THE CONCEPT OF BETTERNESS
AND
SPORT COMPETITIONS

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ORIGINAL ARTICLES (only in print version, original pagination)
ABSTRACT

It is common that people disagree on a question which athlete or team was the best in a particular sport competition. This thesis attempts to clarify these disputes by analysing the concept of betterness in the context of sport competitions.

Betterness can be interpersonal, intrapersonal or a combination of the two. I focus on interpersonal betterness, that is, on superiority. For example, interpersonal betterness may be contested in a football match between the national teams of Germany and Argentina.

My aim is to provide a philosophical account of interpersonal betterness. The account has two functions: descriptive and normative. It describes the shapes and forms in which superiority is instantiated in sport competitions. It also provides a consistent and accurate way to discuss superiority.

The thesis consists of two parts. In the first part, I introduce, elaborate and illustrate my account, which in turn consists of three elements: (1) relations of superiority, (2) standards for the relations of superiority and (3) types of competition. I also discuss my account’s relevance to issues of sport ethics through the example of gender equity and women’s ski jumping. I conclude that this account will not end the disputes over which team or athlete was better in a particular competition. Instead, it provides tools for a more consistent discussion of the disputed issues.

The second part of the thesis includes five reprinted original articles. The account presented in the first part is based on these publications.

Keywords: advantage, athletic superiority, competition, philosophy of sport, sport ethics, sport record, winning
TIIVISTELMÄ

Ihmiset kiistellevät usein siitä, kuka oli kilpailun paras urheilija tai joukkue. Väitöskirjassani yritän selittää, mistä nämä erimielisyydet johtuvat tarkastelemalla paremmuuden käsittettä ja urheilukilpailuja.


Tavoitteenani on esitellä filosofinen malli kilpailun osapuolten välisestä paremmuudesta. Mallin on tarkoitus olla sekä kuvaava että ohjeellinen. Se kuvaa, millaisia muotoja kilpailun osapuolten välinen paremuus saa urheilukilpailussa. Lisäksi se tarjoaa johdonmukaisen ja tarkan tavan puhua kilpailun osapuolten välisestä paremmuudesta.


Väitöskirjan toisen osion muodostavat viisi alkuperäisartikkelia. Ensimmäisen osion malli perustuu näihin julkaisuihin.

Asiasanat: etu, ennätys, kilpailu, urheilunfilosofia, urheilun etiikka, paremuus, voittaminen
ACKNOWLEDGEMENTS

A doctoral thesis is an endeavour that one can rarely complete without the help of others. I wish to thank my primary supervisor, Juha Rääkkä, who read and commented on my papers swiftly and patiently and who has provided a model of philosophical writing since I was an undergraduate. As the supervisor of my doctoral thesis, he was probably more often tasked with restraining my aspirations to complete the thesis than with motivating me. I am also grateful to my other supervisors, Eerik Lagerspetz and Veikko Launis, for their assistance.

It has been a pleasure to belong to the working community of the Philosophy Unit of the University of Turku, where I held a funded position for the first half of 2014. However, my ties to the unit extend beyond that period. I wish to thank all of the members of that community, particularly Marko Ahteensuu, Jussi Haukioja, Markku Keinänen, Olli Koistinen, Sanna Mattila, Markku Oksanen, Arvi Pakaslahti, Rosa Rantanen, Hanna-Mari Salonen, Helena Siipi and Susanne Uusitalo.

In addition, I held a funded position at the Public Choice Research Centre (PCRC) in 2013. During this eight-month period, I experienced memorable successes and a unique sense of community. I would like to extend my gratitude to all of the members of the PCRC, particularly Hannu Autto, Maija Karjalainen, Olli Lappalainen, Vesa Mäkinen, Matti Pihlava and Juha Ylisalo. I received my first office when I was awarded the PCRC position and I hope that I could again experience the awe I felt when I sat in that room for the first time.

In spring 2014, I spent a two-month research period at Swansea University. Mike McNamee deserves my thanks for being an excellent host during my visit. I am also grateful to all those who helped me during that stay.

I met friendly people and received useful feedback on my ideas at philosophy of sport conferences organised by the International Association for the Philosophy of Sport, the British Philosophy of Sport Association and the European Association for the Philosophy of Sport. I entered ‘the philosophy of sport community’ for the first
time at a conference in Prague in 2011. While there, I was privileged to meet Sigmund Lolland, whose ideas I criticise in three original articles included in this thesis. The thesis also includes an article in which I argue against Nicholas Dixon’s views. Meeting him at a conference in Fullerton (US) in 2013 was an honour.

It was exciting to read the insightful comments written by the two reviewers of my thesis, Mike McNamee and Jim Parry. I am also grateful to the journal editors and reviewers of my articles for helping me to refine my ideas.

Occasionally, researching and writing my thesis has been stressful, solitary, unrewarding and torturous. A special lunch group, however, provided valuable moments of escape from these miseries throughout the project. I would like to express my gratitude to Heidi Haanila, Visa Helenius, Jarkko Korpela, Markus Lammi, Anne Salminen and Nils Sandman.

I am painfully aware that I have not named everyone I encountered in the previously noted contexts who helped support my project. My only solace is that I can express my thanks to them collectively. In addition, I thank everyone who does not fit the categories mentioned in this acknowledgements section but who deserves my gratitude.

I greatly appreciate the financial support that my research has received. It has been funded by the Public Choice Research Centre, the University of Turku Graduate School, the Unit of Philosophy (University of Turku), the Turku University Foundation, the Varsinais-Suomi Regional Fund, the TOP-Foundation and the International Association for the Philosophy of Sport.

Last, completing this thesis on schedule has required determination, sacrifice and certain level of selfishness. However, there are valuable things in life that cannot be achieved through an egocentric attitude. During the final stage of the thesis, I met a dauntless girl who taught me this lesson about life. Thank you Anh.
NOTE ABOUT THE STRUCTURE

The thesis has two main parts: an introductory part (the chapters) and a part containing five original, peer-reviewed journal articles. The introductory part is based on the original articles. The electronic version of the thesis does not include the articles.
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LIST OF ORIGINAL ARTICLES


The copyright holders of the original articles have given their permission to reprint these articles in this thesis. They appear at the end of the printed version of this thesis. The electronic version does not contain the original articles.

In the introductory part (the chapters), I refer to the original articles using Roman numerals I–V.
Introduction

1.1 Background

I am holding a newspaper that reports the outcome of the final match of the 2014 football World Cup: Germany 1, Argentina 0. Does Germany’s better official result imply that Germany was the better team in that particular match?

The question is intriguing for two opposing reasons. First, the prevailing notion is that a team or athlete can officially win a contest without being the best team or athlete in that contest. One infamous example that supports this idea is the Olympic middleweight boxing final between the American Roy Jones Jr. and the South Korean Park Si-Hun at the 1988 Seoul Olympics. Jones Jr.’s victory seemed obvious at the fight’s conclusion. However, Park was declared the surprise winner according to the judges’ 3–2 decision. Many individuals, including both fighters, believed that Jones Jr. was better in the match. He hit Park 86 times, while Park recorded only 32 hits. The controversial vote of the judges appeared to be the result of bribery (see Ashdown 2012).

Second, despite the understanding that the official winner of a sporting contest is not always the best team or athlete in that contest, it would be audacious to suggest that the official results are totally irrelevant to the question of betterness. For example, when Brazil and Germany played in the 2002 World Cup final, Brazil scored twice and claimed the title. However, imagine that the referee had used dice to randomly decide the official result at the end of the match and that Germany won 5–1. This imaginary example may sound absurd, and one might plausibly argue that it is absurd because betterness is somehow connected to official results. Thus, we face a perplexing situation: betterness in sport
competitions seems not to be fully reducible to official results but also not fully independent of them.

1.2 Research question and significance

My thesis is an attempt to answer the following question: What is betterness in sport competitions? Sport, however, is not among the topics traditionally discussed by philosophers, and some readers may be sceptical of whether a philosophical enquiry into sport will bear any fruit (see Hyland 1990, xiii). Therefore, before describing how I will approach this research question, I will attempt to earn my place on the philosophers’ playing field. My aim is to demonstrate (1) why sport is a topic of academic interest, (2) why we should consider sport philosophically and (3) why we should analyse betterness in particular.

Sport is an important research topic because it is a ubiquitous cultural phenomenon, and studying these types of phenomena appears to be important (see Hyland 1990, xv; McNamee 2010b, 1–2). For example, Mike McNamee argues that if ‘we accept and support the notion that our dominant cultural practices should be studied critically at the highest educational levels it follows that the study of ethics of sports is valuable’ (McNamee 2010b, 2). Although McNamee’s original statement addresses ethics in sport, it may be extended to consider sport in general.

We can illustrate the ubiquitous character of sport with four observations. First, most people are engaged in sport in some way. They might be professional athletes, recreational athletes, Sunday joggers, fans, television spectators, gamblers, sport volunteers, or parents driving their children to sporting activities. Second, sports are socially valued practices. To support this claim, we can note that numerous newspapers devote a section of every issue to sport or that Finland’s national public service broadcasting company, YLE, may postpone or cancel regular television programmes, such as the news, to air major sporting events, such as the Olympics.
Third, sport matters in education. Physical education is a compulsory subject from the very first grade in several countries. In one clear example of the educational importance of sport, the Finnish Ministry of Education and Culture spent 152 million euros to support sport and physical exercise in 2013. In comparison, it allocated 399 million euros for science (Ministry of Education and Culture). Fourth, the economic impact of sport is illustrated in the price of a single bottle of a famous red-and-white-labelled cola drink, whose manufacturer uses part of its revenues to sponsor the Olympics.

Philosophy can contribute to the study of sport because intriguing philosophical and ethical questions abound in the realm of sport. Philosophers since Plato have used sporting examples in their texts (Reid 2012, xii; Torres 2014, 1). Scholars began to address the philosophical and ethical questions of sport more comprehensively during the twentieth century, and, in the latter part of the century, the ‘philosophy of sport’ became an established sub-field of philosophy (Kretchmar 1997; Torres 2014, 1–2; Reid 2012, 199–204). I will return to the emergence and development of the philosophy of sport at the end of this chapter.

The main question of my study—what is betterness in sport competitions?—addresses a relevant issue in the field of the philosophy of sport for three reasons. First, analysing betterness in sport competitions is a valuable endeavour in its own right. To my knowledge, no existing study purports to inquire comprehensively into the nature of betterness in sport competitions. Perhaps Nicholas Dixon (1999) has come closest to making such an inquiry, in his paper titled ‘On Winning and Athletic Superiority’. In general, researchers have focused on specific betterness-related issues, such as play-offs versus regular league play (Finn 2009; Torres & Hager 2011; see also Dixon 1999), running up the score (Dixon 2000; Dixon 1998; Dixon 1992; Feezell 1999; Hardman et al. 1996; Sailors 2010), point-awarding systems (Torres & Hager 2005) and the use of technology to evaluate betterness (Collins 2010; Nlandu 2012; Royce 2012; Ryall 2012), to name only a few. There have also been
analyses of competition per se (Kretchmar 2010; Kretchmar & Elcombe 2007). However, my study appears to be the first to take the concept of betterness as its primary subject of investigation.

The second reason that it is important to examine betterness is that such an analysis may provide novel insights into the ethical issues of sport. Recent compelling ethical questions include whether South African 800-metre runner Caster Semenya is eligible to compete in the women’s class,1 whether double amputee Oscar Pistorius should be allowed to run with able-bodied athletes2,3 and whether it is possible to set justified doping bans.4 These cases exemplify some of the central topics of sport ethics: gender, equality, fairness and enhancements (see Boxill 2013; McNamee 2010a; Morgan 2007).

An analysis of betterness may offer a novel perspective on ethical issues of sport because betterness plays a central role in several of the important ethical questions in the field. We would not debate the case of Pistorius so fervently—or perhaps at all—if he could not compete on a level similar to that of world-class able-bodied athletes. Furthermore, a novel perspective is desirable because there is a need for further research, despite the existing literature. For example, there is no generally accepted answer to the question of why doping substances should be banned, although many believe that it is important to seek justification for at least some level of prohibition.

Finally, the research question under consideration here is important because this analysis may have areas of application outside

1 See Caplan 2010; Foddy & Savulescu 2011; Camporesi & Maugeri 2010; Munro 2010; Wonkam, Fieggen & Ramesar 2010.
3 Pistorius has attracted attention beyond his sporting abilities. He allegedly shot his girlfriend Reeva Steenkamp in 2013, and a murder trial commenced in 2014. This sad incident remains outside the scope of this thesis.
4 For example, Lavin 2003; Miah 2010; Møller 2010; Schneider & Butcher 2000; Simon 2003.
of the realm of sport, a point I will return to briefly at the end of Chapter 4. In summary, it appears that I have earned my admission to the philosophers’ playing field. The next step is to lay out my game plan.

1.3 Aim

I answer my research question—what is betterness in sport competitions?—by developing a philosophical account. This account has two functions: descriptive and normative. It describes the shapes and forms in which betterness is instantiated in the majority of sport competitions. It also sets a standard for consistent and accurate discussions of betterness.

Two qualifications should be presented for this account. First, this is an account of interpersonal betterness. This qualification is based on the distinction between interpersonal (other-regarding) betterness and intrapersonal (self-regarding) betterness (for a similar distinction, see Kretchmar 2010). The term interpersonal betterness is used to describe relations that obtain between different athletes or teams, such as between the national football teams of Germany and Argentina. In contrast, I use the term intrapersonal betterness to refer to relations that obtain between the different temporal stages of the same team or athlete, such as between Usain Bolt at the 2008 Beijing Olympics and that same athlete at the 2009 Berlin World Championships.

Interpersonal and intrapersonal betterness can also overlap. This situation occurs, for instance, when we compare which athlete has been better in relation to his or her previous performances. Imagine that a long distance runner who has dominated for an entire season wins an international 10,000-metre race with a time that is three minutes slower than his season best. However, the runner in second place sets a national record for his home country and improves his personal record by one minute. Thus, the silver medallist appears to have run better with respect to his previous performances. However, for the most part, I will disregard the
intertwined forms of betterness here because discussing them would require an analysis of intrapersonal betterness.

Please note that I do not use the terms betterness and superiority interchangeably. Betterness can be both interpersonal and intrapersonal, whereas superiority is merely interpersonal. This usage is intended to roughly reflect how people use the words better and superior. For instance, I could say that I am in better shape today than I was yesterday, but I would not say that I am in superior shape today to what I was yesterday. However, as a non-native English speaker, I might have erred in this usage. In this case, my use of language is revisionary rather than descriptive: I try to explicate a distinction that exists but is not revealed on the level of the English language.

The second qualifying remark is that this thesis is interested in betterness in the structural sense, not the psychological or conventional sense. For instance, several athletes have used illegal substances to help them to perform better than others, but the analysis of such psychological attitudes is outside the scope of this thesis. I focus on betterness in the impersonal, abstract and universal sense.

My thesis introduces an account that consists of three elements. Each element is further divided into three components. Table 1 summarises these elements and their components. The elements are (1) relations of superiority, (2) standards for the relations and (3) types of competition. I elaborate and discuss the elements and their components in Chapter two. In Chapter three, I summarise the account and demonstrate how it can be used to analyse a concrete case. In Chapter four, I address how we can utilise this account to address ethical issues that emerge in sport. I do this by presenting and discussing my argument that ski jumping possesses the potential to increase gender equity in sport. The final chapter concludes the thesis. I will now continue by describing my method.
<table>
<thead>
<tr>
<th>ELEMENTS</th>
<th>Relations of superiority</th>
<th>Standards for the relations</th>
<th>Types of competition</th>
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<tbody>
<tr>
<td>COMPONENTS</td>
<td>athletic superiority</td>
<td>official result</td>
<td>knockout or non-knockout</td>
</tr>
<tr>
<td>advantage</td>
<td>ideally adjudicated result</td>
<td>non-reducible or multi-structural</td>
<td></td>
</tr>
<tr>
<td>sport record</td>
<td>display of athletic skills</td>
<td>temporally limited or temporally extended</td>
<td></td>
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</tbody>
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Table 1. A summary of the account of interpersonal betterness.

1.4 Method and original articles

I have employed an adapted version of wide reflective equilibrium in this study. Before explaining how I adapted the original method, I will introduce it briefly. Wide reflective equilibrium is a coherentist method promoted by John Rawls (1974–1975) and Normal Daniels (1979) (see also Räikkä 2009). According to Daniels, the method attempts to establish coherence between three sets of beliefs: (a) considered moral judgements, (b) moral principles and (c) relevant background theories. The starting point is a person’s considered moral judgements. She attempts to identify moral principles that cohere with these judgements but is also ready to adjust the original judgements and introduce new judgements if the
plausible principles clash with her original judgements. The agent uses the relevant background theories to evaluate the plausibility of the judgements and principles. She works back and forth with the judgements, principles and background theories, attempting to achieve coherence among them. None of the beliefs in the three sets is immune to adjustment or exclusion (Daniels 1979, 258–259). Ideally, the process results in a point of equilibrium (Räikkä 2009, 51).

I have made two adaptations to the method of wide reflective equilibrium. First, I have sought coherence among the following three sets of beliefs: (a) considered judgements concerning which team or athlete was better in particular instances, (b) elements of my account of interpersonal betterness and (c) relevant background theories.

The second difference is that I have established partial equilibrium points that occur prior to the overall equilibrium. Each partial equilibrium point covers some elements of the account but not all. The content of the partial equilibrium points is also provisional with respect to the content of the overall equilibrium point. I have established the partial equilibrium points in four original articles, which are included at the end of this thesis, along with a fifth article that presents my argument about the potential of ski jumping. Together, these five articles form the latter part of my thesis. The first part is the current introductory part or narrative part. I refer to the articles using Roman numerals I–V in this introductory part. Although the five articles are part of my thesis, each is also a free-standing contribution to the philosophical study of sport. I will introduce the articles briefly here.

Three Standards of Athletic Superiority (1)
Nicholas Dixon (1999) has suggested that the criterion for athletic superiority is athletic skill. I argue against Dixon by contending that

5 The electronic version of this thesis does not include the articles.
there are three standards of athletic superiority: the demonstration of athletic skill, the achievement of prelusory goal using lusory means and the achievement of superior formal result.

*The Concept of Advantage in Sport (II)*
Sigmund Loland (2002) classifies advantages in sport competitions as formal or informal. I replace his analysis by arguing that there are two kinds of advantages in sport: performance advantage and property advantage. Performance advantage is a function of property advantages.

*A Situational Theory of Advantages in Sport (III)*
I revisit Loland’s (2002) view of advantage, arguing for two senses of the concept of advantage: the absolute sense and the expectancy sense. This approach offers a different analysis of advantage than that presented in ‘The Concept of Advantage in Sport’. One way to reconcile these analyses is to consider the absolute sense and the expectancy sense as two different senses of performance advantage.

*Two Kinds of Sport Records (IV)*
Loland (2001) analysed sport records and has suggested that they are problematic because they face an issue that he terms record dilemma. I critique Loland’s view. I also argue that there are two kinds of sport records: performance records and statistical records. The function of sport records is to fortify a general tendency towards the universal in sport.

*A Sport with Untapped Potential to Empower Women (V)*
I argue that ski jumping possesses untapped potential to empower women. This potential is based on the notion that under certain conditions women can ski jump as far as men. I suggest taking two steps to harness this potential. The first is to introduce a mixed-sex pair competition, and the second is to introduce a sex-integrated individual competition.
It is important to understand two points about the relationship between the articles and the introductory part of this thesis. First, I have adjusted and developed the ideas of the original papers for the introductory part, but I only explicate the major changes in the appropriate contexts in my text. A more detailed record would hardly be interesting. It follows that a careful reader may identify unaddressed discrepancies between the original articles and the introductory part. Second, the original publications still represent valuable contributions to the field, although I no longer agree with everything that I wrote in them. For example, the articles focus more comprehensively on certain aspects and details than the introductory part of this work does. Before proceeding to elaborate my account, I will briefly describe how the field of the philosophy of sport emerged.

1.5 Context

The origins of the academic discipline of the philosophy of sport date back to the second half of the twentieth century. Physical educators addressed sport-related issues in North America in the first half of the century. Gradually, academic philosophers became more involved, and by the late 1960s, it was possible to refer to the philosophy of sport as a sub-discipline of philosophy. One of the first philosophical books about sport written by a philosopher was Paul Weiss’ *Sport: A Philosophic Inquiry*, published in 1969 (Hopfiscker & Jirásek 2014, 333–334; Kretchmar 1997; Torres 2014, 1–2; Reid 2012, 199–204).

A major formal landmark was the establishment of the *Philosophic Society for the Study of Sport* in 1972. Weiss and Warren Fraleigh played an important role in founding the society; Weiss was its first president, and its first meeting was held in Brockport, New York, in 1973. Furthermore, the society initiated a journal entitled *Journal of the Philosophy of Sport* (JPS), the first issue of which was published in 1974 (Kretchmar 1997; Reid 2012, 201). The discussion of the philosophical issues of sport took place, inter alia, at the
society’s annual meetings, in journal articles, in monographs (see for instance Fraleigh 1984; Morgan 1994; Simon 1991) and in general anthologies (see for instance Morgan & Meier 1988; Morgan & Meier 1995; McNamee & Parry 1998).

Due to the international growth of the field, the society was renamed the International Association for the Philosophy of Sport (IAPS) in 1999 (McNamee 2007, 1). The literature continued to expand with the publication of new monographs (for instance McNamee 2008; Reid 2011) and general anthologies (Boxill 2003; McNamee 2010a; Morgan 2007; Morgan, Meier & Schneider 2001). One partially novel feature of the new century was the appearance of anthologies focusing on specialised topics, such as disability (Jespersen & McNamee 2009), sport medicine (Tamburrini & Tännö 2009), phenomenology (Martínková & Parry 2012) and gender (Davis & Weaving 2010).

The second journal in the field, Sport, Ethics and Philosophy (SEP), was founded in 2007 by the British Philosophy of Sport Association. In 2014, even more journals address philosophical issues of sport, such as the open-access online journal Fair Play. Journal of Sport: Philosophy, Ethics and Law. Furthermore, in 2014, two comprehensive anthologies indicate the stature of the field: The Bloomsbury Companion to the Philosophy of Sport, edited by Cesar Torres (2014), and the Routledge Handbook of the Philosophy of Sport, edited by Mike McNamee and William Morgan (forthcoming).

The preceding historical introduction is primarily Anglo-American, but the emergence and development of the philosophy of sport has adopted varying forms and followed different paths across some language areas and countries. The second issue of JPS volume 37 (2010) provides several articles that describe this variety (see also Hopsicker & Jirásek 2014), but my purpose is not to describe the regional development of the philosophy of sport. Let us now shift from contextualising my account to elaborating it.
2 The elements of the account

I will elaborate the three elements of my account of interpersonal betterness in this chapter. I have divided the chapter into three sections on the basis of the relations of superiority, that is, on the basis of the first element of my account. The three sections are athletic superiority (2.1), advantage (2.2) and sport record (2.3). I address the second element of my account, the standards for the relations of superiority, in the section about athletic superiority (2.1). My analysis of the third element, the types of competition, is distributed across the three sections.

2.1 Athletic superiority

2.1.1 The inherent purpose of sport competitions

Philosophers of sport have attempted to describe a purpose or goal that unifies all sport competitions. Sigmund Loland (2002, 10) notes that ‘a general goal that characterizes sport competitions as such […] is to measure, compare and rank two or more competitors according to athletic performance’. Loland terms this the structural goal of sport competitions and proposes that it ‘seems to be common to all sports’ (Loland 2002, 10).

Nicholas Dixon has tried to capture the purpose of sport competitions in a similar way, arguing that a ‘central purpose of competitive sport is precisely to provide a comparison—in Kretchmar’s terms […], a contest—that determines which team or player is superior’ (Dixon 1999, 10, see also Kretchmar 2010). Primarily following Dixon, I stated in Article I that ‘this paper will
focus on the inherent purpose of sports competitions: determining which athlete or team is better’ (I)\textsuperscript{6}.

I no longer support the view that there is a purpose or goal that is universal to all sport competitions. Instead, it appears that sport competitions can have different inherent purposes. At the most fundamental level, the purpose of a particular sport competition depends on whether the competition is a knockout or non-knockout competition. This distinction belongs to the third element of my account, the types of competition. It is the first component of this element.

The inherent purpose of a knockout competition is to determine the set of best teams or athletes that will proceed to the next stage of a non-knockout sport competition. One example of a knockout sport competition is a quarter-final match of the World Cup, such as that between Argentina and England in 1986. However, my focus will remain primarily on non-knockout competitions.

It is possible to classify four slightly different main variants of the inherent purpose of non-knockout sport competitions. These variants are theoretical in the sense that we may not necessarily be able to explicate which of them instantiates in a concrete case.

The first variant of the inherent purpose is to determine which of any two selected participants in a sport competition is better. The final match of a World Cup, such as that between Argentina and West Germany in 1986, could be used to exemplify this inherent purpose. However, a Premier League match does not embody this variant because it may end in a draw, such as the match between Swansea City and Crystal Palace in March 2014.

The second variant of the inherent purpose is to determine which of any two selected participants in a sport competition is better or whether neither is better. One potential example is a Premier league football match because such a competition can end in

\textsuperscript{6} As previously noted, I refer to the original articles included in this thesis with Roman numerals.
a draw. Another example is the men’s super-G at the 2014 Sochi Winter Olympics. In that contest, Frenchman David Poisson and Italian Werner Heel both had the official result of 1:19.74 and shared 17th place. By contrast, a semi-final match in the World Cup is not an example of this purpose.

The third variant of the inherent purpose is to determine which participant in a sport competition is better than any other participant in that competition. This purpose paraphrases Dixon’s focus on determining the superior team or athlete. The final match of the World Cup again provides a possible example, while the women’s downhill at the 2014 Sochi Olympics does not embody this variant. The Slovenian Tina Maze and the Swiss Dominique Gisin both had the same official result of 1:41.57, and they both received gold medals.

The fourth variant determines which participant in a sport competition is better than or as good as any other participant. A Premier League match, the men’s super-G at Sochi and the women’s downhill at Sochi are all candidates for this purpose. The World Cup final is not.

Although there are four variants of the inherent purpose of non-knockout sport competitions, there is also a single feature that unifies all non-knockout sport competitions. This feature states that all non-knockout sport competitions provide the possibility of determining the superior team or athlete: the World Cup final match is one example of this possibility. A Premier League match also provides the possibility of determining the superior team despite the fact that a draw is possible.

The unifying feature of all non-knockout sport competitions and the third variant of the inherent purpose, the variant used by Dixon, partially overlap. According to the unifying feature, all non-knockout sport competitions provide the possibility of determining a superior team or athlete, and, as previously noted, the third variant of the inherent purpose is to determine the superior team or athlete. Consequently, we can paraphrase the unifying feature of non-knockout sport competitions as follows: all non-knockout sport
competitions provide a possibility of determining the third variant. Hence, let us focus on this third variant, determining the superior team or athlete.

Dixon suggests that we are able to determine the superior team or athlete by obtaining an accurate measure of athletic superiority (Dixon 1999, 10). Initially, athletic superiority may appear to be a controversial or vague concept, but in its most basic sense, it is rather straightforward: athletic superiority is the hierarchical order of two teams or athletes at the end of a sport competition (see I). This definition implies that we can explain all the four variants of inherent purposes of non-knockout sport competitions through the concept of athletic superiority. Nevertheless, as noted above, I focus here on analysing athletic superiority in the context of the third variant.

A challenge arises when we try to settle on which criteria should be used to establish the hierarchical order of athletes or teams. Dixon argues that there is a single standard of athletic superiority, athletic skill, which comprises physical prowess and mental attributes. For instance, a football team appears to display more athletic skill than the opposing team if it dominates the ball across the entire field and employs an efficient offense (Dixon 1999, 10–11, 24).

I argue against Dixon, suggesting that there are three standards of athletic superiority: the official result, the ideally adjudicated result and the demonstration of athletic skills. In comparison, I used the terms formal result, the meeting of lusory goals through lusory means and the demonstration of athletic skills in my original article on the subject (Article I). Before elaborating these three standards, I will provide some conceptual preliminaries.

2.1.2 Conceptual background

The three-standard model has its conceptual roots in Bernard Suits’ famous thesis that to ‘play a game is to attempt to achieve a
specific state of affairs [prelusory goal], using only means permitted by the rules [lusory means]' (Suits 2010, 28). This citation includes two important elements: the prelusory goal and the lusory means. The prelusory goal describes a specific state of affairs. In long-distance running competitions, according to Suits, the specific state of affairs is crossing the finish line before others. The lusory means refer to the rules of the game: they define how one is allowed to aim for the prelusory goal. For instance, one is not allowed to trip a rival in such a race (Suits 2010, 25–26).

Suits’ analysis is insightful, but I will modify it or, at least, rephrase his ideas in more detail.7 I replace Suits’ notion of the prelusory goal with the notion of the competitive goal. The term competitive goal refers to the following state of affairs: competing party A performs task T in a more favourable manner with respect to aspect S than do the other competitors. For instance, the competitive goal of a 200-metre race can be described as follows: sprinter A travels the 200-metre distance in less time than the other competitors. A more thorough elaboration of the case would note that task T refers to travelling the distance of 200 metres, aspect S refers to time and the more favourable amount of time is the smaller amount of time.

The notion of a competitive goal helps us understand the unifying feature of non-knockout sport competitions. A non-knockout sport competition provides the possibility of determining the superior team or athlete because the competition provides the competing parties with the possibility of achieving a competitive goal. In other words, a non-knockout sport competition provides every competing party with the possibility of achieving the following state of affairs: competing party A performs task T in a more favourable manner with respect to aspect S than do the other competitors. For example, a 200-metre race provides a sprinter A with the possibility that he will travel the 200-metre distance in less time than the other

7 Carwyn Jones’ criticism has assisted me in reformulating Suits’ ideas.
competitors; similarly, a football match provides team A with the possibility that it will place the ball into its opponents’ goal more frequently than the opponents place the ball into team A’s goal.

I replace Suits’ notion of lusory means with the notion of competitive means. Competitive means dictate the means that A is allowed to use towards achieving the competitive goal. The means, which A eventually employ in his attempt achieve that goal, I term athletic performance. Hence, athletic performance refers to the totality of actions that a competing party performs towards achieving a competitive goal during a sport competition (see II, 313). These preliminaries should assist the reader in grasping the three standards.

2.1.3 Three standards

2.1.3.1 Official result

When we keep my definition of the competitive goal in mind, we can define an official result as follows: a number within aspect S that a sport institution has ascribed to athletic performance in a sport competition. In the 1986 World Cup quarterfinal, Argentina’s official result was 2 goals against England’s 1 because the referee accepted these goals. Michael Johnson’s official result was 19.32 seconds and Frankie Frederick’s was 19.68 seconds in the 200-metre final of the 1996 Atlanta Olympics. These times appear on the list of results. According to the standard of the official results, Argentina was better than England in the World Cup quarter-final, and Johnson was better than Fredericks in the 200-metre final at the Atlanta Olympics.

2.1.3.2 Ideally adjudicated result

Again keeping my definition of a competitive goal in mind, we may state that the ideally adjudicated result is a number within aspect S that describes how A has achieved task T with respect to
aspect S via competitive means. It is, therefore, possible to reveal which team or athlete achieved the competitive goal via competitive means by comparing the ideally adjudicated results. A football match from the 2002 World Cup can be used to illustrate the ideally adjudicated result. Spain faced South Korea in a quarter-final that was decided on penalty shots. According to the standard of the official result, South Korea was better: Spain’s official result was no goals during playing time and 3 goals in a penalty shoot-out, whereas South Korea’s official result was no goals during playing time and 5 goals in a penalty shoot-out. However, it has been argued that the referee disallowed two perfect goals from Spain during playing time (see, for instance, Hayward 2002). According to this interpretation, Spain’s ideally adjudicated result was 2 goals, and South Korea’s ideally adjudicated result was no goals. Consequently, Spain was better according to the standard of the ideally adjudicated result.

The standards of the official result and the ideally adjudicated result differ in the origins of their evaluations. The standard of the official result is based on particular human judgements, while the standard of the ideally adjudicated result has its roots in an epistemically privileged viewpoint. We can imagine a situation in which a javelin thrower throws the javelin 89.00 metres, but the officials erroneously measure the throw at 88.50 metres. Therefore, the official result is 88.50 metres, but the ideally adjudicated result is 89.00 metres. We could, consequently, highlight the difference between the official result and the ideally adjudicated result by suggesting that the former depends on the way referees make decisions, while the latter evaluates how the referees should, ideally, have made those decisions with respect to the rules of the sport.

2.1.3.3 Athletic skills

In this study, I use the standard of athletic skill in roughly the same way as Dixon, but I wish to define athletic skills in more general terms than he does. I argue that athletic skills refer to actions that a sport community values as the means of achieving task
T (see Parry 2006, 206–208 for a similar view). In football, the sport community values such actions as accurate passes, possessing the ball, tricky feints and powerful shots. According to this standard, the team that displays more of these qualities is better.

The core of the standard of athletic skills is that the actions are primarily considered valuable in themselves, not in terms of their consequences. In other words, displaying athletic skills does not necessarily imply that the actions contribute to achieving task T. A football team can dominate the ball and create effective attacks but still fail to score a goal.

2.1.4 **Determination of athletic superiority and four cases of failed athletic contests**

Dixon’s one-standard model and my three-standard model differ in how they determine athletic superiority (I). Dixon argues that if the team or athlete that displays superior athletic skills is the official winner of the contest, athletic superiority has been determined. Accordingly, if the team or athlete that displays more athletic skills is not the official winner, then the competition has failed in its central comparative purpose (Dixon 1999, 10, 14, 16). According to the three-standard model, athletic superiority is determined when the three standards are in harmony: that is, when they denote the same athlete or team as better. Consequently, the athletic contest fails if any of the three standards conflict (I).

Being termed a failed athletic contest is not a comprehensive assessment of that contest. A failed contest may have been successful in respects other than determining athletic superiority. For instance, the audience may enjoy watching a match despite the fact that the team displaying superior athletic skill did not achieve the official victory (according to Dixon’s model) or the fact that the three standards conflict (according to the three-standard model) (Dixon 1999; I). This situation may occur when, for example, the number-one football team in the FIFA world ranking—say, Spain—is
defeated due to a lucky goal by a team ranked at number 207—say, San Marino. A reverse example is a contest in which athletic superiority is determined but watching the competition is very dull: for example, this situation may occur when an Ethiopian long-distance runner wins a 5,000-metre race with a lead of a full lap on the second-place runner.

Dixon lists four factors that can result in failed athletic contests: refereeing errors, cheating, gamesmanship and bad luck. Dixon’s example of a referee error is a football match in which the dominant team loses because the referee erroneously disallows two of the dominant team’s goals and awards a penalty shot to the opponent—also erroneously (Dixon 1999, 11). The case of Ben Johnson in the 1988 Seoul Olympics provides an example of cheating. Johnson was stripped of his Olympic gold medal due to his steroid use (Dixon 1999, 12–13). One example of gamesmanship is the professional or strategic foul, which refers to purposely committing an offence but openly acknowledging the punishment. Dixon describes how a dominant football team lost a match because it did not employ this tactic while its opponent used it (Dixon 1999, 14–15). In the case of bad luck, a dominant football team has several shots on the goalposts. Gusty winds and a muddy field nullify its other scoring attempts and the opposing team scores a goal during its only decent attack (Dixon 1999, 16–17).

Both the single-standard and the three-standard models appear equally capable of explaining why the four cases described above failed to determine athletic superiority. Dixon argues that in such cases, the team or athlete that exhibits the most athletic skills does not achieve the official victory because distracting factors prevent these superior athletic skills from translating into superior official results. For instance, refereeing errors might nullify the athletic skills of the dominant football team (Dixon 1999).

According to the three-standard model, the distracting factors create a conflict between the standards (I). In the case describing a refereeing error, the dominant team displayed more athletic skills and had a better ideally adjudicated result, but the opposing team
achieved a better official result. The same pattern of conflicting standards can occur in cases of cheating, but it is also possible that a cheating case exemplifies a pattern in which the official result and the display of athletic skills are in harmony, and the ideally adjudicated result conflicts with them. Ben Johnson’s case might represent the latter case (confer I). In the matches used to exemplify gamesmanship and bad luck, the display of athletic skill identifies the dominant team as better, while the ideally adjudicated result and the official result designate the opposing team as better (I).

2.1.5 Special case of failed athletic contests

Dixon extends his analysis of failed athletic contests into a fifth case, which he calls ‘inferior performances by superior athletes’ (Dixon 1999, 19). Dixon’s example is an imaginary Wimbledon tennis final between Steffi Graf and an unranked player. The unranked player unexpectedly wins the final by a narrow margin. None of the four previously described distracting factors are involved (Dixon 1999, 19–20).

An inferior performance by a superior athlete is a special case because it is not a failed athletic contest in the same sense as the four cases described above. Dixon describes the unseeded player as follows:

on that day, she is the better player. However, in another sense, she is not the better player. Steffi Graf, who would almost certainly beat the player nine times out of ten, is the better player. She just had an off-day. (Dixon 1999, 19)

The citation and Dixon’s detailed description of the imaginary case seem to imply that the unseeded player was better in the final match, whereas Graf was better in the whole tournament. We might utilise Loland’s terms to express this idea by contending that the unseeded player was better in a single competition (the final match), but Graf was better in the metacompetition (the entire Wimbledon
tournament) (Loland 2002, 99). However, Loland’s distinction does not appear comprehensive enough for my purposes.

I will analyse Dixon’s special case of the failed athletic contest through my second dimension about the types of sport competitions. According to this classification, sport competitions are either non-reducible or multi-structural. A single football match is an example of a non-reducible sport competition, while the World Cup tournament is a multi-structural competition. The difference between a non-reducible sport competition and a multi-structural sport competition is that non-reducible competitions do not contain other sport competitions as their constituent parts, while multi-structural competitions eventually do consist of non-reducible competitions.

An alternative way of expressing the distinction between non-reducible and multi-structural competition is according to competitive goals. The competitive goal of a non-reducible sport competition cannot be reduced to the competitive goals of other sport competitions, but the competitive goal of a multi-structural competition presumes other competitive goals. For example, the competitive goal of a football match is to score more frequently than the opponent, whereas the competitive goal of a World Cup tournament is to achieve the competitive goal of the final match of the tournament.

The Wimbledon tournament is a multi-structural competition. However, it may be surprising that the final match of this tennis tournament is also a multi-structural competition. A tennis match consists of sets that are further divided into games. A single game is a non-reducible competition in the context of tennis.

It is possible to explain Dixon’s concept of inferior performances by superior athletes by arguing that athletic superiority was determined in one multi-structural competition—that is, in the final match of the Wimbledon tournament—but it was not determined in another multi-structural competition—that is, in the Wimbledon tournament as a whole. Dixon’s one-standard model would fit this schema through the suggestion that athletic superiority
was determined in the final match because the unseeded player displayed superior athletic skills and was the official winner. Furthermore, Dixon might argue that the multi-structural competition failed at the tournament level by stating that Graf displayed greater athletic skill throughout the tournament, but did not obtain the official tournament victory.

The three-standard model is able to explain the case of inferior performances by superior athletes by noting that the standards were harmonious in the final match but conflicted in the multi-structural competition at the tournament level (see I). The pattern of conflicting standards at the tournament level could occur as follows: Graf displayed more athletic skills throughout the tournament, whereas the unranked player had a better official result and ideally adjudicated result at the tournament's end, assuming that no decisive refereeing errors, cheating or bad luck occurred.

Thus far, both the one-standard model and the three-standard model have been able to explain all of Dixon's cases of failed athletic contests. Nevertheless, we can determine which of them is better by blending Dixon's cases of failed athletic contests.

2.1.6 Failed athletic contests blended

The three-standard model emerges as a more productive explanation than the one-standard model in cases that combine some of the distracting factors presented in Dixon's examples so that the distracting factors neutralise each other's effects (I). I will analyse two mixed cases that I have created in this manner.

The first case presents a combination of bad luck and refereeing errors. In it, an away team dominates a football match, but bad-luck factors, including wind and muddy ground, prevent it from scoring any goals. The home team scores a goal as a result of its only decent attack. Before the end of the match, the referee erroneously awards two penalty kicks to the away team. It scores each penalty kick and wins the match 2–1. The second case is similar
to the first, except that the away team scores its two goals due to cheating, not through refereeing errors. In other words, the second case is a combination of bad luck and cheating (see I).

According to the one-standard model, the mixed cases would not be failed athletic contests. The reason is that the away team displayed superior athletic skills and achieved the official victory. By contrast, the three-standard model would label the cases as failed because the standards conflict. The away team displayed more athletic skills and obtained better official result whereas the home team obtained a better ideally adjudicated result (I).

It seems that the three-standard model is correct in classifying the mixed cases as failed athletic contests. The cases exemplify victories that occurred in the wrong manner. Another example of a ‘wrong-way’ victory is an Olympic gold medal awarded years after the Games due to the original winner’s doping sanction (I). The ‘wrong-way’ also occurs outside the realm of sport (I). Imagine that I am queuing for a ticket for the premiere of the latest Hobbit film. There is one ticket left and one person is ahead of me in the queue. He was originally behind me, but he jumped the queue. As the jumper attempts to buy the last ticket, he has a sudden heart attack and dies. I receive the ticket, but not in a way that I would have wanted to have it.

In conclusion, these mixed examples of failed athletic contests indicate that the three-standard model is a more productive tool than Dixon’s one-standard model when explaining the nuances of sport competitions (I). Next, I will compare my model with other models of athletic superiority.

2.1.7 Alternative models

To broaden my evaluation of the viability of the three-standard model, I will briefly discuss Jim Parry’s and Sigmund Loland’s perspectives on athletic superiority. As presented in his article ‘The idea of the record,’ Parry’s (2006) view could be roughly described
as a two-standard model of athletic superiority. One of Parry’s standards is athletic skills, and the other is either the official result or the ideally adjudicated result. However, for our purposes, the question of which result comprises the second standard is not important. Parry’s adoption of two standards is revealed when, for instance, he writes: ‘Excellence, in game-sports […] has to do not only with winning, but also with the way in which winning is achieved’ (Parry 2006, 208).

Parry’s two-standard model resembles the three-standard model in the sense that he acknowledges the existence of strings that may pull in different directions in the evaluation of sport competitions. However, two standards are insufficient to explain all of the cases of failed athletic contests that I have discussed here. We need a more fine-grained model to explain the more fine-grained issues of sport competitions.

Loland’s view of athletic superiority can be accessed through his notion of the structural goal of sport competitions. This goal ‘is to measure, compare and rank two or more competitors according to athletic performance’ (Loland 2002, 10). Loland creates a moral norm system that defines athletic performance and how it should be evaluated. He aims ‘to provide an arena for human flourishing’ (Loland 2002, 149) through this system. However, Loland’s moral norm system is not a candidate to replace the three-standard model because it operates, at least in part, on a different level than that model. He focuses on building an ideal system of norms and does not primarily address how we should analyse imperfections that contradict his norms.

I conclude that the three-standard model is a more productive theory than the models offered by Dixon, Parry and Loland for use when explaining the complex situations we face in sport competitions. This conclusion appears to provide a good rationale for adopting my model until a more viable theory is presented. Nevertheless, it does not imply that the three-standard model has no limitations.
2.1.8  The problems of using the three-standard model

When we employ the three-standard model, we must be able to pronounce which team or athlete had a better official result, had a better ideally adjudicated result and displayed more athletic skills. This task can be challenging, and I will discuss these challenges in this subsection. In comparison, I did not analyse them in the original publication.

2.1.8.1  Deciding who determines the official result

The ‘official result’ standard is perplexing for two reasons. First, it can sometimes be problematic to decide who has the right to attribute the official result. In football, the options can include the referee, the umbrella organisation of FIFA and the Court of Arbitration for Sport. The second challenge to the standard of the official result is that the official results may change when time passes. For instance, Marion Jones’ official results from the 2000 Sydney Olympics were nullified seven years later because she was proven guilty of doping. Thus, official results seem to be falsifiable in a similar way to scientific truths (on falsifiability, see Popper 1963).

2.1.8.2  The problem of knowing the ideally adjudicated result

Determining the ideally adjudicated result can be problematic because it sometimes requires the perspective of an omnipotent or god-like being, but we are neither. For example, we may believe that a javelin thrower has thrown the javelin 88.50 metres, whereas he has actually thrown it 89.00 metres. Another example arises from the round of 16 World Cup match between England and Germany in 2010. In that game, the referee disallowed Englishman Frank Lambard’s goal, which would have equalised the match to 2–2. The ball crossed Germany’s goal line, but the referee was unable to see

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8 Mike McNamee helped me realise that changes in official results resemble the falsifiability of scientific truths.
this crossing and did not credit England with its second goal. The official result was 4–1 in favour of Germany. However, it is challenging to determine the ideally adjudicated result because we do not know how the remainder of the match would have proceeded if the referee had accepted the disputed goal.

We can attempt to transcend these imperfections by constructing ideally adjudicated results according to assumptions. If we assume that the officials at a javelin competition have measured a throw accurately at 89.00 metres, we can contend that the ideally adjudicated result was the same as the official result of 89.00 metres. If we make the assumption that the game between England and Germany in the 2010 World Cup would have continued in a similar vein had the referee accepted Lambard's goal, we can state that England's ideally adjudicated result was 2 goals against Germany's 4 goals. Naturally, the plausibility of the ideally adjudicated result in these cases depends on the plausibility of our assumptions.

Constructing an ideally adjudicated result might sometimes require assumptions that are so distant that we may not be able to plausibly determine the ideally adjudicated result. The 1986 World Cup quarterfinal between Argentina and England may exemplify this type of case. In that match, Diego Maradona scored his infamous 'Hand of God' goal by punching the ball into England's net. The referee was unable to see (and penalise) the offence and accepted the goal. As a result, the official result of the match was 2–1 for Argentina. To determine the ideally adjudicated result, we require certain assumptions to override the effect of non-competitive means. If we assume that the match would have continued in a relevantly similar way had the referee spotted Maradona's foul, the ideally adjudicated result would be 1–1. However, the ideally adjudicated result of a quarter-final match in the World Cup cannot be a draw because one or the other team must advance to the semi-final. Thus, we would require an additional assumption about the extra time that was never played, and, thus, it might be reasonable to contend that we cannot determine the ideally adjudicated result in this case.
2.1.8.3 Multifaceted athletic skills

Judging which team or athlete has displayed more athletic skills requires us to have some type of understanding of the notions of the sport community and the valuations of the sport community. However, there are some problems that surround these notions. I focus on addressing issues that may arise from the valuations of the sport community. People in a sport community can value different aspects of sport, but even when the valuations of a sport community are harmonious, the valued features can contradict one another. In football, the sport community seems to value, among other aspects, creative attacks and disciplined defences. Consequently, one team can display more skills in attacking, whereas the other team may demonstrate more skills in defending. Determining which team has displayed more athletic skills is thus challenging in this type of case. Nevertheless, it appears to be possible to lay out some common ground on an abstract level regarding what sport communities value.

The valuations of sport communities appear to be roughly characterised by rarity or exceptionality: the fewer people there are who can execute an action, the more the sport community values that action. For instance, not everyone has the ability to execute a bicycle kick goal such as that made by Zlatan Ibrahimovic in a football match between Sweden and England in 2012.

A problem regarding rarity is whether it refers to rarity among all humans or rarity relative to resources. An example illustrates the issue. We can imagine that Usain Bolt and Carmelita Jeter participate in the same 100-metre race. Bolt runs the distance in 9.89 seconds—his world record is 9.58 seconds—and Jeter runs the distance in 10.02 seconds, which would be 0.47 seconds under the existing women’s world record. If rarity refers to rarity among all humans, Bolt displayed more athletic skill, but if we acknowledge that rarity is relative to resources, Jeter may have displayed more athletic skill—at least according to the initial evaluation.

Both views of rarity have problems. The main problem of the view that rarity refers to rarity among all humans is that is does not
take into account a common intuition about laudable actions. According to this intuition, it is laudable to represent a certain group and do something that is exceptional for members of this group, although the deed might not be exceptional among all humans. Jeter’s imagined record race exemplifies this intuition. A real-world example is the case of Japanese ski-jumper Noriaki Kasai who, at the age of 41, competed in ski jumping in the 2014 Sochi Winter Olympics and won a silver medal.

The primary problem with the second view, the position that athletic skills are relative to resources, is that we appear to devolve into a situation in which athletic skills become a futile standard. Imagine that I had participated in the same competition with Bolt and Jeter and had run the distance in 14.99 seconds. If we assume that athletic skill is relative to available resources, it would impossible to pronounce which of us displayed most athletic skills. All of us performed those actions that were possible according to our resources on that occasion.

From the two available explanations of rarity, I posit that rarity refers to rarity among all humans. My choice has relevancy particularly when I discuss ski jumping in chapter 4. However, I cannot justify my choice thoroughly here, and I do not claim that this is the view that will eventually survive the critical examination most successfully. I simply think the problems that it faces are less severe.

It is important to understand that the above problems with respect to each of the three standards do not seem to render the three-standard model more problematic than Dixon’s or other researchers’ models because their models face the same challenges as my model, at least in part. Next, I discuss the relational character of athletic superiority.

2.1.9 Athletic superiority as a relation

I summarise the character of athletic superiority as a relation as follows: Athletic superiority is a hierarchical order of two teams
or athletes at the end of a sport competition. That order indicates which is better in that competition. Athletic superiority thus represents a pure relation of betterness: if athletic superiority obtains between athletes A and B, then either A is better than B or B is better than A. In other words, athletic superiority did not obtain between Maze and Gisin at the women’s Downhill competition at the 2014 Sochi Winter Olympics—not at least according to the standard of official results because they had the same official result.

The three-standard model of athletic superiority implies that there are three ways to interpret the relation of athletic superiority between A and B. According to the official-result standard, A was better if A had a better official result than B. The ideally-adjudicated-result standard holds that A was better if A had better ideally adjudicated result than B. Last, according to the athletic-skills standard, A was better if A displayed more athletic skills than B.

Athletic superiority is determined when all three standards denote the same team or athlete as better, that is, if each of the standards establishes the relation between A and B in the same manner. By contrast, athletic superiority is not determined when any of the standards contradict one another, which typically implies a failed athletic contest.

A sport competition can fail to determine the superior team or athlete in different degree (see I). The greater the gap between the conflicting standards, the more severely the contest fails. Table 2 illustrates a slightly failed athletic contest between two NHL ice hockey teams—the Winnipeg Jets and the Anaheim Ducks—and Table 3 illustrates a more severely failed contest between the two teams. The Ducks demonstrated slightly more athletic skills than the Jets in the slightly failed athletic contest and remarkably more athletic skills in the more severely failed athletic contest. In both cases, the standard of athletic skills conflicts with the other two standards.
As noted, athletic superiority concerns interpersonal betterness at the end of a sport competition. However, interpersonal betterness can also exist during competitions. I call the relation of interpersonal betterness that exists during a sport competition advantage.

2.2 Advantage

2.2.1 Loland on advantage

It is likely that the concept of advantage is most familiar in the expression ‘unfair advantage,’ which has been used, for instance, in the above-mentioned discussions of Oscar Pistorius, Caster Semenya, and athletes who have doped. A typical question in these discussions has been whether the athletes have gained an unfair advantage. In their attempts to address the question, several writers...
have asked whether we can consistently draw a line between advantages that are unfair and those that are not (see for instance Edwards 2009; Foddy & Savulescu 2011; Jones & Wilson 2008; van Hilvoorde & Landeweerd 2010; see also Carr 2008; Gardner 1995). However, the meaning of advantage per se has rarely drawn attention (see II, 309–310; III, 2).

The most comprehensive account of the concept of advantage is provided by Loland (2002), who classifies advantages as either formal or informal. Formal advantages can be distributed either in physical-mathematical units or in sport-specific units. A javelin thrower gains an advantage in physical-mathematical units: ‘X is in the lead after three throws with a distance of 67.15 metres’ (Loland 2002, 85). A football team gains advantages in sport-specific units: ‘during a football match [...] one team is leading by two goals’ (Loland 2002, 86).

According to Loland, an informal advantage refers to an improved likelihood of formal advantage: ‘Gaining an informal advantage implies achieving a position in the process of competing in which the possibilities for formal advantages improve’ (Loland 2002, 85). For instance, if a football player dribbles around an opponent and moves to a good position for a shot, the possibilities for a formal advantage have improved (Loland 2002, 86).

The shortcoming of Loland’s view of formal advantages is that he classifies formal advantages but does not define what a formal advantage is. Therefore, it is difficult to explicate whether he is using the standard of an official result, an ideally adjudicated result or the display of athletic skills in his analysis and examples about advantages. In comparison, I accused Loland of using the standards in a contradictory manner in the original Article II, although I did not use the terminology of the standards to describe the contradiction (II, 313–314).

The problems of the notion of informal advantage are twofold. First, Loland does not explicate that we merely expect that some position in the process of competing, such as dribbling around an opponent and moving for a good position for a shot, increases the
possibility of a formal advantage. Expectations do not always actualise. A football player in her first public match may become nervous and ‘choke’ when she manages to dribble around an opponent and gains an open shot at the goal. The probabilities for a formal advantage have perhaps decreased (III, 9–11).

The second criticism of the notion of informal advantage is that Loland focuses on the wrong aspect of betterness. He has described informal advantage in a way that more closely resembles intrapersonal betterness than interpersonal betterness. This criticism is based on the remark that, although A’s possibilities for a formal advantage may have improved, it does not follow that they have improved so much that it is likely that A will gain a formal advantage. For instance, I can increase my possibilities to win the Paavo Nurmi Marathon by hydrating regularly during the race, but this does not make it likely that I will win the race. Outperforming others, not enhancing one’s own situation, is a key element of advantage, and advantage, therefore, is a relation of interpersonal betterness (III, 10).

Loland’s classification of formal and informal advantages does not seem to cover all instantiations of advantages in sport (see II, 317–318). For instance, the doping substance EPO is used to increase haemoglobin levels in the blood (Schjerling 2005, 23–24). As discussed above, one of the proposed arguments against performance-enhancing substances is that they provide advantages that are unfair (see Gardner 1995). Thus, according to this argument, EPO would represent an unfair advantage. Loland’s notions of formal and informal advantage, however, cannot directly explain why the increased levels of haemoglobin would be an advantage. To be fair, Loland addresses doping substances in other contexts but does not address or explicate them through his analysis of advantages (see Loland 2002, 78–83).

Taken together, the problems discussed above make Loland’s explanation of advantages defective. Nevertheless, his view provides a good basis for further analysis and development.
2.2.2  A development of Loland’s view

My account of the concept of advantage is based on two original publications, II and III. They are both developments of Loland’s view, but they reflect my thoughts at different stages of development. I wrote Article II first and Article III later. In Article II, I claim that there are two kinds of advantages: performance advantages and property advantages. In Article III, I suggest that there are two senses of advantage: the absolute sense and the expectancy sense. Despite the differences between their conclusions, these papers can be regarded as complementary, not contradictory. I unify the two analyses by claiming that there are two kinds of advantages—performance advantages and property advantages—and by adding that there are two senses of performance advantage: an absolute sense and an expectancy sense (see III, 6, footnote 1).

Before elaborating my analysis of the concept of advantage in detail, I present two qualifications. First, I primarily employ the standard of official result in discussing performance advantages. In this way, my analysis becomes more accessible than if it were to use all three standards. Moreover, in the original articles, I have analysed advantages from the perspective of official result. The second qualification of my analysis is that I employ an adapted version of the official result when I discuss property advantages, but I will explicate the adaptation in that context. My analysis begins with performance advantage.

2.2.2.1  Performance advantage

The absolute sense of performance advantage replaces Loland’s notion of formal advantage (see III, 8). I define the absolute sense of performance advantage as follows: A has an absolute advantage over B at a selected point of a sport competition if A has a better performance number than B at that selected point.

For instance, Usain Bolt and Tyson Gay both took part in the 100-metre final in the 2009 Berlin World Championships. In that
race, Bolt had an absolute advantage over Gay at the 20-metre mark because Bolt's performance number was 2.89 seconds and Gay's performance number was 2.92 seconds at that mark. In the 1991 Tokyo World Championships, Mike Powell and Carl Lewis duelled in the long jump final. Powell had an absolute advantage over Carl Lewis after five rounds: Lewis' performance number was 8.91 metres and Powell's performance number was 8.95 metres. An illustrative football example is that Argentina had an absolute advantage over West Germany when 23 minutes of play had passed in the 1986 World Cup Final because Argentina scored the first goal of the match at that moment.

In my definition of the absolute sense of advantage, I employ the notion of *performance number* instead of the notion *official result*. I use this new vocabulary to highlight a difference between advantage and athletic superiority. The performance number is ascribed to a part of the performance during the sport competition, whereas the official result is ascribed to the whole performance at the end of the competition. Thus, advantage exists during a sport competition and athletic superiority at the end of the competition. I will return to the connection between advantage and athletic superiority in more detail in subsection 2.2.3.

The expectancy sense of performance advantage replaces Loland's notion of informal advantage (see III, 11). I define the expectancy sense as follows: A has an expectancy advantage over B at a selected point of a sport competition if it is reasonable to expect at this selected point that A will have a better official result than B.

The football teams of Spain and Tahiti faced one another in a group stage match in the 2013 Confederations Cup. At the beginning of the match, Spain had an expectancy advantage over Tahiti because it was reasonable to expect that Spain would have a better official result on the basis of the teams' earlier performances. Eventually, Spain's official result was 10 goals and Tahiti's was 0 goals. It should also be borne in mind that expectations are not always fulfilled. Aleksandr Karelin of Russia had an expectancy advantage over Rulon
2.2.2.2 Property advantage

Loland does not have a corresponding term for what I call property advantage. My definition of property advantage is as follows: A has an advantage over B in property X if A has a more favourable amount of that property than B does (II, 317–318).

Properties vary significantly, but they can be roughly divided into those that involve competing parties and into those that involve the competing environment (II, 317). Examples of properties involving competing parties might be lung capacity or haemoglobin. Spanish cyclist Miguel Indurain, who has claimed five consecutive Tour de France victories, had a property advantage in lung capacity over most other cyclists who raced against him because he had an exceptional lung capacity of eight litres (see Elliot 2007). Eero Mäntyranta, a Finnish cross-country skier whose heyday was in the 1960s, had a property advantage over most of his rivals regarding the amount of haemoglobin in the blood, which was due to a genetic anomaly (see Edwards 2009, 29; Tännsjö 2005, 63).

An example of a property advantage concerning properties of competing environment is from the long jump final at the 1991 World Championships in Tokyo. During their longest jumps before the fifth round, Carl Lewis had a property advantage over Mike Powell in the property of tailwind. Lewis had a tailwind of +2.9 m/s compared with +0.3 m/s for Powell.

Property advantage is a special case among relations of superiority because, strictly speaking, the three standards do not apply to property advantages. In the above elaboration, I have used a slightly adapted version of the standard of the official result. It is an adapted version because, according to my definition, the official result...
result refers to a number within a specific aspect that the particular sport institution has ascribed to athletic performance. However, neither lung capacity nor amount of tailwind is an athletic performance.

2.2.2.3 The connection between two kinds of advantages

We can approximately describe the relationship between performance advantage and property advantage by claiming that performance advantage is a function of property advantages (II, 319–320). In more detail, if we assume that the standards of official result and ideally adjudicated result overlap, we can state that A’s absolute performance advantage over B at the selected point of a sport competition is a function of A’s property advantages over B and of B’s property advantages over A. In other words, Powell’s absolute advantage over Lewis after five rounds in the final at the Tokyo World Championship can be reduced to those property advantages that Powell had over Lewis and that Lewis had over Powell. Mapping a comprehensive and reliable evaluation of what property advantages existed between these two athletes and how they led to Powell’s absolute performance advantage, however, is beyond the reach of current scientific knowledge (II). ‘To sum up, the function [relating performance advantage and property advantages] is extremely complex’ (II, 320).

2.2.3 Advantage as a relation

Advantage is a relation of superiority that obtains between two teams or athletes during a sport competition and that leads to the establishment of athletic superiority, which is a relation of superiority at the end of the sport competition. We can paraphrase the connection between the two relations by contending that athletic superiority is an end and advantage is a means to the end.

I have depicted the distinction between ends and means using different terminology in this introductory part of my thesis
compared with the original Article II. When we examine the terminological differences, we find four continuities that are illustrated in Table 4. First, my definition of absolute performance advantage here addresses the same phenomenon as provisional performance advantage in the original article. Second, athletic superiority in the context of this introductory part of my thesis refers to the same phenomenon as final performance advantage in the original article (see II, 315). Third, what I call performance number here, I label provisional performance number in the original article. Fourth, and finally, what I refer to as the official result here, I call the final performance number in the original article (see II, 314).

<table>
<thead>
<tr>
<th>Terms in the introductory part</th>
<th>Term in Article II</th>
</tr>
</thead>
<tbody>
<tr>
<td>absolute performance advantage</td>
<td>provisional performance advantage</td>
</tr>
<tr>
<td>athletic superiority</td>
<td>final performance advantage</td>
</tr>
<tr>
<td>performance number</td>
<td>provisional performance number</td>
</tr>
<tr>
<td>official result</td>
<td>final performance number</td>
</tr>
</tbody>
</table>

*Table 4. A comparison of terminology from the introductory part of my thesis and from Article II.*

The connection between advantage and athletic superiority as means and ends is context sensitive in the sense that athletic superiority in one context can contribute to an advantage in another context. For instance, Swansea and Cardiff met in a Premier League football match on 8 February 2014, and the match ended 3–0 for Swansea. Swansea had thus established athletic superiority over Cardiff in a non-reducible sport competition. Swansea also gained 3
points in the league table, which represents a multi-structural sport competition. In this multi-structural competition, after the match between Swansea and Cardiff, Swansea had an absolute advantage over Stoke City because Swansea’s official result was 27 points and Stoke’s official result was 26 points. To summarise, athletic superiority in the non-reducible sport competition (Swansea versus Cardiff) contributed to an advantage in the multi-structural competition (the league table).

My suggestion about the connection between advantage and athletic superiority as means and ends is not unique. Loland appears to have a similar idea, although he expresses it in different terms. For Loland, the structural goal of sport competitions – measuring, comparing and ranking two or more competitors according to athletic performance – represents the end. He sees advantage as a means to this end: ‘Measurements, comparisons and rankings of athletic performance are carried out via the distribution of advantage’ (Loland 2002, 84). This similarity is a reminder that my analysis of advantages is a development of Loland’s view. I will also utilise his ideas when discussing the third relation of superiority, sport record.

2.3 Sport record

2.3.1 Loland on sport records

An iconic sport record is the men’s 100-metre world record, which, at the moment of writing, is held by Usain Bolt at 9.58 seconds. In general, sport records fascinate people and have also been covered in the literature (Eichberg 1977; Guttmann 1978; Loland 2001; Mandell 1976; Parry 2006). I will focus on Loland’s (2001) account of sport records in my thesis.

Loland argues that a sport record is an athletic performance that is (1) better than any other athletic performance and (2) that occurs in record sports, that is, in sports that are able to measure
performances exactly and that have standardised conditions. Track and field, swimming and weightlifting are record sports. If a sport does not meet both of the above criteria, discussion of sport records is either inaccurate or meaningless. For instance, sport records lack a solid basis in football (Loland 2001, 128).

Loland regards sport records as problematic because they generate what Loland calls ‘the record dilemma’. The record dilemma is analogous to an ecological crisis. In general, an ecological crisis refers to a situation in which humans use the planet’s resources in a way that will lead to the collapse of the planet’s ecosystem. Loland argues that the analogical situation lurks in the realm of sport: it is likely that we will reach a point when setting new records is impossible without biotechnological modification, such as doping (Loland 2001, 128–133).

Both Loland’s characterisation of sport records and his attack on them seem to be unsuccessful. The main problem of the record dilemma is that we cannot sketch the analogy between ecological crisis and sport records as Loland draws (III, 384–385). There are four problems with his conception of sport records.

First, Loland states that a sport record is a kind of athletic performance, but his examples refer to official results. In other words, he does not explicate the distinction between athletic performances and official results (see Loland 2001, 127–128; IV 379). Second, Loland attempts to draw an overly clear line between record sports and sports in which discussion of sport records is unintelligible (see Loland 2001, 128; IV, 379–380). Third, Loland is too hasty in dismissing the records of sports such as football (see Loland 2001, 128; IV, 386). There are also records in these sports, although they differ in certain respects from the records of weightlifting or track and field sports. For instance, the German Miroslav Klose holds the record for the most goals scored—16—in World Cup matches. Fourth, Loland’s formulation of sport records does not accommodate the fact that there can be two record holders (see Loland 2001, 128; IV, 379). For instance, in the early 1980s, runners Sebastian Coe and Steve Ovett shared the record for
the 1,500-metre event with a time of 3.32.1. These four problems encourage the formulation of a more sensitive analysis of sport records.

### 2.3.2 Developing Loland’s view

My explanation of sport records shares two similarities with my analysis of advantages. First, it is a development of Loland’s view. I will expand Loland’s analysis of sport records by arguing that we can separate two kinds of sport records: *performance records* and *statistical records*. The second similarity is that in my analysis, I primarily employ the standard of official result for sport records. The reasons are approximately the same as above: doing so increases the clarity and swiftness of my analysis. I have also analysed sport records mainly from the perspective of official results in the original article (IV).

The core of my view of sport records is as follows: a sport record is an official result that is better than or as good as any other official result in the selected group of official results. The context of the selected group of official results determines whether the record is a performance record or a statistical record. We should consequently ignore my claim in my original Article IV that ‘[p]erformance records represent a special case of statistical record’ (IV, 387). I begin my elaboration of sport records with performance records.

#### 2.3.2.1 Performance records

Performance records refer to approximately the same phenomenon to which Loland refers with his term sport records. An example of a performance record is Usain Bolt’s world record of 9.58 seconds for the 100-metre race. The selected group of official results of this record are all official results of 100-metre races in which the tailwind did not exceed 2.0 m/s and that met other
conditions specified by the IAAF (International Association of Athletics Federations) (IV, 380).

For a sport record to qualify as a performance record, the selected group of official results must meet two conditions. To describe the first condition, I introduce two continuums. The first continuum exists between independent and dependent athletic performances (see Borge 2010, 24–25 for a similar distinction). An athletic performance is independent if it can be executed in a similar manner without the performances of other competitors. The javelin throw and the 100-metre sprint include fairly independent athletic performances. Athletic performance is dependent if it cannot be executed in a similar manner without the performances of other competitors. Football, tennis and wrestling are examples of sports that are characterised by dependent athletic performances (IV, 381). The second continuum exists between standardised and non-standardised sports. The 100-metre sprint and the javelin throw are more standardised sports than road cycling and cross-country skiing because the courses of the two latter may vary (IV, 381).

We can express the first condition for the selected group of official results as follows: with respect to the first continuum, the official results must be chosen from sport competitions that consist of at least fairly independent athletic performances, and, regarding the second continuum, the official results must be chosen from sport competitions that are at least fairly standardised.

The second requirement for the selected group of official results concerns the type of sport competition: a performance record must be an official result of a non-reducible sport competition. For instance, Usain Bolt’s performance record of 9.58 seconds is an official result of a non-reducible world record competition that consists of all official results of 100-metre races in circumstances recognised by the IAAF. This competition has had numerous participants.

The record of most Olympic gold medals in the men’s 100-metre event is not a performance record because it represents an official result of a multi-structural sport competition. This multi-
structural competition consists of all of the Olympic 100-metre events, such as the men’s 100-metre event in the 1984 Los Angeles Olympics. The Los Angeles event can be further reduced to non-reducible competitions, such as the first semi-final heat. Although the most Olympic gold medals in the men’s 100-metre event is not a performance record, it is a statistical record. Carl Lewis and Usain Bolt jointly hold this statistical record with two gold medals.

The selected group of official results determines the scope of the performance record. In the case of world records, we select all relevant official results set by athletes of any nationality, whereas the focus lies on official results set by athletes of a certain nationality in the case of national records, such as the Finnish national records. In comparison, the scope of a track record consists of official results that have been achieved on a specific track (IV, 381).

2.3.2.2 Statistical records

Statistical records are a class of sport records that Loland does not qualify as proper sport records. Parry (2006) has partly addressed them, but my analysis of statistical records is not based on his remarks. I define statistical records in relation to performance records: a statistical record is a sport record that is not a performance record (confer IV, 386). An example is the record for the most Olympic gold medals that Michael Phelps holds with his 18 Olympic gold medals in swimming.

The definition of statistical records implies that the context of these records consists of those instances in which performance records do not occur. I illustrate the context of statistical records through two remarks. First, a statistical record can occur in a sport competition that consists of dependent athletic performances or that exemplifies non-standardisation. Brazil holds the statistical record for the most World Cup victories: it has 5 titles. Bjørn Dæhlie’s 8 Olympic gold medals in cross-country skiing as well as Ole Einar
Bjørndalen’s 8 Olympic gold medals in the biathlon represent the statistical record of the most Winter Olympic gold medals (IV, 386). The second remark about the context of statistical records is that a statistical record can be an official result of a multi-structural sport competition. Phelps’ record of winning the most Olympic gold medals represents this type of statistical record.

It is important to recognise that a sport record is a statistical record if it only partly fulfils performance-record requirements but cannot fully do so. For example, Wayne Gretzky’s 894 NHL regular-season career goals is a statistical record because it occurred in a non-reducible sport competition but in the context of dependent athletic performances.

Setting a performance record and a statistical record may have different implications with respect to other connected sport competitions. By setting a performance record, one typically wins some sport competition other than the sport record competition. For example, by setting the latest 100-metre world record, Bolt won the final at the Berlin World Championships. However, setting a statistical record does not imply a victory in another sport competition as frequently as setting a performance record. For example, the fastest goal in a World Cup match, which was scored by the Turkish player Hakan Şükür in 10.89 seconds in a match against South Korea in 2002, did not guarantee victory in that game by itself.

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9 I mistakenly wrote in the original article IV that Dæhlie has 12 Olympic gold medals (IV, 386). However, he does have 12 Olympic medals, but not all of them are gold medals. Prior to the 2014 Sochi Winter games, Dæhlie’s 12 Olympic medals represented the statistical record of the most medals in the Winter Olympics. Now, following the 2014 Sochi Games, Bjørndalen holds this record with 13 medals.
2.3.3 Sport record as a relation

A sport record can be both a relation of interpersonal betterness and a relation of intrapersonal betterness. The type of relation depends on the selected official results. When we discuss interpersonal sport records, the selected group of official results consists of the official results of different athletes or teams. The men’s 100-metre world record is an interpersonal sport record. By contrast, the scope of intrapersonal sport records consists of the official results of the same athlete or team. An example of an intrapersonal sport record is Carmelita Jeter’s personal best of 10.64 seconds in the 100-metre event. The selected group of official results consists of all of her relevant official results in that distance. I focus in my thesis on sport records that involve interpersonal betterness.

A sport record is not a pure relation of superiority because two athletes may share the same record, as Coe and Ovett did for the 1500-metre event in the early 1980s. In this respect, sport records deviate from athletic superiority and advantage, which are pure relations of superiority. In other respects, the connection of a sport record to athletic superiority and advantage is more intriguing.

By comparing the three relations—athletic superiority, advantage and sport record—we can reveal important features of sport records. Table 5 illustrates the comparison as it relates to aspects other than those involving the purity of the relation of superiority. This comparison reveals that a sport record is a hybrid between athletic superiority and advantage: a sport record resembles both of these relations structurally but is neither equivalent nor identical to either of them.
<table>
<thead>
<tr>
<th>Athletic superiority</th>
<th>Advantage</th>
<th>Sport record</th>
</tr>
</thead>
<tbody>
<tr>
<td>end</td>
<td>means</td>
<td>end</td>
</tr>
<tr>
<td>final</td>
<td>provisional</td>
<td>provisional</td>
</tr>
</tbody>
</table>

Table 5. Some properties of athletic superiority, advantage and sport record.

Sport records are similar to athletic superiority in the sense that both relations describe an end: being better in a sport competition. Argentina was better than West Germany in the 1986 World Cup final match, winning by a score of 3–2, and Michael Phelps owns the statistical record for the most Olympic gold medals. The sport competitions in these examples are football match and the competition to win the most Olympic gold medals.

Sport records differ from athletic superiority because athletic superiority, by its nature, is final whereas sport records are provisional. For instance, Argentina’s athletic superiority over West Germany in the 1986 World Cup final cannot be disturbed by future matches, but it is possible that one day there will be an athlete who wins more Olympic gold medals than Michael Phelps.

Note that sport records are provisional in a structural sense despite the fact that they can be final in a conventional sense. If people stopped running 400-metre races, the current performance record of 43.18 seconds held by Michael Johnson would remain unbroken, i.e., the record would be final in the conventional sense. By contrast, Johnson’s record would still be provisional in the structure, or the logic, of the sport record competition because this abstract structure is independent of historical contingencies such as whether people will stop running 400-metre races.

The difference between the finality of athletic superiority and the provisionality of sport records is based on the type of competition. Here, I introduce the third dimension regarding types of sport competition: the distinction between temporally limited sport competitions and temporally extended sport competitions. Athletic
superiority exists in temporally limited sport competitions. A Premier League football match ends after 90 minutes (plus possible additional time) of play, and a marathon race is over when the competitors have finished the race or have been disqualified. By contrast, sport records exist in temporally extended sport competitions. That is, sport records involve an on-going competition that does not have a final winner, as demonstrated by the list of previous world records in the 200-metre race. I begin the illustrative timeline for this list from the 1996 Atlanta Olympics, where Michael Johnson set the record of 19.32 seconds. Usain Bolt broke the record at the 2008 Beijing Olympics with a time of 19.30 seconds, and in 2009, he improved the record to 19.19 seconds at the Berlin World Championships.

A sport record resembles advantage in the sense that these two relations are provisional. For instance, Finland had an absolute advantage over Sweden in the second period in the quarter-final match of the 2003 ice hockey world championships: Finland was leading Sweden 5–1. This situation constituted provisional superiority, as demonstrated by the fact that Sweden made a comeback and won the match 5–6. The progression of the men’s world record in the 200-metre race illustrates the provisionality of sport records.

The difference between sport records and advantage is that advantage is a means to an end, whereas a sport record is an end in itself. For instance, having an absolute advantage with a 5–1 lead in an ice hockey match is not an end, but a means to an end, to athletic superiority. A sport record is the end of a sport record competition.

The hybrid character of sport records creates a special function for the sport record relation: to enable high levels of universality with respect to superiority in sport competitions. This function is possible because sport records are ends, but the superiority they establish is not limited to particular occasions. Jimmy Hines achieved the world record of 9.95 seconds in the 100-metre race in 1968, and Usain Bolt set the most recent record of 9.58 seconds in 2009, although they never ran against one another
3.1 Three relations of interpersonal betterness

There are three fundamental relations of interpersonal betterness in the realm of sport: athletic superiority, advantage and sport record. Athletic superiority is the hierarchical order of two teams or athletes at the end of a temporally limited sport competition. It is thus a pure relation of interpersonal betterness.

An advantage refers to the hierarchical order of two teams or athletes during a temporally limited sport competition. Thus, as with athletic superiority, it is a pure relation of interpersonal betterness. There are two kinds of advantages: performance advantages and property advantages. The former, the performance advantage, has two senses, the absolute sense and the expectancy sense. The absolute sense refers to the hierarchical order of two teams or athletes at a selected point of a sport competition, whereas the expectancy advantage involves, at a selected point of sport competition, an expectation about athletic superiority. A property advantage is the hierarchical order of two teams or athletes with respect to a selected property.

A sport record refers to a relation that exists among all participants in a temporally extended sport competition. It denotes
which is better than or as good as any other participant. A sport record is thus an impure relation of interpersonal betterness. We can classify two kinds of sport records: performance records and statistical records. The context of the sport competition differentiates between performance records and statistical records.

The connection between athletic superiority and advantage can be described by positing that athletic superiority is the end of a sport competition and advantage is a means to that end. Consequently, athletic superiority is final, and advantage is provisional. A sport record is a hybrid between athletic superiority and advantage: it is an end, but it is not final; it is provisional, but it is not a means.

3.2 Three standards

There are three standards that can be employed to establish a relation of interpersonal betterness: an official result, an ideally adjudicated result and a display of athletic skills. An official result is a number within aspect S that a sport institution ascribes to athletic performance. An ideally adjudicated result is a number that describes how participant A achieved task T with respect to aspect S through competitive means. Athletic skills refer to actions that the sport community values as a means for achieving task T.

Together, the three standards form the three-standard model. According to this model, the ideal state is one in which the three standards are in harmony, i.e., they denote the same athlete or team as better. I have analysed athletic superiority using the three-standard model, but advantage and sport records using only the standard of official result. Nevertheless, we can generally summarise as follows: Athletic superiority is determined if the three standards denote the same team or athlete as better at the end of a temporally limited sport competition. Advantage is determined if the three standards denote the same team or athlete as better during a selected point of temporally limited sport competition. A sport record is determined if the three standards denote the same team
or athlete as better than or as good as any other team or athlete in a temporally extended sport competition.

3.3 The types of competition

There are several ways to categorise sport competitions, but three dimensions are integral to my account of interpersonal betterness. I did not explicate any of these three dimensions in the original publications.

The first dimension exists between non-knockout and knockout competitions. Non-knockout competitions do not have a single inherent purpose, although they all share a common feature: they provide the possibility of determining the superior team or athlete. The inherent purpose of a knockout competition is to determine the set of superior teams or athletes that will proceed to the next stage of a non-knockout competition.

It is curious to remark that a knockout competition typically coexists with a non-knockout competition. For instance, the first heat of the men’s 100-metre semi-final at the 2009 Berlin World Championships simultaneously embodied a knockout competition and a non-knockout competition. The inherent purpose of the knock-out competition was to determine four athletes who were better than the other participants and who would thus proceed to the event final. The inherent purpose of the non-knockout sport competition was, presumably, to determine which sprinter was better than or as good as any other sprinter.

The second dimension of sport competitions exists between non-reducible and multi-structural sport competitions. Non-reducible competitions do not have other competitions as their constituent parts. By contrast, multi-structural competitions consist of other sport competitions and can ultimately be reduced to non-reducible sport competitions.

The third dimension exists between temporally limited sport competitions and temporally extended sport competitions. Temporally limited competitions are those competitions that
embody athletic superiority and advantage. Temporally extended competitions are sport record competitions.

3.4 Illustration of the account

I have illustrated the elements of my account piecemeal through various examples in the previous chapters. Here, I describe the men’s 100-metre final at the 2009 Berlin World Championships using almost the entire arsenal at my disposal. The goal is not to provide an exhaustive analysis, but to illustrate how the account describes interpersonal betterness in a particular case. After analysing the Berlin race, I will employ my account to briefly answer the question that I presented at the beginning of my thesis concerning the match between national football teams of Germany and Argentina.

We can distinguish at least four sport competitions that were instantiated in the Berlin 100-metre final. Table 6 illustrates these competitions. For the sake of convenience, I analyse the competitions according to the official-result standard.

<table>
<thead>
<tr>
<th>Temporally limited competition</th>
<th>Temporally extended competition</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Non-reducible competition</strong></td>
<td>100-metre race (athletic superiority)</td>
</tr>
<tr>
<td><strong>Multi-structural competition</strong></td>
<td>100-metre event at the World Championships (athletic superiority)</td>
</tr>
</tbody>
</table>

Table 6. A scheme of competitions that were instantiated in the men’s 100-metre final of the 2009 Berlin World Championships.
First, we can recognise a non-reducible 100-metre sprint. According to the standard of official results, Usain Bolt established athletic superiority over other participants in this competition because he had a better official result than they did. With respect to betterness between athletes during the race, we can note that, for instance, at the 20-metre mark, Bolt had an absolute advantage over Gay. Bolt’s performance number was 2.89 seconds at that point, and Gay’s performance number was 2.92 seconds. Bolt also had an expectancy advantage over Gay at the 20-metre mark because it was reasonable to expect that he would obtain a better official result than Gay. I omit an example of property advantage because describing it would require knowledge of the physiology of these particular athletes that I lack.

The second competition that was instantiated at the Berlin final was the men’s 100-metre world championships. This multi-structural competition consisted of the heats, the quarter-finals, the semi-finals and the final. Bolt was better than the other participants in this competition because he achieved better official results than the other finalists. Both the first and second competitions were temporally limited. The remaining two competitions were temporally extended.

The third competition, in which participants of the Berlin final took part, was the competition to set the 100-metre world record. This competition was a non-reducible performance record competition. Bolt set a new record with his official result of 9.58 seconds. There are several candidates for the fourth competition because there instantiated several statistical record competitions in the Berlin final. One of these competitions was the statistical record competition for the most men’s 100-metre world championships. Bolt, however, was not the best athlete at this competition because Carl Lewis and Maurice Green both have won three championships, whereas Bolt earned his first title in Berlin.

I offer two illustrative examples to show how we could analyse the Berlin race using the three-standard model. First, we can argue
that the athletic superiority of Bolt over the other participants was
determined in the non-reducible 100-metre competition in the
Berlin final because all three standards appear to denote Bolt as the
best at the end of the competition. Second, it appears that we can as
plausibly suggest that Bolt was also the best in the 100-metre world
record competition according to all three standards. However, let us
next move from the running track to the football field.

I began my thesis by noting the outcome of a football match in
the 2014 World Cup: Germany 1, Argentina 0. I then asked whether
these official results imply that Germany was better in the match.
According to my account, we can answer that these official results
imply that Germany was better than Argentina in a non-knockout,
non-reducible, and temporally limited competition with respect to
the standard of the official result.

3.5 Limitations

The primary limitation of my account concerns the three
standards. Sometimes, it may be challenging to declare which athlete
or team achieved a better official result, an ideally adjudicated result,
or displayed more athletic skills. Furthermore, being able to analyse
certain intriguing cases would presume that one grasps some of the
implicit assumptions that I have made. An example of such a case
would be the incident of Jewish sprinter Abraham Tokazier, who
participated in the 100-metre race in Helsinki in 1938. According to
the original official results he came fourth, but 75 years after the
race in 2013, Tokazier was declared the winner (Finnish Jewish
runner credited with victory stripped in 1938; Simeoni 1938).
Addressing the issue of Tokazier, however, would require too much
time, given the context of this thesis. Lastly, one might argue that my
account is limited in the sense that it is ethically insignificant.
However, this seems to be a misguided criticism. Therefore, before
concluding this thesis, I discuss the ethical relevancy of my account.
4 Ethical relevancy

My account is normative in two respects. First, it sets a standard for a consistent and accurate way to discuss superiority in sport competitions. The second dimension of its normativity is connected to ethical issues of sport competitions: my account can contribute to decision making about these issues. To demonstrate this latter aspect of normativity, I discuss a topical issue in sport: gender equity and women’s ski jumping.

4.1 Ski jumping

Ski jumping is a sport that was opened up to women at the Olympic level for the first time at the 2014 Sochi Winter Games. Its inclusion embodied a step towards gender equity in sport. At the inaugural modern Olympics in 1896 in Athens, women were not allowed to participate in any event, whereas, after the Sochi Olympics, only the Nordic Combined has no women’s Olympic event (Schneider 2000, 123; Weaving 2012, 229–230). The introduction of women’s Nordic Combined into the Olympics, however, would not guarantee that gender equity has been wholly achieved. For instance, in 2013, a list of the 100 top-earning athletes included only 3 women (compared to 97 men) (Badenhausen 2013).

I argue that ski jumping has an untapped potential to increase gender equity beyond its inclusion in the Sochi Olympics. The rationale for this potential is that we could meaningfully replace sex-segregated competitions with sex-mixed competitions in this sport. To elaborate my argument, I proceed as follows: I begin by illustrating the character of ski jumping. Then, I demonstrate why ski jumping has the potential to increase gender equity and address two counterarguments. I also lay out my suggestion for how to realise this potential. Finally, I discuss how the argument about ski jumping’s potential can shed light on the ethical relevancy of my account of
interpersonal betterness, but let us next ascend to the top of a ski-jumping hill.

The pattern of athletic performance in ski jumping is such that the jumper initially sits at a starting gate, then glides down a hill, takes off, flies through the air and lands. The competitive goal of ski jumping is to jump in such a way that the jumper receives more points than his or her opponents. The participants gain points for the length and style of the jump; furthermore, they can receive points via wind compensation and ‘safety’ compensation systems. In addition to the jumper’s own efforts, the length of the jump depends on hill size, the height of the starting gate and the snow and wind conditions (FIS Encyclopedia; Pfister 2007; 54–55).

Ski jumping hills can be classified as normal hills, large hills or ski flying hills, according to their size. Each hill has an estimated target landing area at the downhill: landing beyond that area increases the risk of injury. Thus, ski jumpers want to fly far, but not too far. The jury sets the starting gate at the beginning of each round, and sometimes during the rounds, in a manner such that jumpers are not likely to exceed the target area. By elevating the starting gate, the length of the jump can be increased, and, by lowering it, the length can be decreased (FIS Encyclopedia; Pfister 2007; 54–55).

4.2 The potential of ski jumping

We might meaningfully replace sex-segregated competitions with mixed-sex competitions in ski jumping because women and men are capable of relevantly similar athletic performances in this sport: both are able to jump as far as one another under certain premises (V, 56–59). However, there are at least two qualifications. First, ski jumping’s special characteristics seem to create the potential to increase gender equity only in societies in which effective means for rectifying the problem of gender inequity are limited. Second, utilising ski jumping’s potential would neither be an all-encompassing solution to decrease gender inequity in sport nor remove the need
for other actions. The argument is thus a bold suggestion with a limited scope.

I introduce two alternative conditions that would enable equal jumps (V, 56–59). The core of the first condition is that we could compensate women by allocating them higher starting gates than those allocated to men (V, 56). This mechanism has already been applied indirectly in mixed-team competitions, in which men and women jump in the same competition. However, men and women do not directly compete against one another; instead, they compete against members of the opposing team who are of the same sex. An example of this type of contest was the mixed-team competition on the normal hill in the Nordic World Ski Championships in Val di Fiemme, Italy, in 2013. In this contest, several women jumped as far as men when they started ten gates higher than the men (FIS 2013).

According to the second condition, equal jumps are possible without compensation when the arena for the contest is a ski-flying hill (V, 58). This condition rests on the assumption that women have a better aptitude for ski flying than men. The assumption is not based on actual observations of how women perform on ski-flying hills because there is little evidence about their performance on those hills. Instead, the assumption is primarily based on the fact that women, on average, have a lighter build than men, which seems to be a property advantage in ski flying (see Gleaves 2010, 282–283; Vertinsky, Jette, and Hofmann 2009, 38–40; von der Lippe 2001, 1047, cited in Vertinsky, Jette, and Hofmann 2009, 38). This statistical difference, however, may not guarantee that women actually jump as far as men. Therefore, the first condition is hypothetical, and to confirm or falsify it, we require more empirical data about how far women can jump on ski-flying hills (V, 58–59).

4.3 Two counterarguments

There are two counterarguments against my argument for compensated ski jumping competitions. According to the first criticism, it would be inconsistent to apply a compensation system
only to ski jumping and not to other sports. This criticism supposes that we could build a similar compensation system into numerous other sports. For example, in the 100-metre dash, men could start 1.00 second after women (V, 56–57).

The first counterargument underestimates ski jumping’s compensation mechanism, which is exceptional in two respects (V, 57). First, an average televised ski jumping spectator, such as the author of this thesis, does not observe a relevant difference between the performances of a female and male contestant if the female jumper starts from a higher starting gate and they both land as far on the downhill. Second, the compensation mechanism utilises a system that is already an internal part of the sport. The starting gate is adjusted in each round of the competition to match the weather conditions so that jumps are neither too long nor too short (FIS Encyclopedia).

The second counterargument against allocating compensation for women states that compensated victories would not increase gender equity because they would not be deserved. This counterargument is correct in the sense that a compensated victory might not be deserved from the sole perspective of displaying more athletic skills. Let us assume that a female ski jumper wins a large hill contest in which female participants start from a higher starting gate than male competitors. The female winner beats the second jumper, in this case a man, by jumps that were three and four metres longer than his jumps. No interfering factors, such as bad luck, are involved. According to the three-standard model, this is a failed athletic contest. The female jumper achieves a better official result and an ideally adjudicated result, but she does not display more athletic skills than the second jumper. The difference between their athletic skills is—roughly—that the man used more explosive power in the take-off than the woman. Explosive power is one factor that the sport community values as a means to fly far. Thus, the victory was not deserved from the viewpoint of displaying more athletic skills.

The weakness of the second counterargument is that several sex-segregated sports seem to also be prey to a similar
counterargument (see V, 57–58). In these sports, an Olympic gold medal for a female athlete might not be deserved in the sense that, from the sole viewpoint of displaying more athletic skills, women have not deserved separate classes that make it considerably easier for them to win Olympic gold medals. In the 2012 London Olympics, Jamaican sprinter Shelly-Ann Fraser-Pryce won the women’s 100-metre event with time of 10.75 seconds. In comparison, Richard Thompson of Trinidad and Tobago was seventh in the men’s final with a time of 9.98 seconds. Obviously, Fraser-Pryce would not have qualified for the Olympics without the sex-segregated class.

A crucial qualification is that we seldom evaluate sport competitions merely from the perspective of athletic superiority. Instead, we often use a general viewpoint of justice that acknowledges that we can try to correct the large injustices of our society, such as gender inequity (see Schneider 2000, 137, confer Tännö 2000, 101). Consequently, sex-segregated events can be justified as a means of promoting gender equity in the realm of sport. The compensation system of ski jumping would be a complementary attempt to increase gender equity beyond sex-segregated events. To conclude, in the general scheme of fairness, Fraser-Pryce’s Olympic gold medal in a sex-segregated competition is as deserved as a female ski jumper’s gold medal would be in a compensated contest (see V, 57–58).

One might note that there is a more robust version of the counterargument that my reply does not address (see V, 57–58). This version posits that women themselves—in addition to other people—would regard compensated victories as undeserved. It does not matter whether compensated victories are as deserved as victories in sex-segregated sports. This is a plausible counterargument: we are so accustomed to sex-segregated classes that we consider them a natural part of sport, not as something that is justified as a means to promote gender equity. This ‘naturalisation’ has undoubtedly been one reason why throughout history, sex-segregated sports have increased gender equity.
The variant of the second counterargument implies that, in the end, the success of the sex compensation system cannot be settled by theoretical arguments but instead depends on whether people eventually adapt to the new system. Again, whether people adapt to it depends in part on how the system is introduced. If we introduce it in an intriguing manner, it is assumed that people will be more likely to accept it.

4.4 Towards gender equity ‘under the veil of commercial interest’

My suggestion for realising ski jumping’s potential can be labelled ‘gender equity under the veil of commercial interest’. In other words, the suggestion is based on utilising a means for attracting audiences. The suggestion consists of two temporally separate steps. Roughly, the first step is to introduce a mixed-sex pairs competition in the format of a tournament, and the second step is to introduce an individual mixed-sex competition. The mixed individual competition would utilise a compensation system on normal and large hills, but ski flying contests would be uncompensated (V, 59–61).

4.5 The account of interpersonal betterness and the potential of ski jumping

The reason for discussing ski jumping’s potential has been to address the ethical relevancy of my account of interpersonal betterness. My account is relevant in two ways. First, it has an elaborative function. When I addressed the second counterargument against the potential of ski jumping, I employed the three-standard model to analyse the case. Second, the account provides \textit{prima facie}

\footnote{A more detailed description of the two steps is available in the original article (V, 59–61).}
reasons for ethical decision making. *Prima facie* reasons refer to reasons that we should follow in the absence of any overriding reasons. For the sake of convenience, I abbreviate ‘*prima facie* reasons for ethical decision making’ as ‘*prima facie* ethical guidelines’.

My account of superiority provides a *prima facie* guideline to forgo or ignore the argument for ski jumping’s potential because the argument contradicts my account. According to my account, the ideal state is such that the three standards are in harmony, but the argument for ski jumping’s potential is designed to enable failed athletic contests. With respect to these failed athletic contests in ski jumping, the standards of an official result and an ideally adjudicated result would denote the same athlete as better, while the standard of athletic skills would denote a different athlete as better.

The contradiction between the account and the argument is conditioned on the assumption that the rarity component of athletic skills refers to rarity among all humans (see subsection 2.1.8.2). If the rarity component refers to rarity relative to resources, my account would recommend adopting the argument for ski jumping’s potential. However, I have argued that rarity among all humans seems to be less problematic assumption.

Whether we should disobey the *prima facie* ethical guideline of my account depends on whether there is an overriding reason to do so, and there does indeed seem to be such reason: gender equity. By enabling failed athletic contests in ski jumping, we could increase gender equity. Therefore, we should not forgo the argument for ski jumping’s potential. This statement does not imply, however, that I am discarding my account of interpersonal betterness. On this occasion, I simply claim that determining athletic superiority according to the three-standard model is not the most important concern.

My solution to the contradiction between the *prima facie* ethical guideline and the argument for ski jumping’s potential might dissatisfy some people. That dissatisfaction might take the form of one of the following four counterarguments. According to the first counterargument, I should not have chosen the argument for ski
jumping's potential as an example but instead a case in which we should obey the *prima facie* ethical guideline of my account. I admit that this approach might have been pedagogically wise. Nevertheless, the counterargument does not show that I am wrong in what I claim. The second counterargument claims that my account does not provide *prima facie* reasons; instead, it provides overriding reasons. This counterargument is implausible because my account would then imply that we should prefer evaluations of superiority in sport competitions to every other possible option.

According to the third counterargument, my account is not ethically relevant because it provides only *prima facie* reasons. However, it is hard to see why providing *prima facie* ethical guidelines would be ethically irrelevant. The fourth counterargument states that considerations of gender equity do not override considerations of athletic superiority in ski jumping. I have argued against this view in my response to the second counterargument above.

Before proceeding to the concluding chapter of my thesis, I note that one can use my account to analyse ethical issues in sport beyond women's ski jumping. Interesting cases would be those of Oscar Pistorius or Caster Semenya. Furthermore, there seems to be the possibility of adapting the account to contexts beyond sport. Examples might include evaluation in educational institutions, decisions in courts of law, political elections and hiring practices. However, I leave these attempts for future research.

## 5 Conclusion

I have attempted to answer the question of what constitutes betterness in sport competitions. Betterness can be interpersonal, intrapersonal or a mixture of the two. I have focused on interpersonal betterness and developed an account to describe it. My account consists of three main elements. The first element is the
relations of interpersonal betterness. There are three fundamental relations of interpersonal betterness: athletic superiority, advantage and sport record. The second element is the standards for the relations. There are three standards: official result, ideally adjudicated result and the display of athletic skills. The third element is the types of competition. We can classify sport competitions in different ways. However, three dimensions are particularly important to my account. That is, sport competitions can either be non-knockout or knockout competitions, either non-reducible or multi-structural competitions and, finally, either temporally limited or temporally extended competitions.

The account has two normative dimensions. First, it provides a way of discussing superiority in sport competitions consistently and accurately. Second, the account can contribute to ethical decision making. It clarifies underlying conceptual issues and provides *prima facie* reasons for such decision making. I have discussed the latter aspect of normativity of my account with an argument that states that we could meaningfully replace sex-segregated competitions with mixed-sex competitions in ski jumping.

According to my account, the ideal state with respect to betterness is the one in which the three standards are in harmony for any relation of superiority in any compatible type of sport competition. For instance, if we are analysing athletic superiority in a non-knockout, non-reducible and temporally limited sport competition, the ideal state is such that the three standards are in harmony at the end of the competition. In concrete terms, the ideal state is achieved if, for example, Usain Bolt has obtained the best official result and the best ideally adjudicated result and has displayed the most athletic skills in a single 100-metre race.

The ideal state is not always realised, and conflicts between the standards are common. These situations are a source for repeatedly emerging disputes and discussions of which team or athlete was better in particular sport competitions. My thesis does not end these discussions. Instead, it provides tools to consistently discuss the disputed issues.
6 References


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