Representatives

Title: Doing intersex in elite sport

This information sheet is for you to keep.

My name is Annette Brömdal and I am conducting a research project with Mary Lou Rasmussen a senior lecturer in the Faculty of Education, towards a PhD at Monash University. This means that I will be writing a thesis which is the equivalent of a 300 page book.

You have been invited by your organization to participate in this research because of your experiences and knowledge with ‘intersex’ advocacy/ activism. As this participation is voluntary, you are invited to contact me if you wish to be involved, and the organisation will not know whether or not the invitation has been taken up.

The aim of this research project is to shed light on the ways in which ideas and ideals about sex, gender, body and embodiment are produced, circulated, disciplined and maintained in and around the culture of the International Olympic Committee (IOC) and its medical establishment; how these ideas and ideals about sex, gender, body and embodiment affect athletes with intersex variations; and what role individuals with intersex variations and intersex organizations play in these processes. I am conducting this research to find out more about the elements that impact these ideas and ideals and will be interviewing other intersex organization representatives whose advocacy work is similar to your own.

From your organization’s perspective, this research offers a forum for you to clarify your organization’s views and involvement in how ideas and ideals about sex, gender, body and embodiment are produced, circulated, disciplined and maintained in elite sports. In short, the objective of this research is to understand and not judge how intersex organizations talk about sex, gender, body and embodiment in relation to the IOC, its medical commission and in your own cultural setting.

The study will involve an interview that will last a maximum of to 2 hours. To assist with the transcription of the interviews and to ensure your views are accurately recorded I would like to audio tape our discussion. However, if you are uncomfortable with this you will have the right to refuse or to stop the recording at any stage. You will also have the right to terminate the interview at any point and to review the transcripts at any stage after the interview.

As an informant you will be offered the opportunity to review the final research and will be presented with copies of the summary if you so desire.

In relation to privacy issues, the organization and your contribution to this research may remain anonymous if so wished. The organization and you may also consent to be fully identified. These principles will apply to all published materials, including the dissertation and any subsequent publications. However, it is important to note that due to the small number of intersex organizations in your country, your organization and you may be partially or fully identifiable despite you remaining anonymous.

Storage of the data collected will adhere to the Monash University regulations. The data will be kept on Monash University premises and at my private office in a locked filing cabinet for 5 years. A report of the study may be submitted for publication, but, without your prior written approval you will not be identifiable in such a report.

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Thank you.

Annette C. G. Brömdal
Appendix Three: Consent Forms

Consent Form for International Olympic Committee Representative

Title: Doing intersex in elite sport

NOTE: This consent form will remain with the Monash University researcher for their records

I agree to take part in the Monash University research project specified above. I have had the project explained to me, and I have read the Explanatory Statement, which I keep for my records. I understand that agreeing to take part means that:

1. I agree to be interviewed by the researcher [ ] Yes [ ] No
2. I agree to allow the interview to be audio-taped [ ] Yes [ ] No
3. The organization may be named [ ] Yes [ ] No
4. The organization must not be named in publications related to the research [ ] Yes [ ] No
5. My contribution as a participant to this research may be named [ ] Yes [ ] No
6. My contribution as a participant to this research must not be named in publications related to the research [ ] Yes [ ] No

I understand that my participation is voluntary, that I can choose not to participate in part or all of the project, and that I can withdraw at any stage of the project without being penalised or disadvantaged in any way. However, if I do consent to participate, I may only withdraw prior to having approved the interview transcript.

I understand that any data that the researcher extracts from the interview for use in reports or published findings will not, under any circumstances, contain names or identifying characteristics if the organization box and/or my contribution box are ticked to be anonymous.

I understand that I will be given a transcript of data concerning me for my approval before it is included in the write up of the research.

I understand that any information I provide is confidential, and that no information that could lead to the identification of any individual will be disclosed in any reports on the project, or to any other party if the organization box and/or my contribution box are ticked to be anonymous.

I understand that data from the interview will be kept in a secure storage and accessible to the research team. I also understand that the data will be destroyed after a 5 year period unless I consent to it being used in future research.

Participant’s name

Signature

Date
Consent Form for National Olympic Committee Representative

Title: Doing intersex in elite sport

NOTE: This consent form will remain with the Monash University researcher for their records

I agree to take part in the Monash University research project specified above. I have had the project explained to me, and I have read the Explanatory Statement, which I keep for my records. I understand that agreeing to take part means that:

1. I agree to be interviewed by the researcher □ Yes □ No
2. I agree to allow the interview to be audio-taped □ Yes □ No
3. The organization may be named □ Yes □ No
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6. My contribution as a participant to this research must not be named in publications related to the research □ Yes □ No

I understand that my participation is voluntary, that I can choose not to participate in part or all of the project, and that I can withdraw at any stage of the project without being penalised or disadvantaged in any way. However, if I do consent to participate, I may only withdraw prior to having approved the interview transcript.

I understand that any data that the researcher extracts from the interview for use in reports or published findings will not, under any circumstances, contain names or identifying characteristics if the organization box and/or my contribution box are ticked to be anonymous.

I understand that I will be given a transcript of data concerning me for my approval before it is included in the write up of the research.

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I understand that data from the interview will be kept in a secure storage and accessible to the research team. I also understand that the data will be destroyed after a 5 year period unless I consent to it being used in future research.

Participant's name…………………………………………………………………………………………

Signature…………………………………………………………………………………………………….

Date………………………...
Consent Form for Intersex Organisation Representative

Title: Doing intersex in elite sport

NOTE: This consent form will remain with the Monash University researcher for their records.

I agree to take part in the Monash University research project specified above. I have had the project explained to me, and I have read the Explanatory Statement, which I keep for my records. I understand that agreeing to take part means that:

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I understand that any data that the researcher extracts from the interview for use in reports or published findings will not, under any circumstances, contain names or identifying characteristics if the organization box and/or my contribution box are ticked to be anonymous.

I understand that I will be given a transcript of data concerning me for my approval before it is included in the write up of the research.

I understand that any information I provide is confidential, and that no information that could lead to the identification of any individual will be disclosed in any reports on the project, or to any other party if the organization box and/or my contribution box are ticked to be anonymous.

I understand that data from the interview will be kept in a secure storage and accessible to the research team. I also understand that the data will be destroyed after a 5 year period unless I consent to it being used in future research.

Participant's name..............................................................................................................................................

Signature.....................................................................................................................................................................

Date........................................
Appendix Four: Sample Questions

Sample Questions for IOC Representative

1. From a ‘fairness’ perspective why is it not fair to allow female athletes with functional hyperandrogenism to compete with other women if they accord a competitive advantage?
2. Can you clarify what “the essence of the male/female classification” implies?
3. With the new policy what will trigger for someone to have their testosterone / androgen tested in the first place?
4. The IAAF policy states that a ‘Reliable Source’ or ‘Confidential Information’ to the IAAF Medical Manager or IAAF Medical Delegate can trigger for someone to be tested, can that include another competing athlete, team leader, or team doctor? Does same go for the IOC?
5. Can you clarify the content and the purpose of developing the Athlete Biological Passport?
6. The proposed Expert Medical Panel on hyperandrogenism, will an intersex organisation representative be part of it?
7. It is stated that as long as a female athlete produces androgen levels below the male range she is eligible – Is more than 10nmol/L the official cutting range? So if the athlete has 9.9nmol/L that is fine?
8. What will happen if a female athlete with functional hyperandrogenism is found ineligible? What options will be presented to the athlete in question – what type of treatments are we talking about?
9. Hypothetically, if the female athlete has a testosterone level of 10.5nmol/L and undergoes treatment how far down should the athlete’s supervising physician drop it down to? Again, would 9.9nmol/L be sufficient?
10. Who will pay for this treatment – is it the athlete’s financial responsibility? What if they come from a developing country and have no means to pay for these treatments?
11. In what ways can this procedure of ‘androgen blocking’ affect the athlete’s health?
12. How is this inborn competitive advantage any different from other competitive advantages such as Primary familial and congenital polycythemia (PFCP), someone born with Marfan syndrome or the genetic condition Myostatin-related muscle hypertrophy characterized by reduced body fat and increased muscle mass increasing the person’s muscle strength?
13. Ethically and morally is it just to condition someone to become worse to become eligible if the person has not chemically manipulated their competitive advantage?
14. The South African Sport scientist Tim Noakes argues that all elite athletes, one way or the other, are ‘genetic freaks’ and this genetic advantage is what makes them superior at what they do, why is this genetic difference being punished?

15. During the meeting in Lausanne in October last year, the OII representative Hida Vilora was part of the meeting, in what ways was it useful to have an intersex organisation representative part of the meeting?

16. Have the IOC and the IAAF incorporated any of OII’s suggestions, if yes, what?

17. What did the IOC and the IAAF not incorporate that the OII suggested, why not?

18. In brief, why was the terminology changed from ‘disorders of sex development’ to functional hyperandrogenism?

19. Hida Viloria argues that the new rules of conditioning someone to undergo hormone therapy are a form of ‘reverse doping’, what is your opinion on that?

20. Hida further argues that if the IOC and the IAAF cannot define one to be female, that that in itself is a proof that that men and women come in many varieties, and that we should accept, not punish the ones outside the norm. What is your opinion on that?

21. In your view do the IOC and its medical commission view ‘female’ athletes with intersex variations differently to ‘male’ athletes with intersex variation? …why/why not?

22. In your opinion why do you believe men are not sex and gender verified in male only sporting events?

23. As there is a great discrepancy between how much androgen men produces could one man argue that a man can have a competitive advantage over someone else? Why is this not looked into?

24. In your opinion is sex and gender the ideal way to segregate elite sports?...why/why not?
Sample Questions for NOC Representative

1. In brief, what is your view on the terminology ‘intersex’?
2. In brief, what is your view on the nomenclature ‘disorders of sex development’?
3. What is your view on gender verification testing in female only sporting events of the elite level?
4. As female athletes will be verified on a case-by-case basis, what does that imply to you?
5. In your opinion why do you believe men are not sex and gender verified in male only sporting events?
6. How do the IOC and its medical commission view and describe sex?
7. How do the IOC and its medical commission view and describe gender?
8. How do the IOC and its medical commission view and describe the female/male body and embodiment?
9. In your view do the IOC and its medical commission view ‘female’ athletes with intersex variations differently to ‘male’ athletes with intersex variation? …why/why not?
10. How do the IOC and its medical commission determine who shall be part of the panel of experts determining the sex and/or gender of the athlete in question?
11. Have any intersex support/activist groups contacted the IOC and its medical commission before the Semenya incidence? What was their concern?
12. Have any intersex support/activist groups contacted the IOC and its medical commission post the Semenya incidence? What was their concern?
13. In your opinion what is at stake with regards to the Semenya controversy, and others – why do you think these cases have become such controversies?
14. Have there been any changes in how athletes with intersex variations have been viewed over time? …In what ways?
15. Why did the IOC decide to organize a gender symposium in Miami, in January 2010?
16. What did the IOC agree on through this meeting?
17. In October of this year, the IOC held another meeting in Lausanne towards the establishment of a consensus statement on the management of athletes with intersex variations, why?
18. What type of representatives were part of this meeting compared to the first one?
19. What did the IOC and the members of this meeting agree on here?
20. The IOC and its medical commission refer to athletes with intersex variations as DSDs why is this?
21. In your opinion how should athletes with intersex variations be viewed by the IOC and its medical commission?...why?

22. From a ‘fairness’ perspective is it fair to allow female athletes with ‘certain’ intersex variations that may accord competitive advantage to compete with other women? Why/why not?

23. In your opinion should female athletes with intersex variations be diagnosed and treated in order to eligibly compete in female only sporting events?...why/why not?

24. If they do not comply, what space is there for ‘female’ athletes with intersex variations to compete in elite sports? where should they then compete?

25. In your opinion should male athletes with intersex variations be diagnosed and treated in order to eligibly compete in male only sporting events? …why/why not?

26. In your opinion should elite sports be segregated?

27. In your opinion is sex and gender the ideal way to segregate elite sports?...why/why not?
Sample Questions for Intersex Organisation Representative

1. Could you please clarify if you are an Intersex ‘support group’ or an Intersex ‘activist group’
2. In brief, what is your view on the terminology ‘intersex’?
3. In brief, what is your view on the nomenclature ‘disorders of sex development’?
4. What is your view on gender verification testing in female only sporting events at the elite level?
5. As female athletes will be verified on a case-by-case basis, what does that imply to you?
6. In your opinion why do you believe men are not sex and gender verified in male only sporting events?
7. In your view do the IOC and its medical commission have certain ideas and ideals when it comes to sex?
8. In your view do the IOC and its medical commission have certain ideas and ideals when it comes to gender?
9. In your view do the IOC and its medical commission have certain ideas and ideals when it comes to body and embodiment?
10. In your view how do you think these ideas and ideals affect athletes with intersex variations? …is there a difference between male and female athletes with intersex variations?
11. Has your organization made any public comments on the Semenya case or any other intersex and elite athlete cases, the IAAF and the IOC controversy?… why/why not?
12. In your opinion what is at stake with regards to the Semenya controversy, and others – why do you think these cases have become such controversies?
13. Has your organization been in contact with the IAAF and/or the IOC prior/post to the Semenya controversy on intersex and elite sports?
14. In your view how do the IOC and its medical commission view athletes with intersex variations prior to the Semenya incident?
15. In your view how do the IOC and its medical commission view athletes with intersex variations after the Semenya incident?
16. The IOC and its medical commission refer to athletes with intersex variations as DSDs why do you think that is?
17. In your opinion how should athletes with intersex variations be viewed by the IOC and its medical commission?…why?
18. From a ‘fairness’ perspective is it fair to allow female athletes with ‘certain’ intersex variations that may accord competitive advantage to compete with other women? Why/why not?

19. In your opinion should female athletes with intersex variations be diagnosed and treated in order to eligibly compete in female only sporting events?…why/why not?

20. (If participant argues they should not be allowed to compete even if they hormonally and surgically comply – where should they then compete?

21. In your opinion should male athletes with intersex variations be diagnosed and treated in order to eligibly compete in male only sporting events? …why/why not?

22. In your opinion is sex and gender the ideal way to segregate elite sports?...why/why not?
Questions Structuring the Analysis of the Autobiographical Accounts

1. How did they experience the sex/femininity/gender verification?
2. How did the sex/femininity/gender verification affect them and their lives?
3. Did they agree or disagree with the IOC/ISF logic to sex/femininity/gender verify female athletes?
4. Did they think it was fair to police and regulate female athletes with certain intersex variations in women’s competitions?; and
5. How did they read and mark their own sex, gender, body, embodiment and athletic performance as female athletes?