

***Fair Equality of Opportunity: An Ethical Framework
for Classification in Paralympic Sport***

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ABSTRACT

Fairness is one of the most important ethical issues in sporting competition and is a particular problem in Paralympic sport due to differences in the nature and severity of athletes' impairments. The International Paralympic Committee (IPC) attempts to promote fairness in the structure of competition by grouping athletes into different classes. There are, however, many aspects of that classification system that are unfair. This thesis aims to develop an alternative ethical framework for Paralympic classification based on the principle of fair equality of opportunity. I argue that the purpose of, and rationale for Paralympic classification is not, as the IPC states, to minimise the impact of impairment on athletic performance, but rather to provide all athletes with a fair and equal opportunity to perform in meaningful competition. Loland has established the most developed ethical model for assessing fairness in sport. I propose a three-stage framework for Paralympic classification that develops Loland's model and incorporates but distinguishes the separate equal opportunity theories of Jacobs and Roemer. I call this the Fair Equality of Opportunity 2 ('FEO2') model. I argue that natural differences of Paralympic athletes that cannot be controlled but have a significant effect on athletic performance should be recognised by grouping athletes into relevant classes ("Background Fairness", "BF"). I argue that the distribution of advantage in each class should reflect differences in athletic performance based on natural intrinsic talents (i.e. relevant skills and abilities) rather than extrinsic factors such as technology ("Procedural Fairness", "PF"). Finally, I argue that unequal treatment in the distribution of advantage between Paralympic athletes should reflect differences in performance ("Outcomes Fairness", "OF"). I conclude that the FEO2 model is preferable to the present IPC classification system because it embeds the principle of fair equality of opportunity before, during, and after, sporting competition.

DECLARATION

This work has not previously been accepted in substance for any degree and is not being concurrently submitted in candidature for any degree.

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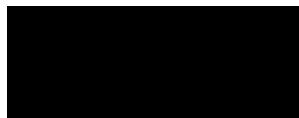
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STATEMENTS

This thesis is the result of my own investigations, except where otherwise stated. Where correction services have been used, the extent and nature of the correction is clearly marked in a footnote(s).

Other sources are acknowledged by footnotes giving explicit references. A bibliography is appended.

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Date

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I hereby give consent for my thesis, if accepted, to be available for electronic sharing.

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carry on and try to beat his brother, Joe waited for Will to put the egg back on his spoon. Having done so, Will and Joe both set off together walking side by side, eggs, and spoons in hand. Needless to say, they didn't win the race. However, I was so moved by this moment that I didn't notice who did. Why can't everyone adopt the same philosophy in sport?

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In loving memory of
Margaret Parnell (nee Webb), 1946-2016

“Frodo: ...I wish none of this had happened.

Gandalf: So do all who live to see such times, but that is not for them to decide. All we have to decide is what to do with the time that is given to us.”

“Pippin: I didn't think it would end this way.

Gandalf: End? No, the journey doesn't end here. Death is just another path, one that we all must take. The grey rain-curtain of this world rolls back, and all turns to silver glass, and then you see it... White shores, and beyond, a far green country under a swift sunrise.”

— J.R.R. Tolkien, *The Lord of the Rings*

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CHAPTER 1 - INTRODUCTION

“I shall therefore conclude this introductory discourse with desiring the reader to excuse the inaccuracies of style, which doubtless he will frequently meet within the following narrative; and that when such occur, he will recollect that it is the production of a man, who has not had the advantage of much school education...”

Captain James Cook, 7 July 1776, in Heywood, 2023.

1.1 Overview

In this study, I critically review the current classification system of the International Paralympic Committee (“IPC”) which is used in Paralympic sport and sporting competition and analyse some of the ethical and other problems associated with this system before attempting to develop an alternative three-stage ethical framework for Paralympic classification that incorporates the principle of fair equality of opportunity. Developing Loland’s (2002, 2010, 2017, 2020; Loland and Hoppeler, 2012) moral norm system for fairness and fair play in sport, and relying on the separate equal opportunities theories of Roemer (1998) and Jacobs (2004), I argue that a model that is based on fair and equal opportunity provides for a better approach to Paralympic classification than the current IPC system.

1.2 Statement of the Problem

A fair and just classification system is fundamental to the integrity of Paralympic sport (and by extension, the integrity of the IPC as the international organising body and regulator of Paralympic competition and the organiser of the quadrennial Paralympic Games). A classification system that ensures that athletes with a similar level of impairment and function compete against one another lies at the heart of the Paralympic movement. The fundamental challenge for the IPC is how to maintain fair and meaningful competition between athletes with different types and severity of impairments, whilst recognising that even athletes with the same type of impairment may have very different functional and other abilities and therefore levels of performance (Wu, 1999). The IPC has responded to this challenge by developing classification systems in Paralympic sport that categorises participants into different groups or

‘classes’ so that athletes with similar characteristics such as the same type or severity of impairment or functional ability compete against one another (Wu, 1999).

The IPC classification system is, however, both confusing and complex and is therefore very difficult for athletes, coaches, and spectators to understand. In addition, and as I will set out in more detail in Chapter 6, there are many ethical and other issues that are associated with the current system of Paralympic classification that are unfair. The problem that I, therefore, aim to address in this study is whether it is possible to develop a more fair and just classification model for Paralympic sport by considering this problem from an ethical and philosophical perspective.

The complexity of the current Paralympic classification system can be illustrated by reference to the sport of Para swimming. In Para-swimming, athletes are grouped into ‘sport classes’ which are determined by reference to the degree of functional limitation resulting from their impairment(s) (World Para Swimming, 2024). To be eligible to compete in Para swimming, the athlete must firstly have an eligible impairment and secondly, meet the minimum impairment criteria set out in the World Para Swimming Classification Rules and Regulations (World Para Swimming Classification Rules and Regulations August 2022). In Para swimming, sport classes consist of a prefix (“S”, “SB”, or “SM”) and a number. The prefixes stand for the individual strokes (‘S’ is for freestyle, butterfly, and backstroke; ‘SB’ is for breaststroke; and ‘SM’ is for the individual medley) and the number indicates the sport class. There are 10 different sport classes for athletes with physical impairment, numbered 1-10. Swimmers with a visual impairment compete in sport classes 11 to 13, depending upon the severity of their impairment, whilst swimmers with an intellectual impairment compete in sport class 14.

In Para swimming, classification is determined by reference to the functional impact the impairment has on the particular event rather than on the impairment itself, with the result that athletes with different impairments compete against each other in the same class. To evaluate the impact of impairments on the event, classifiers assess all functional body structures using a points system and ask the swimmer to complete a practical water assessment. The total number of points then determines the athlete’s sport class. Because the individual medley event is comprised of all four strokes (backstroke, butterfly, breaststroke, and freestyle), the SM sport class is calculated from the S and SB points combined.

There is, however, a further type of competition in Para swimming known as ‘Multi-Classification’ (or ‘MC’ races) where Para swimmers compete against rivals from different classifications and receive a points score based on how close they are to the existing world record. In MC races, the positions of the swimmers are therefore determined based on relative performance rather than time. This means that although a certain swimmer may touch the wall first, and therefore be perceived to be the ‘winner’ of the race, this is not necessarily the case, which is incredibly confusing, not only for the swimmers themselves but also for the spectators.

1.3 Aims and Objectives

The overriding aim of this thesis is to present a philosophical argument defending the recommendation of a superior alternative approach to classification in Paralympic sport. In addition, the thesis will address each of the following specific objectives:

- (i) to critically review the fairness of the current Paralympic classification system adopted by the IPC;
- (ii) to critically assess the adequacy of Loland’s ethical model to determine whether this provides for fairness and fair play in Paralympic sport and sporting classification;
- (iii) to construct an alternative theoretical and conceptual framework for a fair and just classification system in Paralympic sport from an ethical and philosophical perspective; and
- (iv) to make recommendations for the improvement of the Paralympic classification system based on the preferred alternative model, which I shall call the Fair Equality of Opportunity 2 (‘FEO2’) model.

1.4 Methodology

The methodology adopted in this study is essentially that of a literature review of the relevant research and scholarly work that has been undertaken in the areas of disability and impairment, classification (both in general terms and more specifically, regarding Paralympic classification), Paralympic sport, and moral ethics and political philosophy, particularly in respect of the principle of fair equality of opportunity.

1.5 Strengths and limitations of this approach

The strength of the approach that I have adopted in this study is that this represents a comprehensive review of the relevant literature in those areas identified in paragraph 1.4 above. The limitation of this approach, however, is that it would have been advantageous to have carried out some form of empirical study in addition to the literature review. In particular, it would have been beneficial to have interviewed various stakeholders in Paralympic sport with a specific interest in the Paralympic classification system such as the representatives of relevant sporting governing bodies together with Paralympic athletes and coaches to obtain their views on the fairness of the current classification system and to determine what, if anything, could be done to address the shortcomings with that system. In addition, and as will become apparent throughout this study, it should be acknowledged and recognised from the outset that there is no ‘perfect’ classification system that will address the ethical and other problems which arise in Paralympic sport with the result that the suggestions, recommendations, and conclusions which I have put forward in this study can only ever be tentative at best.

1.6 Structure of Thesis

This thesis comprises four different parts consisting of ten separate chapters which are structured as follows. **Part I** of this study (**‘Concepts’**) consists of two substantive chapters that introduce the two broad concepts that relate to Paralympic classification, namely eligibility, disability, and impairment on the one hand; and classification on the other. In particular, **Chapter 2** introduces the concept of ‘disability’ broadly defined by reviewing the various definitions of ‘disability’ and the two dominant models of disability that have been articulated in recent times, namely the medical model and the social model, together with the so-called ‘medico-social’ model, which is a hybrid of the medical and social models. After considering some of the legislative definitions of disability that I have drawn from the English Disability Discrimination Act 1995 (‘DDA’) (now Equality Act 2010) and the U.S. Americans with Disabilities Act 1990 (‘ADA’), I proceed by outlining some of the previous attempts that have been made to classify disability from several different perspectives. This includes the two main models of disability that have been developed by the World Health Organisation (‘WHO’), namely The International Classification of Impairments Disabilities and Handicaps (‘ICIDH’), 1980, which is based largely on the medical model of disability, and its successor, The International Classification of Functioning, Disability and Health (‘ICF’), 2001, which

incorporates several different elements from the social model of disability in its framework. The chapter concludes with a summary of the key differences between the two WHO models.

Chapter 3 provides an overview of the philosophical study of classification in general terms, before focussing on the specific issue of biological classification. This is the area that is most appropriate to the focus of this study, namely the structure of the human body and how this functions to carry out certain tasks that are necessary to perform in a given manner, in this case by undertaking a specific Paralympic sport or event. In this chapter, I review some of the main definitions, theories, and methodologies of classification, including historical analysis of the classical works of Plato and Aristotle; botanists and medical herbalists such as Cesalpino and Linnaeus; the evolutionary theory of Darwin; and the theories of Wittgenstein, Rosch, and Kuhn in the area of classification.

Having introduced the two broad concepts of disability/impairment and classification in Part I and Chapters 2 and 3, **Part II** of this study (**‘Paralympic Sport’**) addresses the first specific objective of the thesis that was identified in paragraph 1.3 above by critically reviewing the fairness of the current Paralympic classification system adopted by the IPC. Chapters 4, 5, and 6 provide a detailed analysis of several different elements that comprise Paralympic sport. **Chapter 4** provides a brief overview of the origins and history of Paralympic sport by way of an introduction to the problem with which I am concerned in this study. It begins by examining the origins of what we now recognise as the modern-day Paralympic Games by considering the rehabilitative work undertaken by the German physician Doctor Ludwig Guttman with those military veterans at the Stoke Mandeville Hospital in Buckinghamshire who had suffered spinal cord injuries during the Second World War, together with the establishment of the original Stoke Mandeville Games for disabled athletes. I then examine the development of the modern Paralympic Games during the period from 1960 until 1989, when the IPC was formed. After briefly providing an overview of the various international federations that govern Paralympic sport, the chapter concludes by summarising the organisational structure of the IPC, and in particular, the circumstances in which decisions relating to classification are taken.

Building on the earlier work that I have undertaken in Chapters 2 to 4, **Chapter 5** examines classification in sport in general terms, by considering how sport currently classifies athletes by reference to such characteristics as ability, sex, age, and weight, before turning to the issue of classification of competitors on the grounds of disability. This entails a discussion of the

purpose of, and rationale for, Paralympic classification and a review of the different types of classification systems that have been used in Paralympic sport, namely medical classification and functional classification, together with an explanation of the most recent type of proposed classification system, evidence-based classification ('EBC'). After outlining the relative advantages and disadvantages of those classification systems, I conclude Chapter 5 by providing a summary of the current classification process that has been adopted by the IPC for use in Paralympic sport.

In **Chapter 6**, I examine a range of prominent ethical and other problems in Paralympic sport that have an impact on classification.¹ Some of those issues are not unique to Paralympic sport but also arise in able-bodied sport. They include the use of performance-enhancing drugs and other substances and access to resources and technology. Several other ethical issues, however, arise solely in relation to Paralympic sport. They include Intentional Misrepresentation ("I.M."); autonomic dysreflexia (better known as 'boosting'); elective amputation; and the use of prosthetics and other forms of technology. Each of these particular issues has a potential impact on the fairness of Paralympic classification and therefore the integrity of Paralympic sport and sporting competition. In this chapter, I examine each of these issues in further detail by addressing them separately and in turn. I will then return to some of those ethical issues in Chapter 9 by considering them within the context of the alternative conceptual and theoretical framework that I have developed in this study to demonstrate the suitability of this model and to confirm that this is fit for purpose where Paralympic classification and competition are concerned.

Part III ('Theory') specifies the substantial theoretical elements that form the core of my thesis. Having outlined some of those problematic ethical issues that arise in Paralympic sport and classification in Chapter 6, **Chapter 7** addresses the second specific objective of the thesis set out in paragraph 1.3 above by assessing Loland's ethical model to determine whether this provides for fairness and fair play in Paralympic sport and sporting classification. Chapter 7 begins by considering the issue of fairness and fair play in sport and reviews Loland's moral norm system in more detail. Sigmund Loland (2002, 2010, 2017, 2020; Loland and Hoppeler,

¹ It should be noted that the material in Chapter 6 is based largely on that material which was previously published in McNamee, M.J. and Parnell, R.J., 2018. Paralympic philosophy and ethics. *The Palgrave handbook of Paralympic studies*, pp.461-478; and in McNamee, Mike, Richard Parnell, and Yves Vanlandewijck. "Fairness, technology and the ethics of Paralympic sport classification." *European Journal of Sport Science* 21, no. 11 (2021): 1510-1517.

2012) has established the most sophisticated ethical model for evaluating fairness and fair play in sport. Loland, however, makes no distinction between able-bodied and non-able-bodied or disability sport in his model. Chapter 7 provides an overview of Loland's moral norm system as a precursor to establishing whether this is capable of being applied to Paralympic classification and sporting competition in its current form, or whether and to what extent it requires adaptation or even rejection. In particular, I consider Loland's reliance on Rawls's (1971) *Justice as Fairness* social contract theory in his model and in particular, the concepts of the *original position* and *veil of ignorance*. Following Nussbaum's (2006) critical analysis of Rawls, Chapter 7 also raises several concerns as to whether a *lacuna* exists in Rawls's theory where individuals with impairments such as Paralympic athletes are concerned. The chapter continues by examining the Aristotelian aspects of Loland's model in terms of the formal equality principles set out in the *Nicomachean Ethics*, which Loland uses to develop the various moral norms that together constitute his model for fairness and fair play in sport. The chapter concludes by reviewing the different constituent parts of Loland's model.

Chapter 8 examines the issue of fair equality of opportunity, and more specifically, the separate equal opportunity theories of Roemer (1998) and Jacobs (2004). I begin this chapter by considering the main purpose of, and rationale for Paralympic classification and argue, extending Loland's view, that the main purpose of classification in Paralympic sport is to provide every Paralympic athlete with an equal opportunity to perform in meaningful competition (which LaVaquer-Manty (2005) describes as "*the realistic hope of winning*") regardless of an athlete's particular impairment or impairment group. After pausing briefly to reflect on what I mean by the phrase "meaningful competition", I argue that the underlying feature behind a fair classification system in Paralympic sport is to provide all athletes with an equal opportunity to perform in meaningful competition. I therefore spend some time in Chapter 8 outlining the concept of equality of opportunity in general terms before turning to the two theories of equality of opportunity which I shall rely upon in developing my ethical framework, namely Lesley Jacobs' Three-Dimensional Model for Equal Opportunities as a Regulative Ideal (Jacobs, 2004) and John Roemer's equality of opportunity theory (Roemer, 1998). Both Jacobs and Roemer argue for equal opportunity theories which attempt to level the playing field for participants and contain elements of background and procedural fairness. Jacobs' theory, however, also includes a third element – stakes fairness – which forms the third aspect of his three-dimensional model, but which does not feature in Roemer's theory at all.

Part IV ('A Superior Alternative Model') is the fourth and final part of this study and addresses the third specific objective of this thesis outlined in paragraph 1.3 above by considering the development of an alternative theoretical and conceptual framework for a fair and just classification system in Paralympic sport from an ethical and philosophical perspective. **Chapter 9** brings together each of the strands of Chapters 7 and 8 by proposing an alternative superior ethical framework for Paralympic classification that embeds the principle of fair equality of opportunity in the current IPC classification system, which I have called the Fair Equality of Opportunity 2 ('FEO2') model.² I argue that whilst there are certain similarities between the FEO2 model and Loland's moral norm system, the separate equal opportunities theories of Roemer and Jacobs provide a better starting position to provide fairness in Paralympic sport and ultimately strengthen the framework for a fair Paralympic classification system. In Chapter 9, I therefore set out my proposed alternative framework for Paralympic classification which extends and modifies Loland's model by adopting the three-dimensional aspects of Jacobs' model, namely background fairness, procedural fairness, and stakes fairness, together with several components of Roemer's theory, and develops the following three propositions:

- (i) Where natural differences of Paralympic athletes that cannot be controlled have a significant influence on athletic performance, such differences should be recognised by grouping athletes into relevant classes in Paralympic sport ("**Background Fairness**" or '**BF**');
- (ii) The distribution of advantage (i.e. success or achievement) in each class should reflect intrinsic differences in athletic performance (i.e. relevant skills and abilities) rather than extrinsic factors such as technology ("**Procedural Fairness**" or '**PF**');
and
- (iii) Unequal treatment in the distribution of advantage between Paralympic athletes should reflect differences in athletic performance ("**Outcomes Fairness**" or '**OF**').

Chapter 9 concludes by demonstrating that this alternative model is suitable for use in connection with Paralympic classification and sporting competition and is therefore fit for purpose by applying some of those ethical issues that I identified in Chapter 4 to each of the

² Chapter 9 incorporates material from McNamee, Mike, Richard Parnell, and Yves Vanlandewijck. "Fairness, technology and the ethics of Paralympic sport classification." *European Journal of Sport Science* 21, no. 11 (2021): 1510-1517.

three components which constitute the FEO2 model, i.e. those conditions that apply before, during, and after, competition.

The final chapter, **Chapter 10**, provides the summary and conclusion of the thesis and argues that the alternative model for classification that I have proposed is more fair and just than the present IPC classification system because it embeds the principle of fair equality of opportunity in each of the three critical stages of sporting competition (i.e. before, during, and after, competition). In so doing, it places the notion of fair equality of opportunity at its core, puts greater emphasis on an athlete's background circumstances, and incorporates an additional element of fairness, namely outcomes fairness, which does not feature in the current IPC classification process. In this chapter, I also address the fourth and final specific objective set out in paragraph 1.3 above by providing several recommendations to improve the current IPC classification system in Paralympic sport based on the alternative ethical framework that I have outlined in Chapter 9. As stated in paragraph 1.5 above, my aim here is not to undertake a fundamental change as to how Paralympic classification is undertaken but rather to seek to refine this by placing more emphasis on the concept of fair equality of opportunity to create a greater sense of fairness and justice in Paralympic sport and sporting competition.

1.7 Original Contribution

Despite the Paralympic Games being almost 70 years old and the fact that classification forms such an integral part of Paralympic competition, the Paralympic classification system has received comparatively little attention or serious scrutiny from an ethical or philosophical perspective. As far as I am aware, there have been no, or no serious, attempts to devise any form of theoretical or conceptual framework for Paralympic classification from an ethical or philosophical point of view. Furthermore, although Loland's moral norm system is widely recognised as the most developed ethical framework for assessing fairness and fair play in (able-bodied) sport, there have been no previous attempts to apply this model specifically to either Paralympic sport or Paralympic classification to see if this is suitable or appropriate for this specific context. This study therefore attempts to fill that void.

PART I - CONCEPTS

CHAPTER 2 – ELIGIBILITY: DISABILITY AND IMPAIRMENT

“We don’t see things as they are, we see them as we are”.

Anais Nin, 1961.

At the risk of stating the obvious, to be eligible to compete in Paralympic sport, an individual must have a relevant and qualifying disability. In particular, the IPC specifically mandates that a necessary condition of being able to compete in the Paralympic Games is that the athlete must have an eligible impairment, which the IPC defines as

“An Impairment designated as being a prerequisite for competing in Para sport, as detailed in the International Standard for Eligible Impairments”

whilst an ‘impairment’ is defined by the IPC as

“A physical, visual or intellectual Impairment.”

(IPC, 2015, p.18).

The definition of ‘disability’ is, however, a highly contentious and controversial concept (Wasserman, 2016). Wasserman cites two reasons for this. Firstly, it is only in the last one hundred years or so that the term ‘disability’ has been used to refer to a distinct class of people. Disability is therefore a term that is only of relatively recent construction. Secondly, many different conditions and characteristics may be considered disabilities that arise as a result of illness, injury, or disease, and may be either congenital or acquired. Indeed, Wasserman suggests that there is as much variation among disabled people as there is among people who lack disabilities (Wasserman, 2016).

In this chapter, I will examine the various definitions of ‘disability’ and the two dominant models of disability that have been developed in recent times, namely the medical model and the social model, together with a hybrid of the medical and social models, the so-called ‘medico-social’ model. I then consider some of the methods by which the World Health Organisation (‘WHO’) has attempted to classify disability, namely The International Classification of Impairments Disabilities and Handicaps (“ICIDH”) of 1980 which was based

predominantly on the medical model of disability and was subsequently replaced by The International Classification of Functioning, Disability and Health (“ICF”) in 2001, which introduced an increased number of elements from the social model of disability. I then summarise the key differences between the ICIDH and ICF. In doing so, I will attempt to differentiate between the terms ‘disability’ and ‘impairment’, which are often used interchangeably, but have different meanings. Having done so, this will lead us neatly into a discussion in Chapter 3 of the other broad conceptual issue that is of interest in this study, namely that of classification.

2.1 Definitions and Models of Disability

There are, broadly speaking, two main models of disability that have been developed in recent times, namely the medical model and the social model (Oliver, 1990; Terzi, 2004). These models, however, represent two extreme positions of a wide spectrum of differing beliefs about disability, which is a complex, multi-dimensional concept (Altman, 2001). As we shall see in Chapter 5, there are clear parallels to be drawn between the medical model of disability and the medical classification system used in Paralympic classification on the one hand, and the social model of disability and the functional classification system adopted in Paralympic sport on the other. These comparisons will be developed further later on in this chapter when considering the two WHO models of disability, the ICIDH and ICF, referred to above. But for now, let us begin by considering the medical model of disability.

The Medical Model

The conventional view of disability is that this involves some form of physical or mental characteristic or ‘impairment’ which results in a limitation or restriction on a person’s ability to participate in some type of activity (Wasserman, 2016). According to the so-called medical model, disability is therefore medically, or biologically, grounded. It involves some sort of personal tragedy or misfortune that is intrinsically bad and makes life worse and is, therefore, something that gives us reason to try to avoid or correct. Kahane and Savulescu (2009) call this the “everyday concept” of disability. By contrast, John Harris defines disability as

“a condition that someone has a strong rational preference not to be in and one that is moreover in some sense a harmed condition.”

(Harris, 2007, p.91).

For Harris, a ‘harmed condition’ is defined as relative to both one’s rational preferences and those conditions that might be described as harmful. For example, Harris refers to an “emergency room test” for determining disability, whereby if a patient presents themselves with a certain condition in the emergency room of a hospital and that condition could be easily and immediately reversed unless the doctor acts without delay, a doctor would be negligent were he or she not to attempt reversal (Harris, 2007).

This medical interpretation of disability is illustrated by Nagi’s (1965) original model which was based on an article written for a conference of the American Sociological Association and the Vocational Rehabilitation Administration. Nagi bases his model on pathology, by which he means the state of mobilisation of the body’s defences against a condition associated with infection, traumatic injury, or some other aetiology (Altman, 2001). As Altman explains, for Nagi, pathology represents an interruption in “normal” body processes while the body attempts to restore that normal state. Its association with disease, traumatic injury, and other aetiologies is discussed as part of the definition, but its relationship to diagnoses is not referred to. By contrast, Nagi defines ‘impairment’ as anatomical or physiological abnormalities and losses (Nagi, 1965). Whilst acknowledging that such abnormalities can also be reflections of an active pathology, Nagi makes a distinction by also including abnormalities and losses associated with residuals of pathology, that is to say, abnormalities and losses that remain after an active pathology has been prevented or eliminated. In his later model, Nagi (1977) specifically included abnormalities such as congenital deformities, which are not necessarily associated with pathology. In his later work, Nagi (1991) noted that impairments can vary among several different dimensions that can influence the nature and degree of disability observed. These dimensions include the degree of visibility and disfigurement; predictability of the underlying disability; prognosis and prospects for recovery or stabilisation; threat to life; types and severity of limitations in the function they impose; and the point of onset in the life cycle (Nagi, 1991, Altman, 2001).

In his 1965 model, Nagi saw disability as a “*pattern of behaviour that evolves in situations of long-term or continued impairments that are associated with functional limitations*” (Nagi 1965, Altman, 2001). Nagi initially identified functional limitations as the restrictions that

impairments set on the individual's ability to perform the tasks and obligations of his or her usual roles and normal daily activities. Nagi subsequently clarified this in his later works by referring to functional limitations as the most direct way impairments contribute to disability and noted that functional limitations might be grouped into four different categories, namely physical, emotional, intellectual, and sensory (Nagi, 1991).

In Verbrugge and Jette's (1993) model of disability, pathology refers specifically to biochemical and physiological abnormalities that are detected and medically labelled as disease, injury, or congenital or developmental conditions. In particular, Verbrugge and Jette argue that bodily changes represented by pathology are not always directly measurable in medical practice (Altman, 2001).

By contrast, the Institute of Medicine ("IOM") model (IOM, 1997) is based on the Nagi model and therefore includes a similar definition of the meaning of pathology proposed by Nagi (Altman, 2001). However, the first IOM group was tasked with addressing issues of preventing potentially disabling conditions from developing into disability and minimising the effects of such conditions on a person's productivity and quality of life. Their perspective included an approach that also examined and discussed risk factors that can lead to pathology. By contrast, the IOM defines "impairment" as a discrete loss or abnormality of mental, physical, or biochemical function, including losses caused by all forms of pathology (IOM, 1997). The IOM maintains that specific impairments may have different aetiologies and different types of pathologies, whilst impairments include anomalies, defects, or losses that relate to the specific functioning of an organ or organ system but not the organism or person as a whole (Altman, 2001).

For some, the physical or mental impairment may be some form of absence, malfunction, deviation, or abnormality from the 'average' person, either on statistical grounds relating to some particular reference group; or on biological grounds relative to normalcy, normal human functioning, or species-typical functioning (McNamee, 2017). For example, McNamee (2017) refers to the work of Christopher Boorse (1975, 1977), who maintains that health is conceptually the equivalent of 'normal functioning' and states that health, within his theory, is understood as 'species typical functioning' that occurs normally in the absence of disease or impairment. For Boorse, 'normal functioning' is therefore a matter of objective fact that can

be determined without reference to the views of the person whose health or even, by extension their disability, is in question (McNamee, 2017).

By contrast with Boorse, Maxwell Mehlman (2001) points out that in clinical practice, ‘normality’ refers to a certain distribution of the population around an average measure for a particular trait. Individuals are ordinarily considered ‘normal’ with regard to a specific trait if they are no more than two standard deviations from the mean of the population for that trait. Mehlman also points out, however, that based on this definition, around five percent of the population is ‘abnormal’ for any characteristic (Mehlman, 2001). Mehlman argues that were abnormality, or species-atypicality, equivalent to a disability, the numbers of the disabled would vastly expand. Species-atypicality, understood neutrally, thus underdetermines disability. Nevertheless, any atypical individual has a higher than species-typical potential to be disabled (Mehlman, 2001).

The Social Model

At the other end of the spectrum is the so-called social model of disability developed by the disability scholar Michael Oliver (1990). Oliver argues that disability is a product of specific social and economic structures that cause oppression and discrimination against disabled people (Oliver, 1990). This model grew out of the disabled rights movement and in particular, the document “*Fundamental Principles of Disability*” published by the Union of the Physically Impaired Against Segregation (“UPIAS”) in 1976 (UPIAS, 1976). The definition of ‘disability’ in the social model draws from the UPIAS document, which states that:

“In our view, it is society which disables physically impaired people. Disability is something imposed on top of our impairments by the way we are unnecessarily isolated and excluded from full participation in society. Disabled people are therefore an oppressed group in society. To understand this it is necessary to grasp the distinction between the physical impairment and the social situation, called “disability”, of people with such impairment. Thus we define impairment as lacking part or all of a limb, or having a defective limb, organ or mechanism of the body; and disability is the disadvantage or restriction of activity caused by a contemporary social organisation which takes no or little account of people who have physical impairments and thus excludes them from participation in the mainstream of social activities.”

(UPIAS, 1976).

Oliver and the social model therefore rejects the individual, medical model of disability and focuses instead on understanding the lived experience of disabled people themselves. In the social model, disability, therefore, has nothing to do with the body, but is instead something that is imposed on disabled people by social and economic institutional structures that discriminate against disabled people who are an oppressed group in society (McNamee, 2017). Consequently, the social model “*does not deny disability, but locates it squarely within society*” (Oliver, 1996). For Oliver, disability is therefore “*wholly and exclusively social*” (Oliver 1996).

Anastasiou (2013) summarises the main arguments of the social model thus:

- (i) Impairment is the functional limitation within the individual caused by physical, mental, or sensory impairment. Disability is the loss or limitation of opportunities to take part in the normal life of the community on an equal level with others due to physical and social barriers;
- (ii) Impairment refers to physical/bodily dysfunction, whereas disability refers to social organisation;
- (iii) Disability is not a product of bodily pathology, but of specific social and economic structures. These structures are responsible for the exclusion of disabled people from their full participation in mainstream social activities. It is not individual limitations, of whatever kind, which are the cause of the problem but society’s failure to provide appropriate services and adequately ensure that the needs of disabled people are fully taken into account in its social organisation;
- (iv) Disabled people are an oppressed group. The oppression is attributable to the capitalist mode of production or the structures of industrial capitalism and the demands for increased productivity, whereby impaired people are marginalised; and
- (v) Disability is not a matter of personal tragedy. Nothing about disabled people is wrong and needs to be fixed. Medical intervention is not appropriate. Instead, disabled people are better advised to struggle to change society.

Having considered the medical and social models of disability, there is a third model of disability we should consider at this juncture, which is the so-called medico-social model which represents a hybrid of the medical and social models.

The Medico-Social Model

An alternative view is that disability is not caused by medical or social factors alone, but is influenced by both medical/biological *and* social factors acting together (Hull, 1998). For example, Jonathan Glover (2006) argues that disability involves a functional limitation which (either on its own or more usually in combination with social disadvantage or discrimination) impairs a person's capacity for 'human flourishing'. By contrast, Silvers (2003) argues that impairment may be the absence, loss, deletion, omission, or diminution of something, but that impairments are anomalous in that they differ from what is typical, but they are not necessarily harmful, disadvantageous, or otherwise bad. Silvers maintains that we assume that hearing, seeing, walking, etc are necessarily good and that their absence constitutes a loss of an intrinsically valuable experience and a reduction in the quality of life (Silvers, 2003). In other words, disabilities necessarily correlate with limitations, but not every limitation is a loss, and just because a certain condition is less preferable than another does not make it intrinsically bad (Silvers 2003). Silvers argues that although disability necessarily concerns health, we do not need to impose the medical or social models of disability on an individual and that it is therefore possible to construct a 'neutral' conception of disability (Silvers, 2003). In particular, Silver argues that for us to address differing degrees of limitation, we may be inclined to adopt a comparative scale of functioning of the human body that involves a balance between the medical and social models of disability, that is, between understanding disability in terms of biological conditions that disadvantage individuals and understanding disability in terms of social conditions that marginalise minorities (Silvers, 2003).

2.2 Legislative Definitions of Disability

In addition to the different models of disability that have been developed, several definitions of disability differ according to the particular issue concerned (Silvers, 2003). For example, Silvers (2003) argues that there is a difference between legal and administrative definitions of disability, public health definitions, clinical definitions, and scholarly research definitions. It may therefore be helpful to pause briefly here to consider some of the various legal definitions of disability that have been developed in countries such as England and Wales and the United States.

In England and Wales, one of the earliest definitions of disability is that set out in Section 1 of the Disability Discrimination Act of 1995 (“DDA”), which was subsequently repealed and replaced by The Equalities Act 2010, and which states that

“a person has a disability for the purposes of this Act...if he has a physical or mental impairment which has a substantial and long-term adverse effect on his ability to carry out normal day-to-day activities.”

(Section 1, Disability Discrimination Act, 1995).

Under the DDA, any condition could amount to a “physical impairment” provided that the remainder of the definition in Section 1 was satisfied. For a condition to amount to a “mental impairment” under the 1995 Act, it must be specifically recognised by either the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (“DSM-IV”) published by the American Psychiatric Association (Frances, 1995) or the International Classification of Diseases, Tenth Revision (“ICD-10”) published by the World Health Organisation, which covers all disease, and not just mental illnesses (with recognised mental illnesses being listed in section F). For these purposes, “substantial” means that the condition must be more than merely minor or trivial in nature, whilst the effect of an impairment is said to be “long-term” if either:

- (i) It has lasted for at least 12 months;
- (ii) it is likely to last for at least 12 months, or
- (iii) it is likely to last for the rest of the life of the person affected (i.e. it is permanent).

The guidance to the 1995 Act gave specific examples of “normal day-to-day activities”, although this is absent in the Equality Act of 2010.

In contrast with the DDA, The Americans with Disabilities Act of 1990 (“ADA”) is a wide-ranging civil rights law of the United States that prohibits discrimination based on disability under certain circumstances and affords similar protections against discrimination to Americans with disabilities as the Civil Rights Act 1964, which made discriminatory acts unlawful based on race, religion, sex, national origin, and other characteristics. Under the ADA, a disability is defined as being a physical or mental impairment that substantially limits one or

more major life activities, a record of such an impairment, or being regarded as having such an impairment.

Wasserman (2016) states that there are two common features of most official definitions of disability such as those set out in the DDA and ADA, namely:

- (i) a physical or mental characteristic labelled or perceived as an impairment or dysfunction; and
- (ii) some personal or social limitation associated with that impairment.

When considering different legislative definitions of disability such as those set out in the DDA and ADA, there seem to be several key principles that apply to determine this issue. In other words, for there to be an underlying physical or mental impairment in either the DDA or the ADA, the condition must:

- (i) be sufficiently serious;
- (ii) be long-term (or permanent); and
- (iii) affect the ability of the person to undertake some form of activity.

I have thus far examined the different models of disability that have been developed in recent times, namely the medical model, the social model, and the medico-social model. I have also considered some of the legislative definitions of disability which have been incorporated in relevant legislation such as the DDA and Equality Act in England and Wales, and the ADA in the United States, both of which were introduced to afford greater protection to individuals from discriminatory conduct on grounds relating to disability. Whilst I am interested in what is, and is not, a disability or impairment for this study for the reasons outlined at the start of this chapter, it is also important for me to identify those previous attempts that have been made to classify disability and impairment, for this issue is critical to understanding Paralympic sport and ensuring fairness between Paralympic athletes when they compete against one another in sporting competition.

2.3 Classification of Disability

The organisation which has produced the most comprehensive amount of literature on the issue of classification of disability and impairment is the World Health Organisation (“WHO”). The first significant attempt by the WHO to classify disability was contained in the International Classification of Impairments Disabilities and Handicaps (“ICIDH”) which was produced in 1980 (World Health Organisation, 1980). The ICIDH was based largely on the ‘medical model’ of disability referred to above. In response to criticisms of the ICIDH from those who argued against the medical model and in favour of the social model of disability, the WHO subsequently produced the International Classification of Functioning, Disability and Health (“ICF”) in 2001 (World Health Organisation, 2001). I will now set out the main features of the ICIDH and ICF separately and in turn, beginning with the original ICIDH, before considering the main differences between the two models.

The International Classification of Impairments Disabilities and Handicaps (“ICIDH”)

The ICIDH defines ‘disability’ as

“...any restriction or lack (resulting from impairment) of ability to perform an activity in the manner or within the range considered normal for a human being”

(ICIDH, 1980, p.28).

The ICIDH definition of disability is based on the medical model of disability (De Pauw, 1997). As we have seen above, the medical model is based on the belief that there is a causal relationship between a person’s impairment and their disability.

By contrast with the term, ‘disability’, the ICIDH defines ‘impairment’ as

“any loss or abnormality of psychological, physiological or anatomical structure or function”

(ICIDH, 1980, p.27).

According to the ICIDH, disease necessarily leads to ‘impairment’, which in turn can lead to ‘disability’, which can further lead to what was then described as a ‘handicap’. Whereas impairments arise at the level of ‘body parts’ such as organs, disabilities are said to arise at the

level of the whole individual (ICIDH, 1980). Consequently, impairments are properly attributed to body parts, and disabilities are properly attributed to persons (McNamee, 2017).

The ICIDH defines ‘handicap’ as

“...a disadvantage for a given individual, resulting from an impairment or a disability, that limits or prevents the fulfilment of a role that is normal (depending on age, sex and cultural factors) for that individual”

(ICIDH, 1980, p.29).

The ICIDH definitions of ‘disability’ and ‘handicap’ have been criticised by those who reject the idea that disability and handicap are ‘consequences of disease’ (Oliver, 1990; UPIAS, 1975). Advocates of the ‘social model’ of disability therefore argue that the causes of disability can be found in the social environment and not in the individual and that the ICIDH classification is therefore deeply flawed (McNamee, 2017).

The International Classification of Functioning, Disability, and Health (“ICF”)

As with the ICIDH, the ICF retains three separate components but replaces the terms ‘disability’, ‘impairment’, and ‘handicap’ with ‘impairment’, ‘activity limitations’, and ‘participation restrictions’ (McNamee, 2017).

The ICF defines ‘impairment’ as

“a loss or abnormality in body structure or physiological function (including mental functions). Abnormality here is used strictly to refer to a significant variation from established statistical norms (i.e., as a deviation from a standard population mean...)”

(ICF, 2001, p.190).

The ICF replaced the term ‘disability’ with a new term, ‘activity limitation’, which is described as follows:

“difficulties an individual may have in executing activities. An activity limitation may range from a slight to a severe deviation in terms of quality or quantity in executing the activity in a manner or to the extent that is expected of people without the health condition”

(ICF, 2001, p.191)

The ICF removes the ICIDH's reference to 'activities within the range considered normal for a human being', and states instead that:

"Limitations or restrictions are assessed against a generally accepted population standard"

(ICF, 2001, p.21).

In contrast with the terms 'disability' and 'impairment' (which do not involve any consideration of social issues), the term 'handicap' is now considered to be a derogatory term with negative connotations in many societies and is therefore no longer included in the ICF (although this term is still acceptable in certain cultures such as Scandinavia). Instead the term 'handicap' has been replaced by the term 'participation restriction', which is defined as

"...problems an individual may experience in involvement in life situations. The presence of a participation restriction is determined by comparing an individual's participation to that which is expected of an individual without disability in that culture or society"

(ICF, 2001, p.191).

It would therefore appear that the term 'participation restriction' is determined by reference to a comparison with the types of activities typically engaged in by others. If an individual is restricted from participating in such activities, due to the presence of 'impairments' or 'activity limitations', they are considered by the ICF to suffer from a 'participation restriction' (McNamee, 2017).

The WHO makes it clear in the ICF that disability should not be conceived of solely as a problem for individuals. Instead, the ICF refers to the role of environmental factors:

"A person's functioning and disability is conceived as a dynamic interaction between health conditions (diseases, disorders...) and contextual factors"

(ICF, 2001, p.10).

Both Shakespeare (2007) and Harris (2007) have criticised the social model of disability, complaining that just as the ICIDH may have overemphasised medical issues to the neglect of

social factors, the social model makes the opposite mistake; namely, by overemphasising social factors and neglecting the significance of individual impairments (McNamee, 2017).

The ICF is explicit in rejecting the medical model of disability but does not wholly embrace the social model. Instead, the ICF incorporates elements of both the medical and social models and is, therefore, closer to the medico-social model referred to above.

2.4 Summary and Conclusions

In this chapter, I have reviewed the different definitions of ‘disability’, together with the two dominant models of disability that have been developed in recent times, namely the medical model and the social model, together with a hybrid of the medical and social models, the so-called ‘medico-social’ model. I have also outlined some of the methods by which the World Health Organisation (‘WHO’) has attempted to classify disability, namely The International Classification of Impairments Disabilities and Handicaps (“ICIDH”) of 1980, which was subsequently replaced by The International Classification of Functioning, Disability and Health (“ICF”) in 2001. I have confirmed that the ICIDH was essentially based on the medical model of disability, whilst the ICF introduced more elements from the social model of disability whilst retaining some aspects of the medical model, such that the ICF can be properly described as a hybrid of the two types of model, or a medico-social model. I have summarised the key differences between the ICIDH and ICF, and attempted to differentiate between the terms ‘disability’ and ‘impairment’, which are often used interchangeably, but have different meanings.

As we shall see in Chapter 4, Paralympic sport was established as an alternative competition to able-bodied sport for athletes with impairments. To be eligible to participate in Paralympic sport, an individual must therefore have a relevant and qualifying impairment. It is therefore necessary for this thesis first to identify what is, and is not, considered to be an impairment.

In this chapter, I have identified two separate methods for determining impairment, namely the three different conceptual models of disability that have been developed (i.e. medical, social, and medico-social models), together with the two World Health Organisation models. The determination of an athlete’s impairment type necessarily involves a consideration of their physical or biological constitution and as such, coheres with the medical model of disability.

This is not, however, the sole consideration, since sport, as a physical activity, also involves the extent to which an athlete can perform a particular function that is required of the sport concerned, together with the relative limitations that the athlete experiences as a result of their impairment. This draws parallels with the social model of disability (Oliver, 1990). Likewise, whilst the original WHO ICIDH model was essentially a medical model, the refined ICF version represented a better balance between the medical and social models, in the sense that this involves considerations of the nature or type of the individual's impairment and the functional limitations of that impairment on the individual's ability to undertake a specific task.

The conceptual (medical, social, and medico-social) and WHO models of disability (ICIDH and ICF) referred to in this chapter can therefore assist with the defined objective of developing an alternative framework for a fair and just classification system in Paralympic sport. In particular, and relying in part on the conceptual medico-social and WHO ICF models, I will argue that for Paralympic competition and classification, impairment should ultimately be defined by reference to both medical and social factors, and is, therefore, closer to the 'hybrid' medico-social model of disability than the medical or social models acting alone. Having reviewed the issue of impairment, I will now consider the other broad conceptual issue relating to Paralympic competition, namely that of classification itself.

CHAPTER 3 – CLASSIFICATION: SIMILARITY AND DIFFERENCE

“[It is a] truly wonderful fact...that all animals and all plants throughout all time and space should be related to each other in group subordinate to group, in the manner which we everywhere behold – namely, varieties of the same species most closely related together, species of the same genus less closely and unequally related together, forming sections and sub-genera, species of distinct genera much less closely related, and genera related in different degrees, forming sub-families, families, orders, subclasses, and classes.”

Charles Darwin, *The Origin of Species*, 1923.

I identified at the outset that to promote fairness between athletes in Paralympic competition it is necessary to group athletes into different classes. I also argued that a classification system that ensures that athletes with a similar type and level of impairment compete against one another is integral to the fairness of competition and the integrity of the IPC and the Paralympic Games. I have also, however, conceded that this is no easy task and that the principal challenge for the IPC is how to maintain fair and meaningful competition between athletes with different types and severity of impairments whilst recognising that even athletes with a similar type of impairment may have very different functional and other abilities and levels of performance.

In the chapter which follows, I undertake a more detailed review of classification in general terms, including reference to the different definitions of classification and how classification differs from the similar, but related, concepts of taxonomy and categorisation. I then move on to consider the specific issue of biological classification which is, at first sight, the most relevant method of classifying the human body and how it functions and is therefore potentially the most appropriate system of classifying Paralympic athletes when they are required to undertake certain tasks and activities to perform in competition. In particular, I examine several different theories of biological classification through the classical works of Plato and Aristotle; the botanists and medical herbalists Cesalpino and Linnaeus; the evolutionary theory of Darwin; and the theories of Wittgenstein, Rosch, and Kuhn. Having done so, I turn my attention to the differing types of methodology of classification. We begin, however, by considering the purpose of classification, and the question of why we classify at all.

Classification is an important and fundamental concept in many different fields, not least of all in philosophy and the biological sciences (Hjorland, 2017). Time and space do not allow for a

comprehensive review of classification in each of these fields, and neither is this necessary for this study. Instead, I will concentrate on the area that is most appropriate to Paralympic sport, namely biological classification (Richards, 2016). Biological classification has an obvious bearing on the potential classification of humans, and in particular, those athletes with impairments who participate in Paralympic sport. As we shall see in the analysis of the development of Paralympic classification systems in Chapter 5, there is a distinction between so-called medical classification (i.e. classification by reference to the type and severity of an athlete's impairment) which prevailed in the early years of Paralympic competition; and functional classification (i.e. the ability of that athlete to participate in a given sport or event notwithstanding that impairment), which largely superseded medical classification systems in the majority of Paralympic sports from the early 1990's onwards. In that sense, we can draw obvious parallels between the medical and social models of disability, referred to in Chapter 2. As will become apparent, however, the theories relating to biological classification that I have considered below incorporate elements of both medical *and* functional classification and are therefore more analogous to the WHO's ICF which is essentially a medico-social model of disability.

Why do we classify things? One initial answer to this question is that we classify because we must. As Bowker and Starr (2000) remark, "*to classify is human*". For Richards (2016), classification is an unavoidable natural human tendency, and humans tend to classify many different things, not just living things. To understand classification in general, Richards (2016) believes that we can approach it naturalistically, treating it as a natural phenomenon to be studied scientifically. Richards maintains that all cultures appear to classify living things into hierarchies and that people tend to classify things in roughly similar ways in different cultures, citing the evidence of linguists and cognitive psychologists through their observation and experiments across different cultures. The classifications of different cultures often reflect the different utilities, roles, and functions of the various kinds of living things that are found in each culture (Richards, 2016). In other words, classification is a reflection of the immediate local environment. Richards (2016) argues that cognitive psychologists and developmental linguists tell us that hierarchical classification is a natural consequence of our cognitive development and language acquisition. Although an extremely fascinating subject in itself, the so-called anthropology and psychology of classification is, however, beyond the immediate scope of this study.

3.1 Definitions of Classification

Hjorland (2017) states that we should differentiate the term ‘classification’ from other related concepts such as categorisation, concepts, ordering, typology, division, and taxonomy. Taxonomy is the science of classification, which is used to classify diseases (pathology), plants (botany), and animals (zoology). According to Fleishman, Quaintance and Broedling (1984), taxonomy is

“the theoretical study of systematic classifications, including their bases, principles, procedures, and rules. The science of how to classify and identify.”

(Fleishman, Quaintance, and Broedling, 1984).

It is difficult to provide a single, agreed definition for the term ‘classification’. Fleishman, Quaintance and Broedling (1984), however, offer the following definition:

“the ordering or arrangement of entities [or units] into groups or sets [or classes] on the basis of their relationships, based on observable or inferred properties.”

(Fleishman, Quaintance and Broedling, 1984, p.22).

Hjorland, however, identifies two specific definitions of classification which are particularly worthy of note, namely those of Frederik Suppe (1989) and Henry Bliss (1931). For example, Suppe distinguishes between two types of classification with a broad and narrow meaning (Hjorland, 2017). Suppe calls the broad meaning “conceptual classification”, and the narrow meaning “systematic classification”. Suppe defines conceptual classification as follows:

“Classification is intrinsic to the use of language, hence to most if not all communication. Whenever we use nominative phrases we are classifying the designated subject as being importantly similar to other entities bearing the same designation; that is, we classify them together. Similarly, the use of predicative phrases classifies actions or properties as being of a particular kind. We call this conceptual classification, since it refers to the classification involved in conceptualizing our experiences and surroundings”.

(Suppe, 1989, p.292).

Suppe contrasts this broad meaning with

“a second, narrower sense of classification [which] is the systematic classification involved in the design and utilization of taxonomic schemes such as the biological classification of animals and plants by genus and species.”

(Suppe, 1989, p.292).

By contrast, Bliss (1931) stated that

“[t]his term, like other English derivatives ending in ion, is ambiguously used both in the predicative and in the substantive sense, now for the action and now for the act, sometimes for the process and sometimes for the product.”

(Bliss, 1931, p.142).

Hjorland (2017) states that to remove this ambiguity, Bliss suggests three definitions of classification:

- “1. The verb to class denotes likening, referring, or assigning a thing to a class, or several things to their respective classes, as may be requisite or relevant to interest involved. This verb is used not only transitively, but sometimes intransitively. Thus it may be said that olive oil classes as a luxury;
2. The verb classify means primarily to make, or conceive, a class, or classes, from a plurality of things, and secondary to arrange classes in some order or to relate them in some system according to some principle or conception, purpose or interest [...]. These three processes, classing, forming classes, and arranging classes, are so implicated that it is not easy to separate them in thought or in terminology; yet we propose here that this should be done as conducive to precision in this study. There is an important distinction between assigning a thing, or things, to some class or classes, and arranging classes in some order or system. [...];
3. A classification is a series or system of classes arranged in some order according to some principles or conception, purpose or interest, or some combination of such.”

(Bliss, 1931, pp.142-143).

I have provided just a few definitions of the term ‘classification’. As Hjorland (2017) remarks, there are, however, a multitude of definitions of disability that exist and offers no less than 53 different definitions of the term. I much prefer, however, the simplicity of the definition for classification suggested by Richards (2016), who defines it as

“the division of the world into different kinds of things”

(Richards, 2016, p.6).

Having provided several different definitions of classification, I now proceed to consider several different theories of classification, noting that there are almost as many different views and theories of classification as there are definitions. For the reasons I have already outlined above, such consideration extends largely, but not exclusively, to the theories concerning biological classification, which Richards (2016) describes as

“the comparison and grouping of organisms, the naming of these groups, the theoretical basis for grouping, and the philosophical foundations for systems of grouping – ‘taxonomy’ or ‘systematics’”

(Richards, 2016, p.1).

I now turn to examine each of those theories of classification separately and in turn in chronological order wherever possible.

3.2 Theories of Classification

Theories of classification have invariably been influenced by what the particular type of classification represents (Richards, 2016). For example, since he was very religious, Linnaeus believed that classification should represent the ideas of God, whereas Darwin, an atheist, based his theory of classification on his concept of evolution. By contrast, some classification theorists known as systematists or ‘pheneticists’ reject Darwin’s evolutionary system of classification and argue that classification should instead be based on similarities and differences, that is to say, living things with the greatest amount of overall similarity should be grouped together. Moreover, there is a significant difference of opinion between classification theorists as to *how* a classification should be generated or constructed. For example, Linnaeus was particularly interested in the reproductive traits of organisms, whilst Darwin was more interested in homologies, that is to say, shared traits due to common ancestry, or similarities based on adaptive change. By contrast, other theorists focused on all similarities and differences between living things, not just those traits that are homologies. In other words, they argue that we should only look at the overall similarity between things, not their evolutionary history. Against this background, I shall begin by considering the classical works of Plato and Aristotle and their separate theories of classification.

Plato and Aristotle

Perhaps the earliest and best-known (although potentially misunderstood) theory of classification is that of Aristotle. The traditional understanding of Aristotle on biological classification is that he argued that all objects in a given class must share at least one characteristic with all other members of that class and that membership in a particular class is determined by a set of necessary and sufficient conditions (Richards, 2016; Hjørland, 2017). For example, according to Aristotle's *per genus et differentiam* definition, man is a rational animal. This definition first considers a class consisting of all animals (including humans). It then claims that the essential difference between humans (men) and all other animals is that humans are rational. In this way, the class of 'animals' is divided into two non-overlapping classes, namely 'rational animals' (humans) and 'non-rational animals' (all other animals). For some object to belong to the class of humans, it is therefore necessary for that object to be rational, since all elements in that class must have this particular characteristic. It is also a sufficient condition, since if that object has the characteristics of all other animals plus the characteristic of being rational, it must therefore be human (Hjørland, 2017).

This classic interpretation suggests that Aristotle was an essentialist where biological classification is concerned (Richards, 2016). Elliott Sober (2002) describes the concept of essentialism in the following terms:

"Essentialism is a standard philosophical view about natural kinds. It holds that each natural kind can be defined in terms of properties that are possessed by all and only members of that kind....A natural kind is to be characterized by a property that is both necessary and sufficient for membership"

(Sober, 2002, p.148).

Some types of classification reflect real divisions in the world while others seem merely arbitrary or pragmatic (Richards, 2016). This is the difference between 'natural' kinds and 'conventional' or 'artificial' kinds. The origins of natural kinds may be found in the work of Aristotle's teacher, Plato. In *Phaedrus*, Plato argued that we should divide the world as a butcher divides meat, that is to say by cutting nature at its joints. Plato's idea is that the butcher who cuts at the 'natural' joints doesn't just cut arbitrarily wherever he or she wants but at places determined by the structure of what is being cut, which are neater and cleaner. In other words, when we divide and group things in nature through classification, we should divide them at

their ‘natural’ divisions, producing the groupings and divisions determined by nature rather than by our own human interests, preferences, or desires (Richards 2016). Natural kinds are therefore taken to be independent of human beliefs, preferences, conventions, and biases and are therefore discovered not invented (Richards, 2016).

By contrast, ‘non-natural’ or artificial kinds are entirely dependent upon human preferences, conventions, and biases, with some being truly arbitrary and therefore artificial (Richards, 2016). Some appear to be real because they have become embedded into laws, practices, conventions, and institutions, but they do not exist in nature independently of these conventions in which they are embedded. Richards (2016) therefore concludes that there are three types of ‘kinds’:

- (i) Natural kinds that are independent of human preferences;
- (ii) Conventional kinds that are dependent upon human preferences and conventions but seem real in some sense; and
- (iii) Artificial kinds that are entirely arbitrary.

(Richards 2016, p.30)

Natural kinds have essences that serve as definitions, sets of necessary and jointly sufficient conditions that make a thing the kind of thing that it is, and that determines what counts as each natural kind. Richards (2016) states that modern biological classification divides the world into classes that have some features of natural kinds. They are not arbitrary groupings but somehow seem to ‘carve nature at its joints’ in the way that Plato describes.

Richards (2016) argues that natural kinds have several important features in this interpretation:

- (i) They are usually understood as not being restricted to any specific time or place;
- (ii) They are unchanging;
- (iii) The essential properties of those natural kinds are normally taken to be intrinsic, in that they do not depend upon some external state of affairs or influence; and
- (iv) They are discrete, in that they do not merge into one another.

(Richards, 2016, pp.32-33).

Richards (2016), however, argues that the interpretation of Aristotle as an essentialist is misleading. Richards argues that whilst Aristotle disagreed with Plato's views, he did adopt and develop certain aspects of Plato's thinking in the development of his method of logical division, as can be found in Aristotle's use of the Greek terms 'eidos' (species) and 'genos' (genus). Aristotle's idea was that to determine the essence of a thing, it is necessary to determine first its generic nature, and second, its specific attributes – that is to say, those things ('differentia') that distinguish it from other kinds of things that share the generic nature. The definition of a species would then be the set of properties that are necessary to be a member of its genus, and a property or set of properties, that differentiate it from the other species in that genus. Typically this method is taken to be hierarchical and dichotomous, whereby the differentia are understood as the presence or absence of a particular trait or traits. Richards (2016) argues that this interpretation of Aristotle is accurate in so far as he applied this method in his logical works such as *Posterior Analytics*, but not in so far as Aristotle's treatment of living things is concerned (Richards, 2016).

For example, Richards argues that in his *Parts of Animals*, Aristotle rejected the use of dichotomous division to classify animals (Richards, 2016). Instead, Richards maintains that Aristotle believed that we should form larger groups of living organisms by general similarity, with differences in degrees of attributes serving to generate the sub-divisions. Consequently, and according to Richards, Aristotle did not think that logical division alone was capable of generating a satisfactory hierarchical classification of living things (Richards, 2016).

Richards (2016) argues that there are several additional reasons to doubt that Aristotle was an essentialist where biological classification is concerned. First, because the logical division method was used to classify non-living things, it was not a biological system like the Linnaean method. Instead, it was an all-purpose, logical system of classification that was not tied explicitly to any natural or non-natural domain. Second, because the terms 'eidos' and 'genos' were used at multiple levels, depending upon the investigation in question, there were no fixed hierarchical levels. Third, Aristotle's main project in his biological works was not classification, but functional and explanatory. In other words, when Aristotle is discussing necessary conditions or essences, he is not referring to the logical requirements in a definition of a kind of animal, but rather functional requirements for living things to survive and flourish. What is important to Aristotle are the functional relations among the parts of an organism, its environment, and its way of life. Richards believes that Aristotle was interested not so much in

classifying living things based on their parts as he was in understanding how the parts of living things function together (Richards, 2016). Finally, Aristotle used the terms ‘eidos’ and ‘genos’ in multiple ways. In his biological works, Aristotle refers to eidos and genos not as hierarchical or in terms of the method of logical division, but as eidos as a material form or shape of a thing perpetuated in generation; and ‘genos’ in terms of origins and relative to living things such as lineage, race, or family. This is similar to family resemblance, i.e. form, shape, or resemblance that is perpetuated over time (Richards, 2016).

Aristotle also referred to the shared set of traits (eidos) out of which different specific forms develop (genos). In this sense, the differences are just a matter of degree, rather than discrete, and the functional value is critical. Here the essential traits are based on the functional role they play in a lifestyle based on their variation of form and is analogous to Darwin’s observance of the beaks of the Galapagos finches. (Richards, 2016). Richards therefore believes that although Aristotle’s method of logical division could potentially be used to construct an essentialist system of biological classification, Aristotle did not use this method in his biological works (Richards, 2016).

The Medical Herbalists: Cesalpino and Linnaeus

Cesalpino (1519-1603) and many of the naturalists and medical herbalists who followed him agreed with Aristotle’s use of the method of division to classify living things based on ‘functionally essential’ traits. Cesalpino’s approach was therefore hierarchical. However, because Cesalpino used the method of division based on just a few traits of living things, he also used these traits as taxonomically essential to determine inclusion in a category. The traits used were practical in that they were highly variable and easy to observe and identify. This was contra to Aristotle’s views, who argued that classification should be based on many traits and reflect the full complexity of that living thing.

The Swedish botanist Carolus Linnaeus (1709-1778) developed Cesalpino’s work by adopting a fixed hierarchy and using functionally essential traits to classify living things but using practical traits that were easily identifiable and highly variable. Linnaeus grouped all living things into species that were then grouped into higher-level taxa, i.e. genera, orders, classes, and kingdoms. Linnaeus also developed a naming system based on genus and species

membership, with the first part of the name denoting the genus, whilst the second part identified the species within the genus, e.g. homo sapiens (Richards, 2016).

At first blush, Linnaeus also appears to be an essentialist, using Aristotle's method of division to classify living things based on traits that were both necessary and sufficient. However, Linnaeus also recognised that new species could be produced through hybridization (Richards, 2016). Linnaeus, therefore, argued that species were capable of change and were therefore dynamic rather than static and fixed in nature. This did not sit easily with Linnaeus, whose firm belief was that all living things were created by God, and not by man.

Linnaeus also recognised that using functionally essential traits would not produce a 'perfect' natural classification system and that only by comparing all traits, similarities, and differences, would such a system be established. Linnaeus also believed that it was important to have a system of classification that was easy to apply and remember, which meant that the most variable and easily observable traits had the most practical value in generating classification. Finally, Linnaeus thought that his logical method simplified the use of just a few traits to generate a fixed unambiguous hierarchy compared with the many observed similarities, differences, and gradations in living things that divide and group in many conflicting ways without clear lines of demarcation (Richards, 2016). This revealed a tension between the oversimplifying logical system of classification and the observed complexity of nature. The goal was a natural classification based on all features, not just a functionally essential few, but an artificial system such as that created by Linnaeus was nonetheless a useful starting point towards natural classification (Richards, 2016).

Darwin and Evolutionary Classification

The Linnaean system of classification of living things was largely adopted by Charles Darwin in his *Origin of Species* (Darwin, 1923). However, Darwin gave this an evolutionary interpretation. For Darwin, the group-in-group hierarchy of the Linnaean system was better represented as the branch-on-branch structure of the evolutionary tree, which in turn could represent evolutionary diversification as new species form and merge (Richards, 2016). Darwin's work was subsequently adapted and developed by Ernst Mayr and G.G. Simpson, who were better known as the 'pheneticists' or 'cladists'.

Similarity and Resemblance: Wittgenstein, Rosch and Kuhn

Ludwig Wittgenstein (1953) argued that not all classes consist of objects that have a set of necessary or sufficient characteristics and used the example of family resemblance where there are several overlapping similarities, but no single feature which is common to all members. In other words, some members of the family may share the same single characteristic (e.g. the shape of the nose), but not all members share that particular characteristic.

Building on Wittgenstein's work, Eleanor Rosch (1978) subsequently developed her 'Prototype' theory of classification, which operates on the basis that some objects are better examples or representatives than others of a given class. For example, in the class of 'bird', a blackbird may be considered a better example than a penguin (Hjorland, 2017). In contrast to Aristotle's necessary and sufficient conditions, the Prototype theory suggests that classes are determined by the overall likeness or similarity to a particular 'prototype', hence the name.

Hjorland refers to Lakoff (1987), who states that:

“From the time of Aristotle to the later work of Wittgenstein, categories [and classification] were thought to be well understood and unproblematic. They were assumed to be abstract containers, with things either inside or outside the category. Things were assumed to be in the same category if and only if they had certain properties in common. And the properties they had in common were taken as defining the category. This classical theory was not the result of empirical study. It was not even the subject of major debate. It was a philosophical position arrived at on the basis of a priori speculation. Over the centuries it simply became part of the background assumptions taken for granted in most scholarly disciplines. In fact, until very recently, the classical theory of categories was not even thought of as a theory. It was taught in most disciplines not as an empirical hypothesis, but as an unquestionable, definitional truth.”

(Hjorland, 2017)

Of the difference between Aristotle's theory and Prototype theory, Bowker (1998) comments as follows:

“An Aristotelian classification works according to a set of binary characteristics, which the object being classified either presents or does not present. At each level of classification, enough binary features are adduced to place any member of a given population into one, and only one class. [...] Aristotelian models [...] have traditionally informed formal classification theory in a broad range of sciences, including biological

systematics, geology, and physics. Rosch's (1978) prototype theory argues that, in daily life, our classifications tend to be much fuzzier than we might at first think. We do not deal with a set of binary characteristics when we decide that this thing we are sitting on is a chair. Indeed, it is possible to name a population of objects that people would in general agree to call chairs that have no two binary features in common."

(Bowker, 1998).

Thomas Kuhn (2012) is perhaps best known for his work *The Structure of Scientific Revolutions*, but his later work concentrated on concepts, classification, and scientific taxonomy (Hjorland, 2017). Kuhn's theory divides objects into classes according to 'similarity relations'. Classes are not defined by identifying necessary and sufficient conditions, but by learning to identify similarities and differences between those objects. Kuhn argues that we learn such concepts through a series of encounters with objects that highlight the similarities and differences between those currently accepted by a particular community (Hjorland, 2017). Andersen et al (2006) refer to Kuhn's example of a child learning the concepts of "duck", "goose", and "swan" (Kuhn, 1974). In this example, an adult familiar with the classification of waterfowl guides a child through a series of acts until the child learns how to distinguish between ducks, geese, and swans (Andersen et al, 2006). Hjorland (2017) points out that the most important aspects of Kuhn's theory are as follows:

- (i) People learn classifications according to how these concepts are understood in a given society by being confronted with examples and similarities as well as differences compared with other concepts;
- (ii) Two people can correctly identify the same classes even if they use different characteristics to make the correct classification; and
- (iii) Differences play as important a role in classification as similarity – similarity alone is not enough.

In this section, I have considered several different theories of classification, both from a biological and non-biological perspective. In the section that follows, however, I examine the particular methods that are used to classify, in other words, *how* the practice of classification is carried out.

3.3 Methodology of Classification

Classes may be formed in many different ways. Two of the leading proponents of the methodology or epistemology of classification are Marradi (1990) and Hjørland (2017). Marradi distinguishes between three different types of methodology, namely *intensional* classification; *extensional* classification; and *classing* (Marradi, 1990). Intensional classification refers to the type of sub-division or ‘downwards’ classification which is typical of Aristotle’s logical division referred to above. Marradi describes intensional classification in the following terms

“[T]he subdivision of the extension of a concept (genus) into several extensions corresponding to as many concepts of lower generality (species). The former and all the latter concepts have the same intension except for one aspect (fundamentum divisionis): on that account each species concept is a different partial articulation of the genus concept.”

(Marradi, 1990).

By contrast, extensional classification refers to ‘upwards’ classification otherwise known as numerical taxonomy (Sokal and Sneath, 1963) or ‘cluster analysis’ where

“[T]he grouping of the objects/events of a set into several subsets according to the perceived similarities of their states on one or more properties.”

(Marradi, 1990).

Hjørland (2011) considers that the first of Marradi’s methodology type, intensional classification or subdivision, corresponds to what he describes as ‘rationalism’, namely that subjects are constructed logically from a fundamental set of categories. Likewise, Marradi’s second methodology type, extensional classification, is similar to what he describes as ‘empiricism’. Hjørland (2011) describes empiricism as being

“...based on the idea that similar...objects share a large number of properties. Objects may be classified according to those properties, but this should be based on neutral criteria, not on the selection of properties from theoretical points of view because this introduces a kind of subjective criteria, which is not approved by empiricism. Numerical statistical procedures are based on empiricist philosophy.”

(Hjørland, 2011).

Hjorland (2011) states that this means that overall likeness, or “phenetics”, is the basis of this particular method, which is a statistical measure of similarity based on a number of attributes or characteristics. Hjorland raises several problems with such an approach, including:

- (i) The number of attributes or characteristics that are needed. Hjorland remarks that the number of variables increases the probability of correct classification, but it may suit to reduce the number for pragmatic reasons. However, since every object has a potentially unlimited number of properties, it is impossible to consider them all (Hjorland, 2011);
- (ii) The description of objects to be classified cannot be atheoretical or objective – the data used are always theoretically biased; and
- (iii) Classification is concerned with similarity, i.e. bringing like things together and separating unlike things. However, things cannot be similar in an objective way, because every object is similar to another object in some ways but dissimilar in others.

Hjorland uses the three objects below to illustrate his point:



The objects above may be classified according to either colour or shape. For some purposes (shape), the two squares are most alike and should be classified together. For other purposes (colour), the two black objects (square and triangle) should be classified together. Hjorland believes that empiricism is therefore not sufficient in itself and that we need some further guidance to determine which criteria should be used when assessing similarity (Hjorland, 2017).

Marradi contends that the two methods of intensional and extensional classification (or using Hjorland’s terminology, rationalism, and empiricism) are all that is required to classify a particular set of objects (Marradi, 1990). However, Hjorland considers a further two methods of classification, namely historicism and pragmatism/critical theory (Hjorland, 2017).

Marradi defines classing as

“[T]he assignment of objects/events to classes defined by the first operation [subdivision] (or of new objects/events to groups created by the second operation with other objects/events).”

(Marradi, 1990).

Of general importance for our purposes is Marradi’s comment that

“The predominant criterion is to maximize homogeneity within classes and heterogeneity between classes”

(Marradi, 1990).

Hjorland argues that classification is a term that is used both about the classification process (which he says is a kind of discriminatory practice), and the resulting set of classes, as well as the assignment of elements to pre-established classes (Hjorland, 2017).

3.4 Summary and Conclusions

In this chapter, I have examined some of the many definitions of the term ‘classification’. I also considered some of the more prominent theories of biological classification through the classical works of Plato and Aristotle; the botanists and medical herbalists Cesalpino and Linnaeus; the evolutionary theory of Darwin, and the theories of Wittgenstein, Kuhn and Rosch. Finally, I also reviewed some of the different methods of classification, and in particular, the work of Marradi (1990) and Hjorland (2017) in this area.

Paralympic classification is an archetypal example of the statement that we classify because we must (Bowker and Starr, 2000). Classification lies at the heart of Paralympic sport and could not operate without it (at least not in any fair or meaningful sense) (Howe, 2006). I have already established in this chapter that my preferred definition of classification is that of the division of the world into different kinds of ‘things’. In common with all forms of classification in sport that we will encounter in Chapter 5, the ‘thing’ that is to be divided in Paralympic sport is the participants themselves, who are grouped into different classes for competition. The fundamental difference between classification in general terms, and classification in sport is, however, the need to ensure fairness between the ‘things’ within each class. In Paralympic sport, fairness is achieved by attempting to ensure that athletes with the same, or similar, type and severity of impairment compete against one another. Achieving this stated aim is not,

however, an easy task since even athletes with similar types of impairment have different functional limitations that necessarily impact their ability to perform their chosen event.

As I have argued in Chapter 2, defining an athlete's impairment type and severity is primarily a physical or biological consideration. It is therefore this feature that is the most relevant method of classifying a Paralympic athlete and how he or she functions when they are required to undertake certain tasks and activities to perform in competition. For this reason, I have chosen to concentrate on the different methods of biological classification in this chapter. It is not necessary to consider any evolutionary traits to classify Paralympic athletes, with the result that Darwin's theory of classification does not work here. Similarly, although Paralympic athletes in each class may bear a close resemblance to one another in terms of their physical appearance and might also share the same, or similar characteristics, as is obvious with athletes with a missing limb, this is not necessarily obvious with other athletes where their impairment may be hidden from view and not be so readily apparent. Consequently, I argue that the approach to classification adopted by Wittgenstein, Rosch, and Kuhn should not be used to classify Paralympic athletes. There is, however, much to commend Aristotle's system of logical division to classify Paralympic athletes based on the type of their impairment(s) and its severity, that is to say, the extent to which this impairment limits their ability to perform a particular task or activity. Of the methodologies of classification discussed above, Marradi's '*intensional*' system of classification appears to be the most appropriate system of classification to use in Paralympic sport, since this refers to the type of sub-division or 'downwards' classification which is typical of Aristotle's system of logical division. This is also the method of division recommended by Roemer in his theory of equal opportunity, which I will rely on to develop my alternative framework for fairness in paralympic classification, together with Lesley Jacob's Three-Dimensional Model for Equal Opportunities as a Regulative Ideal, to which I shall return in Chapter 8.

Having introduced the concept of disability and impairment in Chapter 1, together with the theoretical components of classification in Chapter 2, this concludes the main conceptual section of this study. In the section that follows, I begin to consider how these two factors – disability/impairment and classification – have a bearing on Paralympic sport and classification, beginning with an overview of the history of Paralympic sport itself and then providing a summary of the various international federations that govern the different

Paralympic sports before outlining the organisational structure of the IPC, and in particular, the circumstances in which decisions relating to classification are taken.

PART II – PARALYMPIC SPORT

CHAPTER 4 – PARALYMPIC SPORT: A BRIEF HISTORY

In the first two substantive chapters of this thesis, I outlined the principal conceptual issues with which Paralympic classification is concerned, namely the issue of what constitutes an ‘impairment’; and the issue of classification itself. In the two chapters that follow, I will, however, turn to the first of those specific objectives which I stated at the outset, which is to critically review the fairness of the current Paralympic classification system adopted by the IPC. This Chapter aims to provide a brief outline of the history of Paralympic sport to give some context to the issue of Paralympic classification which follows in Chapter 5. It begins by examining the origins of what we now recognise as the Paralympic Games as a result of the rehabilitative work undertaken by Doctor Ludwig Guttman with those military veterans at the Stoke Mandeville Hospital in Buckinghamshire who had suffered spinal cord injuries during the Second World War. It then examines the development of the modern Paralympic Games during the period from 1960 until 1989, when the IPC was formed. After briefly providing a summary of the various international federations that govern the different Paralympic sports, the chapter concludes by outlining the organisational structure of the IPC, and in particular, the circumstances in which decisions relating to classification are taken.

4.1 Ludwig Guttman and the Stoke Mandeville Games, 1948-1960

Dr Ludwig Guttman is widely acknowledged as the pioneer of Paralympic Games, just as the Baron Pierre de Coubertin is for the Olympics. Guttman was a Jewish physician who left his native Germany for England in 1939 to escape the Nazi regime. Although Guttman was originally based at Oxford University, he was subsequently appointed as the Director of the National Spinal Injuries Unit at the Stoke Mandeville Hospital in Aylesbury, Buckinghamshire. Many of the patients being treated at Stoke Mandeville at that time were soldiers or civilians who had suffered spinal cord injuries during World War II. At that time, patients who had sustained spinal cord injuries would often die within a relatively short period due to complications from either sepsis of the blood or kidney failure, or both (Brittain, 2018). Many of those patients also suffered from clinical depression as a result of their lived experience of their condition. Historically, society tended to shun individuals with disabilities, believing that nothing could be done for them and shutting them away or even placing them in institutions (Wasserman, 2016). Little or no attention was paid to the prospect of rehabilitating disabled

people, either through sport or at all. By contrast, Guttman's alternative approach to spinal cord injuries was to focus on rehabilitation, since he

“recognised the physiological and psychological values of sport in the rehabilitation of paraplegic hospital inpatients”

(McCann, 1996).

And so it was that Guttman introduced sport as a method of rehabilitating patients with spinal cord injuries at the Stoke Mandeville Hospital after he arrived in 1943. The sport which he initially used for such rehabilitative purposes was that of archery, with Guttman claiming that archery was

“of immense value in strengthening, in a very natural way, just those muscles of the upper limbs, shoulders and trunk, on which the paraplegic's well-balanced, upright position depends.”

(Guttman, 1952).

Another benefit of archery for those with spinal cord injuries was, as Brittain (2018) explains, that it was (and remains) one of the few sports where disabled competitors can compete on a truly level playing field with non-disabled competitors (indeed, archery is one of the few sports where men and women can also compete on equal terms). Over time, the patients from Stoke Mandeville began to compete against archers from other teams, initially from different spinal cord units, and later on, non-disabled archery clubs, culminating in the first Stoke Mandeville Games of 1948. This featured just 16 wheelchair archers (14 men and two women) representing two teams and was limited to competitors with spinal cord injuries only. This was intentionally held on the same day, 29 July 1948, as the opening ceremony of the London Olympic Games (Legg, 2018).

The subsequent Stoke Mandeville Games of 1952 were again restricted to competitors with spinal cord injuries only. The Games organisers, The International Stoke Mandeville and Wheelchair Sport Federation (ISMWSF), devised a basic classification system that separated participants with quadriplegia and paraplegia (Wu, 1999). The number of individuals competing at the Stoke Mandeville Games grew to 360 individuals from 17 teams by 1959, with several additional sports being added to the program over that time, including netball,

javelin, snooker, table tennis, swimming, fencing, shot put, 'throwing the club', pentathlon, and the peculiarly named 'dartchery' (Brittain, 2018).

4.2 Toward the Paralympic Games, 1960-1989

In 1955, Rome was selected by the International Olympic Committee as the host city for the 1960 Olympic Games. Coincidentally, Rome was also the venue for the annual meeting of the World Veteran's Federation in 1959, which was also attended by Guttman. Guttman used this opportunity to canvass support for the holding of the Stoke Mandeville Games outside the UK for the first time, suggesting that this should be held in the same city, and immediately following, the Olympics Games. The First Paralympic Summer Games was therefore held in Rome in 1960, where athletes with polio were also permitted to compete alongside participants with spinal cord injuries. Further Paralympic Games followed in Tokyo (1964), Tel Aviv (1968), and Heidelberg (1972). Although men's weightlifting, athletics track events, lawn bowls, and women's wheelchair basketball were added to the Paralympic programme between 1960 and 1972, these events remained solely for those individuals with spinal cord injuries (with tetraplegics participating in certain events for the first time in 1972) (Brittain, 2018).

Inspired by the work Guttman was undertaking with spinal cord injury patients, sports organisations for other types of disability subsequently began to emerge, including the International Sports Organisation for the Disabled (ISOD), which was originally formed in 1964, but later dissolved into three separate organisations, resulting in the creation of the Cerebral Palsied-International Sports and Recreation Association (CP-ISRA) in 1978 and the International Blind Sports Association (IBSA) in 1981. At the Toronto Games in 1976, amputees and the blind and visually impaired were therefore also represented alongside athletes with spinal cord injuries. This led to new sports such as goalball being introduced for the blind and visually impaired. The Arnhem Games of 1980 also saw athletes with cerebral palsy take part for the first time, with the sport of boccia added to the Paralympic programme.

The classification system that had been used up until that point was limited to spinal cord injuries and was not designed with other types of impairment in mind. Consequently, the ISOD developed a new classification system for amputees based on the length of the residual limb(s) and the position of the amputated limb(s). The IOSD originally established 12 classes for amputee athletes but subsequently reduced this to nine classes at the Paralympics in 1980. As

with spinal cord injuries, the classification system for amputees was largely applied across all sports. The CP-ISRA developed a classification system specifically for athletes with cerebral palsy which had four classes, but only the higher two classes of athletes were allowed to participate (i.e. those with mild or moderate severity) (Wu, 1999).

In 1984, the Paralympics were extended to include athletes with other types of physical impairments. This became known as the “*les autres*” (‘the others’) class. This included athletes with arthrogryposis, arthritis, brachial plexus injury, dwarfism, muscular dystrophy, and osteogenesis imperfecta (Wu, 1999). The ISOD also developed a classification system for *les autres* athletes with six different classes based on their functional ability and athletic performance. In general terms, the more severe the impairment, the lower the class. However, it was difficult to establish standard testing criteria due to the diversity of types and severity of physical impairments. By 1984, athletes with all types of physical impairment were represented at the Paralympics and had access to the highest level of international sporting competition, albeit using different types of classification systems (Wu, 1999).

By the 1980’s there were, therefore, four international sports organisations representing disabled athletes, including the original ISMGF, ISOD, CP-ISRA, and IBSA. At a meeting in Stoke Mandeville in 1982, these four international sports governing bodies agreed to form the first umbrella organisation for international disability sport, which was initially called the International Co-ordinating Committee (ICC) but was subsequently renamed the ICC of World Sports Organisation for the Disabled (WSOD) in 1984, before finally emerging as the International Paralympic Committee (IPC) following a meeting of the ICC General Assembly in Bonn in September 1989 (Brittain, 2018). The word “Paralympic” derives from the Greek “para” (meaning beside or alongside) and the word “Olympic”. Thus, the Paralympics are intended to be a parallel set of Games to the Olympic Games and is intended to illustrate how the two movements exist alongside one another (International Paralympic Committee, “Paralympic History”, <https://www.paralympic.org/ipc/history>, accessed on 12 June 2023).

4.3 The International Paralympic Committee, 1989 to Present

The IPC remains the international governing body of the Paralympic Movement to this day and is equivalent to the International Olympic Committee (“IOC”) for Olympic sports. There are currently 22 Summer and 6 Winter Paralympic sports (see Tables 4.1 to 4.3 below). The IPC

acts as the international federation for nine Paralympic sports, namely alpine skiing, athletics, biathlon, cross-country skiing, ice sledge hockey, powerlifting, shooting, swimming, and wheelchair dance (Hums and Pate, 2018). As an international federation for these sports, the IPC manages and governs all technical aspects of that sport in areas such as athlete classification and also organises the World Championships for that sport. The IPC has, however, issued clear guidelines to all Paralympic sports that they must establish their own international governing body which is independent of the IPC (IPC Sports Strategic Plan, 2013-2016). This is referred to specifically in the latest version of the IPC's Constitution in Article 21, Part IV, which says that the IPC's stated aim is for all IPC sports to separate from the IPC by no later than 31 December 2026 (Article 21, International Paralympic Committee Constitution, 2023). Article 22 of the IPC Constitution also states that the IPC will establish a World Para Sports Unit (WSU) by 31 December 2022 with the specific objective of assisting each IPC sport to establish its own independent federation and sets out how the relevant transitional arrangements will operate (Article 22, International Paralympic Committee Constitution, 2023).

In addition to the IPC serving as the international federation for several Paralympic sports, several governing bodies were originally established for able-bodied sports that now incorporate their Paralympic equivalent. These governing bodies include the International Tennis Federation (ITF), which is responsible for all able-bodied tennis competition together with wheelchair tennis; the *Union Cycliste Internationale* (UCI) which governs both able-bodied cycling and all para-cycling disciplines; the *Federation Equestre Internationale*, which looks after able-bodied and Para equestrian events; the International Sailing Federation; the International Rowing Federation; the Badminton World Federation; the International Canoe Federation; and the International Table Tennis Federation.

Aside from the IPC and those single-sport federations referred to above, there are several governing bodies that have been established for organising different disability groups under the same umbrella. These include the IBSA and CP-ISRA referred to above. IBSA and CP-ISRA are both responsible for the management and governance of certain sports that are featured in the Paralympic programme such as football, goalball, and judo, together with several other non-Paralympic sports. Several Paralympic sports also have their own international federation, including wheelchair basketball (the International Wheelchair

Federation), boccia (the Boccia International Sport Federation), wheelchair rugby (the International Wheelchair Rugby Federation), and sitting volleyball (World Para Volley).

Whilst the various ISOD's organised the Paralympic Games from 1960 until 1992, the IPC has organised each of the quadrennial Summer and Winter Paralympics with effect from 1992 onwards. The IPC's role in organising the Paralympic Games is specifically enshrined in the IPC's Constitution. For example, Article 3 of the IPC Constitution states that the IPC's mission is to

“...lead the Paralympic Movement, oversee the delivery of the Paralympic Games, and support IPC Members to enable Para athletes to achieve sporting excellence”

(Article 3, International Paralympic Committee Constitution, 2023).

Article 5 of the IPC Constitution also states that

“The IPC is the supreme authority of the Paralympic Games. All rights and properties related to the Paralympic Games (directly or indirectly) belong to the IPC... Participation in the Paralympic Games is subject to the Paralympic Games Regulations. No IPC Member or Person has any right of any kind to participate in the Paralympic Games. The Governing Board will decide (in its absolute discretion) on the sports/disciplines and medal events on the Paralympic Games Sport Programme in accordance with the Paralympic Games Regulations.”

(Article 5, International Paralympic Committee Constitution, 2023).

The IPC is governed by a General Assembly, which is comprised of international sports federations (an international sports federation recognised by the IPC as the sole worldwide representative of a specific Para sport); National Paralympic Committees (a national organisation recognised by the IPC as the sole representative of the Paralympic Movement in the NPC's country or territory); ISOD's (an international organisation recognised by the IPC as the sole worldwide representative of a specific disability group); and IPC Regional Organisations (a regional organisation recognised by the IPC as the sole regional representative of IPC Members located within a specific region). The General Assembly is the general meeting of the IPC Members represented by their respective delegates, and is the supreme body of the IPC, meeting at least every two years (Articles 30 and 31.1 of the International Paralympic Committee Constitution, 2023).

The Governing Board of the IPC is responsible for implementing the various policies and directives of the General Assembly, and its members include the President and Vice-President. The IPC Chief Executive Officer attends meetings of the Governing Board but is not a member. The Governing Board has a non-executive role and is elected by IPC Members. The role and powers of the Governing Board include implementing decisions of the General Assembly (Article 41 of the International Paralympic Committee Constitution, 2023). Members of the Governing Board serve an initial four-year term but may serve a maximum of three terms.

The Chief Executive Officer is responsible for the operational management of the IPC and is appointed by, and responsible to, the Governing Board (Article 48.3 of the International Paralympic Committee Constitution, 2023). The CEO delegates certain responsibilities to members of the Management Team, which represents various departments and functions of the IPC.

The General Assembly, Governing Board, and Management Team are assisted by several different committees that are established by the Governing Board (Article 50 of the International Paralympic Committee Constitution, 2023). Each committee comprises between 5 and 15 members, who are appointed by the Governing Board. The committees assist the IPC by carrying out a variety of strategic and other tasks (Hums and Pate, 2018). There are currently 11 such committees, including anti-doping, athletes with high support needs, audit and finance, classification, development, education legal and ethical, Paralympic Games, sports science, medical, and women. Four of the committees are mandatory, and may not be disbanded. They include the Classification Compliance and Oversight Committee (Article 50.4 of the International Paralympic Committee Constitution, 2023). The composition, responsibilities, and procedures of each committee are set out in the relevant terms of reference for that committee which is approved by the Governing Board (Article 50.1 of the International Paralympic Committee Constitution, 2023). The role of the Classification Committee is to advise the Governing Board on the ongoing development and evaluation of the IPC Classification Code and global classification education and understanding and to facilitate communication and education about classification in the Paralympic Movement to all stakeholders; to advise and guide member international federations concerning their classification systems; and to advise the IPC on such other matters within its area of responsibility as the Governing Board may request (*IPC Handbook: Classification Compliance and Oversight Committee terms of reference*, effective 01 September 2022).

4.4 Summary and Conclusions

The first stated objective of my thesis from the outset was to critically review the fairness of the current Paralympic classification system adopted by the IPC. It is therefore important for these purposes to provide an overview of the background to the historical development of Paralympic sport and the Paralympic Games and to consider the present structure and composition of the IPC as an organisation to better understand the circumstances in which decisions relating to athlete classification are taken. This will also provide more context to the discussion of the current system of Paralympic classification which follows in Chapter 5.

It is universally accepted that the modern-day Paralympic Games was the brainchild of Dr Ludwig Guttman, whose novel approach in introducing sport as a form of rehabilitation for military veterans who had fought in World War Two led firstly to the creation of the Stoke Mandeville Games in 1948, and later to the quadrennial Paralympic Games. In 1949, Guttman made the bold yet prophetic statement that the Stoke Mandeville Games would one day become the paraplegic equivalent of the Olympic Games (Brittain, 2018). The number of competitors, countries represented, and sports held at the Paralympics has grown significantly in the period from 1948 until the last Games in Paris in 2024. It is, however, unlikely that Guttman could have foreseen many of the complications relating to the different types, and severity, of the impairments of those athletes competing in the modern Paralympic Games. I have already stated that the most fundamental challenge to the fairness and integrity of Paralympic sport and the IPC as a governing body is that of classification. In the chapter that follows, I therefore examine classification in sport in general terms, before specifically considering classification in Paralympic sport.

Table 4.1 – Paralympic Sports, Categories of Athletes and Governing Bodies

Sport	Year Introduced	Initial Category	Subsequent Category	Governing Body
Archery	1960	WC	ALA, CP	IPC/Federation International de Tir a l'Arc
Athletics	1960	WC	ALA, CP, ID, VI	IPC
Swimming	1960	WC	ALA, CP, ID, VI	IPC
Table Tennis	1960	WC	ALA, CP, ID	International Table Tennis Federation (ITTF)
Wheelchair Basketball	1960	WC	-	International Wheelchair Basketball (IWBF)
Wheelchair Fencing	1960	WC	-	International Wheelchair and Amputee Sports Federation (IWAS)
Powerlifting	1964-	WC	ALA, CP	IPC
Bowls	1968-88, 1996	WC	ALA, CP, VI	IPC
Shooting	1976-	ALA, CP, VI, WC	-	IPC
Volleyball	1976-	ALA	-	World Organisation for Volleyball for Disabled (WOVD)
Goalball	1980-	VI	-	International Blind Sport Association (IBSA)
Boccia	1984-	CP	-	Cerebral Palsy

				International Sport and Recreation Association (CP-ISRA)
Cycling	1988-	ALA, CP, ID, IV	-	Union Cycliste Internationale (UCI)
Football (7-a-side)	1988-	CP	-	Cerebral Palsy International Sport and Recreation Association (CP-ISRA)
Judo	1988-	VI	-	International Blind Sport Association (IBSA)
Wheelchair Tennis	1992-	WC	-	International Tennis Federation (ITF)
Basketball ID	1996-2000	ID	-	INAS-FID
Equestrian	1996-	ALA, CP, VI, WC	-	International Equestrian Federation (FEI)
Sailing	2000-	ALA, CP, VI, WC	-	International Foundation for Disabled Sailing (IFDS)
Wheelchair Rugby	2000-	WC	-	International Wheelchair and Amputee Sports Federation (IWAS)
Football (5-a-side)	2004-	VI	-	International Blind Sport Association (IBSA)
Rowing	2008-	WC	ID	International Rowing Federation (IRF)

Canoeing	2016-	ALA, WC	-	International Canoe Federation (ICF)
Paratriathlon	2016-	ALA, WC, VI	-	ITU

ALA = Amputee and les autres ; CP = Cerebral Palsy; ID = Intellectual Disability ; VI = Visually Impaired; WC = Wheelchair.

(Adapted from Darcy, 2018 and Hums and Pate, 2018).

Table 4.2 – Participation at Summer Paralympic Games, 1960-2016

Year	Host City	No. of countries	No. of athletes	Men	Women	Impairment Groups Included
1960	Rome	21	328	275	53	SCI
1964	Tokyo	21	378	303	75	SCI
1968	Tel Aviv	28	730	554	176	SCI
1972	Heidelberg	42	984	697	287	SCI
1976	Toronto	40	1369	1105	264	A, BVI, SCI
1980	Arnhem	42	1973	1503	470	A, BVI, CP, SCI
1984	New York	45	1750	1278	472	ALA, BVI, CP
1984	Stoke Mandeville	41	1097	829	268	SCI
1988	Seoul	60	3059	2380	679	ALA, BVI, CP, SCI
1992	Barcelona*	83	3001	2301	700	ALA, BVI, CP, SCI
1992	Madrid	75	1600	N/A	N/A	ID
1996	Atlanta	103	3259	2469	790	ALA, BVI, CP, ID, SCI
2000	Sydney*	122	3882	2891	991	ALA, BVI, CP, ID, SCI
2004	Athens	135	3808	2643	1165	ALA, BVI, CP, SCI
2008	Beijing	146	4011	2628	1383	ALA, BVI, CP, SCI
2012	London	164	4237	2736	1501	ALA, BVI, CP, ID, SCI
2016	Rio de Janeiro*	158	4317	2648	1669	ALA, BVI, CP, ID, SCI

A = Amputee; ALA = Amputee and *les autres*, BVI = Blind and Visually Impaired; CP = Cerebral Palsy; ID = Intellectual Disability; SCI = Spinal Cord Injury.

*Includes a group entitled “Independent Paralympic Athletes”.

(Adapted from Brittain, 2018).

Table 4.3 - Participation at Winter Paralympic Games, 1976-2016

Year	Host City	No. of countries	No. of athletes	Men	Women	Impairment Groups Included
1976	Ornskoldsvik	16	198	161	37	A, BVI
1980	Geilo	18	299	229	70	A, BVI, SCI
1984	Innsbruck	21	419	325	94	ALA, BVI, CP, SCI
1988	Innsbruck	22	377	300	77	ALA, BVI, CP, SCI
1992	Tignes	24	365	288	77	ALA, BVI, CP, SCI
1994	Lillehammer	31	471	381	90	ALA, BVI, CP, SCI
1998	Nagano	31	561	440	121	ALA, BVI, CP, ID, SCI
2002	Salt Lake	36	416	329	87	ALA, BVI, CP, SCI
2006	Torino	38	474	375	99	ALA, BVI, CP, SCI
2010	Vancouver	44	502	381	121	ALA, BVI, CP, SCI
2014	Sochi	45	538	410	128	ALA, BVI, CP, ID, SCI

A = Amputee; ALA = Amputee and *les autres*, BVI = Blind and Visually Impaired; CP = Cerebral Palsy; ID = Intellectual Disability; SCI = Spinal Cord Injury.

(Adapted from Brittain, 2018).

CHAPTER 5 – PARALYMPIC CLASSIFICATION

“To classify is human”.

Bowker G.C. and Star S.L., “Sorting Things Out: Classification and its Consequences”, 2000.

In the previous chapter, I outlined the historical development of Paralympic sport and the creation of the IPC, which is the international sporting body responsible for the organisation of the Paralympic Games and the system of classification that is used by the IPC to categorise participating athletes. The purpose of that chapter was to provide some context as to the circumstances in which decisions relating to athlete classification are taken and to begin to address the first of my stated objectives of this thesis, which is to critically review the fairness of the current Paralympic classification system adopted by the IPC. In the chapter that follows, I continue this theme by examining how sport classifies competitors in sport in general terms. I then go on to review the different types of classification systems that have been historically adopted in Paralympic sport, including medical classification and functional classification, together with the advantages and disadvantages of those systems. I then briefly examine the most recent types of classification systems such as classification using taxonomic principles (Tweedy 2002) and evidence-based classification (‘EBC’) (Connick et al 2018). I conclude the chapter by providing an outline of the current classification process adopted by the International Paralympic Committee (IPC) in Paralympic sport.

5.1 Classification in Sport

Able-bodied sport has traditionally classified competitors on the grounds of age, sex, weight, and ability. The principal reasons for such classification include an attempt to ensure fair competition and maintain a level playing field; to prevent or minimise the risk of injury or harm (i.e. paternalistic reasons); to ensure that competitors are evenly matched with competition being as closely balanced as possible; and to make the result less predictable to create, in the words of Kretchmar and Fraleigh, “*the sweet tension of uncertainty of outcome*” (Kretchmar, 1975; Fraleigh, 1984). Classification in sport, therefore, has a particular purpose, which is to ensure fair and just competition between participants. It also attempts to reduce the likelihood

of one-sided competition. Let us now consider some of the different ways in which sport has traditionally classified athletes, beginning with classification by ability.

Classification by Ability

Sport frequently classifies competitors according to performance or ability. For example, in domestic football, teams are divided into different leagues based on ability. In England and Wales, we therefore have a ‘pyramid’ structure in men’s professional football consisting of the Premier League, English Football League Championship, and Leagues 1 and 2 (and beneath that, a myriad of ‘non-league’ teams in the ‘lower’ divisions which consists of predominantly semi-professional or amateur players), with opportunities for teams to move upwards or downwards between leagues at the end of each season depending upon their performance in that particular season through the process of promotion or relegation. This should be contrasted with the so-called ‘franchise’ model of professional sport in countries such as the United States, where sports such as Baseball, Basketball, and American Football lack a promotion and relegation system.

Amateur football also frequently differentiates between the ‘A’, ‘B’, or ‘C’ leagues for players of a certain age group, which is dependent upon the ability of the players and the team overall. Other examples of performance classification include the handicapping system used in golf and the coloured belt system used in martial arts such as Judo, Karate, and Taekwondo. The rationale for such classification is to try to ensure that as far as possible, competition takes place between those who are of the same, or similar, ability which in turn provides a greater level of satisfaction among the competitors involved (English, 1978). Indeed, there is little incentive or motivation for a player or team to continue participating in their chosen sport if they regularly experience a ‘drubbing’ on a cold and wet winter morning in the local Sunday league football competition (although thousands of participants still do so every week regardless).

Classification by Age

Age is often used to classify different levels of amateur competition, particularly those involving children. For example, we are all familiar with the notion of dividing children into different year groups for competing at school sports days, or the concept of being a player of a

team in the “under 13’s” local district Sunday league football competition. In swimming, events are often classified according to the date of birth of the competitor as at a certain specified date (usually 31 December in the year of competition) or the date of the relevant competition itself. Consequently, children may compete against one age range of individuals at one event, but a different age range of competitors at another, often leading to very different results in terms of final positions and therefore medals. At or around the ages of 16-18, at about the time when full adult maturation is reached, competitors are normally classified in the “seniors” or “open” competition, with no further differentiation by age. In amateur sport, competitors are also often classified in specific age brackets for more mature competitors, for example, the 30-35 years category, or upon reaching a certain arbitrary age which varies between different sports, for example, “the over-40’s”, when competitors are categorised as “masters” or even “veterans”.

Classification by Sex/Gender

For historical reasons, sport has also traditionally segregated competitors according to their sex in almost every sport despite the fact that in many sports there is no obvious reason for doing so. The rationale for this appears to be the fact that men and women are physiologically and biologically different in ways that are relevant to sports performance. In other words, on a purely statistical analysis between the sexes, women are generally smaller than men, have a higher percentage of body fat, are less muscular, and have a different hip structure and slower oxygenation rate (English, 1978). Consequently, in sports that emphasise size, speed, and strength, men tend to dominate the competition rather than women. However, as English (1978) observes, in some sports, women have a natural advantage over men, such as the balance beam in gymnastics or synchronised swimming, where grace, poise, and elegance are the relevant and unique qualities needed. English (1978) has therefore proposed that in order to acknowledge the natural physiological differences between men and women we should create a greater variety of sports than those that currently dominate the sporting landscape which will provide advantages for competitors with a wider range of physical characteristics, with the result that men will inevitably dominate in some sports, whilst women will excel in others. This would, however, involve the continuation of segregation between men and women in sport. The view that men have typically ‘male’ qualities and women have typically ‘female’ qualities creates an inherent tension between the traditional view of the ‘ideal’ athlete (i.e. the perception of the athlete as a warrior, who is strong, aggressive, and masculine) compared to the traditional view of the ‘ideal’ woman (i.e. ‘soft’, gentle and caring) (Schneider, 2000). This is perhaps no

more evident than in sports such as female competitive bodybuilding (Klein, 1993; Bunsell, 2013).

Almost all sports have traditionally segregated men and women in sports competitions, despite the fact that in some sports there is no logical reason for doing so. For example, in many skill-based sports, such as equestrian, archery, sailing, and shooting, where strength and/or aggression are not critical factors, men and women could quite conceivably compete against one another. In addition, in endurance events such as ultra-long distance running, there is evidence to suggest that men and women are inseparable in terms of achievement, with the result that there is a strong argument that sex divisions should disappear from that particular event altogether (LaVaque-Manty, 2005). In response, Tannsjo (2000) has therefore called for the abolishing of sex segregation in (most) sports, which is dismissed by Schneider (2000) as a “*utopian fantasy*”. Tannsjo has even gone so far as to suggest that in boxing, men and women should be permitted to fight one another provided it is safe for them to do so.

Loland (2002) has suggested that some sports be ‘moderated’ to accommodate greater integration of men and women. Tannsjo has developed this argument further by suggesting that such moderation could include non-moral virtues typically associated with men such as aggression and strength being given a less important role in sport and moral virtues typically associated with women such as inventiveness, sensitivity, playfulness, and wit playing a more important role instead (Tannsjo, 2000). Tannsjo argues that once we have introduced such moderation in sport, we will be able to safely abandon sex segregation in sport altogether, allowing men and women to compete against each other on equal terms. Iris Marion Young expresses similar sentiments when she says that

“Androgyny in sport means...the incorporation of values typically associated with women into the symbols and practices of sport – such as expressiveness and grace – along with a corresponding decline in the present overly aggressive and instrumentalist aspects of sport which are typically associated with masculinity.”

(Young, 1995).

The integration of men and women in sporting competition would also have the advantage that this would avoid the ethical and practical challenges associated with the controversy surrounding gender verification tests, as illustrated in the recent cases of the athletes Dutee Chand (*Ms Dutee Chand v Athletics Federation of India and The International Association of*

Athletics Federations, CAS 2014/A/3759) and Caster Semenya (CAS/2018/O/5794 Mokgadi Caster Semenya v The International Association of Athletics Federations and CAS/O/5798 Athletics South Africa v The International Association of Athletics Federations, Award of 30 April 2019; Bundesgericht, interlocutory order (4A_248/2019) made 29 July 2019; and Press Release of the Swiss Federal Supreme Court (30 July 2019)).

Tannsjo does not, however, completely rule out the possibility that additional single-sex sport competitions may still be organised, provided that there is a strict ban on any type of ‘irrelevant’ segregation. This view strikes interesting parallels with Paralympic sport and coheres with the idea that it may be possible to introduce fully integrated sports competitions between impaired and non-impaired athletes whilst retaining separate competitions for impaired athletes only, which is an interesting issue but outside the immediate ambit of this study.

Classification by Weight

Other sports such as boxing, weightlifting, and wrestling have traditionally separated competitors by reference to different weight divisions. The relevant weight classes in boxing have changed over time, but the boundaries between classes are fairly arbitrary in nature as no statistical or scientific evidence supports the rationale for the current weight classes used (Riding, 1994). Boxing provides one of the best examples of how and why such categorisation occurs in sport. Originally, bare fist fighting, prize-fighting, and later the sport of boxing as we now know it, did not distinguish between the size or weight of the boxers, leading to many uneven and one-sided contests. In 1909, however, the National Sporting Club in London introduced eight different weight divisions as part of several amendments to the Queensbury Rules, these being (in descending order), heavyweight, cruiserweight (later “lighter heavyweight” in England, and “light heavyweight” in the United States), middleweight, welterweight, lightweight, featherweight, bantamweight, and flyweight.

In 1920 the New York Senate passed the Walker Law, by which the state of New York legalised professional boxing, having previously banned the sport. The Walker Law introduced a New Code of Boxing which became the basis for similar laws being implemented in other U.S. states. It also established standard weight divisions, which were alleged to have been heavily influenced by the rules and weights used by the American Expeditionary Force Boxing Tournament in 1919, which was held in England. The Walker Law added a further nine weight

divisions to the classes established by the National Sporting Club in 1909, resulting in the 17 weight classes that are used in professional men's boxing today. The present weight categories mean that fighters are more precisely matched in terms of weight and allow fighters to move between the different divisions with greater ease.

Taking into account the differences between male and female boxers, there are currently 13 separate weight divisions for professional women boxers. The weight divisions for amateur boxing also differ again and currently consist of 11 different weight divisions from light flyweight (up to 106lb, 48.1kg) up to super heavyweight (over 201lb, 91.2kg).

Classifying boxers by weight appears to operate reasonably successfully in practice, and is therefore perhaps one of the least contentious aspects of an extremely controversial sport. The following principles may be said to arise from boxing classification which could provide us with some assistance in our deliberations of classification in Paralympic sport:

- (i) Classification is based on weight only, which is a purely biological or physiological characteristic;
- (ii) Classification ignores other natural characteristics such as height, reach, and general physique;
- (iii) The upper and lower boundaries of the relevant weight divisions are entirely arbitrary;
- (iv) The system of classification was developed piecemeal over time and is subject to constant change, such that it is a fluid, dynamic concept;
- (v) Boxers can, and do, change their classification by losing or gaining weight;
- (vi) Skill, technique, and training (i.e. merit) become the critical distinction between competitors;
- (vii) The traditional 'weigh-in' immediately prior to the contest confirms the eligibility of the competitor to compete in the particular weight division concerned; and mixes it with safety because dehydration to make weight is well known and the weigh-in is 24 hours before, so a health of medical criterion can be said to apply; and
- (viii) Classification by weight allows for fair and even competition by matching individuals of the same (or broadly similar) size.

5.2 Classification by Disability

In common with able-bodied sport, modern Paralympic sport also classifies athletes by reference to age, sex, and weight. However, Paralympic athletes are also classified by reference to an additional set of criteria, namely the *type* and *severity* of their impairment. The diversity and range of both the impairments and the functional ability of Paralympic athletes are such that effective classification in Paralympic sport is paramount. Indeed, as Connick et al (2018) observe, Paralympic sport simply cannot exist without classification. Classification is essential for, and defines, sport for athletes with an impairment (Richter 1994). If there were no system of classification in Paralympic sport, athletes with impairments would not be able to compete against one another (Illman 1994). The importance of classification in Paralympic sport cannot, therefore, be overstated. Despite being such an essential part of Paralympic sport, however, the systems of classification used continue to remain controversial (Tweedy, 2002). Indeed, as Riding puts it,

“We are trying to take apples and oranges and turn them into grapefruits.”

(McCann et al. 1994).

It has been argued that the purpose of Paralympic classification is two-fold: firstly, to control the impact of impairment on the outcome of competition (Tweedy and Vanlandewijck, 2011); and secondly, to prescribe the specific methods for allocating athletes to different classes to ensure that each class comprises impairments that cause approximately the same degree of difficulty in performing a particular function or functions of the relevant sport or event in question (Connick et al, 2018). The fundamental challenge for Paralympic sport is how best to achieve these two goals given the different types and severity of impairments that affect athletes participating in Paralympic competition.

McCann (1994) has defined [Paralympic] classification as

“an examination to determine the type and degree of physical impairment of the competitor, so that the competitor can then be placed in a group or class which will allow fair athletic competition with other who have similar levels of functions.”

(McCann, 1994).

McCann (1994) states that the classification process should minimise or eliminate considerations of disability and allow talent, training, and motivation to determine which athletes are successful. In Paralympic sport, classification should therefore enable competitors of similar disabilities to compete in a fair manner (Weiss and Curtis, 1986). The classification process should not, however, contribute to the athlete's performance or success (Davis, 1994). Strohkendl (1986) has suggested that any classification system must provide every individual with an equal opportunity by giving every athlete a fair chance to reach the highest level of competition and should help to maintain the high standard of competition in Paralympic sport. For Strohkendl, fairness and credibility of competition are therefore both important elements of disability sport, although both concepts may not be achieved at the same time (Strohkendl, 1986; Wu, 1999).

By contrast, Richter has proposed that the purpose and intent of classification in sport is to provide a fair and equitable starting point for competition, not for every individual, but for every class or group of athletes (Richter et al., 1992; Richter, 1994). Others argue that the most important consideration of Paralympic classification is how the athlete perceives the fairness of their own classification (Kruimer, 1994; Richter, 1994). In particular, Richter (1994) observes that the classification process should be 'athlete centred', in the sense that this should be clear and transparent for all involved, including athletes, coaches, and classifiers, with classifiers listening to the opinions of athletes and coaches and taking those opinions into account to develop and improve classification systems. In this way, Wu (1999) argues that athletes and coaches would be provided with the opportunity to contribute to the development of future classification systems.

Tweedy (2002) has, however, argued that the main purpose of classification in Paralympic sport is to facilitate fair competition among eligible competitors by minimising the influence of specified impairments of structure and/or function on the results of athletic competition. Tweedy states that by 'fair competition', he means competition that is decided on the same basis as able-bodied sport, namely natural anthropometric, physiological, and psychological attributes and the enhancement of those attributes by legitimate means such as training, diet, technique, and technical aids and equipment. Tweedy therefore argues that athletes should not be precluded from potential success solely as a result of the extent of the activity limitation caused by their impairment (Tweedy, 2002). By 'minimising the influence', Tweedy means that classification cannot eliminate the influence of impairments, but only minimises it. In other

words, not all athletes in a class will experience the same extent of activity limitation as a result of their impairment. Classes must therefore span a sufficiently large range of activity limitations to ensure that enough athletes are eligible for the classes to hold viable competitions. The range of activity limitation must be sufficiently small to ensure that within any one class, the athletes with the greatest extent of activity limitation are not unduly disadvantaged when compared with the athlete with the least extent. This needs to be balanced with the requirement to keep the number of overall classes to a minimum (Tweedy, 2002).

Tweedy and others contend that a valid and effective classification system, and the close competition that typically results from it, assists in promoting increased participation in sport, whilst the aim of Paralympic classification is to promote participation in sport by individuals with disabilities by controlling for the impact of impairment on the outcome of competition (Tweedy, Beckman and Connick, 2014). By contrast, invalid and ineffective classification with suggestions of athletes being in the wrong class may be perceived as providing those athletes with an unfair advantage, which in turn poses a significant threat to the integrity of [Paralympic] sport.

Tweedy (2011) differentiates between “performance classification” on the one hand and “selective classification” on the other. Tweedy states that performance classification occurs when competitors are grouped according to their performance in that sport or event. Competitors who perform well therefore compete together and those who are less accomplished also compete together. Competitors who improve their performance through enhanced fitness, training, or skills are therefore reclassified to a higher class or division. In that sense, competition is normally close, which in turn produces more meaningful competition.

By contrast with selective classification, the relevant unit of classification is not performance but rather a specific factor or set of factors that are indicative of performance, such as age, weight, and sex. Tweedy argues that the effect of selective classification is to minimise the impact of the unit of classification on the outcome of competition (Tweedy, 2011). Tweedy is therefore attempting to rule out all extraneous variables, much as Loland is seeking to do when he compares his theory to a scientific experiment (Loland, 2002). Tweedy states that selective classification does not eliminate the impact of the units of classification on the outcome altogether but simply reduces that impact. Furthermore, if an athlete improves their performance through improved training or acquired skills they will not change their class as

they would in performance classification, but rather this makes them more competitive within their given class. For these reasons, performance levels may vary widely within a specific class. Tweedy, therefore, observes that Paralympic sport requires the application of selective classification so that athletes who improve their performance through effective training will not be moved to a class with athletes with less activity limitation, as they would with a performance-based classification system (Tweedy 2011).

5.3 Systems of Paralympic Classification

There are several ways in which Paralympic athletes have historically been classified, reflecting the different interpretations of what constitutes a ‘similar characteristic’ for Paralympic sport. Broadly speaking, two main types of classification systems have been used in Paralympic sport, namely *medical* classification (otherwise known variously, and ambiguously, as ‘physiological’ classification (Richter et al., 1993); ‘diagnosis-orientated’ classification (Lindstrom, 1986); or ‘anatomical’ or ‘biological’ classification) on the one hand; and *functional* classification (also referred to in the literature as ‘integrated’ classification) on the other. For simplicity, I shall refer throughout to the terms ‘medical’ classification and ‘functional’ classification. There is also a third type of classification that has recently emerged, namely that of evidence-based classification (“EBC”). I shall now examine each type of classification system separately and in turn.

Medical Classification

Although classification has been used in Paralympic sport for several decades, the development of individual classification systems evolved in response to the practical needs of each Paralympic sport (Wu, 1999). The international governing body for each Paralympic sport was historically responsible for the system of classification that was used in that particular sport. Between 1948 and 1992, the classification system that was favoured by most Paralympic sports and their governing bodies was that of medical classification.

The medical or ‘impairment-specific’ classification system classifies the athlete objectively by reference to an individual’s underlying condition or disability (Davis, 1994). The medical classification system is therefore analogous to the medical model of disability which was referred to in Chapter 2. Medical classification depends largely on the medical evaluation and

assessment of classifiers who are normally physicians. Athletes are therefore required to undergo a detailed physical examination before competing as part of the classification process when the classifier analyses the athlete's physical characteristics from a medical or biological perspective before assigning them to an appropriate class. Medical classification is therefore specific to a particular disability or disability group and does not take into consideration the functional abilities or athletic performance of the individual athlete, with the result that there is no observation of the athlete in competition.

Functional Classification

From the early 1990s onwards there was a shift in favour of the functional system of classification in most (but not all) Paralympic sports (Wu, 1999). By the early to mid-1980s, there were calls from several different quarters to move away from the dominant medical classification system toward a functional system of classification (Strohkendl, 1986; Craven, 1990). This was particularly evident in the sport of wheelchair basketball, where the functional ability of players was felt to be more important than their medical condition (Vanlandewijck and Chappel, 1996). This meant that athletes with different physical impairments began to compete in the same events. At the Arnhem Seminar which was held in the Netherlands in 1987, there was general agreement amongst the International Coordination Committee of World Sports Organisations for the Disabled ("ICC", the predecessor to the IPC) that those international governing bodies of Paralympic sports that were not already using a functional system of classification should begin to develop their own functional system and move away from medical classification. The IPC, therefore, encouraged international governing bodies to develop functional classification systems that addressed the specific needs of their sport (Wu, 1999). Consequently, by the time of the 1992 Paralympic Games in Barcelona, several different sports such as swimming used a functional classification system rather than a medical classification system. This trend continued at the Paralympic Games in Atlanta in 1996, with many sports revising and improving the functional classification systems they had first introduced in 1992 (Wu, 1999). By 1996, functional systems of classification had therefore begun to dominate most Paralympic sports.

In contrast with medical classification, functional classification categorises athletes by reference to their functional ability and athletic performance. In this sense, functional classification draws clear parallels with the social model of disability we examined in Chapter

2. Functional classification is a more subjective form of classification because it evaluates various functions of the athlete (i.e. skills and abilities), including strength, range of motion, motor coordination, and balance (Davis, 1994). Athletes with similar levels of functional ability are therefore placed in the same class irrespective of the type or severity of their impairment. Athletes are assessed by reference to their functional abilities to perform basic movements and techniques in a specific sport or event. Consequently, the functional evaluation which is carried out in each sport is different. Because the requirements of each sport are different, functional classification is necessarily specific to each sport. For this reason, functional classification has also been referred to as “sport-specific” classification (Wu, 1999). Although functional assessment is the primary method of classification in a sport-specific system, most functional systems still incorporate some form of assessment of the athlete’s physical impairment as part of that system. The functional classification system, therefore, comprises three different components, namely a medical assessment; performance during testing; and subjective observation during the competition itself (Davis, 1994). The functional classification system, therefore, combines both a physical and functional evaluation (Wu, 1999) and involves not only physicians but also a multi-disciplinary team of classifiers, including sports scientists, in the classification process (Riding 1994).

Advantages and Disadvantages of Medical and Functional Classification

There are a number of advantages to the functional classification system over medical classification. The functional system reduces the number of classes, resulting in shorter competitions and fewer cancellations of events due to insufficient numbers of athletes in each class and therefore potentially helps to enhance the overall quality of the event (Wu, 1999). This also increases the credibility of Paralympic sport in the minds of the media and public which in turn helps to attract greater numbers of athletes and coaches. Hainey (1994) argues that the functional model of classification is superior to the medical model [in the sport of Para swimming]. He states that one of the arguments against functional classification is that it is not fair to all athletes or impairments. Hainey, however, also argues that sport, in general, is inherently unfair and that when designing a classification system for Paralympic sport, it is, therefore, important to recognise that no system will be completely fair (Hainey, 1994). Hainey argues that although the functional model is complex, it is far less confusing than the medical model, which increases the credibility and recognition of Paralympic sports (Hainey, 1994). Hainey also suggests that the functional system is favoured by the majority of athletes, coaches,

administrators, and organisers, but does not provide any specific empirical or other evidence in support of that proposition (Hainey, 1994). Kruimer argues that the relevant classification system must be specific to each sport, and based on biomechanical, physiological, and anatomical principles (Kruimer, 1994).

There are, however, several disadvantages to the functional classification system (Richter 1992, 1994). The fundamental problem with functional classification is the challenge involved in attempting to integrate athletes with varying types and severity of impairments into different classes to compete alongside one another. Richter (1994) points out that disabilities are extremely difficult to compare and that some impairments, such as amputations, are fixed or static in terms of their effect on performance with the result that the essential performance characteristic does not change no matter how fatigued an athlete is. Other disabilities such as cerebral palsy are far more fluctuating or dynamic in nature. Such athletes will have a marked detrimental performance with fatigue since spasticity increases when athletes are tired. Richter points out that an athlete should not be denied the chance of success simply because they happen to belong to a specific disability group, and that success (or lack of it) should instead depend upon training, talent, motivation, and skill. Richter argues that functional classification does not recognise or address this problem (Richter, 1994).

It is of course perfectly possible for an athlete with significant impairment to improve their performance through training programs and practices. Under the functional classification system, such an athlete could therefore be placed in a higher/lower class to compete against someone with a lesser/greater impairment. In this way, training and practice could negatively influence a functional classification system by potentially penalising an athlete who trains rigorously to reach their potential by being placed into a more competitive class because of the higher level of athleticism they have achieved due to their own efforts (Davis, 1994; Illman, 1994). Richter suggests that it is the athletes' innate potential, and not their acquired skills, which should be measured, and that classifiers should therefore consider the athletes' raw material, not the finished product (Richter, 1994). To do otherwise would be to penalise the well-trained athlete (Weiss and Curtis, 1986).

Although Higgs et al. (1990) argue that functional classification creates a larger number of athletes in each class which in turn ensures more interesting and viable competition, Richter (1994) argues that the problem of events having insufficient numbers of competitors can be

addressed differently by recruiting more potential athletes from this particular impairment group (or groups). A further problem with reducing the number of classes is the potential risk of excluding lower-functioning athletes from the competition, as traditionally the lower classifications are comprised of fewer athletes (Davis, 1994). Lindstrom has even gone so far as to suggest that athletes with lesser ability may select their events based on their functional ability to improve their chance of success (Lindstrom, 1986). Integrating or combining athletes with various impairments into a functional classification system, therefore, risks systematically discriminating against various classes of athletes (Richter, 1994).

Other problems with functional classification include the fact that the functional system often involves a high degree of subjectivity concerning the practical part of the classification process (Illman, 1994). In particular, one of the inherent difficulties with functional classification is the potential for the athlete to “hold back” during the performance assessment stage by not performing to the best of their ability, thus creating an unfair advantage during the actual competition itself (Davis, 1994). This may be either because the athlete does not want to injure or exert themselves too much before an event, or because they are deliberately attempting to “hoodwink” or mislead the classifier(s) to enable them to compete in a lower class and thereby increase their chance of success (Illman, 1994). This issue is better known as “intentional misrepresentation” (“I.M.”). Illman argues that if the classifier(s) notice a significant discrepancy between the athlete’s performance during the process of classification and the competition itself, the athlete should be penalised as heavily as an individual who gains a competitive advantage by taking prohibited drugs or other performance-enhancing substances (Illman, 1994). The comparison between doping and intentional misrepresentation, being two different methods of cheating, is an interesting one, to which I shall return in Chapter 6.

Above all, Richter argues that the main problem with functional classification is a faulty scientific analysis of sport (Richter 1994). Richter states that the functional classification system only takes into consideration certain variables which are then quantified in a hierarchical manner but that there is no sport-specific analysis that has been able to accomplish this for disabled athletes (Richter 1994). Richter argues that whilst the use of a points-based system in functional classification is an attempt to give it a scientific basis, with only a few variables tested and with no true scientific basis for quantifying those variables, it is difficult to see how this can be accomplished. As Counsilman said about placing different percentages on body parts regarding their contribution to the different strokes in para-swimming,

“The main thing wrong with this [functional classification] is... that it is unscientific and based on subjective evaluation...”

(Counsilman, 1977).

But that is an old view, it is outdated and crudely dichotomises scientific and subjective analysis. Indeed, Wu (1999) argues that classification systems in general, not just functional classification, have rarely been supported by sufficient scientific research.

Taxonomic principles

In addition to medical and functional classification systems, Tweedy has argued that classification systems in disability sport should be based on taxonomic principles, otherwise, they will lack a sound theoretical basis (Tweedy, 2002). Tweedy refers to Fleishman, Quaintance, and Broedling’s (2004) definition of taxonomy who state that this is

“the theoretical study of systematic classifications, including their bases, principles, procedures, and rules. The science of how to classify and identify.”

(Fleishman, Quaintance, and Broedling, 1984).

They also argue that the primary purpose of classification is to

“describe the structure and relationships of the constituent objects in regard to each other and to similar objects, and to simplify these relationships in such a way that general statements can be made about classes or objects.”

(Fleishman, Quaintance, and Broedling, 1984).

Fleishman, Quaintance, and Broedling argue that in general terms, scientists and researchers have invariably tended to focus almost exclusively on the product of applying taxonomic theory (i.e. the formal set of classes or categories that result from classification) without placing sufficient emphasis on the process of applying taxonomic theory (i.e. the principles guiding the systematic arrangement of units into classes) (Fleishman, Quaintance and Broedling, 1984; Tweedy, 2002). Tweedy argues that in disability sport, this has meant that issues such as methods of assessment, equality, fairness, and the number of classes in specific systems [of classification] have often been investigated, but very little has been written on what

classification is, what its purpose is, and what is actually being classified (Tweedy, 2002). Consequently, classification is a typical example of Sherrill's observation that

“disability sport is driven by many theories, most of which remain underidentified and underanalysed.”

(Sherrill, 1999).

In his early work on Paralympic classification, Tweedy (2002, 2011) proposed that the International Paralympic Committee should adopt the World Health Organisation's International Classification of Functioning, Disability and Health ('ICF') as the appropriate system of classification in Paralympic sport. Tweedy argued that the ICF is the most widely accepted international classification of health and functioning which is a broad, multi-purpose system that provides a standardised form of language and structure that may be applied to describing and understanding health-related functioning in a wide variety of contexts and sectors. He also argued that the ICF is an international system of classification used and approved by a global institution, which is published in several different languages and is therefore widely accessible. Tweedy (2002) has therefore proposed that the language and structure of the ICF should be applied to Paralympic classification and has identified several advantages in doing so, including:

- (i) the ICF definitions for key terms are clear, unambiguous, and internationally accepted;
- (ii) the concepts of functioning and disability set out in the ICF are contemporary, including the relationship between impairment and activity [limitation]; and
- (iii) the key terms and concepts of the ICF are described in six different languages, thereby removing a significant barrier to international understanding of Paralympic classification.

Whilst, however, the IPC has now adopted much of the language and many of the definitions of the ICF, it has not gone so far as formally recognising the full ICF classification system. This may be in part, through fear of over-emphasising the medical model of disability at the expense of the social model.

Evidence-Based Classification ('EBC')

In their subsequent work on Paralympic classification, Tweedy and Vanlandewijck (2011) have argued for a comparatively new system of classification that is evidence-based. An evidence-based system of classification is one where the purpose of the system is stated unambiguously and empirical evidence indicates the methods used for assigning classes will achieve the stated purpose (Tweedy and Vanlandewijck, 2011). With an evidence-based system, scientific evidence indicates that the methods used for assessing impairments and assigning classes will result in classes that comprise athletes who have impairments that cause approximately the same amount of difficulty in a given sport (Tweedy and Vanlandewijck, 2011).

In 2016, Tweedy and others further developed the conception of an evidence-based system of classification by publishing a six-step approach to developing EBC systems through appropriate research which outlined the main conceptual issues that need to be addressed (Beckman et al. 2016). Those six steps are as follows:

- (i) Identify the target sport and impairment type(s) to be classified;
- (ii) develop a theoretical model of the determinants of sports performance;
- (iii) develop valid measures of impairments (i.e. specific to the impairment; quantitative; reliable; precise);
- (iv) develop standardised, sport-specific, measure(s) of determinants of performance;
- (v) assess the relative strength of association between valid measures of impairment and sport-specific measures of performance determinants to identify the measures of impairment that account for a significant and independent portion of the variance in performance; and
- (vi) use outcomes from step 4 to determine minimum impairment criteria, number of classes, and class profiles

(Beckman et al. 2018).

Beckman et al. (2018) state that the above approach involves completing all stages at a given level to a satisfactory standard before moving on to the next level. However, the framework does not describe the types of studies that researchers must undertake to complete the process. Beckman et al. (2018) therefore set out those types of studies that are required, which include systematic or narrative reviews of peer-reviewed literature and elite performance coaching manuals (at step 2); reliability studies of impairment measures (i.e. the consistency of

measurements or the absence of measurement error); developing valid measures of impairment (at step 4); and the use of statistical classification algorithms (at step 5) (Beckman et al. 2018).

Beckman et al. (2018) maintain that whilst the assessment of impairment and the class allocation process used in the current Paralympic classification system is not supported by scientific evidence (as Richter alleges) these methods reflect current best practices and no better methods exist (Beckman et al., 2018). The IPC also acknowledges that classification in Paralympic sport is an ongoing and evolving process and that there is a distinct possibility that the complexity of class allocation reduces the confidence of classifier decisions and increases the likelihood that difficult decisions are contested by athletes and/or their national governing bodies (Beckman et al., 2018). In response to these concerns, Tweedy, therefore, argues that Paralympic classification should be based on scientific evidence as an alternative to the current system (at least where physical impairments are concerned) (Tweedy, 2002; 2003).

Beckman et al. believe that the introduction of EBC will improve the transparency of Paralympic classification by increasing the confidence in decision-making and reducing the number of contestable decisions because objective evidence will be available to show how classifiers arrive at their decision (Beckman et al. 2018). The IPC Classification Code of 2015 specifically recognises the need for systems of classification in Paralympic sports that are evidence-based and mandates the relevant governing bodies of those sports to develop further research in such systems (IPC Athlete Classification Code, 2015). Despite the IPC's mandate encouraging the development of further research relating to EBC, however, no such systems have yet been implemented in Paralympic sport, which is therefore still very much an emerging field of research (Beckman et al., 2018).

5.4 The Current Position on IPC Classification

Having considered the two broad types of classification systems that have been used in Paralympic sport, namely medical classification and functional classification, together with two alternative classification systems that have been posited by Tweedy and others, that is to say, classification based on taxonomic principles, and evidence-based classification, I now turn to consider the current classification system which has been adopted by the IPC for Paralympic sport and sporting competition, beginning with the IPC's Athlete Classification Code of 2015.

The IPC Athlete Classification Code

In 2003, the IPC began to analyse various classification systems to develop a universal classification code for all Paralympic sports. The outcome of this process was the IPC Classification Code, which was introduced in 2007 (IPC Classification Code, 2007). In 2013, the IPC commenced a further consultation process to review the 2007 Code, which resulted in the introduction of a revised Athlete Classification Code in November 2015 (“the Classification Code”). The Classification Code was approved by the IPC Governing Board in June 2015 and was subsequently passed by the IPC General Assembly in November 2015 and was effective as of 01 January 2017, with compliance required by 01 January 2018 (IPC Athlete Classification Code: Rules, Policies, and Procedures for Athlete Classification, November 2015).

The Classification Code is supplemented by an Athlete Reference Guide, which was issued by the IPC in February 2017 (IPC Athlete Reference Guide to the 2015 Athlete Classification Code, February 2017). The revised 2015 Classification Code is also supplemented by the following five International Standards, compliance with which is required by all signatories of the Classification Code:

- (i) *Eligible Impairments*: identifies which impairments are classification-related;
- (ii) *Athlete Evaluation*: procedures for sport class and sport class status allocation;
- (iii) *Protests and Appeals*: procedures for the management of classification-related protests and appeals;
- (iv) *Classifier Personnel and Training*: classifier recruitment, training, and certification strategies; and
- (v) *Classification Data Protection*: ensures the proper use of athlete classification data.

Section 1.1.2 of the Classification Code refers to its scope and confirms that this applies to all members of the Paralympic Movement and all athletes competing in Para-sport at international competitions under the jurisdiction of the international sports federations (including the Paralympic Games) (section 1.1.2).

Section 2 of the Classification Code states that athlete classification is a defining feature of Para-sport and defines this as

“grouping athletes into sport classes according to how much their Impairment affects fundamental activities in each specific sport or discipline.”

(Section 2.1; Glossary on page 17).

Section 1.3 of the Classification Code refers to the purpose of classification and states that

“The Code is the fundamental document upon which Classification in the Paralympic Movement must be based. The purpose is to uphold confidence in Classification and promote participation by a wide range of Athletes. To achieve this purpose, the Code details policies and procedures common across all sports and sets principles to be applied by all Para-sports. The Code is intended to be specific enough to achieve harmonisation on Classification where standardisation is required and general enough in other areas to permit flexibility regarding the implementation of its principles.”

(Section 1.3)

Section 2.2 of the Classification Code sets out the stated purpose of classification, which is to define who competes in Para-sport and to ensure that the impact of eligible impairment in each event is minimised. The IPC goes on to state that to achieve this purpose, each International Sport Federation must develop and implement its own classification system that complies with the Classification Code. In particular, each classification system must:

- (i) State that an athlete must have an eligible impairment to compete in the sport;
- (ii) Set processes and procedures for assessing whether an athlete has an eligible impairment;
- (iii) Set minimum impairment criteria for each eligible impairment; and
- (iv) Require that athletes be allocated a sport class based on the extent to which athletes are able to execute the specific tasks and activities fundamental to the Para-sport or discipline concerned.

In this way, the process of classification follows a similar process in every Paralympic sport irrespective of the specific system of classification used in that particular sport. Paralympic Classification therefore currently involves four stages for each Paralympic sport, namely:

- (i) The athlete must have a health condition that will lead to one or more of the ten eligible types of physical impairment;
- (ii) The athlete must have an eligible impairment type;
- (iii) The impairment must be sufficiently severe; and
- (iv) The athlete is then assigned a class in which he or she will compete.

I will now consider each of these stages separately and in turn.

(i)/(ii) Eligibility

Stages one and two, therefore, involve the issue of the athlete's eligibility for competition. There are currently ten different types of impairment for eligibility purposes, namely five impairments of function (impaired muscle power, impaired range of movement, hypertonia, ataxia, and athetosis); three impairments of structure (limb deficiency, leg length difference, and short stature); visual impairment; and intellectual impairment (Tweedy and Vanlandewijck, 2011, and see Table 5.1 below). Eligibility can often be assessed immediately based on visual inspection (e.g. amputation), but occasionally athletes will need to submit other documentation such as medical reports and test results to confirm the nature of the impairment concerned.

(iii) Severity of Impairment

Stage three considers the severity of the athlete's impairment, which must meet certain specified minimum criteria. To be eligible to compete, the athlete's impairment must therefore be sufficiently severe to impact upon sports performance, which varies from one sport to another. This is assessed by several different methods, depending upon the nature of the condition and impairment concerned. Each Paralympic sport has therefore adopted its own Minimum Disability Criteria (or "MDC") to determine eligibility for that particular sport. One of the inherent problems with Paralympic classification is therefore determining whether a particular athlete is sufficiently disabled or impaired to enable them to compete in the particular sport in question.

(iv) *Athlete Evaluation and Sport Class*

Finally, stage four involves allocating the athlete to a specific class. Section 4 of the Classification Code refers to athlete evaluation, sport class, and sport class allocation. Athlete evaluation is the process by which an athlete is assessed under the International Sport Federation's Classification Rules, which must be carried out in accordance with the International Standard for Athlete Evaluation (section 4.1). In addition, each international sport federation must ensure that a process is in place whereby athletes will be allocated a sport class and sport class status under the International Standard for Eligible Impairments and the International Standard for Athlete Evaluation, the process for which must be incorporated in the Classification Rules of each International Sports Federation (section 4.2). The International Sports Federation's Classification Rules must detail the assessment methodology and assessment criteria for the allocation of a sport class (section 4.3).

By contrast, a sport class is a category defined by each International Sports Federation in the Classification Rules of the sport, in which athletes are categorised by reference to the ability to perform the specific tasks and activities fundamental to the sport in a non-competitive environment (section 4.4). Each athlete must be allocated to a sport class and sport class status under the International Standard for Athlete Evaluation and the International Standard for Eligible Impairments following Athlete Evaluation (section 4.5).

Finally, following the allocation of a Sport Class, the Athlete must be designated a Sport Class Status which indicates the evaluation requirements and protest opportunities. A Sport Class Status must be designated in accordance with the International Standard for Athlete Evaluation (section 4.6).

5.5 Review of 2015 IPC Classification Code

In January 2021, the IPC Governing Board agreed to carry out a comprehensive review of the 2015 IPC Athlete Classification Code, which involved an extensive consultation process. This consultation process ended on 31 October 2023 (<https://www.paralympic.org/classification-code-review> accessed on 29 January 2024). The IPC has prepared a draft of the new Athlete Classification Code, which is planned to be submitted for approval at an Extraordinary General Assembly of the IPC in 2024. The IPC anticipates that the new IPC Athlete Classification Code

will be implemented in January 2025 for summer sports and July 2026 for winter sports. The IPC has also stated that the current 2015 IPC Athlete Classification Code will remain in place until the new Code is implemented.

The latest draft of the new Classification Code dated July 2023 is available on the IPC website (https://www.paralympic.org/sites/default/files/2023-12/2023_07_Draft_IPC_Classification_Code_Consultation_Phase_3.pdf accessed on 29 January 2024).

5.6 Summary and Conclusions

In this chapter, I have set out how sport currently classifies athletes, by reference to such criteria as ability, age, sex/gender, and weight. I have also considered classification by disability and the purpose of classification in Paralympic sport. I have reviewed the different methods of classification that have been used in Paralympic sport, including medical classification and functional classification, together with the differences between those two systems and the relative advantages and disadvantages of those systems. I have referred to Tweedy's notions of classification based on taxonomic principles and by reference to evidence-based classification. Finally, I have provided an outline of the current classification process used by the IPC in Paralympic sport by conducting a review of the IPC Athlete Classification Code of 2015. In so doing, I have provided a critical review of the types of classification systems adopted in Paralympic sport, in both historical and contemporary terms.

In addition to the methods used by organisations such as the IPC to classify impaired athletes, there are also several ethical and other problems associated with Paralympic sport that have an impact on the fairness of the classification process. In the chapter that follows, I therefore review some of the more ethically challenging aspects of the current Paralympic classification system that have an impact on the fairness of competition and therefore the integrity of Paralympic sport (and by extension, the integrity and credibility of the International Paralympic Committee which is responsible for organising and regulating Paralympic sport). Some of those issues are not unique to Paralympic sport but also arise in able-bodied sport, whilst others are exclusive to Paralympic sport. My objective is to provide several examples of ethical issues and case studies relating to Paralympic classification and competition, before returning to those same issues later on in Chapter 9 of this study when considering the efficacy of the alternative

model that I propose to put in place to establish a more fair and just Paralympic classification system.

Table 5.1 - Descriptions of Physical Impairment types eligible to compete in Paralympic Sport

Physical Impairment Type	Structure or Function	Description	Examples of health conditions causing impairment
Strength	Function	Impairment to the force generated by the contraction of a muscle or muscle group	Spinal cord injury, spina bifida, muscular dystrophy
Range of Movement	Function	Impaired Joint Mobility	Arthrogryposis, ankyloses, cerebral palsy
Hypertonia	Function	A form of motor overactivity which increases muscle tone in people with upper motor neuron lesions	Cerebral palsy, brain injury, multiple sclerosis
Ataxia	Function	A movement disorder that is associated with impairments of limb coordination	Cerebral palsy, Friedreich's ataxia, brain injury, multiple sclerosis
Athetosis	Function	A movement disorder that is characterised by involuntary writhing, usually of the distal musculature	Cerebral palsy, stroke, brain injury
Limb Deficiency	Structure	Total or partial absence of the bones or joints of the shoulder region, upper extremities, pelvic region, or lower extremities	Amputation
Leg Length Difference	Structure	Aberrant dimensions of bones of right lower limb or left lower limb but not both	Congenital or traumatic causes of bone shortening in one leg

Short Stature	Structure	Aberrant dimensions of bones of upper and lower limbs or trunk which will reduce standing height	Achondroplasia
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(Adapted from Beckman et al, 2018).

CHAPTER 6 – PARALYMPIC ETHICS

As we saw in Chapter 5, it is obvious that some kind of classification criteria is necessary in Paralympic sport in order for meaningful competition to take place. I therefore agree with Howe and Jones (2006) when they state that classification is at the heart of Paralympism. Invalid and ineffective classification with suggestions of athletes being in the wrong class may therefore provide certain athletes with an unfair advantage, which in turn poses a significant threat to both the integrity of Paralympic sport, and the IPC as the organisation responsible for establishing the rules relating to classification, and for organising Paralympic competition, including the Paralympic Games (McNamee, Parnell, and Vanlandewijck, 2021). The wide diversity and range of impairments, (dis)abilities, and functional abilities of Paralympic athletes are such that effective classification in Paralympic sport is therefore paramount.

There are, however, several prominent ethical issues in Paralympic sport that have an impact on classification. Some of those issues are not unique to Paralympic sport but also arise in able-bodied sport. They include the use of performance-enhancing drugs and other substances ('doping') and access to resources. Several other ethical issues, however, arise solely in relation to Paralympic sport. They include Intentional Misrepresentation ("I.M."); autonomic dysreflexia (better known as 'boosting'); elective amputation; and the use of prosthetics and other forms of technology. Each of these issues has an impact on the fairness of Paralympic classification and therefore the integrity of Paralympic sport and sporting competition. In this chapter, I will examine these issues in further detail by addressing them separately and in turn. At this stage, I am simply introducing these issues as examples of specific ethical problems that exist within Paralympic sport and classification. I will, however, return to some of these issues in Chapter 9 when considering them within the context of the alternative framework that I have developed in this study, and to demonstrate that this particular model is fit for purpose.

The chapter begins by considering two issues that arise immediately *before* the competition itself, namely (i) an athlete's eligibility to compete in Paralympic competition, and the question of whether the athlete meets the specific Minimum Disability Criteria ('MDC') for the relevant sport or event concerned (in other words, whether the athlete is 'sufficiently disabled' for these purposes); and (ii) the problems resulting from an athlete's access to resources and the issue of 'system strength'. I then focus on outlining several difficult ethical challenges that arise *during*

the competition itself within the context of the use of prosthetics and other technologies, before addressing several different ethical problems concerning rule violations within Paralympic competition including elective amputation, the use of drugs and other performance-enhancing substances ('doping'), the practice of 'boosting', and finally the issue of intentional misrepresentation. In particular, I consider the case study of Paralympic athletes with cerebral palsy who use botox injections. Let me begin, however, by considering the issue of eligibility.

6.1 Eligibility

As I stated in Chapter 2, to be eligible to compete in the Paralympic Games, all athletes must have a qualifying disability at the time of competition. This means that a person must be affected by at least one of the eligible impairments relating to that particular sport (see Table 5.1 above). Furthermore, each sport will stipulate how severe this impairment must be to compete in the relevant event concerned (the so-called Minimum Disability Criteria, or "MDC"). For example, the various MDC used in Athletics are set out in Appendix 1 of the IPC Athletics Classification Rules and Regulations (the latest version of which is dated January 2016). To be eligible to participate in running events, an individual with lower limb deficiency must satisfy the following definition

"Limb deficiency may result from amputation (e.g. acquired due to trauma or diseases such as bone cancer) or dysmelia, which is defined as a congenital abnormality characterised by missing or foreshortened extremities..."

(IPC Athletics Classification Rules and Regulations, Appendix 1, January 2016).

With lower limb deficiency, the relevant MDC is stated as being a complete unilateral amputation of half the length of the foot from the tip of the great toe to the posterior aspect of the calcaneus (otherwise known as a Lisfranc's amputation), or the equivalent congenital limb deficiency. With unilateral dysmelia, the MDC is that the length of the affected foot must be less than or equal to 50% of the length of the unaffected foot.

Occasionally there is no obvious or objective reason as to why certain MDC have been selected. For example, and as we have seen, the MDC for athletes with lower limb deficiency competing in running events is the loss of at least half of the foot. The decision to apply this particular criterion is therefore somewhat arbitrary, though not random, in nature: it might just as easily

be assessed as either 30% or 70%. Nevertheless, 50% is the decisive criterion. The effect of the application of this particular rule is to assess those individuals with less than 50% of their foot missing as being ineligible to compete (at least in running events in Athletics). These individuals are likely to be classified as disabled in society as a whole (and may therefore struggle to compete on equal terms with able-bodied athletes), but have been deemed as ineligible, and hence not (sufficiently) disabled, as far as Paralympic sport is concerned.

The MDC is not, however, without its problems. Consider, for example, the case of the paracyclist, Dame Sarah Storey, who was born without a fully functioning left hand. Storey started her career as a swimmer before switching to cycling. In terms of medals, Storey is the most successful and decorated British Paralympic athlete in history, winning 30 Paralympic medals, including 19 gold medals, and taking part in the Paralympic Games on nine occasions between 1992 and 2024. Storey's dominance on the track is such that she also competed in able-bodied competition and was a member of the Great Britain Olympic team pursuit team. Storey also won several track world cup gold medals in the team pursuit event, narrowly missing out on the able-bodied women's hour world record. Without wishing to minimise the nature or severity of her impairment or take anything away from her considerable achievements and success, both in Paralympic sport and able-bodied sport, the effect of Storey's impairment on her ability to perform in cycling must, however, be questionable in a sport where the most important physical attributes are leg power/strength and lung capacity.

Sarah Storey is of course not the only Paralympic athlete to have competed against able-bodied competitors. At the St. Louis Olympics of 1904, American Gymnast George Eyser competed with a wooden leg, collecting six medals in the process, three gold, two silvers, and a bronze. New Zealand archer Neroli Fairhall competed at the Paralympic Games in Heidelberg in 1972 and Arnhem in 1980, where she won the gold medal. Neroli, however, went on to become the first Paralympic athlete to compete at the Olympics at the Los Angeles Games of 1984, finishing in 35th place. South African Paralympic swimmer and single-leg below-the-knee amputee Natalie du Toit also competed without the use of a prosthetic limb at the Beijing Olympics of 2008. This is somewhat unusual for Paralympic amputees, with athletes such as Oscar Pistorius relying so heavily on prosthetic devices to assist their performance. I shall return to Oscar Pistorius shortly. This brings us neatly to the next ethical issue in Paralympic sport, namely the use of prosthetic limbs and other forms of technology.

6.2 Prosthetic Technology and Access to Resources

As I have previously stated in Chapter 1, a fair classification system is fundamental to the integrity of Paralympic sport, and by extension, the credibility of the IPC which organises Paralympic competition and is ultimately responsible for determining the classification system that is used in such competition. One of the greatest challenges to maintaining such integrity and credibility is to design a classification system that ensures that athletes with a similar level of impairment and functional ability compete against one another in the same class or event. To achieve this, and to ensure fair and equitable competition, the IPC must ensure that such a system reduces the impact of an athlete's impairment on the outcome of that competition as far as reasonably possible (McNamee, Parnell and Vanlandewijck, 2021).

It is, however, also fair to say that the impact of that impairment will differ significantly when an athlete is dependent upon the use of some form of technology or other equipment to perform the particular event or sport in question. Such technology may take the form of external aides such as wheelchairs or the types of straps and pillows used in wheelchair basketball, but may also extend to much more sophisticated and expensive forms of technology such as the use of prosthetic limbs, which are effectively integrated into, and therefore become part of, the athlete's body itself (McNamee, Parnell and Vanlandewijck, 2021). The introduction of such technology or equipment may therefore result in an athlete obtaining a particular advantage in terms of his or her performance which he or she would not have had but for the use of such external aides. Indeed, it is simply impossible for a Paralympic athlete to undertake certain types of sports or events at all without the use of such technology. Consider, for example, a single or double-leg amputee who wishes to compete in any of the events comprising the modern-day Athletics programme. With the exception of throwing events such as the shot put, discus, and javelin, which are capable of being performed whilst seated, all other events require such athletes to wear some form of prosthesis. For these reasons, it is therefore important to examine the role that the use of technology plays in Paralympic sport and the impact it has or may have, on the classification of competitors.

The IPC Policy on Sport Equipment

In recognition of the particular problems that the use of prosthetics and other technology creates for Paralympic competition and classification, the IPC has introduced a specific policy on

sports equipment that applies to all Paralympic sports and any other sports that are associated with the IPC (IPC Policy on Sport Equipment, 2011). Whilst the introduction and implementation of the IPC Policy on Sport Equipment is a laudable and important starting point to consider the effects of technology on athletic performance within Paralympic sport, the policy itself is extremely short and runs to just two pages, offering very little guidance or detail, either by reference to particular sports or events or at all.

Section 1 of the Policy begins by providing a brief overview and simply states that

“The International Paralympic Committee recognizes the important role of sports equipment in enabling Paralympic competition, and is committed to a sport environment where there are fair and clear rules governing the use of sport equipment for each sport”.

(Section 1, IPC Policy on Sport Equipment, 2011).

The scope of the application of the IPC Policy on Sport Equipment is set out in section 2, which states that

“This Policy shall apply to all Paralympic Sports and any other sport associated to the IPC or the Paralympic Movement.

Sports equipment in this policy refers to all the implements and apparatus adapted to the special needs of Paralympic athletes, and used by athletes during competition on the Field of Play to facilitate participation and/or to achieve results (e.g. wheelchairs, seated throwing devices, bicycles, sit-ski, prostheses and orthoses).”

(Section 2, IPC Policy on Sport Equipment, 2011).

Section 3.1 of the IPC Policy on Sport Equipment outlines four fundamental principles regarding the use of prosthetics and other equipment during Paralympic competitions and events, including the Paralympic Games. They include physical prowess, fairness, universality, and safety. I now consider each of those fundamental principles separately and in turn, by focusing on how they may impact upon, and affect the issue of Paralympic classification, starting with the issue of what the IPC describes as ‘physical prowess’.

(i) Physical Prowess

The stated aim of the IPC Policy on Sport Equipment is to emphasise what it calls ‘physical prowess’ in Paralympic events and competition by making clear its focus on human performance rather than technological assistance. For example, section 3.1.4 of the policy states that

“Human performance is the critical endeavour to the sport performance, not the impact of technology and equipment.”

(Section 3.1.4, IPC Policy on Sport Equipment, 2011).

Furthermore, section 3.2 of the 2011 Policy states that

“Equipment that results in sport performance not primarily being generated by the athlete’s own physical prowess but being generated by automated, computer aided, or robotic devices is prohibited in IPC Sanctioned Competitions and Events, and at Paralympic Games.”

(Section 3.2, IPC Policy on Sport Equipment, 2011).

The IPC’s emphasis on human performance rather than external technological assistance in the 2011 policy bears a distinct resemblance to Rule 6.3.4 of the Technical Rules of World Athletics, which prohibits

“The use of any mechanical aid, unless on the balance of probabilities the use of an aid would not provide them with an overall competitive advantage over an athlete not using such aid”

(World Athletics Technical Rules, 1 November 2019 and amended on 31 January 2020).

The previous iteration of this particular rule (rule 144.2(e) of the International Association of Athletics Federations (IAAF) rules of competition) prohibited the

“Use of any technical device that incorporates springs, wheels or any other element that provides the use with an advantage over another athlete not using such a device.”

(Rule 144.2(e) of the International Association of Athletics Federations (IAAF) rules of competition, World Athletics, 2007).

This rule formed the basis of the objection of World Athletics (which was then known as the IAAF) to Oscar Pistorius competing alongside able-bodied athletes at the 2008 Beijing Olympics (Burkett et al. 2011; McNamee and Parnell, 2018). Oscar Pistorius, the former ‘blade runner’, is a double transtibial amputee who used the latest J-shaped carbon prosthetic limbs (or ‘blades’) called the ‘Cheetah flex-foot’ manufactured by the Icelandic company, Ossur. The IAAF had initially invited and encouraged Pistorius to compete in able-bodied events in the lead up to the Beijing Olympics of 2008. The IAAF’s actions may have been motivated by the realisation that Pistorius had the potential to attract greater numbers of spectators and enhance media interest in the sport as a result of his different (some would say novel) appearance. In a strange about turn, the IAAF subsequently ruled that Pistorius was ineligible to compete in Beijing, even if he achieved the necessary qualifying times and was selected to run by the South African National Association.

The IAAF relied upon competition rule 144.2(e) in support of its position. The IAAF’s main concern was whether Pistorius’s carbon ‘blades’ gave him an unfair advantage over his able-bodied competitors. Prosthetic blades are lighter than natural legs, more aerodynamic, and have reduced contact area with the track. They may also give greater ‘spring’ than natural legs, leading to a longer stride. As a result, the IAAF claimed that Pistorius had an unfair advantage over athletes with natural legs (Bruggemann et al., 2007; Jones and Wilson, 2009). The sports scientists retained that Pistorius retained as experts argued otherwise, stating that the blades were notoriously difficult to control round bends (a distinct disadvantage in the 200m and 400m events) and that his acceleration out of the starting blocks was much slower than able-bodied athletes (Weyand et al., 2009).

Pistorius appealed the IAAF decision to the Court of Arbitration for Sport (“CAS”), who ultimately ruled in his favour (*CAS 2008/A/1480/Pistorius v IAAF*, award of 16 May 2008). However, in doing so, the CAS was at pains to stress that it was not setting a legal precedent and that every case would necessarily turn on its own set of facts. This is, however, an interesting case that questions whether and how far technology may alter or even undermine the nature and goods (i.e. those inherent aspects thought to be of value) of Paralympic competition and in this particular case, the possibility of shared competition between Olympic and Paralympic athletes (Burkett et al., 2011; Edwards and McNamee, 2015; Jones and Wilson, 2009), but which is not the focus of this study.

The reliance on technology rather than natural ability or ‘physical prowess’ can also be seen in the long jump event, where the Blade Runner has given way to the ‘Blade Jumper’, the German Paralympic athlete, Marcus Rehm. Rehm is a single-leg amputee, who competes using a prosthetic limb manufactured by the German company Ottobock. Like Pistorius, Rehm has competed alongside able-bodied athletes. Rehm was the German National Champion in both 2014 and 2015. In 2014, Rehm outjumped the 2010 able-bodied European champion, Christian Reif, with a distance of 8.24m and the German Athletics Federation allowed Rehm to claim the title. In 2015, Rehm won the National title again with a leap of 8.11m. This time, however, Rehm was not allowed to retain the title, which was awarded to the second-placed athlete Fabian Heinle. Nothing of any significance had changed between the 2014 and 2015 events, and whilst Rehm remains somewhat stoic about the difference in treatment, we can only assume that whilst the German Athletic Federation was willing to allow the ‘underdog’ one victory, they were not prepared to let history repeat itself. Rehms personal best of 8.29m would have placed him in the silver medal position behind Britain’s Greg Rutherford at the 2012 Olympic Games. The 64,000 dollar question is this: is Rehm an extraordinarily talented long jumper who just happens to have lost a limb, or is his carbon prosthetic limb responsible for his success? This is precisely the same question that was levelled at Oscar Pistorius.

We can also draw upon an example from the sport of wheelchair tennis and the case of Nicholas Taylor. Taylor is an American wheelchair tennis player who dominated the men’s doubles event together with his partner, David Wagner, after 2004, winning 4 Paralympic medals, 11 Doubles Masters titles, 7 US Open grand slam titles and 4 Australian Open grand slam titles. Whilst Wagner (and most opponents) moves his wheelchair around the court manually using his hands, Taylor has use of an electric engine on his wheelchair that he controls with a joystick. The use of such technology is problematic for the IPC’s Policy on Sport Equipment (International Paralympic Committee, “IPC Policy on Sport Equipment”, 02 April, 2011) and in particular, the statement that human performance is the critical endeavour, not the impact of technology and equipment.

The Taylor case draws parallels with the Belgian cyclo-cross rider, Femke Van den Driessche, who was disqualified from competition in 2016 when it was discovered that she had used an electric motor to power her bike which was hidden inside the bike frame (Pike, 2018). Van den Driessche was not a Paralympic athlete, but the case illustrates the extent to which athletes rely on technology and equipment to assist their sporting performance. Perhaps the critical

difference between Tayloe and Van den Driessche, however, is that whilst Taylor uses his wheelchair to assist with his day-to-day activities and makes no attempt to hide his use of this equipment, the electric motor used by Van den Driessche was deliberately concealed inside her bike frame. Another important difference between Taylor and Van den Driessche is the fact that without this particular piece of technology, Taylor cannot manually propel his wheelchair, while Van den Driessche is capable of riding her bike without using a motor.

(ii) Fairness

Section 3.1.2 of the IPC Policy on Sport Equipment states that

“Equipment needs to be regulated in sports rules in sufficient detail.”

(Section 3.1.2, IPC Policy on Sport Equipment, 2011).

Section 3.3 of the IPC policy also states that

“Sports in the Paralympic Movement have the responsibility to ensure the provisions of this policy are reflected in the respective IPSF rules and regulations. These provisions shall also include rules and regulations governing equipment control and inspection, the certification authority and clear timelines and procedures to handle protest and arbitration.”

(Section 3.3, IPC Policy on Sport Equipment, 2011).

The use of increasingly sophisticated technologies in Paralympic sport such as prosthetic technology has the potential to affect the fairness of Paralympic classification and competition. The example of prosthetic blade length serves to illustrate this point. Despite his successful appeal to the IAAF referred to above, Oscar Pistorius ultimately failed to achieve the necessary qualifying times for his chosen events and did not compete at the Beijing Olympics in 2008. He did, however, compete at the London 2012 Olympic and Paralympic Games. Pistorius lost the 200m Paralympic final (for which he was the pre-race favourite) to the Brazilian Alan Oliveira, prompting an outburst from Pistorius, who accused Oliveira of using longer blades, and stated that

“If you look at videos from last year, Alan was shorter than me but now he’s taller than me.”

(Paxinos, 2012; Thomas and Banks, 2013).

The CAS judgment in the Pistorius appeal case held that Pistorius had to use the specific blades tested as a condition of competing at the Olympics. Indeed, it would have been wholly impractical for Pistorius to train for, and compete with, one set of blades of a certain length at the Olympics and another set of blades of a different length at the Paralympics. Consequently, it could be argued that Pistorius's decision to challenge the IAAF decision and his overwhelming desire to compete at the Olympics ultimately backfired by costing him the 200m Paralympic Gold. The argument between Pistorius and Oliveira raises another interesting ethical dilemma, namely that it is potentially possible for double-leg amputee athletes to change the length of their prosthetic limbs to enable them to become taller than they would otherwise have been had they had natural legs and therefore propel themselves faster along the track (Illman, 1994).

Universality

Section 3.1.3 of the IPC Policy on Sport Equipment states that

“The cost and large-scale availability of (principal components of) equipment to guarantee access to a sufficiently large number of athletes in the sport.”

(Section 3.1.3, IPC Policy on Sport Equipment, 2011).

In addition, section 3.4 of the IPC policy states that

“Sports in the Paralympic Movement have a responsibility to support the development of universally available high-standard sports equipment.”

(Section 3.4, IPC Policy on Sport Equipment, 2011).

The IPC's inclusion of sections 3.1.3 and 3.4 in the 2011 policy is designed to ensure that the technology and equipment used by Paralympic athletes should be available to all, regardless of the athlete's nationality, level of resources, or individual circumstances (McNamee, Parnell and Vanlandewijck, 2021). This is something of a lofty ideal that the IPC has ultimately failed to deliver on. Whilst it is fair to say that technology dominates many modern sports, both Olympic and Paralympic, it is arguably the case that Paralympic athletes rely more heavily on adaptive technology than their able-bodied peers. Increased reliance on, and use of, such

technology often results in unequal access to, and distribution of, resources between the ‘haves’ and the ‘have nots’. We only have to look at the cost of the latest carbon prosthetic technology to appreciate this fact. Modern prosthetic technology designed and manufactured by the likes of Ossur and Ottobock costs tens of thousands of pounds, giving those athletes who can afford them an obvious advantage over those who cannot. This gap will surely only widen as technology improves, and costs increase. This may lead (or exacerbate) the position where resource-rich nations and/or those athletes with the benefit of wealthy sponsors, succeed over those athletes from resource-poor nations and/or those without the backing of affluent corporations.

Technology such as prosthetic limbs are therefore most certainly not available to all athletes, particularly those from less developed countries and/or those less high profile competitors who lack access to sponsorship from prosthetic technology manufacturers such as Ossur and Ottobock. This is illustrated by the results of athletes competing in successive Paralympic Games, which has consistently indicated that athletes from less developed countries are far less successful than athletes from wealthier nations when it comes to events that rely on prosthetic and other technologies (McNamee, Parnell, and Vanlandewijck, 2021). The non-universal access to such equipment presents an obvious challenge to the rules set out by the IPC in their Policy on Sport Equipment.

Safety

Section 3.1.1 of the IPC Policy on Sport Equipment states that

“All Equipment in use must protect the health and safety of the user, other competitors, officials, spectators and may not cause damage to the environment (e.g. Field of Play)”

(Section 3.1.1, IPC Policy on Sport Equipment, 2011).

The issue of safety can be illustrated by reference to the case of the German Paralympic ‘*Blade Jumper*’, Markus Rehm (Beckmann et al, 2016). As stated above, Rehm is a single-leg amputee long jumper, who competes using a prosthetic limb manufactured by the German company, Ottobock. Like Oscar Pistorius, Rehm has on occasion competed alongside able-bodied athletes. Whilst it may not be immediately obvious, amputations can take many forms, as can the manner with which the athlete’s natural leg and stump are connected to the prosthesis that

is being used. It has been suggested that Rehm has a ‘perfect’ stump which allows an ideal connection with his prosthetic blade, resulting in greater functionality and efficiency than many of his competitors who do not possess this advantage (McNamee, Parnell, and Vanlandewijck, 2021).

Whilst the discussion has thus far concentrated on the ability to alter the connection between an athlete’s natural leg/stump and an external device such as a prosthetic limb, there also remains a more radical solution to this problem in the form of osso-integration, which involves the semi-permanent fusing of human tissue and bone with an external mechanical device such as a prosthetic limb. Whilst authors such as McNamee et al (2013) have discussed the role that organisations such as the IPC should play in intervening in such cases by greater regulation, together with the prospect of athletes having more choice in the types of biotechnology in terms of the surgery and prosthetic design and fitting that is available to them for use in sporting competitions, it is wholly unclear from the current iteration of the IPC Sport and Equipment Policy, as to whether such modifications would be permitted. Furthermore, it is not beyond the realm of imagination that athletes who feel they are at a disadvantage may even consider the possibility of surgical procedures to alter the configuration or shape of their stump to provide a better connection with their prosthetic limb. The potential for such ‘elective amputation’ by Paralympic athletes is hugely controversial and is an issue to which I will now turn.

6.3 Elective Amputation

Elective amputation is not a new concept (Dyer, 2000). There are at least two reasons why an individual might seek to undergo amputation surgery voluntarily. The first is that some people claim that a particular limb does not feel “part of them”. The limb is not usually damaged or diseased in any way, and there is no therapeutic reason for any form of surgical intervention. Such individuals are typically diagnosed with a specific form of psychiatric illness such as Body Dysmorphic Disorder (“BDD”) (Bridy, 2004) or Body Identity Integrity Disorder (“BIID”) (Muller, 2009).

A second possibility is the amputation of an intact but damaged limb. Two examples serve to highlight this issue. The first example involves a 22-year-old war veteran who suffered injuries to his feet and ankles after being involved in a mine explosion. After surgery and rehabilitation, the individual had no or mild pain whilst resting, mild pain when walking short distances, and

moderate pain when walking longer distances. He had no other medical concerns and was otherwise healthy. After spectating at a disability sports event and witnessing the latest technological prosthetic devices, the individual requested a bilateral below-knee amputation so that he could compete in disabled sporting competitions. The second example concerns a 19-year-old wheelchair athlete who had sustained a complete spinal cord injury in a car accident when she was 15, who requested a bilateral above-knee amputation to be lighter and therefore faster (McNamee et al, 2014).

Somewhat paradoxically, the elective amputation of an individual who is already disabled (thereby disabling them further) may result in a form of non-therapeutic enhancement when viewed from a purely sporting perspective. Indeed, it might appear that such athletes, post-successful amputation, might be flourishing (Nordenfelt, 1997). However, when viewed from the medical model of disability advocated by Boorse (1977), such elective amputations are effectively requests to facilitate self-harm (and even mutilation) (McNamee et al, 2014).

Although a patient who has capacity and is therefore of sound mind would presumably give their consent for such surgery, the physician treating that patient risks being in breach of the Hippocratic Oath by deliberately harming them. To what extent, if any, is this any different from an ethical perspective to doctors who practice cosmetic surgery with no therapeutic value? For example, the Romanian tennis player, Simona Halep, underwent breast reduction surgery at the age of 17 to reduce her breasts from a 34DD bra size to 34C, arguing that this would improve her reaction times. By the age of 22, Halep had risen through the world rankings such that she was the number three seed in the Ladies' Singles event at the 2014 Wimbledon Championships. Halep's rise to fame may have happened irrespective of the surgery, although her coach has remarked that the surgery was an important part of her career, which indicates that this was at least partly responsible for her success on the court (Kelly, 2014).

If breast reduction surgery is now perceived as a legitimate (and increasingly acceptable) method of surgery for both sporting and non-sporting purposes, should we consider extending those same principles to more radical forms of elective surgery on other parts of the body, such as amputation of the limbs? This approach is consistent with the views of Mill, who believed that individuals should have the right to exercise control over their own bodies and therefore have the right to harm themselves provided that no one else is harmed in the process (Mill, 2016; McNamee et al., 2014). Nevertheless, it may invite a "slippery slope" for organisations

such as the IPC and other sports governing bodies to invite, encourage or condone such behaviour or allow such athletes to participate in their competitions. Indeed, I would argue that it is perfectly reasonable and ethically permissible for those organisations to prevent such athletes from competing on the basis that their understanding of disability – whether congenital or acquired – does not include those who have in effect created their own impairments. The practice of elective amputation by Paralympic athletes is therefore ethically and morally questionable and is likely to constitute cheating. In the section that follows, I examine some other highly questionable practices, beginning with the use of performance-enhancing drugs and other prohibited substances, or ‘doping’.

6.4 The Use of Performance-Enhancing Drugs (‘Doping’)

There is just as much potential for paralympic athletes to cheat as able-bodied competitors. For example, the use of performance-enhancing drugs or ‘doping’ is not only a problem in able-bodied sport, but is also prevalent in Paralympic sport. Paralympic athletes are just as likely as their able-bodied peers to use performance-enhancing drugs to train harder and longer; assist with recovery; deal with pain or injury; and/or attempt to obtain an unfair advantage over their fellow competitors. For example, at the Sydney Paralympics of 2000, the Canadian sprinter, Earle Connor, destroyed the opposition in the T42 (above-the-knee amputee) class using the latest prosthetic technology. During those Games, and perhaps with inside knowledge of what was to follow later, Connor was heard to say that

“You are naïve if you think that there are not athletes here doing drugs”

(Howe 2008, p.130).

Somewhat ironically, Connor tested positive for the banned substances nandrolone and testosterone immediately before the Athens Paralympics of 2004 and was therefore banned from competition as a result (Howe, 2008). The need to apply strong anti-doping measures is therefore seemingly just as much of a priority in Paralympic sport as it is in Olympic sport. The use of performance-enhancing drugs does not, however, have any direct bearing on the issue of classification in Paralympic sport and sporting competition. We can, however, find particular forms of cheating in Paralympic sport that do not appear in able-bodied sport. Examples include the practice of autonomic dysreflexia (or ‘boosting’).

6.5 Autonomic Dysreflexia (“Boosting”)

Autonomic Dysreflexia (or “boosting” as it is better known) involves the athlete deliberately provoking a bodily response equivalent to an adrenaline rush leading to increased heart rate and blood pressure. This may be achieved by various means, including self-administered shocks, intentionally withholding the release of urine or other self-induced pain (McNamee 2015). The possible side effects of boosting include an increased risk of stroke or heart attack (Mills and Krassioukov, 2011). This practice is prohibited by the IPC on the basis that it is similar to doping (International Paralympic Committee, “Position Statement on Autonomic Dysreflexia and Boosting”, April 2016). In contrast to doping, however, the athlete does not use any external substances (with the exception of electric shocks). Consequently, it could be argued that boosting is simply a “natural” phenomenon that ought to be permitted. Further, it might be possible to defend the practice by arguing that athletes with naturally low blood pressure are merely using their own bodies to compete on a par with those with naturally higher blood pressure. Alternatively, one could factor in the resting blood pressure of athletes in eligibility criteria and have two different events for the two categories of competition (McNamee, 2015). However, this would needlessly create even more categories of classification in Paralympic sport where a plenitude of categories already exist.

Furthermore, the risks of boosting are such that the IPC would appear to be justified in banning this practice on the basis that, in common with doping, it is potentially both performance enhancing and significant harm to the athlete may result from it. It would seem, moreover, a likely candidate for being an action that is contrary to the ‘spirit of sport’, thereby satisfying all three of the criteria of the World Anti-Doping Agency (“WADA”) Code (only two of which are necessary to consider a substance or method for WADA’s Prohibited List).

6.6 Botox Injections

A further ethical concern is that of intentional misrepresentation (“IM”). This occurs when an athlete intentionally misrepresents his or her skills, abilities, degree, or nature of physical, visual, or intellectual impairment with the intention of misleading or deceiving those responsible for the classification process (Article 9, International Paralympic Committee, “Athletics Rules and Regulations 2016-2017, January 2016). This is, of course, a form of cheating, and will be investigated and potentially sanctioned by the IPC (IPC Draft

International Standard for Intentional Misrepresentation, July 2023). However, determining when this amounts to cheating is incredibly difficult in Paralympic sport, where no two athletes are the same, and the relevant impairment may be unstable and therefore change over time, with the result that an athlete may need to undergo continual reclassification over an extended period of time.

It is well understood and accepted that the class to which an athlete is assigned has an obvious impact on their success. Consequently, there is an inherent risk that athletes may try to exaggerate their impairment and under-perform on the relevant assessment to be placed in a class of athletes who have more severe impairments so that they have a better chance of winning. Whilst athletes who misrepresent their position may face severe sanctions, it is exceptionally difficult to determine whether any such cheating has taken place. This is certainly the position with botulinum toxin (“botox”) injections.

Individuals with conditions such as cerebral palsy may bring about greater spasticity by using botox injections, which in turn assists their ability to undertake normal daily activities. When applied in a non-sporting context, botox, therefore, represents a form of therapeutic treatment that is relatively uncontroversial. If, however, this same treatment was used in a sporting context immediately before competition, a Paralympic athlete may be able to deliberately cheat the system by changing their classification status to improve their chance of success. This is made more difficult because the IPC does not have any express rules or criteria forbidding this practice and even if this was prohibited, there are no methods currently available to detect the use of botox (McNamee, 2015).

Why is it that the use of botox is seemingly ethically acceptable in the first instance, but is frowned upon (although not specifically prohibited) in the second instance? The answer may well lie in the fact that in the first instance, botox is being used for therapeutic purposes to enable the individual to undertake certain activities that an able-bodied individual may take for granted and therefore assists that person in restoring their function wholly or partially to that of the typical [human] species. In the second instance, however, the use of botox would represent a form of cheating by attempting to gain an unfair advantage. When used in a sporting context, the use of botox must therefore surely be ethically questionable.

6.7 Intentional Misrepresentation ('IM')

Intentional Misrepresentation has become a particular problem in Paralympic sport and has been called “the biggest threat to the integrity of Para sports” (Cohen et al, 2023). Examples of intentional misrepresentation include Paralympic athletes deliberately exhausting themselves before classification so that they seem weaker or pretend to be less coordinated. Perhaps the most (in)famous case of intentional misrepresentation involved the Spanish basketball team who won gold in the intellectual impairment class at the 2000 Paralympics in Sydney. Shortly after the conclusion of the Games, a team member revealed that 10 of the 12 athletes on the team were not intellectually or otherwise impaired. As a result of this incident, the Spanish athletes were stripped of their medals, and sports for athletes with intellectual impairments did not make a further appearance at the Paralympic Games until 2012 (Mackay, 2013). More recently, the IPC stripped Indian discus thrower Vinod Kumar of his bronze medal in the 2020 Paralympics (World Para Athletics, 2022). Kumar had been assigned to the F52 class for athletes in field events who compete from a seated position due to limb deficiency, leg length difference, impaired muscle power, or impaired range of movement. Kumar, however, was observed competing with less impairment than he had shown during the original classification process and the IPC deemed him to have deliberately exaggerated the extent of his impairment.

Intentional misrepresentation has also been prevalent in sports such as Athletics and Swimming. For example, in 2014, the Performance Programme Manager of British Athletics, Mike Cavendish, raised concerns over British athletes deliberately misrepresenting their condition to be placed in a more favourable class for their particular event and thus improve their chance of success. In an internal email, Cavendish said that the majority of athletes who had been entered into the wrong Paralympic classification had done nothing wrong, but that others were

“thought to have knowingly pursued classifications that they know to be incorrect, simply to gain a competitive advantage”.

(Taylor, 4 September 2016)

Cavendish also wrote:

“On some occasions athletes (and national Paralympic committees/national governing bodies) are thought to have knowingly pursued classifications that they know to be incorrect, simply to gain a competitive advantage. Unfortunately despite IPC Athletics’ recent introduction of the Medical Diagnostics Form (MDF) prior to classification, the process isn’t always robust enough to spot these individuals.”

(Taylor, 4 September 2016)

Cavendish also stated in the email that the key aim of British Athletics was to win as many gold medals as possible:

“In doing so British Athletics’ sole aim is to maximise the chances of gold medal success at these competitions, principally the Paralympic Games,”

(Taylor, 4 September 2016)

British Athletics responded to the issues raised by Cavendish by stating that

“This is actually clear evidence of UK Athletics going well beyond what is required to ensure that all British athletes competing internationally are in the correct class so as to avoid problems that had occurred in previous cycles for a wide range of nations across Paralympic sports. This email does not in any way acknowledge a UK issue, more our recognition of being a leading nation on the international landscape.”

(Taylor, 4 September 2016)

British Athletics added that:

“We would refer you to the following from that email: ‘In order to be eligible for selection, the British Athletics chief medical officer must be confident that an athlete has a permanent and verifiable medical diagnosis to underpin their classification. This will be the case regardless of whether an athlete has a confirmed or reviewed IPC Athletics classification, or no classification at all. If we doubt an athlete’s classification, we believe it is our duty as the [national governing body] of athletics in the UK to protect the integrity of the sport. Doing so protects vulnerable individuals within the sport but also ensures government investment within Para-athletics, via UK Sport, is invested correctly and fairly.’”

(Taylor, 4 September 2016)

They added that:

“Classification of all international para-athletes is handled exclusively by the International Paralympic Committee. UK Athletics is not responsible for the

classification of any of its athletes competing internationally. The system for classifying disabilities in Paralympic competitions is highly complex, involving a wide range of physical conditions and requiring detailed analytical processes...UK Athletics is confident of the classification of all British athletes who will be competing in Rio and we always cooperate 100% with the IPC to ensure that all GB athletes are correctly classified in line with international rules. Where concerns have been raised, UKA have correctly responded by requesting that the IPC check medical and procedural records to either ratify or change the athlete classification. All such decisions are rightly a matter for the IPC only and cannot be influenced by national governing bodies."

(Taylor, 4 September 2016)

Another complaint regarding IM was raised by the British Paralympian Bethany Woodward, who won silver in the T37 200m at the 2012 London Paralympics but decided to withdraw from the British team in 2016 so that she could speak out on the classification process. Woodward, who has cerebral palsy, told the Sunday Times newspaper that she had lost faith in the team over the issue, saying

"I represented my country for a long time, but if I can't compete like I used to compete because they've brought in people who are not like me in terms of disability, what's the point?"

(Taylor, 4 September 2016)

A spokesman for the IPC responded to Woodward by stating that:

"Although we are sympathetic with Bethany's view, we would like to stress that the 30s classes are not and never have been just for athletes with cerebral palsy but athletes with coordination impairments. All athletes who take part in international competition have all been classified internationally by an independent panel and we are confident and happy they are in the correct class to compete. Each international race is also watched by a chief classifier who can protest an athlete classification at any point if they believe they are in the wrong class."

(Taylor, 4 September 2016)

Finally, the father of the Paralympic athlete Olivia Breen, who ran with Woodward to take bronze in the 400m relay in London in 2012, has also complained about the current classification system. Michael Breen alleged that British Athletics seemed primarily focused on winning medals, stating that:

“The current classification system is not fit for purpose. Consequently, some athletes have been incorrectly classified.”

(Taylor, 4 September 2016).

UK Athletics’ former head Paralympics coach, Peter Eriksson, has also called for the classification of athletes to be removed from the IPC and handed over to an independent body similar to WADA. Eriksson told The Guardian that:

“The IPC is constantly looking at how we can improve classification, but I think classification should be done by an independent organisation similar to Wada. We should have to have full-time professionals doing this. Classification should be independent of the IPC and the sport to take the pressure off the IPC. This would, however, be associated with a huge amount of cost.”

(Taylor, 6 September 2016)

Eriksson said that he believed handing over classification to an independent body would improve things, adding that:

“I think the classification system is an ongoing process to improve. I think the classification organisation should be independent. I think we are inevitably going in that direction.” He added: “The UK is doing the best job of any country in the world when it comes to getting classification correct. I don’t believe there’s cheating, but everyone can make a mistake. When I was in the UK, it was part of the system to make sure that everybody had the proper information – we had MRI scans and specialised neurological scans to make sure everyone is above board.”

(Taylor, 6 September 2016)

Eriksson said it should be harder for athletes to get confirmed status, and that athletes should be observed over a longer period of time before being permanently classified. Although these concerns were initially dismissed as having no basis in fact by officials of British Athletics and the IPC, British Athletics subsequently set up an inquiry to investigate this issue. The subsequent report dated March 2017 made several recommendations. It is, however, unclear to what extent (if any) those recommendations have been acted upon by British Athletics.

Concerns about intentional misrepresentation are not limited to athletics but have also recently been raised in swimming. For example, in July 2016, on the eve of the Rio Paralympics, the US para-swimmer, Ian Silverman, wrote to the IPC expressing his concerns relating to the

Ukrainian para-swimmer, Denys Dubrov (SwimSwam, 2016). In August 2016, the IPC confirmed that it had reviewed more than 80 individual files of athlete classifications across six different sports in the previous 12 months (International Paralympic Committee, “The IPC provide an update on alleged cases of intentional misrepresentation”, 11 August 2016). The IPC advised that it had examined 16 potential cases of intentional misrepresentation in Swimming and determined that in all cases there was insufficient evidence to take any cases forward. This led to a flurry of requests to the IPC to review individual classification cases across several other sports, involving a total of 80 athletes from 24 countries. However, the IPC found no instances of intentional misrepresentation in any of the cases that had been referred to them.

Despite the IPC’s findings from 2016, controversy continues to surround the issue of intentional misrepresentation, causing some to argue that classifiers should have the mandate to carry out random ‘spot’ checks of an athlete’s classification, similar to the system of drug testing operated by sports governing bodies, with an independent body similar to the World Anti-Doping Agency (‘WADA’) being set up to detect and deal with such cases (Cohen et al, 2023). This would, however, come at a considerable cost and it is unclear who would be able or willing to fund such a testing program given the relatively modest resources available to organisations such as the IPC.

6.8 Summary and Conclusions

The requirement to ensure fairness and fair play between participants is one of the most important ethical issues at all levels of sporting competition and is a particular problem in Paralympic sport due to differences in the nature and severity of athletes’ impairments. As the organiser of Paralympic sport, the IPC attempts to promote fairness in the structure of competition by grouping athletes into different classes. As I have identified in this chapter, however, many aspects of the current classification system are unfair. In this chapter, I have outlined some of the ethical issues and other problems that arise in Paralympic competition that have an impact on the classification process. I have stated that some of those issues are unique to Paralympic sport, and include Intentional Misrepresentation (“I.M.”); autonomic dysreflexia/‘boosting’; elective amputation; and the use of prosthetic technology, whilst other issues such as the use of performance-enhancing drugs and other substances (‘doping’) and

access to resources and technology are common to both Paralympic sport and able-bodied sport.

These issues are not exhaustive, but I have introduced them at this stage to give examples of the types of ethical problems that exist within Paralympic sport and classification. I will return to some of those issues in Chapter 9 by considering them within the context of the alternative framework that I have developed in this study to demonstrate that this particular model is fit for purpose. In the chapter that follows, however, I will critically examine the work of Sigmund Loland, who has established the most well-developed model for fairness and fair play in sport in his moral norm system.

PART III - THEORY

CHAPTER 7 – LOLAND: FAIR PLAY TO FAIR EQUALITY OF OPPORTUNITY

There are many aspects of the current system of Paralympic classification which are unfair. In Chapter 6, I outlined some of the more problematic ethical issues that arise in Paralympic sport and classification. My stated objective at the outset was to provide a fair classification system for Paralympic sport from an ethical and philosophical perspective. Sigmund Loland (2002, 2010, 2017, 2020; Loland and Hoppeler, 2012) has established the most sophisticated ethical model for evaluating fairness and fair play in sport. Loland, however, makes no distinction between able-bodied and disability sport in his model. The second of my stated objectives from the outset was to critically review Loland's ethical model to determine whether his model adequately provides for fairness and fair play in Paralympic sport and sporting classification. In this chapter, I therefore address this specific objective by providing an overview of Loland's moral norm system as a precursor to establishing whether this is capable of being applied to Paralympic sport in its current form, or whether and to what extent it requires adaptation or even rejection.

7.1 Loland's Moral Norm System

The most developed framework for assessing fairness and fair play in sport on a philosophical basis is the moral norm system proposed by Sigmund Loland, in *Fair Play in Sport: a Moral Norm System* (Loland, 2002). Loland subsequently develops this framework in several later works (Loland 2010, 2017, 2020; Loland and Hoppeler, 2012). Loland's model uses moral and political philosophy to integrate several different ethical approaches. The first part of the model considers the fairness of sport and sporting competition using Rawlsian social justice and Aristotelian virtue ethics. The second part examines what constitutes a 'good' sporting competition, wherein he adopts a utilitarian approach. For this study, I intend to concentrate on the first part of Loland's model only, since I am primarily concerned with a model for ensuring *fairness* in Paralympic classification and sporting competition, rather than what makes for a *good* Paralympic competition.

Loland's stated aim is to develop a moral norm system of fairness and fair play to guide conduct in sport and sporting competition. In so doing, Loland selects from three separate normative ethical theories, namely the virtue ethics of Aristotle; the consequentialism/utilitarianism of

Bentham and Mill; and the non-consequentialist theories such as those of Kant. Although Loland considers applying a consequentialist approach to develop the first part of his ethical framework, he ultimately dismisses this, preferring a non-consequentialist approach. This is because Loland, following Rawls (1971), argues that utilitarianism does not distinguish between individual persons or different kinds of moral norms (Loland, 2002). Loland argues that normative ethics must have action-guiding force, which requires an understanding of human agency based on choice, holding that we are responsible for our actions if we could have chosen otherwise. In other words, a person acts voluntarily when that person chooses a particular action from two or more alternatives and when there are no obstacles, restrictions, or limitations preventing that person from acting in a particular manner (Loland, 2002). Voluntary action is therefore unforced action. For Loland, sport is an archetypal example of a voluntary practice in which individuals make unforced, rational choices.

Loland argues that being rational is often associated with prudence and acting with self-interest, or self-preservation, in the Hobbesian sense (Loland, 2002). Loland cites Hobbes as an example of a consequentialist approach to ethical norms. Like Midgley (1985, 1991), Loland rejects the narrow account of rationality as the maximisation of self-interest, and with it, the consequentialist line of thought. Instead, Loland argues that human beings form agreements with one another not merely through self-interest, but because they also have sympathy for, and empathy with, others of their species and that they are essentially programmed, or ‘hard-wired’, to like and communicate with one other (Loland, 2002). Having rejected consequentialism as the basis for his ethical model of fair play in sport, Loland looks for alternative theories and finds these in the shape of the social contract. Loland likens fairness and fair play in sport as a form of social justice and draws heavily on Rawls’s ‘*justice as fairness*’ theory as the main influence in formulating the first part of his moral framework which Rawls articulates in *A Theory of Justice* (1971).

7.2 The Social Contract

I pause briefly here to consider the concept of the social contract. The notion of the social contract is one of the strongest approaches to justice and is derived from the liberal political philosophy in the classical Western tradition (Nussbaum, 2006). The social contract has appeared in various guises in Locke’s *Two Treatise of Government* (1689), Rousseau’s *Social Contract* (1762), and Kant’s *Doctrine of Right*, part one of his two-part *Metaphysics of Morals*

(1797). The Hobbesian contractarian view is to imagine a ‘state of nature’ without government, the rule of law, any judicial system, property rights, or sovereignty. Hobbes famously described this state of nature in the following passage from *Leviathan*, which was first published in 1651:

“In such condition, there is no place for Industry; because the fruit thereof is uncertain; and consequently no Culture of the Earth; no Navigation, nor use of the commodities that may be imported by Sea; no commodious Building; no Instruments of moving, and removing such things as require much force; no Knowledge of the face of the Earth; no account of time; no Arts; no Letters; no Society; and which is worst of all, continuall feare, and danger of violent death; And the life of man, solitary, poore, nasty, brutish, and short.”

(Hobbes, 2017).

Unless you had unlimited power and/or resources, life would not be pleasant or enjoyable in Hobbes’s state of nature. Instead, contractarians propose that the citizens of that society should come together to make a [social] contract with one another which would set out the basic set of rules or principles that would apply to each of those citizens to protect their interests. The structure of the resulting society is therefore made from the outcome of that contract. Hence there are essentially two parts to the social contract, namely the design of the “*initial choice*” situation (in which individuals frame the relevant principles that are to prevail in a fair and just society); and the principles that ultimately result from this process. The idea behind the social contract is that if the structure of the initial choice situation is fair, then the principles resulting from that bargaining position will also be fair. Rawls calls this ‘procedural justice’ (Rawls, 1971).

Several elements are essential to the social contract tradition. First, those participating in the initial choice situation must find themselves in a particular type of situation under which justice is desirable and necessary. Hume describes these as the ‘circumstances of justice’, though he is no contractarian himself (Hume, 2000). In broad terms, those circumstances include the fact that the participants are broadly similar in physical and mental powers and have roughly the same needs and interests such that cooperation with one another is possible. Second, the participants are all ‘free, equal, and independent’. They are *free* in the sense that no one owns anyone else (or in the words of Locke, “*nobody may be subjected to the power of another but by consent*” (Nussbaum, 2006). The parties are also roughly *equal* in terms of both moral capacity and power and resources. This is crucial to understanding how the parties contract with one another, why they want to make a contract, and what they hope to gain from it

(Nussbaum, 2006). The parties are *independent* in the sense that they are not under the domination of, or dependent upon, any other persons. Third, the purpose of cooperation between the parties is to achieve mutual advantage. The parties, therefore, cooperate with one another to secure a mutual benefit, which they could not obtain without such cooperation. Fourth, the motivations of the parties are such that they wish to pursue their own goals, projects, and interests. Fifth, and finally, the participants all act rationally.

The basic form of the social contract which pervades throughout the theories of contractarians such as Locke, Kant, and Rousseau, therefore, involves rational individuals deciding to make a contract with one another, for mutual advantage, to govern themselves through the rule of law. Authority is derived from the consent of the parties establishing a contract or mutual agreement with one another.³

7.3 Rawls and Justice as Fairness

The most important and influential contemporary proponent of the social contract tradition is John Rawls (Rawls, 1971). In *A Theory of Justice*, Rawls developed his model for [social] justice as fairness by combining various elements of the classical social contract traditions (and in particular, the Lockean view of the social contract being made by people who are “free, equal and independent”) with Hume’s ‘circumstances of justice’ and Kantian moral principles. Of the social contract tradition, Rawls writes that:

“The guiding idea is that the principles of justice...are the principles that free and rational persons concerned to further their own interests would accept in an initial position of equality.”

(Rawls, 1971, p.11).

Unlike Hobbes, Rawls does not assume that humans live together in the state of nature. Instead, Rawls embarks on a thought experiment in which he describes the initial choice situation of the social contract as the ‘*Original Position*’. In the original position, free, equal, and independent individuals seek social cooperation through mutual advantage by making a social contract with one another to identify the necessary principles for a fair and just society. Rawls

³ Michael Sandel has argued that it is not always necessary for such consent to exist, although this is beyond the scope of this present study (Sandel, 2010).

also incorporates certain moral assumptions in his original position through the ‘*veil of ignorance*’, whereby the parties do not know certain characteristics which they possess such as their class, gender, race, health, or wealth. In this way, Rawls tries to ensure that the parties act impartially and with a sense of fairness which particular principles will apply in the resulting society. In Rawls’s original position, the parties, therefore, wish to seek advantage by pursuing their own interests, but the veil of ignorance ensures that they do so only on terms that are fair to all. Rawls’s theory is, therefore, a hybrid of Kant’s moral philosophy and the social contract tradition, with mutual advantage being the goal of social cooperation (Nussbaum, 2006). In particular, in *A Theory of Justice*, Rawls states that:

“The main idea is that when a number of persons engage in a mutually advantageous cooperative venture according to rules, and thus restrict their liberty in ways necessary to yield advantages for all, those who have submitted to these restrictions have a similar right to acquiescence on the part of those who have benefited from their submission.”

(Rawls, 1971).

Rawls therefore adopts the concepts of the original position and the veil of ignorance to determine the relevant principles of justice that should govern society in very broad terms.

It is worth noting, however, that despite drawing heavily on Rawls’s theories to incorporate the notion of the social contract in his ethical framework of fair play in sport, Loland ultimately prefers the closely related, but separate, contractualist ideas of Thomas Scanlon in his moral norm system (Scanlon, 1985). Whilst Rawls’s theory is a mixed theory combining the classical social contract tradition with Kantian morality, Scanlon bases his theories purely on the Kantian notions of fairness and mutual acceptability, without incorporating the concept of mutual advantage (Scanlon, 1985). In *What We Owe to Each Other*, Scanlon deals solely with ethical principles and not political theory. Scanlon takes as his starting point the Kantian idea that principles, to be fair, must be rationally acceptable to all who are affected. Since Scanlon does not adopt a social contract perspective, he is not bound by the notion of rough equality which is assumed to exist between individuals making a social contract with one another. Nor does he assume that those individuals are responsible for deciding upon the relevant laws, or rules, of society for themselves. Consequently, there is no good reason to exclude individuals with impairments from participating in the appropriate decision-making process.

Loland does not provide any detailed reasons for preferring Scanlon to Rawls. However, those reasons that Loland does give have little or nothing to do with the distinction, which we have drawn here, between disabled and able-bodied athletes. In particular, Loland states that:

“I subscribe to the idea of moral norms as based on some kind of unforced, informed agreement that gains authority by the fairness of the procedures by which they arise. However, my ambition is somewhat different from that of Rawls. The more limited goal in this book is to develop a theory of fair play in sport. I have presented sport competitions as social practices that are realized through some kind of shared interpretations of the rules among participants, what I called an ethos. An ethos of sport arises, and is negotiated and developed, in concrete social settings by full-blooded persons with the capacity to make voluntary choices. I have allowed for the possibility for more than one ethos of sport to be morally acceptable. Consequently, the understanding of the contract procedure I have proposed is not of rational decision-makers seeking full consensus behind a veil of ignorance, but, rather, of persons searching for a set of norms that can readily be accepted, or at least that cannot be reasonably rejected, as a basis for rational agreement.”

(Loland, 2002, p.31).

Loland therefore relies on Scanlon to articulate the following overarching moral norm for his framework, which he applies as the final arbiter or “tie-breaker” to decide whether a given practice in sport and sporting competition is fair or unfair:

“Choose norms that no one can reasonably reject as a basis for unforced, informed general agreement.”

(Loland, 2002, p.31).

7.4 Nussbaum and the Disability Objection

There is, however, some doubt as to whether the social contract in general and Rawlsian theory in particular, is able to provide justice to the disabled, which I have described as ‘the Nussbaum objection’ (Nussbaum, 2006). In *Frontiers of Justice* (2006), Martha Nussbaum argues that Rawls’s justice as fairness theory fails to provide justice in four specific situations, including the denial of justice to those individuals with physical or mental impairments, both temporary and permanent.⁴ Nussbaum argues that Rawls acknowledges that there is a gap in his theory in

⁴ The other ‘three unsolved problems’ to which Nussbaum refers include what is owed to animals and the rest of nature; justice across national boundaries; and justice for future generations, none of which concern us here (Nussbaum, 2006, pp 22-23).

relation to these issues and worries about them but ultimately offers no solutions to resolve them, stating that this is an issue that should be deferred and considered at a later stage. Rawls argues that justice does not cover everything and nor should we expect it to, before concluding that:

“While we would like eventually to answer all these questions, I very much doubt whether that is possible within the scope of justice as fairness as a political conception”

and that they are

“problems on which justice as fairness may fail”

(Rawls, 1993, p.21).

Nussbaum provides a detailed account of why she believes that Rawls’s theory denies justice to those with physical and mental impairments, which is largely centred around the mechanism of the social contract, and in particular, the failure to include those with impairments in the design of the initial choice situation (or in Rawlsian terminology, the original position). Indeed, Nussbaum maintains that the social contract tradition cannot provide justice for the disabled. In particular, Nussbaum argues that the social contract makes certain assumptions about the abilities or characteristics of the participants in the initial choice situation, including the ability to think and act rationally, together with roughly similar physical and mental capacities. Nussbaum believes that these requirements mean that those with physical and mental impairments are therefore excluded from participating in the original choice situation. Nussbaum also argues that since the parties who contract with one another in the initial choice situation are the same people whose lives will be regulated by the principles chosen in that bargaining position, the parties are therefore designing principles for citizens who, like them, have no physical or mental impairments with the result that justice is denied to this particular group of individuals.

Nussbaum also has grave concerns with Rawls’s own interpretation of the social contract as far as justice for the disabled is concerned. In particular, Nussbaum is critical of Rawls’s conception of the participants in the original position, which she says deliberately excludes individuals with physical or mental impairments. For example, in *Political Liberalism* (1993), Rawls argues that the physical and mental powers and capabilities of the participants in the

original position must lie within the “normal range” and that they should all have “normal capacities.” Rawls goes on to state that:

“We are not directed to look for differences in natural features that affect some maxim and therefore serve as possible grounds for different grades of citizenship. We do, however, look for some minimum degree of the capacity, understood as the capacity for a sense of justice, or the capacity to take part in and to act in accordance with the public understanding of the initial situation...Only scattered individuals are without this capacity, or its realization to the minimum degree.”

(Rawls, 1971, pp 505-506).

Nussbaum believes that the ‘scattered individuals’ of whom Rawls speaks are those with mental impairments (Nussbaum, 2006). Rawls’s conception of the person in the original position also requires a high degree of rationality, which is a particular problem for those with mental impairments. Furthermore, Rawls also states that the parties to the social contract are “roughly equal” in powers and abilities.

Rawls also describes each of the participants in the original position as a “*fully cooperating member of society over a complete life.*” (Rawls, 1971, p.13). Nussbaum argues that since many individuals with physical or mental impairments will be dependent on others for much (if not all) of their lives, Rawls therefore deliberately excludes them from participating in the original position.

Nussbaum not only provides a critique of Rawls’s justice as fairness theory but also advances her own alternative theory of justice, namely the ‘capabilities approach’ (Nussbaum, 2006). The underpinnings of Nussbaum’s theory rest with the economist Amartya Sen (2009), but the particular form of the theory that Nussbaum adopts also bears similarities with Hugo Grotius’s natural law approach as set out in *On the Law of War and Peace* (1625) which recognises moral equality, human dignity and a person’s worth through a series of basic rights or entitlements. This mirrors a human rights approach to social justice. Nussbaum’s capabilities approach identifies a list of ten central human capabilities that she says are implicit in the idea of a life worthy of human dignity and represent the source of the political principles that each liberal society should adopt as its own, but stresses that this is not an exhaustive list of such capabilities (Nussbaum, 2006).

Nussbaum argues that these capabilities should be pursued for every person in a given society and that for each capability identified, there should be a minimum threshold level beneath which it is impossible for humans to function. In other words, the goal or objective of every society is therefore for all of its citizens to rise above this minimum threshold. Nussbaum accepts that her theory is not a complete account of social justice. Although Nussbaum does not use the phrase ‘sufficientarianism’ in connection with the capabilities approach, it is clear that this is such a theory, since the idea behind the concept is to ensure that every individual in a particular society has enough of a specific good (or goods). Nussbaum believes that the capabilities approach can be used to help extend Rawls’s theory to the three unsolved problems she identifies with his theory, including providing justice to those individuals with physical and mental impairments. Nussbaum concludes that since it is difficult to see how Rawls could give up the commitments that are inherent in his form of social contract, it is best to look elsewhere to develop a theory of justice for individuals with disabilities.

Without wishing to over-simplify my understanding of Rawls, it seems reasonable to conclude from Rawls’s analysis that if those participating in the original position are ignorant of factors such as sex, race, and wealth, those same individuals would therefore lack the knowledge of any impairments they may possess in the society which was to follow. Any improper insight or prior knowledge of such factors would surely prejudice any discussion of the principles of justice that would prevail in that society, which Rawls was so keen to avoid. In my view, this is the true and proper application of Rawls’s veil of ignorance. If I am wrong about this, and participation in the original position requires all individuals to fall within the “normal range” of ability (whatever this may mean), this would then prevent those individuals with physical or mental impairments from being included.

If Nussbaum is right about Rawls (and I believe that she is, not least of all because Rawls himself accepts that his theory is problematic for providing justice to the disabled), it is doubtful whether the social contract, as elaborated by Rawls, is sufficient to provide justice to those individuals with physical or mental impairments. As a result, I agree with Nussbaum’s views and argue that it is therefore unsafe to rely on Rawls’s social justice theory to formulate an ethical and moral framework for fairness and fair play in Paralympic sport. If I am to construct an ethical framework for Paralympic sport and classification, I must therefore adopt an alternative theory of justice for this purpose instead.

Whilst Nussbaum's capabilities approach has much to commend it, and has several benefits that will undoubtedly prove useful when applied to certain types of sufficientarian issues associated with basic human rights, it is unfortunately not suitable for use in connection with the problems that I have identified in this study. Consequently, I need to identify an alternative theory of justice that is capable of being applied to such problems. An alternative theory of justice to that of Rawls and Nussbaum, and the one which I advance in this study, is that of equal opportunities. In Chapter 8, I will explore these alternative theories in more detail with specific reference to the theories of Lesley Jacobs (2004) and John Roemer (1998) to determine how those theories could be applied to issues of fairness in Paralympic classification and competition.

I will argue, with Nussbaum, that Rawls denies justice to individuals with physical and mental impairments, not only in general terms but by extension to Paralympic athletes specifically. There is, however, a further reason not to follow Rawls when determining the relevant principles of justice for those with impairments which is not addressed by Nussbaum. Whilst Rawls relies upon the original position and veil of ignorance to determine the relevant principles of justice to govern society in general terms, I will argue that it is impossible to construct any form of meaningful classification system (fair or otherwise) if those who are responsible for classifying Paralympic athletes in the 'original position' before the competition are required to do so behind a veil of ignorance and without knowing the nature and severity of an athlete's impairment(s). Instead, I will argue that just decisions, contra to Rawls' veil of ignorance, should be taken with full knowledge of an individual's characteristics (including any relevant impairments) which serve Paralympic sporting classification better by affirming specific differences within particular groups (i.e. Paralympic athletes). Ultimately, I conclude that we cannot rely on the Rawlsian aspect of Loland's model as a basis upon which to provide fairness in Paralympic sport or its classification system and that we will need to consider other, alternative theories to provide such fairness, which we will find in the equal opportunities models of Jacobs and Roemer.

7.5 Loland and Aristotle

Loland argues that questions of justice (in general terms) often relate to the distribution of goods and burdens between individuals and groups by the process of distributive justice and that in sport, the relevant distributive scheme is explicitly stated in the rules of the sport or

event concerned (Loland, 2017). Loland argues that the structural goal of sport is to measure, compare, and rank participants based on their athletic performance (Loland, 2002; 2017). Loland adopts the classical interpretation of justice from Aristotle's *Nicomachean Ethics* (Crisp, 2014) which holds that:

- (i) Relevantly equal cases should be treated equally;
- (ii) cases that are relevantly unequal may be treated unequally; and
- (iii) unequal treatment should stand in a reasonable relationship with the actual inequalities in question.

(Loland, 2002, p.29).

In applying Aristotle's thinking to his model, Loland prescribes that relevantly equal cases in sport and sporting competition should be treated equally, which is dependent upon the reliability and validity of the measurements carried out. Loland argues that the relevant inequality in sport is that of athletic performance, which is the relevant 'variable' for these purposes (Loland, 2002). In particular, Loland argues that we should only measure that which is relevant to our interests and eliminate and/or compensate for non-relevant factors or 'sources of error'. Finally, Loland argues that the essential criterion for unequal treatment in sport is that of inequality in athletic performance (Loland, 2002). Loland argues that in sport, we treat competitors differently by distributing competitive advantage unequally, such as rankings, points, and goals, and that the distribution of competitive advantage between competitors should reflect the actual inequalities in athletic performance.

Whilst Aristotle's interpretation of justice is not particularly controversial, this only provides a general framework for distributive justice which means very little unless and until this is applied in a practical context to a specific problem or set of problems. Loland maintains that local distributive norms vary significantly (Walzer, 1983) with the result that we need to devise a series of substantive criteria to determine what is to be considered equal, and what are to be considered relevant inequalities that qualify for unequal treatment, regarding the various objectives of the particular practice concerned, which is where they become more problematic (Loland, 2002). Loland, therefore, applies this general norm to a series of specific issues in sport, beginning with the first formal justice norm that equal cases should be treated equally.

(i) *Equal Cases Should be Treated Equally*

Based on the Aristotelian principles referred to above, the first part of Loland's formal justice norm for sport prescribes that relevantly equal cases should be treated equally. The requirement for equal treatment does not, however, mean that everyone should be treated the same. No two people are identical, and individual inequalities are ethically relevant in different ways (Loland, 2017). As Rawls suggests, we, therefore, need to achieve an 'imperfect' form of procedural justice that is based on talent, merit, and the effort of the individuals concerned (Rawls, 1971). Individuals are rewarded in sport according to athletic performance. However, if we are to measure, compare, and rank the relevant inequalities in performance, it is important to standardise various conditions to provide all participants with what Loland calls an equal opportunity to perform (Loland, 2002, 2017). Following Rae (1981), Loland defines 'equal opportunity' not as a lottery in which all participants have an equal chance to win, but rather as equality of access to the same set of means to win (Loland, 2002).

Loland begins by stating that at the start of, and during the process of competing, all non-relevant inequalities should be eliminated wherever possible. However, Loland accepts that it is not always possible to eliminate all such inequalities, in which case we should compensate for such inequalities in the best way possible (Loland, 2002). Loland articulates this in the following terms:

“All competitors ought to be given equal opportunity to perform through eliminating or compensating for non-relevant inequalities.”

(Loland, 2002, p.46).

Loland goes on to describe three different ways in which competitors should be given equal opportunity to perform by removing or reducing non-relevant differences, namely (i) the external conditions in which athletes compete; (ii) differences in an individual's personal characteristics (which Loland terms 'person-dependant' matters); and (iii) differences in a competitor's access to resources and technology. Let us start by considering the external conditions in which competitors perform.

External Conditions

Loland proceeds by considering (in)equalities in external conditions, in relation to both ‘direct’ and ‘indirect’ competitions. By ‘external’ conditions, Loland is referring to the influence of the weather on competitions, such as wind, sun, and rain, and conditions relating to the playing arena, such as surface materials. By ‘direct’ competition, Loland means the situation where participants compete at the same time, in the same place, such as team sports like football and rugby, or individual events such as athletics and swimming. By ‘indirect’ competition, Loland is referring to events where participants compete individually at different times, such as the long jump or high jump (Loland, 2002). Loland concludes that:

“Uncontrollable inequalities in external conditions ought to be distributed by the drawing of competitors’ positions” and that

“Controllable inequalities in external conditions ought to be eliminated, while partly controllable inequalities in external conditions ought to be compensated for by mixed procedures that to the greatest possible extent realize equal opportunity to perform.”

(Loland, 2002, p.53).

Loland’s conclusions here are both well-founded and uncontroversial. I, therefore, take the view that differences in external conditions are equally as likely to apply to athletes with impairments as they do able-bodied competitors, with the result that there is unlikely to be any, or any significant, difference in approach between able-bodied and impaired athletes in this respect.

‘Person-Dependant’ Matters

Loland states that the relevant inequality to be considered in sport is that of athletic performance, which depends on several factors including natural ability, training, interaction with the environment, and situational factors in the competition itself (Loland, 2002). Loland examines differences and inequalities by reference to what he terms ‘person-dependent matters’ such as body size, age, and sex (Loland, 2002; Loland, 2017). Loland argues that differences in an individual’s personal characteristics should be regulated to provide athletes with an equal opportunity to compete in sport. In particular, Loland argues that athletes should

not be responsible for differences or inequalities in personal characteristics that they cannot influence and have not voluntarily chosen themselves (Rawls, 1971; Loland, 2002).

Loland, therefore, argues that one of the most important methods of regulating differences and/or inequalities in competitors' personal characteristics is to introduce some form of classification in sport. As we saw in Chapter 3, classification systems are a central feature of most modern sports and regulate the impact of factors that affect performance (Connick et al, 2018). Such classification systems provide a framework for competition that increases the likelihood of more close competition, which some authors have argued helps to promote greater participation in sport amongst individuals with widely varying skills and abilities (Tweedy and Vanlandewijck, 2011; Connick et al, 2018).

If we did not classify participants into different categories, we are likely to (re)produce one-sided contests that are unattractive to both competitors and spectators alike and would deny all participants an equal opportunity to compete. In this sense, competitors would win or lose based on inequalities that they cannot affect in any significant way, and for which they should not be held responsible. Loland, therefore, formulates the following premise in relation to inequalities in personal characteristics:

“Competitors ought to be differentiated in classes only in cases where inequalities in person-dependent matters that they cannot influence in any significant way and for which they cannot be held responsible have systematic and significant influence on athletic performance”

With the proviso that:

“Where inequalities in body size, sex and age exert significant and systematic influence on athletic performance, such inequalities ought to be eliminated or compensated for by establishing reasonably standardised weight, height, sex, and age classes.”

(Loland, 2002, p.60).

Placing athletes into different classes based on certain differences in personal characteristics to try to reduce or eliminate inequalities is relatively uncontroversial and is a central feature of most modern-day sports and sporting competitions. This is particularly relevant in Paralympic sport given the differences in the type and severity of impairments of the athletes competing.

Access to Resources and Technology

Loland argues that achieving equality through standardisation in sporting competition does not just apply to external conditions, but also extends to matters relating to both access to resources and the types of equipment and technology used by athletes (Loland, 2002). Loland points out that great inequalities exist among individuals when it comes to access to material resources such as facilities and equipment, personnel such as coaches and psychological and medical support systems, and the finances available to them (Loland, 2002). Loland observes that in many sports, access to specialised equipment, technology, and facilities are crucial and absolute necessities for performance at the elite level. Loland states that at the regional, national, and international levels of performance, inequalities in access to such resources are distributed in problematic ways, which is evidenced by the distribution of medals at competitions such as the Olympic Games, in which athletes from Western, capitalist countries and the former Eastern Bloc nations (through state-sponsored programs) dominate (Loland, 2002). There is a similar trend in Paralympic sport, where more wealthy, developed countries far outweigh the poorer, developing nations in terms of medal success because of their access to greater resources and technology, including the number and type of facilities that are made available for training and competition together with the funding programs that are available to athletes and coaches.

Loland believes that athletes from weaker sports systems or less wealthy nations are therefore at a potential disadvantage when it comes to competitive sport. To provide an equal opportunity to compete, Loland, therefore, argues that inequalities in terms of access to resources or “system strength” should be eliminated or compensated for wherever possible. Loland suggests that to eliminate or reduce such inequalities, we need to regulate the competitive situation. This would include, for example, equal access to medical support staff such as physicians, psychologists, and physiotherapists and disallowing external assistance from coaching staff immediately before, and during, the competition itself (as is the position in tennis, where coaching during a match is specifically prohibited by the rules). Alternatively, such external assistance should be made equally available to all athletes. In terms of equipment and technology, Loland argues that steps should be taken to reduce systematic and significant influence from inequalities by ensuring that the equipment used is standardized wherever possible, but that we need to standardize with care, based on the particular sport in question (Loland, 2002). In terms of economic inequalities, he argues that it is possible to standardize system strength by, for example, specifying a maximum amount that teams could spend on

their playing squad every season, such as the salary cap that was voluntarily introduced by clubs competing in Leagues One and Two of the English Football League during the COVID-19 pandemic hit season of 2020-21 (the beneficiaries of which included my own club, Lincoln City, which reached the EFL Play-Off Final at Wembley in May 2021, when it was assisted significantly by the salary cap that was in place that season⁵). Loland concludes that:

“Inequalities in access to resources that are not subject to voluntary choice, and that exert significant and systematic influence on athletic performance, ought to be eliminated or compensated for by regulation of the competitive situation, and/or by relevant standardization procedures.”

(Loland, 2002, p.65).

As we saw in Chapter 6, the issue of access to resources and technical assistance takes on particular importance where Paralympic sport and sporting competition are concerned, given the extent to which many Paralympic athletes rely on such technology to compete. Indeed, many Paralympic events would simply not take place without such equipment. Consider, for example, Paralympian athletes who compete in wheelchair events or amputees who use prosthetic limbs, who would be physiologically unable to compete but for the availability and use of such assistive technology.

(ii) *Unequal Cases may be treated Unequally*

Athletic Performance

As we have seen above, Loland argues that the relevant inequality in sport and sporting competition is athletic performance, in that inequalities in athletic performance give rise to unequal treatment in the distribution of competitive advantage (Loland, 2002). Loland observes that advantages based on athletic performances are not the only cause of inequalities and that we also need to consider unfair advantages, such as intentional and unintentional rule violations. Loland states that inequalities due to rule violations are non-relevant inequalities that should be eliminated or compensated for (Loland, 2002). Loland therefore concludes that:

⁵ Despite scoring the fastest goal in EFL Play-Off history, Lincoln ultimately lost the final 2-1, thereby defeating Lincoln's previously unblemished record at Wembley (a single victory against Shrewsbury Town in the EFL Trophy Final in May 2018).

“In sport, unequal treatment ought to be based upon inequalities in athletic performance.”

(Loland, 2002, p.66).

Each sport and sporting event has its own sport-specific goal or objective which requires a different aspect and level of athletic performance and distinguishes it from other sports. Athletes demonstrate a wide variety of human abilities and skills, and advanced sporting performances represent human functioning at its most complex (Loland, 2002). Bouchard et al (1997) describe athletic performance as the result of a large number of relevant genetic and non-genetic factors. Genetic predispositions to developing good performance are often called “talent”. Non-genetic factors may be referred to as “environmental influences”.

Loland argues that genetic predispositions to develop athletic performance include several physical, or bio-motor, abilities such as strength, endurance, flexibility, speed, and coordination, which are also linked to the functioning of certain mental abilities, such as sensation, motivation, emotion, cognition, and personality (Loland, 2002). Loland argues that ‘talent’ has a significant and systematic influence on athletic performance and that different sports require different talents (Loland, 2002). By contrast, Loland argues that talent and the exercise of abilities through training and practice enable athletes to develop the relevant skills that are needed for their particular sport or discipline and that these are dependent upon various environmental influences (Loland 2002). Consequently, there are two key aspects to athletic performance, namely innate or natural talent and the development of abilities on the one hand; and environmental influences and the development of skills, on the other.

Duty Not to Inflict Unnecessary Harm

The second aspect that Loland examines in relation to (un)equal treatment is that of not exposing others or oneself to unnecessary harm (Loland, 2002). Many sports are inherently dangerous and involve the risk of injury or even death (for example, boxing, climbing, and motor racing). In some cases, this is due to how the sport is undertaken, for example, fouls involving dangerous tackles in football which may cause temporary or permanent injury to an opponent. In others, the sport itself may pose an unacceptably high risk, such as downhill skiing or contact sports such as boxing, where the aim is to inflict deliberate blows to the other

fighter's head and body. This has resulted in calls for certain sports such as boxing to be banned on ethical grounds (Anderson, 2007).

Unnecessary harm can also occur outside the rules of the sport itself, such as the decision of some athletes to take performance-enhancing substances, which are banned in almost all sports (the notable exception being the practice of competitive bodybuilding, where no drug testing takes place, and a blind eye is turned). Aside from the fact that this is an intentional rule violation, and therefore amounts to cheating (which is an issue to which I will return below), doping also risks unnecessary harm to the athlete, and is one of the three prescribed reasons cited by the World Anti-Doping Agency (WADA) for banning the practice in sport.⁶ For example, excessive use of steroids can lead to various undesirable side effects such as the growth of tumours, the shrinkage of male genitalia, and excessive hair growth and deepening of the voice in female athletes (Ungerleider, 2013). In addition, the use of substances such as erythropoietin, which are designed to increase the number of red blood cells in the body, can cause a thickening of the blood and higher blood pressure, resulting in several reported cases of heart failure, strokes, and deep vein thrombosis (Moller, 2010). Against this background, Loland agrees with the view that performance-enhancing substances have no place in sport, and should therefore be prohibited.

Loland, therefore, formulates the following summary of unequal treatment in sport:

“In sport, unequal treatment ought to be based upon inequalities in performance within the framework of the relevant ethos that are:

- *Based on talent, that is, genetic predispositions for the development of the relevant abilities and skills;*
- *Based upon the actual realisation of talent through the development of the relevant abilities and learning of the relevant skills; and*
- *In accordance with a basic norm of not exposing others and oneself to unnecessary harm.”*

(Loland, 2002, p.78).

This brings us to the third, and final, moral norm identified by Loland, namely that unequal treatment ought to stand in reasonable accordance with the actual inequality in cases.

⁶ The other reasons are that it has the potential to enhance or enhance sport performance; and that it violates the spirit of sport (World Anti-Doping Agency, World Anti-Doping Code, 1 January 2021).

(iii) Unequal Treatment and Actual Inequalities

The third aspect of Aristotle's *Nicomachean Ethics* is that:

“Unequal treatment ought to stand in reasonable accordance with the actual inequality between cases.”

(Loland, 2002, p.83).

This moral norm suggests that there should be a reasonably close relationship between the relevant inequality concerned and the unequal treatment that results from this, and cites two different examples of this in terms of competitive advantage and rule violations. We shall begin by considering the issue of competitive advantage.

Competitive Advantage

Loland believes that measurements, comparisons, and rankings of athletic performance in sport are carried out through the unequal distribution of advantage between competitors and can be summarised as follows:

“Unequal treatment in the distribution of advantage among competitors ought to stand in a reasonable accordance with the actual inequality in athletic performance.”

(Loland 2002, p.84).

Loland considers the distribution of competitive advantage in sport in terms of both physical-mathematical measurements and sport-specific advantage. Measurements or units of advantage can be identified by time (for example, the fastest runner or swimmer in a particular event), or distance (for example, the javelin thrower who throws the furthest or the high jumper who leaps the highest). By contrast, sport-specific advantage relates to the particular types of objectives that are defined by the rules of a particular sport, such as goals in football or games and sets in tennis. Loland also argues that both forms of competitive advantage can be formal or informal in nature (Loland 2002).

Loland argues that advantages in sport should be distributed primarily on merit, but that other non-meritocratic elements such as luck and chance also inevitably play a part in determining

this process (Loland 2002). Whilst luck and chance are unavoidable and have to be accepted in all walks of life, including competitive sport, we ought to try to minimise these factors as far as possible, such that luck and chance should never exert a systematic or significant influence on athletic performance. Loland therefore formulates the following moral norm for luck and competitive advantage:

“Luck ought not to exert significant and systematic advantage on the measuring, comparison, and ranking of competitors according to athletic performance, and possibilities for subjective and partial evaluation ought to be eliminated to the greatest possible extent.”

(Loland 2002, p.92).

Rule Violations

Finally, Loland considers the relationship between inequalities arising from rule violations and the penalties that are imposed on competitors who are guilty of breaking those rules. In doing so, Loland distinguishes between *intentional* and *unintentional* rule violations (Fraleigh 1984, Loland 2002). Loland defines unintentional rule violations as

“...consequences of actions that come about due to circumstances over which we have little or no control. They are the results of, for instance, bad luck, lack of skill, or lack of knowledge.”

(Loland 2002, p.95)

As far as rule violations are concerned, Loland goes on to say that:

“Inequalities due to rule violations ought to be eliminated or compensated for and there ought to be a reasonable accordance between degree of violation and the penalties imposed.”

(Loland, 2002, p.95).

7.6 Summary and Conclusions

In this chapter, I have outlined Loland’s moral norm system for fairness and fair play in sport. Loland’s model relies on Rawls’s *Justice as Fairness* theory and Aristotle’s formal equality

principles. An integral part of Loland's model for developing a moral norm system for fair play and fairness in sport includes Aristotle's classic interpretation of formal equality from the *Nicomachean Ethics* which holds that:

- (i) relevant cases should be treated equally;
- (ii) cases that are relevantly unequal should be treated unequally; and
- (iii) unequal treatment should stand in reasonable accordance with the actual inequality between cases.

Applying Aristotle's formal equality principles to determine fairness and fair play in sport, Loland concludes as part of his model *inter alia* that:

- (i) where person-dependent inequalities such as body size, sex, and age exert significant and systematic influence on athletic performance, such inequalities should be eliminated or compensated for by establishing standard weight, height, sex, and age classes;
- (ii) unequal treatment should be based on inequalities in athletic performance; and
- (iii) unequal treatment in the distribution of advantage among athletes should stand in reasonable accordance with the actual inequality in athletic performance.

The second of my stated objectives from the outset was to critically review Loland's ethical model to determine whether this model adequately provides for fairness and fair play in Paralympic sport and sporting classification. I have argued, following Nussbaum (2006), that there is a lacuna in Rawls's *Justice as Fairness* theory where justice for individuals with impairments such as Paralympic athletes is concerned. I have demonstrated that Rawls's social contract theory denies justice to individuals with physical and mental impairments, not only in general terms but by extension to Paralympic athletes specifically. I argue that there is, however, an additional reason to reject Rawlsian theory within the context of deriving principles of fairness and justice for Paralympic classification which Nussbaum does not address. Whilst Rawls relies on his *veil of ignorance* to determine the relevant principles of justice, I argue that decisions relating to the classification of Paralympic athletes that are necessarily taken in the original pre-competition position cannot be made behind a veil of ignorance since this would lack any knowledge of the nature and severity of the athlete's impairment(s) and the extent to which that impairment impacted upon their ability to perform

the tasks required of their chosen sport or event. Instead, I argue that such decisions should be taken with full knowledge of those characteristics and that Paralympic sporting classification would be better served by acknowledging and confirming specific differences within particular groups (i.e. Paralympic athletes).

In light of the above, I therefore conclude that we cannot rely on the Rawlsian aspect of Loland's model as a basis upon which to provide fairness in Paralympic classification. I will, however, preserve the Aristotelian aspect of Loland's moral norm system in my own ethical framework for Paralympic classification. In particular, and as we will see in Chapter 8, I will modify and extend the Aristotelian aspects of Loland's model for demonstrating fairness in Paralympic sport by proposing a mixed ethical theory that combines Aristotelian formal justice with an equal opportunities model that combines elements of Jacob's three-dimensional model of equal opportunities as a regulative ideal with John Roemer's equal opportunities framework (Jacobs 2004; Roemer 1998).

CHAPTER 8 – ROEMER, JACOBS, AND THE THREE-DIMENSIONAL MODEL

Loland is surely correct when he states that, as an integral part of his moral norm system for fairness and fair play in sport, all athletes should be given an equal opportunity to compete (Loland 2002). I begin this chapter by considering the purpose and rationale of competitions (sporting or otherwise) by considering the work of Wolff (1998) and Brown (2015) in this area before turning to the purpose of Paralympic classification. Extending Loland's view, I argue that the purpose of Paralympic competition is to provide every athlete who has an impairment with an equal opportunity to participate in meaningful competition irrespective of their particular impairment or impairment group. I will then pause to reflect on what is meant by the phrase "meaningful competition" before arguing that the underlying feature behind a fair classification system in Paralympic sport is the provision of equal opportunity to all competitors. I then spend some time outlining the concept of equality of opportunity in general terms before turning to the two separate theories of equality of opportunity which I shall rely upon in developing my alternative framework for Paralympic classification, namely Lesley Jacobs' three-dimensional model of equal opportunities as a regulative ideal (Jacobs, 2004) and John Roemer's equality of opportunity theory (Roemer, 1998). I shall argue that although there are certain similarities between my proposed model and Loland's moral norm system, the two theories upon which I rely ultimately strengthen the framework for a fair Paralympic classification system. I conclude this chapter by confirming that my proposed framework will therefore adopt the three-dimensional aspects of Jacobs' model - background fairness, procedural fairness, and stakes fairness - together with several components of Roemer's theory.

8.1 Purpose of, and Rationale for, Competitions

In his article '*The Ethics of Competition*', Jonathan Wolff refers to the different types of rationale for competitions (Wolff, 1998). Although the examples which Wolff provides are intended to apply to economic rather than sporting competitions, it is nevertheless still possible to utilise them in a sporting context (Brown, 2015). Wolff suggests the following seven potential rationales for competition:

- (i) *Pure lottery*: A scarce resource is to be allocated, and a competition of pure luck is held as a means of fair allocation. Here there are just two levels of achievement - win or lose - and achievement on this scale is not meant to reflect any underlying trait or ability;
- (ii) *Weighted lottery*: again a scarce resource is to be allocated, and a competition is held in which differential efforts are possible. In such a case the competition is arranged so that someone who achieves best on a scale designed to reflect some underlying trait will be awarded the scarce resource. For example, the competition might be designed simply to be responsive to effort, on the assumption that those who try hardest are those who most want the resource in question, and it is a good thing if resources go to those who want them most. A different example would involve trying to arrange distribution so that it is responsive to some trait thought to be deserving, for the value of rewarding desert;
- (iii) *Pure competition*: Competitive behaviour is considered desirable in itself, and so turns an activity of no value in itself into something of value;
- (iv) *Constitutive competition*: an activity can only exist if it involves some sort of competition (for example, the game of chess);
- (v) *Activity enhancement*: a competition for a prize is presented as a way of enhancing an activity already thought valuable in itself;
- (vi) *Side-effect of award*: a weighted lottery is held for the external effects of awarding the reward to someone of a certain type; and
- (vii) *Side-effect of activity*: a competition is held for the external effects of people engaging in the activity that the competition draws out or encourages.

(Wolff, 1998, p.90).

Sport is not a 'pure lottery' in the sense described by Wolff. Although luck may certainly play a part in the outcome of sporting competition, that outcome is not achieved purely by luck (or at least, it should not have that effect). It is possible to argue that most elite sports (both able-bodied and non-able-bodied) are matters of pure competition and constitutive competition, in the sense that they turn something of relatively little value into something of significant value, particularly where significant prestige, money, medals, and other plaudits are at stake; and only exists because it involves some form of competition. There is, however, little doubt that most competitive sports as we know them today are examples of weighted lotteries of which Wolff speaks. In professional sport, the scarce resources which are to be allocated are that of money,

medals, trophies, etc. In sport, the competitors demonstrate a wide range of abilities, skills, and effort, and the competition is arranged so that the competitor who performs best by demonstrating a particular trait is awarded that scarce resource. Wolff gives as examples effort and desert as two possible underlying traits that may lead to the award of the scarce resource concerned, namely that those who try the hardest are those who most want the scarce resource in question (effort) and/or distribution of the scarce resources is reflective of some deserving trait (desert). In either case, the weighted lottery is a meritocratic form of competition.

8.2 Meaningful Competition

The term “meaningful competition” has received very little consideration in the academic literature. Paul Gaffney (2007) has written about the meaning of sport, whilst Scott Kretchmar has written extensively on the subject of meaningful experiences in physical education and youth sport (2000, 2001, 2005a, 2005b, 2006, 2007, 2008) and on the difference between sporting tests and contests (2007).

Kretchmar describes the general term ‘meaning’ “in a broad, common sense way. It includes all emotions, perceptions, hopes, dreams, and other cognitions—in short, the full range of human experience”, whilst maintaining that ‘meaningful experiences’ are those that hold “personal significance” (Kretchmar, 2007, 382). Kretchmar argues that meaningful experiences in education and youth sports comprise social interaction, fun, challenge, increased motor competence, and delight (Kretchmar, 2006). Kretchmar builds on the work of Metheny (1968), who argues that individuals find meaningfulness by making sense of past, present, and future experiences and that something is made personally meaningful as

“we seize upon it, take it into ourselves, and become involved with it. This feeling of involvement is a symptom of what the idea means to us, or how we find it meaningful or significant”

(Metheny, 1968, p. 5).

Beni et al (2016) thus believe that meaningful experiences are personal to the individual. Adopting Kretchmar’s criteria for meaningful experiences set out above, Beni et al (2016) review the literature on how young people identify experiences in physical education and youth sport as meaningful. Beni et al also added ‘challenge’ and ‘competition’ to the criteria

identified by Kretchmar, and found that the literature suggested that the role of competition contributed in both positive and negative ways to participants' meaningful engagement in physical education and youth sport; and that although competition may be viewed as meaningful for many youth sport participants, the evidence from their review suggested that this was not necessarily the case for students in physical education, who preferred an emphasis on the challenge(s) inherent in the process of competing rather than on the outcome (i.e. winning and losing).

In contrast with Kretchmar and Beni et al, I am more interested in exploring the concept of meaningful competition rather than meaningful experience or engagement; and considering this within the context of elite athletes rather than participants in physical education and youth sport (although I will argue that Paralympic athletes are more likely to have a meaningful experience if the competition itself is meaningful). Mika LaVaque-Manty is one of the few individuals who has written about meaningful competition, and he does so from the perspective of disability sport (LaVaque-Manty 2005). In particular, LaVaque-Manty explores whether individuals have a right to meaningful competition, and if so, on what terms. He believes that an individual's meaningful participation in a competition depends upon the terms on which they do it, and concludes that the opportunity to participate in sport on fully equal terms requires an equal opportunity to meaningful competition. LaVaque-Manty states that one interpretation of meaningful competition might be that all participants have a realistic chance of winning, whilst another interpretation is to eliminate the effects of the luck of birth and other factors that do not depend on a person's individual efforts - in other words, the person who applies themselves most diligently should be the winner. LaVaque-Manty also refers to the need to classify athletes to ensure meaningful competition in a process he calls "ascriptive proxies", namely that groups or classes are created to ensure that two randomly selected individuals from a given reference group should have an equal chance of beating one another. LaVaque-Manty suggests that "meaningful competition" involves competition between other similarly situated even if not similarly talented athletes.

I argue that for competition to be meaningful in elite sport, it must ascribe something of value or significance to all those who are involved in the competition, be they participants, spectators, organisers, or coaches. I also argue that such meaning is achieved by ensuring that:

- (i) results are unpredictable;

- (ii) outcomes are close;
- (iii) competitors are evenly matched with others of a similar level of ability; and
- (iv) competitors have a realistic chance of winning.

This combination of ingredients thus enables individual athletes to fully understand and engage in the competitive process (Trono, 2017).

We can also quantify what we mean by “meaningful competition” in statistical terms. For example, Baseball Canada defines meaningful competition as a differential of 5 runs or less between the teams, with a game being considered a “blowout” (or walkover) if the run differential is 10 runs or more (Trono, 2017). We could also apply this same principle to age group football, where we might say that a match that ends with a difference of two or fewer goals between the two teams is relatively close (with the result that the teams are evenly matched), but a difference of four or more goals (which suggests that the teams were not evenly matched) does not fulfil that criterion. We can then consider a season or competition as a whole and determine what percentage of matches were meaningful and what percentage were non-meaningful to determine the relative closeness of that competition. We could also apply the same logic to the number of seconds (or tenths or hundredths of seconds) difference in individual events such as athletics or swimming. This coheres with Jacobs’s (2004) concept of stakes fairness, to which I shall return below.

8.4 Equality of Opportunity

Equality of opportunity is probably the most familiar account of egalitarian justice there is (Arneson, 1989, 2000, 2006; Cohen, 1989; Dworkin 1981; Mason, 2006; Roemer, 1996, 1998). Central to the idea of equal opportunity is the view that the allocation of scarce resources or distribution of certain benefits and burdens in competitive procedures should be governed by criteria that are morally relevant to the particular goods at stake and not those criteria that would affect the individual’s chance or opportunity for success but are morally irrelevant. Each model of equal opportunity represents a different interpretation of that broad, generalised concept (Jacobs, 2004). Andrew Mason (2006) offers an insightful explanation of the equal opportunity ideal. Mason states that the most simple view of equality of opportunity requires advantaged social positions to be subject to both open competition and fair access, which he describes as a ‘meritocratic’ ideal (Mason, 2006, p.2). Egalitarians such as Arneson and Roemer argue that

those circumstances that are irrelevant include those factors which an individual cannot control or influence, and for which they are not responsible (Arneson, 1990; Roemer, 1998).

The two models of equal opportunity that I endorse in this study are Jacobs' three-dimensional model of equal opportunities as a regulative ideal (Jacobs, 2004) and Roemer's equality of opportunity theory (Roemer, 1998). Neither theory was intended to be applied to sport (although as we shall see, Jacobs uses several sporting analogies to illustrate his theory). Despite there being several key differences between both models, which I have highlighted below, both theories share a common underlying trait, which is that they endeavour to 'level the playing field' for individuals in various spheres of society and can therefore be adapted for use in a sporting context (and in particular, Paralympic sport). I shall now consider both theories separately and in turn.

8.5 Jacobs and Equal Opportunities as a Regulative Ideal

Lesley Jacobs sets out the theoretical framework for his model of equal opportunities in the first two chapters of *Pursuing Equal Opportunities: The Theory and Practice of Egalitarian Justice* (Jacobs, 2004). The remainder of his book then applies that model to three separate social issues, namely race, class, and gender. It is a shame for these purposes that Jacobs did not attempt to apply his model to the issue of disability. I am, however, more interested in the theoretical underpinnings of Jacobs' model than his application of that model to the various areas he chooses to focus on, which are not directly relevant to this study.

Jacobs argues for a specific type of equal opportunity model as a form of egalitarian justice which he calls the 'three-dimensional model of equal opportunities as a regulative ideal'. Jacobs defines equal opportunities as

“an ideal for the normative regulation of competitions that distribute valuable opportunities in society”

(Jacobs, 2004, p.4).

Like Loland, Jacobs identifies equal opportunities with the concept of fairness. However, Jacobs' model focuses on three separate 'dimensions' of fairness that assist with the regulation of any given competition, namely *background fairness*, *procedural fairness*, and *stakes*

fairness (Jacobs, 2004). The first two elements are both familiar components of equal opportunity theories, whilst the third dimension is (arguably) a novel addition to this field. As its name suggests, '*background fairness*' requires a level playing field for all those participants who are involved in the competition that is being regulated. *Procedural fairness* regulates the basic procedural rules that govern the competition itself, including how the winners of that competition are determined (Jacobs, 2004). Finally, *stakes fairness* regulates the distribution of what is at stake in the competition, i.e. prizes, medals, prestige, and so forth.

Jacobs contends that whilst many theories of equal opportunity are only one-dimensional, in the sense that they tend to concentrate on *procedural fairness* alone, other theories such as those of Rawls are two-dimensional, in that they consist of *procedural fairness*, but also add the concept of *background fairness*, which is sensitive to the role which socio-economic differences between individuals play in the distribution of opportunities. Jacobs claims that his own theory is novel because it adds a third dimension, namely *stakes fairness*. Despite this assertion, Alex Voorhoeve (2005) has argued that the concept of stakes fairness is not perhaps as innovative as Jacobs would have us believe, remarking that it bears a close resemblance to the Rawlsian difference principle and the focus of Arneson and Cohen on outcomes which follow from different choices. Although I agree that Voorhoeve may be correct in this observation, Jacobs' theory still provides a useful framework to develop my own model for fairness in Paralympic sport and classification.

8.6 The Three-Dimensional Model

Jacobs' three-dimensional model for equal opportunities as a regulative ideal focuses on the fair use of competitive procedures as a means of achieving an egalitarian distribution of scarce resources or goods (Jacobs, 2004). Jacobs explains that in competitive procedures there are of course winners and losers, with the winners enjoying the benefit of the resources or goods at stake, and the losers either not enjoying them at all, or enjoying them to a lesser degree (Jacobs, 2004). Jacobs suggests that competitive models of equal opportunity present the concept in its strongest and most plausible form, at least as far as egalitarian justice is concerned (Jacobs, 2004). Jacobs argues that competitive models of equal opportunity comprise three essential features, namely (i) that justice is conceived of in terms of rules and procedures (i.e. it is a regulative ideal); (ii) the winner is a function of those rules with no pre-determined outcome; and (iii) equality of opportunity is a normative standard for regulating certain types of

competition (Jacobs, 2004). Jacobs argues that rules and procedures in a competitive model of equal opportunity should be structured in terms of a level playing field, whereby at the beginning of any competition, all competitors have roughly the same starting position in terms of an equal chance or opportunity of winning (or losing) (Jacobs, 2004). Like Loland, Jacobs, therefore, endorses the level playing field approach towards equal opportunities.

Jacobs extends the sporting analogy by explaining his three-dimensional equal opportunities model by reference to professional boxing (Jacobs, 2004). As we saw in Chapter 4, boxing attempts to achieve *background fairness* by dividing boxers into different weight classes, ensuring that the participants start each fight on roughly equal terms (at least in relation to their body weight) and ensuring that the playing field is relatively level. *Procedural fairness* is achieved by virtue of the Marquis of Queensbury Rules, which sets out the specific rules of engagement for the sport such as forbidding punching below the belt or headbutting your opponent. Furthermore, there is no pre-conceived outcome (at least in the absence of any contest which is deliberately ‘rigged’ for the purposes of illicit betting, for example), the winner being determined by either knockout, technical knockout, points at the end of the contest, throwing in the towel, or retiring hurt or injured. Finally, Jacobs observes that *stakes fairness* in professional boxing relates to the distribution of the prize money between the two fighters.

Having introduced the three different dimensions of Jacobs’ model, I shall now provide a more detailed examination of the concepts of *background fairness*, *procedural fairness*, and *stakes fairness*.

(i) Background Fairness

Perhaps the most important element of fairness where Paralympic classification, and sport in general, is concerned is that of background fairness. *Background fairness* is the principle that competitions must take place against fair background conditions, that is to say, the circumstances of all individuals immediately before the given competition should be roughly equal, such that the individuals then enter the competition on a broadly level playing field. Rawls (1971) discusses these conditions within the context of his hypothetical ‘original position’. By contrast, Jacobs speaks to the importance of establishing a level playing field from the outset, with individual participants competing from an initial starting position that is governed by fairness (Jacobs, 2004). Rather than adopting the Rawlsian principle of the veil of

ignorance to guide our judgments about background fairness, however, Jacobs argues that the guiding principle should be that of something which he calls ‘status equality’.

Status equality, Jacobs argues, does not require that all individuals start a competition with an equal amount of goods as each other or that they have the same level of human functioning. Instead, Jacobs believes that status equality requires all individuals to have the same moral standing in the competition immediately prior to that competition (Jacobs, 2004). Jacobs contrasts the social status of an individual with their moral status and argues that for these purposes, an individual’s moral status is his or her standing in the moral universe, arguing along Kantian lines, that the moral universe is one where all individuals share a common humanity that recognises the same standing for each, and nothing else in the universe has a higher moral standing (Jacobs, 2004).

Jacobs offers as an example the presumption of a person’s standing of innocence until proven guilty beyond reasonable doubt in a criminal trial, which that person enjoys irrespective of their particular socio-economic circumstances. In other words, status equality serves as a regulative ideal of background fairness in a criminal court of law (Jacobs, 2004). Jacobs offers the presumption of ‘innocent until proven guilty’ in criminal law as an example of status equality, which an individual should enjoy irrespective of his or her wealth, gender, dis/ability, class, race, religion, etc. In other words, Jacobs says,

“status equality functions as a regulative ideal of background fairness for criminal trials when those trials are viewed as competitions between the accused and the state.”

(Jacobs, 2004, p.30).

(ii) Procedural Fairness

Jacobs says relatively little about *procedural fairness*, perhaps because this is the most well-known of the three dimensions of fairness in his model. *Procedural fairness* reflects a concern with the basic rules of procedure that govern a given competition, including the determination of the winner(s) (Jacobs, 2004). Jacobs remarks that the standards of *procedural fairness* are normally specific to each competition and that what counts as procedurally fair is often linked to what is at stake in the competition (Jacobs, 2004). Jacobs states that in many competitions,

the basic requirements of *procedural fairness* are not deeply contested and that those requirements often reflect a general consensus that has developed over time (Jacobs, 2004).

(iii) Stakes Fairness

The most innovative aspect of Jacobs' three-dimensional equal opportunities theory (at least far as Jacobs himself is concerned) is that of *stakes fairness*. *Stakes fairness* concentrates on the regulation of the outcome or effect of a competition (Jacobs, 2004). As Baker (2004) observes, Jacobs is surely right in identifying that whether the outcome of a competition is fair it is not only a matter of *background* and *procedural fairness* but is also a question of whether the particular benefits assigned to the participants are also fair. *Stakes fairness* concerns what, and how much, is at stake in any given competition (Jacobs, 2004). Jacobs describes *stakes fairness* as a regulatory device that prescribes a distribution of the prizes at stake in a particular competition that are broader than a simple 'winner-takes-all' scheme (Jacobs, 2004). The example of prize fighting in boxing which Jacobs refers to above is illustrative of his point here. Brown (2015), however, explains that the distribution of prize money in boxing is much more complicated than Jacobs states. In particular, Brown states that it is traditional for the fighters to share prize money in professional boxing (as opposed to a 'winner-takes-all, loser-receives-nothing' system). He refers to Rule 2.12 of the World Boxing Council (WBC) Rules and Regulations ('Divisions of Proceeds in a Purse Offer') which states that:

"The net purse offer (after deduction of the WBC certification fees) shall be divided as follows:

- a) 70% for the champion and 30% for the challenger;*
- b) 50% to each contender in the case of vacant titles or elimination bouts;*
- c) 55% to the champion and 45% to the interim champion, in the event of such a bout;*
- d) Notwithstanding the terms of subparagraphs a), b), and c) above, the Board of Governors may, in its discretion and by a majority vote, modify the division of pursue offer proceeds between boxers in unusual or special cases, like the consideration of the outstanding marketing value of one of the boxers. The modification of the split will be limited to three categories: 70-30%; 60-40%; and 55-45% for the Champion and challenger, respectively, except in the most exceptional circumstances, in which the split may be modified to 50-50%."*

(Brown, 2015, p.159).

Brown therefore states that the WBC Rules provide for the net purse (i.e. the monies that are collected in box office and merchandise sales, television rights, endorsements, and advertising deals less the promoter's cut and other taxes, fees, and expenditure) to be split between the existing champion and challenger, rather than the winner and loser of the fight. This reflects the fact that in most cases, the champion has a greater marketing value than the challenger (one notorious exception being the so-called 'Rumble in the Jungle' between Muhammed Ali and George Foreman in Zaire in 1974, where both boxers received \$5m in prize money regardless of who actually won the fight (this was, of course, Ali, who spent the majority of the fight laying against the ropes encouraging a constant onslaught of punches from Foreman in a deliberate ploy to tire him out, the so-called 'rope-a-dope' strategy. Ali's tactics worked: he finally took advantage of his exhausted opponent by delivering a single devastating blow that knocked out Foreman in the eighth round) (Mailer, 1975).

Having introduced the concept of *stakes fairness* as a possible third dimension of equal opportunities, Jacobs, unfortunately, fails to sufficiently develop this idea further. Indeed, as Baker (2004) argues,

[i]f stakes fairness really matters, we surely need a clearer account of what it is."

(Baker, 2004; Voorhoeve, 2005; Brown, 2015).

Fortunately Alexander Brown takes up this challenge by extending this concept and establishing a number of principles of *stakes fairness* within a sporting context (Brown, 2015). In his article *Principles of stakes fairness in sport*, Brown identifies a number of different principles of *stakes fairness* that could regulate particular sporting competitions. Brown makes it clear that his aim is to establish regulatory principles of justice that specify normative governing standards for sporting prize structures which could be codified, implemented, or complied with by sporting governing bodies, agents, and promoters so that they may guide rules and practices concerning the design and implementation of prize structures. Brown emphasises that his use of the term 'prize' refers not only to monetary rewards but also titles, prestige, and plaudits (Brown, 2015, p.155).

Brown identifies the following ten principles of *stakes fairness*, emphasising that different principles may be appropriate for different competitions and that his list is not exhaustive:

- (i) *The Principle of Ranking-Based Winner-Takes-All* – whichever competitor is ranked in first place at the end of the competition should take the whole prize, while the losers receive nothing;
- (ii) *The Principle of Strict Equality* – all competitors receive the same prize irrespective of their ranking as winners or losers and whether or not any ranking is employed;
- (iii) *The Principle of Ranking-Based Lexicality* – every competitor should receive a share of the prize pot, but whichever competitor is ranked in first place at the end of the competition should take the largest share, the competitor who is ranked in second place should take the second largest share, and so forth;
- (iv) *The Principle of Performance-Based Proportionality* – all competitors should receive shares of the prize pot that are proportionate to their differing degrees of performance;
- (v) *The Principle of Winner-Weighted Performance-Based Proportionality* – the winner of a competition may take a share of the prize pot that is disproportionate to his or her degree of performance;
- (vi) *The Principle of Loser-Weighted Performance-Based Proportionality* – The competitor who finishes in last place at the end of a competition may take a share of the prize pot which is disproportionate to his or her degree of performance;
- (vii) *The Principle of Contribution-Based Proportionality* – each competitor should receive a prize that is proportionate to his or her contribution to the prize pot;
- (viii) *The Principle of Contribution-Based Winner-Weighted Proportionality* – the winner of a competition may receive a prize that is disproportionate to his or her contribution to the prize pot;
- (ix) *The Principle of Equity-Stake Contribution-Based Winner-Weighted Proportionality* – the winner of a competition may receive a prize that is disproportionate to his or her contribution to the prize pot, but only if he or she has contributed an equal amount to the prize pot; and
- (x) *The Principle of Minimum-Stake Contribution-Based Winner-Weighted Proportionality* – the winner of a competition may take a prize that is disproportionate to his or her contribution to the prize pot, but only if he or she has contributed a minimally adequate amount to the prize pot.

(Brown, 2015, pp.156-161).

Having identified the ten different principles of stakes fairness referred to above, Brown then attempts to devise a method for working out which principle is most appropriate for any given sporting competition (Brown, 2015). Brown argues that we should consider the specific details and features of the particular competition itself, rather than trying to identify the ‘best’ principle amongst the ten and applying that same principle to all competitions. Brown, therefore, follows Rawls in this respect, who states that

“the correct regulative principle for anything depends on the nature of that thing.”

(Rawls, 1971, 29).

This also coheres with Michael Walzer’s ‘complex equality’ principle, which is designed to secure the autonomy of different spheres of society (Walzer, 1983). Brown, however, argues that Jacobs’ theory is missing a method of connecting particular competitions to appropriate principles of stakes fairness and therefore attempts to fill this void (Brown, 2015). In particular, Brown argues that in order to connect particular competitions to appropriate principles of stakes fairness, it is necessary to explore the underlying purpose and rationale of the competition itself (Brown 2015, p.163).

Brown comments that for Jacobs, the core idea of stakes fairness reflects a concern with widening the distribution of outcomes within competitions and an acknowledgment that a “winner-takes-all” prize structure is rarely fair. Brown says that this idea shares some features with the concept of ‘luck’ egalitarianism and the distinction that Arneson (1989) and Cohen (1989) make between equality of opportunity and equality of outcomes (Brown 2015). However, since principles of stakes fairness are supposed to regulate competitions that generate winners and losers (i.e. unequal outcomes), it does not require equality of outcome. In other words, Jacobs does not insist that all competitors receive the same prize. This coheres with sporting competitions which are, by their very nature, meritocratic and are therefore designed to produce winners and losers and hence unequal outcomes.

Stakes fairness shares certain features of the Aristotelian formal justice principles upon which Loland relies, as set out in Chapter 7, and in particular, that unequal treatment should stand in a reasonable relationship to inequalities between individuals. Brown argues that stakes fairness is an example of what Mark Reiff calls ‘the principle of proportionality’, namely that when two competing claims have unequal moral weight, we should divide the good so that the parties

each receive a share of the good that is proportionate to the relative strength of their competing claims (Reiff, 2009). This bears a close resemblance to the concept of ‘desert’ in terms of talent, effort, and personal circumstances.

I will return to the second aspect of Jacobs’ theory shortly. First, however, I shall consider Roemer’s equality of opportunity model. I will then highlight the relevant differences between Jacobs’ model and Roemer’s model in relation to the issue of so-called ‘natural’ inequalities, before confirming that I ultimately prefer Roemer’s interpretation to that of Jacobs.

8.7 Roemer and Equality of Opportunity

Like Jacobs, Roemer’s equal opportunities theory is based on the ideal of a level playing field as far as the relevant starting position of the competitors is concerned. Roemer also agrees with Jacobs that equality of opportunity involves an ideal that can be applied to different spheres of social life and is sensitive to distinguishing between equality of opportunity and meritocracy (Jacobs, 2004). However, unlike Jacobs, Roemer places responsibility at the heart of his theory, whereas Jacobs regards responsibility as peripheral (Jacobs, 2004). Although Roemer does not incorporate Jacobs’ third dimension of *stakes fairness* in his theory, opting to focus on *background* and *procedural fairness* only, I will follow Roemer’s approach to the issue of responsibility rather than that of Jacobs.

Although Roemer does not refer to any sporting analogies in his theory, Jacobs attempts to explain Roemer’s theory by reference to boxing (Jacobs, 2004). Jacobs states that Roemer classifies the entirety of a given population into ‘types’, where types are analogous to body weight classifications in boxing. He says that for Roemer, what determines an individual’s membership of a particular type (or class) is his or her ‘ability’, which, for Roemer means the propensity to transform their relevant background circumstances into achievement (Roemer, 1998). An individual’s *circumstances* are those background factors that he or she is unable to influence or control, and for which they have no responsibility. These factors could include, for example, an individual’s genes or socio-economic circumstances. For Roemer, an individual’s ‘ability’ performs the same function in identifying a person’s ‘type’ as body weight determines a boxer’s class (Jacobs, 2004). The term ‘ability’ should be contrasted with ‘effort’ which for Roemer is a factor for which an individual is able to influence, control, and over which he or she is able to exercise responsibility. The upshot of Roemer’s model is that he

partitions a given population into distinct types (or classes) based on their ‘ability’, that is, those relevant background circumstances which they are unable to influence or control. In that sense, Roemer’s theory is entirely meritocratic, that is to say, he believes that rewards are only earned and not gifted. Ultimately, the differences in achievement within any given type or class are determined by the degree of effort which they expend. Roemer summarises the position as follows:

“We will observe, in all likelihood, a distribution of effort levels in each type...Where on that distribution an individual sits is, however, by construction, due to his choice of effort...equal-opportunity policy must equalize, in some average sense yet to be defined, the...achievements of all types, but not equalize the achievements within types, which differ according to effort.”

(Roemer, 1998, p.7).

Roemer’s reasoning for reaching this conclusion is that if ability in boxing is purely a function of an individual’s body weight, then success or failure in fights between similarly classified boxers would be determined by individual effort. In other words, for Roemer equality of opportunity implies that the benefits received by an individual should be determined by their effort, and not their ability. He describes it thus:

“[L]evelling the playing field means guaranteeing that those who apply equal degrees of effort end up with equal achievement, regardless of their circumstances.”

(Roemer, 1998, p.12).

Jacobs is critical of Roemer’s theory for a number of reasons. Firstly, Jacobs argues that Roemer concentrates only on the *input* factors in a given competition, which in Roemer’s terms means an individual’s background circumstances or degree of effort. Jacobs argues that the outcome of competitions is determined not only by input factors but also by other factors (such as luck) which creates unpredictability of outcome (Jacobs, 2004). Jacobs concludes that whilst Roemer’s theory is technically proficient, it is also somewhat ‘sterile’. Jacobs attributes this sterility to the fact that Roemer concentrates on the two dimensions of *background* and *procedural fairness* only, rather than incorporating the third dimension of *stakes fairness*. Jacobs therefore suggests that Roemer’s theory is effectively restricted to the distribution of achievement/benefits *within* different types (classes) only, and is incapable of handling other forms of competition, particularly those that involve competition *across* different classes

(Jacobs, 2004). Whilst this may be a valid observation when Roemer's theory is applied to certain other spheres of life, this does not present any difficulties for Paralympic sport, which is essentially concerned only with competitions *within*, and not *across*, particular classification types. Consequently, I argue that there are certain aspects of Roemer's equal opportunities theory that can be utilised within my proposed framework for Paralympic classification, particularly those that relate to relevant background circumstances (or 'input' factors as Jacobs describes them) immediately prior to the competition itself.

8.8 'Luck' Egalitarianism

The biggest divergence between Jacobs and Roemer relates to their views on 'luck' egalitarianism, and in particular, the question of 'natural' inequalities between individuals and the degree to which individuals are responsible for these inequalities. You will recall from Chapter 6 that 'luck' egalitarianism is a key component of Loland's moral norm system (although he does not call it as such, since this term was first coined by Elizabeth Anderson in her influential article "*What is the Point of Equality?*" (Anderson, 1999). Loland argues that inequalities that an individual cannot influence or control, and for which they are not responsible, but which have a significant and systematic effect on athletic performance, should be eliminated or compensated for in a variety of different ways, including regulation of the competition, standardisation of sporting equipment, and placing competitors in different classes.

Jacobs rejects the belief that there are natural inequalities between persons and argues that *all* inequalities are in fact socially constructed (Jacobs, 2004). This particular element of Jacobs' model is at odds with the views of Roemer. Whilst I agree with Jacobs that reference to the phrase "inequality" should instead be replaced with the word "difference", I reject Jacobs' view that all inequalities/differences are of social construction and ultimately follow Roemer in this respect. Contra Jacobs, who argues that inequalities are purely socially constructed, I argue that differences between Paralympic athletes arise as a result of both natural *and* social construction. In particular, I will argue that fair decisions, contra Rawls' veil of ignorance, should be taken with full knowledge of an individual's characteristics (including any relevant impairments) and compensate only for those differences that they cannot control or be held responsible, but which have a significant effect on athletic performance, by grouping athletes into relevant classes. I argue that this requires a comparison of the similarities and differences

between Paralympic athletes, with the result that rather than being ignorant of the differences between athletes in the strict Rawlsian sense, Paralympic classification would be better served by affirming specific differences within particular groups (i.e. Paralympic athletes).

8.9 Summary and Conclusions

In this chapter, I have considered the purpose of, and rationale for competitions (sporting or otherwise) by reviewing the work of Wolff (1998) and Brown (2015) in this area, before examining the purpose of Paralympic competition. Extending the views set out by Loland in his moral norm system, I have argued that the purpose of Paralympic competition is to provide every athlete who has an impairment with an equal opportunity to participate in meaningful competition irrespective of their particular impairment or impairment group. I have stated that for competition to be meaningful, it must ascribe something of value or significance to those who are involved in the competition, be they participants, spectators, organisers, or coaches. I have also argued that such meaning is achieved by ensuring that:

- (i) results are unpredictable;
- (ii) outcomes are close;
- (iii) competitors are evenly matched with others of a similar level of ability; and
- (iv) all competitors have a realistic chance of winning.

In common with Loland, I argue that any ethical framework for fairness and fair play in sport must ensure that all athletes have an equal opportunity to compete. I therefore argue that the purpose of, and rationale for Paralympic classification is not, as the IPC states, to minimise the impact of impairment on athletic performance, but rather to provide all athletes with a fair and equal opportunity to perform in meaningful competition.

The third of my stated objectives that were defined at the outset was to develop an alternative theoretical and conceptual framework for a fair and just classification system in Paralympic sport from an ethical and philosophical perspective. Having reviewed Lesley Jacobs' three-dimensional model of equal opportunities as a regulative ideal (Jacobs, 2004) and John Roemer's equality of opportunity theory (Roemer, 1998), I have concluded that this alternative framework should be based on the principle of fair equality of opportunity and should incorporate certain aspects of Jacobs' model together with several elements of Roemer's

theory. I do not, however, wish to reject Loland's model altogether since I believe that this has significant merit in determining fairness and fair play in sport. Consequently, I wish to construct an ethical framework for Paralympic classification that is based on the concept of fair equality of opportunity (the Fair Equality of Opportunity 2, or 'FEO2' model) and develops Loland's model but incorporates and distinguishes the separate equal opportunity theories of Jacobs and Roemer. This will include the three-dimensional aspects of Jacobs' model (that is to say, background fairness, procedural fairness, and stakes fairness) and those parts of Roemer's theory that relate to the classification of populations by reference to those background circumstances that an individual is unable to influence or control and for which they have no responsibility and Roemer's argument that the distribution of advantage within each class should be determined by reference to an individual's ability to transform those background circumstances into achievement.

By developing Loland's model and incorporating elements of the separate equal opportunities theories of Jacobs and Roemer, we can now start to formulate the outline of a three-stage equal opportunities model for Paralympic classification. The first stage of this process occurs in the original position before the start of the competition and recognises that the natural differences of Paralympic athletes that cannot be controlled but have a significant effect on athletic performance should be addressed by grouping athletes into relevant classes. I will call this 'Background Fairness'. The second stage of the process occurs during the competition itself when the distribution of advantage in each class should reflect differences in athletic performance based on natural intrinsic talents (i.e. relevant skills and abilities) rather than extrinsic factors such as technology. I will term this 'Procedural Fairness'. The third and final stage of the process occurs at the end of the competition and recognises that unequal treatment in the distribution of advantage between Paralympic athletes should reflect differences in performance. I have called this 'Outcomes Fairness'. I shall call this framework the Fair Equality of Opportunity 2 (or 'FEO2') model. In the chapter that follows, I will develop the FEO2 model in significantly more detail and will argue that this ultimately strengthens the framework for a fair classification system in Paralympic sport.

PART IV – A SUPERIOR ALTERNATIVE MODEL

CHAPTER 9 – THE FAIR EQUALITY OF OPPORTUNITY 2 (‘FEO 2.0’) MODEL

In Chapters 7 and 8, I argued that the main purpose of, and rationale for, classification in Paralympic sport is to provide all athletes with an equal opportunity to perform in meaningful competition. This is a meritocratic system that should apply in all sporting competitions, not just in Paralympic sport. Paralympic sports, however, create a further challenge in that equality of opportunity is also affected by considerations of fairness, which is evidenced by establishing distinct categories or ‘classes’ of competitors to construct fair and meaningful contests (McNamee, Parnell, and Vanlandewijck, 2021).

In this final substantive chapter, I extend these philosophical ideas to consider how the fair equality of opportunity principle may operate within the context of Paralympic sports classification by summarising my alternative Fair Equality of Opportunity 2 (‘FEO2’) model and applying this to several of the problematic ethical issues that I identified in Chapter 6. My aim here is to demonstrate that the FEO2 model is both suitable and fit for purpose for use in Paralympic classification and competition. In doing so, I will address the third of the stated objectives of this thesis which I identified at the outset, which is to consider the development of an alternative theoretical and conceptual framework for a fair and just classification system in Paralympic sport from an ethical and philosophical perspective.

9.1 Loland: From Fair Play to Fair Equality of Opportunity

As we saw in Chapter 7, Loland (2002, 2010, 2017, 2020; Loland and Hoppeler, 2012) has developed the most established ethical model for understanding and evaluating fairness and fair play in sport. Loland’s original mixed ethical theory combines the Aristotelian principle of formal equality with Rawlsian concerns of justice as fairness, whilst his later work adopted a more specific fair equality of opportunity principle. As we have seen, Loland’s theory focuses on able-bodied sport and does not draw any distinctions between able-bodied sport and disability sport. Moreover, and as we saw in Chapter 7, Rawls’ justice as fairness theory has been criticised for its failure to provide justice to individuals with impairments (Nussbaum, 2006). In Chapter 7, I outlined the reasons why I agreed with Nussbaum’s objections to this element of Rawls’s theory and thus rejected the Rawlsian element of Loland’s model when applied to Paralympic sport and classification. I also confirmed, however, that I wished to retain

the Aristotelian aspect of Loland's model and that there was considerable merit in adopting and adapting this aspect of his model to apply to Paralympic classification and sporting competition. In particular, I argued that achieving fairness in Paralympic sport and classification (albeit only one ethical issue within the problems facing all Paralympic sports) requires consideration of the fair equality of opportunity principle.

Loland reminds us that the Aristotelian principle of formal equality holds that

- (i) Relevantly equal cases should be treated equally;
- (ii) cases that are relevantly unequal can be treated unequally; and
- (iii) unequal treatment should stand in reasonable accordance with the actual inequality between cases.

From these principles, Loland develops a moral norm system for fairness and fair play in sport in the earliest iteration of his model (Loland 2002) by arguing, *inter alia*, that:

- (i) All competitors should be given equal opportunity to perform by eliminating or compensating for non-relevant equalities;
- (ii) Competitors should be differentiated in classes only where inequalities in person-dependent matters that they cannot influence in any significant way, and for which they cannot be held responsible, have systematic and significant influence on athletic performance;
- (iii) Unequal Treatment should be based on inequalities in athletic performance; and
- (iv) Unequal Treatment in the distribution of advantage among athletes should stand in a reasonable relationship with the actual inequality in athletic performance.

(Loland 2002, p.105).

The first aspect of Loland's model referred to above is a distinctly meritocratic principle, namely, that all competitors should be given an equal opportunity to perform in competition. More specifically, where certain background conditions are concerned, such as an athlete's individual characteristics (which he refers to as 'person-dependant matters') and access to resources (including the provision of technology and equipment), Loland (2002) argues that those inequalities that are not open to voluntary choice, and that exert significant and systematic

influence on athletic performance, ought to be eliminated or compensated for by regulation of the competitive situation and/or by relevant standardization procedures.

Although Loland is strongly opposed to system dominance over athletes and athletic performance, the background conditions from which different athletes, clubs, and nations prepare for and participate in sport are less discussed. I have developed this dimension in the context of Paralympic sport and also extended the concerns of procedural justice to include the stakes that sporting success attracts. The model that I propose can therefore be seen as a processual model that includes the application of scholarship in the theory of equal opportunities as applied to other human characteristics such as age, gender, and race. This is drawn ostensibly from the two separate equal opportunity theories of Lesley Jacobs (2004) and John Roemer (1998).

9.2 Roemer, Jacobs, and the Three-Dimensional Model

In Chapter 8, we saw that Jacobs (2004) has proposed a ‘three-dimensional’ model for equal opportunities as a regulative ideal in competitive settings (Jacobs, 2004), in which he defines equal opportunities as

“an ideal for the normative regulation of competitions that distribute valuable opportunities in society”

(Jacobs, 2004, p.4).

Jacobs’ model focuses on the fair use of competitive procedures as a means of achieving an egalitarian distribution of scarce resources or goods. Jacobs explains that competitive procedures produce winners and losers, where the former enjoy the benefit of the resources or goods at stake, and the latter less so or not at all (Jacobs, 2004). Like Loland, Jacobs argues that competitive models of equal opportunity comprise three essential features, namely:

- (i) that justice is conceived of in terms of rules and procedures (i.e. it is a regulative ideal);
- (ii) the winner is a function of those rules with no pre-determined outcome; and
- (iii) equality of opportunity is a normative standard for regulating certain types of competition.

(Jacobs, 2004, p.14).

Jacobs also notes, however, that whilst many theories of equal opportunity are only one-dimensional (concentrating exclusively on procedural fairness), other theories such as that of Rawls are two-dimensional, in that they consist of procedural fairness and background fairness, which is sensitive to the role played by individual differences in the distribution of opportunities. Jacobs' theory adds a third dimension of fairness to assist with the regulation of any given competition, namely 'stakes' fairness. The three dimensions for regulating competitions that he identifies are therefore *background fairness*, *procedural fairness*, and *stakes fairness*.

Background fairness dictates that competitions take place against fair background conditions, i.e. that the circumstances of all participants immediately before the competition should be roughly equal, such that they enter the competition on a broadly level playing field. For the initial starting positions of the individuals in any competition to be fair, Jacobs states that those individuals must all share something which he describes as 'status equality' (Jacobs, 2004, 29). For Jacobs, the term 'status equality' means that all persons should enjoy the same 'standing' in the relevant competition. The concept of status equality draws clear parallels with the Rawlsian concept of the *original position* and the *veil of ignorance*, and it is here that we see the clearest issues relating to the fairness of Paralympic sport.

Procedural fairness regulates the basic procedural rules that govern the competition itself, including how the winners (or losers) of that competition are determined. Jacobs states that the standards of procedural fairness are normally specific to each competition and that what counts as procedurally fair is often linked to what is at stake in the competition (Jacobs, 2004).

Finally, 'stakes' fairness regulates the outcome or effect of a competition i.e. whether the benefits assigned to the participants are fair. Stakes fairness concerns what, and how much, is at stake in any given competition (e.g. the distribution of advantage and the prizes at stake). Jacobs describes stakes fairness as a regulatory device that prescribes a distribution of the prizes at stake in a particular competition that are broader than a simple 'winner-takes-all' scheme (Jacobs, 2004). Since principles of stakes fairness regulate competitions that generate unequal outcomes (i.e. winners and losers), it does not require equality of outcome. In other words, not all competitors should receive the same prize. This coheres with sporting

competitions which are, by their very nature, designed to produce winners and losers and hence unequal outcomes. Stakes fairness therefore shares certain features of the Aristotelian formal justice principles upon which Loland relies, and in particular, that unequal treatment should stand in a reasonable relationship with the inequalities between individuals.

Roemer (1998) agrees with Jacobs that a level playing field is the relevant starting position for equality of opportunity. Roemer's theory, however, focuses on background and procedural fairness but does not include stakes fairness in his model. Instead, Roemer's two-dimensional model adds novelty by distinguishing populations into distinct 'types' (classes) based on their 'ability', i.e. their propensity to transform their relevant background circumstances into achievement (Roemer 1998). An individual's circumstances are those background factors, that they are unable to influence or control, and for which they are not responsible. These factors could include, for example, an individual's genes, socio-economic circumstances, or, in Paralympic sport, an individual's impairments. Loland recognizes this meritocratic ideal though he does not explicitly argue as Roemer does for the binary classes. Roemer argues that the differences in achievement within any given class are determined by the degree of effort that the individuals expend. Effort is, after all, a factor over which an individual is able to exercise responsibility. Roemer argues that the differences in achievement within any given type are determined by the degree of effort that the individuals expend. He states that:

"We will observe, in all likelihood, a distribution of effort levels in each type...Where on that distribution an individual sits is, however, by construction, due to his choice of effort...equal-opportunity policy must equalize, in some average sense yet to be defined, the...achievements of all types, but not equalize the achievements within types, which differ according to effort."

(Roemer, 1998, p.7).

Jacobs, however, argues that whilst Roemer's theory is sophisticated, it is restricted to the distribution of achievement or benefits within different types (classes) only, and is incapable of handling other forms of competition, notably across different classes (Jacobs, 2004). Even if Jacobs is right about this, however, it does not present any difficulties for Paralympic sport, which is essentially concerned with competitions *within*, and not *across*, particular classification types.

9.3 The Fair Equality of Opportunity 2 (‘FEO2’) Model

To address the ethical problems in Paralympic sport and classification that I have identified in Chapter 6, I have developed an alternative framework for classification that attempts to apply and extend Loland’s (2002; 2010; 2017; 2020; Loland and Hoppeler, 2012) theoretical work in fair play and fair equality of opportunity by incorporating the separate equal opportunity theories of Jacobs (2004) and Roemer (1998). In particular, I have utilised both Jacobs’ and Roemer’s theories when examining fair equality of opportunity in Paralympic classification, particularly in relation to those relevant background circumstances that apply immediately before the competition itself. Applying Jacobs and Roemer to Loland, I have therefore articulated the following propositions which together form the three-stage Fair Equality of Opportunity 2 (‘FEO2’) model:

- (i) *Where natural differences of Paralympic athletes that cannot be controlled have a significant influence on athletic performance, such differences should be recognised by grouping athletes into relevant classes in Paralympic sport (“**Background Fairness**” or ‘**BF**’);*
- (ii) *The distribution of advantage (i.e. success or achievement) in each class should reflect differences in athletic performance (i.e. relevant skills and abilities) rather than extrinsic factors such as technology (“**Procedural Fairness**” or ‘**PF**’); and*
- (iii) *Unequal treatment in the distribution of advantage between Paralympic athletes should reflect differences in athletic performance (“**Outcomes Fairness**” or ‘**OF**’).*

In this final substantive chapter, I intend to test the efficacy of the FEO2 model by applying it to some of the ethical issues in Paralympic sport and classification that I have identified in Chapter 6. You will recall that my aim here, as stated at the outset, is not to provide a revolutionary overhaul of the Paralympic classification system, but to seek to refine and improve this. My objective is to propose a new system to change how classification is undertaken in Paralympic sport by placing more emphasis on fair equality of opportunity to create a greater sense of fairness and justice. Let me start by considering the issue of *Background Fairness*, ‘BF’, which is the first limb of the three-stage FEO2 model.

9.4 Background Fairness ('BF')

My stated proposition with regard to Background Fairness is as follows:

'Where natural differences of Paralympic athletes that cannot be controlled have a significant influence on athletic performance, such differences should be recognised by grouping athletes into relevant classes in Paralympic sport.'

'Natural' Differences

We have seen from Loland that the relevant inequality to be considered in sport is that of athletic performance, which depends on several different factors including natural ability, training, interaction with the environment, and situational factors in the competition itself (Loland, 2002). Loland examines differences and inequalities by reference to what he terms 'person-dependent matters' such as body size, age, and sex (Loland, 2002, 53; Loland, 2017). He argues that differences in an individual's personal characteristics should be regulated to provide athletes with an equal opportunity to compete in sport. In particular, Loland argues that athletes should not be responsible for differences or inequalities in personal characteristics that they cannot influence and have not voluntarily chosen themselves (Rawls, 1971; Loland, 2002).

One of the most important methods of regulating differences and/or inequalities in competitors' personal characteristics is to introduce some form of classification in sport. As we saw in Chapter 3, classification systems are a central feature of most modern sports and regulate the impact of factors that affect performance (Connick et al, 2018). Such classification systems provide a framework for competition that increases the likelihood of more close competition, which helps to promote greater participation in sport amongst individuals with widely varying skills and abilities (Tweedy and Vanlandewijck, 2011; Connick et al, 2018).

If we did not classify participants into different categories, we are likely to (re)produce one-sided contests that are unattractive to both competitors and spectators alike and would deny all participants an equal opportunity to compete. In this sense, competitors would win or lose based on inequalities that they cannot affect in any significant way, and for which they should not be held responsible. Loland, therefore, formulates the following premise in relation to inequalities in personal characteristics:

“Competitors ought to be differentiated in classes only in cases where inequalities in person-dependent matters that they cannot influence in any significant way and for which they cannot be held responsible have systematic and significant influence on athletic performance”.

With the proviso that:

“Where inequalities in body size, sex and age exert significant and systematic influence on athletic performance, such inequalities ought to be eliminated or compensated for by establishing reasonably standardised weight, height, sex, and age classes.”

(Loland, 2002).

Placing athletes into different classes based on certain differences in personal characteristics to try to reduce or eliminate inequalities is relatively uncontroversial and is a central feature of most modern-day sports and sporting competitions. This is particularly relevant in Paralympic sport given the differences in the type and severity of impairments of the athletes competing.

I have already established that fair equality of opportunity requires that all competitions, including Paralympic competition, should take place against fair background conditions, that is to say, the circumstances of all individuals immediately before the given competition should be roughly equal, such that the individuals then enter the competition on a broadly level playing field. For Rawls, this was his hypothetical *original position*, where individuals make a social contract with one another to identify the necessary principles for a fair and just society, which is achieved through the *veil of ignorance*, whereby the parties are ignorant of characteristics that they possess. Nussbaum’s objection is, however, primarily based on the argument that Rawls’s theory denies justice to those with physical and mental impairments. In particular, Nussbaum argues that Rawls fails to include those individuals with impairments in the design of, and participation in, the initial choice situation which he refers to as his original position. For those reasons, Nussbaum argues that the social contract tradition in general, and Rawls’s theory in particular, cannot provide justice for the disabled.

Whilst I have already rejected the Rawlsian element of Loland’s model following the Nussbaum objection, there is a further reason not to follow Rawls when determining the relevant principles of justice for those with impairments that are not specifically addressed by Nussbaum. On top of the Old Bailey Courts of Justice in London stands the familiar figure of

Lady Justice holding a sword in one hand and a set of scales in the other, symbolising the law and judgment that she is required to provide. Lady Justice is also depicted wearing a blindfold when administering justice so that she cannot see those subjects who stand before her and is, therefore, able to act consistently, fairly, and impartially by not knowing any of the individual characteristics of those involved (Carr, 1981). On the face of it, this imagery provides an apt illustration of the classical interpretation of justice as we know it and is also indicative of the Rawlsian veil of ignorance. Yet it also represents a certain paradox in that it blinds us to the practice of delivering justice. As Carr (1981) puts it:

“Justice is not blind to particular subjects. Quite the contrary, it looks to those who stand before her and demands from us the response which is appropriate for them. The practice of doing justice, this is to say, signals the need to respect the rights and deserts of particular subjects.”

(Carr, 1981, p.224)

Whilst the Rawlsian account of fair equality of opportunity relies upon the original position and veil of ignorance to determine the relevant principles of justice to govern society in general terms, I argue, following Carr, that fairness and justice cannot be achieved in Paralympic sport by making decisions relating to classification of athletes behind a veil of ignorance. Indeed, it is simply impossible for us to construct any form of meaningful classification system (fair or otherwise) if those responsible for the classification process are ignorant of and blind to, the nature and severity of an athlete's impairment(s). Rather than adopting Rawls's *veil of ignorance*, I, therefore, argue that we should apply the principles of fair equality of opportunity in the context of Paralympic sport by comparing the similarities and differences of Paralympic athletes with full knowledge of their individual characteristics (including the nature and severity of their impairment(s)) and then group those athletes into relevant classes immediately before the competition begins (which is the relevant original position or initial choice situation for these purposes).

In my view, a better starting position than the Rawlsian veil of ignorance for the determination of Paralympic classification is Jacob's concept of *status equality*, which strives to achieve a level playing field by requiring all individuals to have the same moral standing in the competition immediately before that competition, by establishing that all athletes have an equal

amount of goods (here, for example, access to resources) and the same level of human functioning. I would argue that in Paralympic sport, status equality between athletes is achieved by adopting a fair classification system.

Classification

Although Loland argues that athletes should be placed into appropriate classes, his model does not, however, extend to identifying *how* we should classify athletes. This is perhaps not surprising given that this was not the purpose of Loland's study. We therefore need to identify an appropriate method of constructing such a system within the FEO2 model. I argue that Roemer's equal opportunities theory can assist in this process.

You will recall that Roemer distinguishes populations by dividing them into distinct 'types' (classes) based on their 'ability', which he describes as their propensity to transform relevant background circumstances into achievement (Roemer 1998). For Roemer, an individual's circumstances are those background factors that they are unable to influence or control, and for which they are not responsible. These factors include, for example, an individual's genes, socio-economic circumstances, and, in Paralympic sport, an individual's impairments.

My aim in this study is to develop a framework for classification that essentially provides *fairness* between Paralympic athletes. It is not concerned with such factors as the funding of competitions or the time which is needed to undertake those competitions (although I accept that such factors have significant practical and financial importance for the IPC that governs and organises such events, not least of all the Paralympic Games). Against this background, and considering the different models of disability and types of classification systems that I have reviewed in this study, I argue that Paralympic athletes should initially be divided into classes based on the *type of impairment* in the first instance in accordance with those impairments that are recognised as qualifying disabilities as set out in Table 5.1 above. This would enable competitors with the same similarities and differences to compete together in the same class. In this sense, I am therefore essentially adopting the medical model of disability and stressing a medical system of classification. I accept that this is somewhat controversial and will draw criticism because it would appear at first sight to represent a backward step in Paralympic classification.

I would also argue, however, that we should qualify this initial starting position by introducing a finer, more granular, criterion within each of those primary classes by sub-dividing athletes into smaller classes by reference to their *functional ability* and the extent to which their ability to perform a particular sport or event is limited or restricted. This speaks to the social model of disability and the functional classification system that has been introduced to Paralympic sport more recently. As a result, this adopts that aspect of Roemer's theory that states that classes should be divided by reference to their 'ability', i.e. their propensity to transform their relevant background circumstances into achievement. In this sense, I have effectively combined the medical and social models of disability and the medical and functional classification systems by creating a hybrid system that comprises elements of both models/systems. This will inevitably create more classes in each event, and potentially result in fewer athletes participating in each event and therefore longer competitions. This is, however, an issue that is already prevalent in Paralympic sport. For example, the British Para swimmer Harvey Phillips, is a bilateral amputee, having had both his legs and parts of his arms amputated as a baby due to contracting meningitis (Swim England, 2024). Phillips has been classified in the SB3 category for the 100m Breaststroke, where he is the current British record holder. There are, however, only 5 swimmers who participate in this event in this class in long course (50m pool) in the current world rankings, where Phillips currently ranks fourth with a personal best time of 2:14.77 (World Para Swimming Rankings, 2024).

Access to Resources

In Chapter 6, I considered the problematic issue of the use of prosthetics and other technology by Paralympic athletes, with specific reference to the IPC's Policy on Sport Equipment, 2011. This policy identified 'universality' as a fundamental principle that should apply in all Paralympic sports and competitions, and is an ideal that coheres directly with the concept of Background Fairness. Universality should ensure that the technology and equipment used by Paralympic athletes are available to all, regardless of the athlete's nationality, level of resources, or individual background circumstances, both before and during competition. This is not, however, borne out by the results of successive Paralympic Games, which indicate that less developed nations can only be successful in disciplines that do not use such equipment. A further disadvantage in developing countries is the lack of appropriate medical care, complicating issues such as the stump-socket alignment due to misshaping of the amputated leg (McNamee, Parnell, and Vanlandewijck, 2021).

Here then is a criterion that speaks directly to Background Fairness. Even if Procedural Fairness were assured, the distortive effect of technology access predictably prevents athletes from developing economies competing fairly with their richer counterparts. The non-universal access to such equipment therefore presents an obvious challenge to the principle of fair equality of opportunity generally and the IPC Policy on Sport Equipment specifically.

A possible response to this problem is, therefore, to ensure that athletes from less developed nations who do not have sufficient money or access to prosthetics and other technology should be aided and assisted by developed countries sharing such technology and ‘technical know-how’ with them. Illman contends that it is the responsibility of international sports governing bodies such as the IPC to facilitate this sharing of technical knowledge and resources (Illman, 1993).

9.6 Procedural Fairness (‘PF’)

I have formulated the following proposition relating to Procedural Fairness (‘PF’) where Paralympic classification is concerned:

‘The distribution of advantage (i.e. success or achievement) in each class should reflect differences in athletic performance (i.e. relevant skills and abilities) rather than extrinsic factors such as technology.’

Whilst Roemer argues that the distribution of advantage in each class, once determined, should be based on effort alone, I argue that in Paralympic competition, the distribution of advantage in each class should be determined by differences in the *natural* talents of athletes (i.e. relevant skills and abilities, and not just effort) within the ethos and rules of the sport. I also argue that social inequalities such as the use of prosthetic technology and other equipment should be eliminated or compensated for by regulating the competition structure and/or the standardisation of equipment.

Standardisation of Equipment

A potential solution to level the playing field where technology is concerned is to standardize such technology in Paralympic sport so that all athletes have access to the same equipment (Loland, 2002). We can draw upon examples in able-bodied sport such as the javelin and pole

vault in Athletics, where athletes use the same equipment provided by the event organizers in competition and do not use their own equipment to see how this might work in practice. Standardization appears to work well in some sports, for example in yachting and motor racing, where the equipment used is external to the body. The standardisation of equipment in sport should provide all athletes with access to the same type of technology to ensure equality of opportunity. But in Paralympic sport, this principle creates its own inherent problems. For example, it is difficult to conceive of a ‘standard’ wheelchair that is suited to all body types and impairments, since individual differences make this virtually impossible. It is even more difficult to standardize equipment that attaches to the body such as a prosthetic limb. For example, in theory, all amputee sprinters could be provided with the same type of prosthetic device to compete. Adopting such a literal “one size fits all” approach may not, however, suit all. It is, however, difficult to adapt the stumps of leg amputees to fit the sockets of prosthetic blades such as those used by Pistorius and others. Many athletes run in pain and discomfort as a result. This also risks harm or injury to the athlete. For example, the Brazilian double-leg amputee sprinter, Alan Oliveira, repeatedly complained of skin tissue damage to his stump in the Rio 2016 Paralympics, which was caused by the interface between his stump and prosthetic limb. Such incidences are likely to become more frequent if competitors were to use standardized prosthetic limbs. Furthermore, while an initial solution providing for standardized equipment may assist in mitigating unfair effects, its impact on performance will inevitably vary according to the type and severity of the impairment(s) concerned. Consequently, whilst the standardisation of prosthetic technology may produce a level playing field by giving all athletes the same tools, this equipment may not be suited to all (McNamee, Parnell, and Vanlandewijck, 2021).

Regulation of Prosthetic Technology

You will recall that in Chapter 6, I considered some of the problematic ethical issues concerning Paralympic sport and classification, including the use of prosthetics and other technology. One of the case studies I cited was that of the length of the carbon running blades used by Paralympic athletes such as Oscar Pistorius, and his allegation at the 2016 Paralympics that his rival, the Brazilian sprinter Alan Oliveira, appeared taller than he had been in previous competitions due to wearing longer prosthetic limbs. This is a problem that relates to procedural fairness, that is to say, fairness concerning the rules of the competition itself. The IPC appears to have addressed this issue by implementing strict guidelines for the length of prosthetic blades

based on those aspects of the athlete's body that are capable of being measured, such as arm length. For example, it is theoretically possible to adopt a standardized test for prosthetic limbs which is based on an athlete's body weight or size/height. For single-leg amputees we could use the length of the natural leg to determine the length of the prosthetic limb; whilst for double amputees we could use a percentage of the average height.

The other case study I examined in Chapter 6 was that of Markus Rehm, the German 'Blade Jumper'. You will recall that Rehm was able to excel in both the Paralympic (and able-bodied) long jump event as a result of his use of the latest, most expensive prosthetic blades. Rehm is a trans-tibial (i.e. below the knee) amputee. It should be noted that amputations take many forms that may facilitate or complicate the fitting of the prosthesis. Rehm has what might be described as the 'ideal' stump in relation to its capacity to function efficiently with the prosthesis (he is after all a prosthetic technician).

One method of addressing this issue is to examine which leg is used as the 'take off' leg by single-leg amputee long jumpers. There is no IPC rule that stipulates whether the natural leg or prosthetic leg must be used as the 'take off' leg. It is typical, however, that athletes such as Rehm use their prosthetic limb for this purpose. This may be because the prosthetic limb acts more like a spring than a natural limb, which is perfect for an event such as the long jump. If the IPC were to specify that all single-leg amputees must use their prosthetic limb as their 'take off' leg, this would standardise competition, making it fair for all. This would not, however, fulfil the IPC policy of promoting physical prowess over technology. Indeed, it would seemingly promote precisely the opposite. The other option is to specify that all single-leg amputees must use their natural leg as their 'take off' leg instead. This would equalise the competition by adopting the same rule for all and would also satisfy the IPC's policy of natural ability over technology. It would also resolve the issue when Paralympic athletes such as Rehm compete against able-bodied athletes in the same competition because both would be using their natural leg as their 'take off' leg.

The IPC Classification Code 2015 states that technology should not have any impact on classification. There is, however, little doubt that equipment such as prosthetic limbs have the ability to have a significant impact on both classification and athletic performance in Paralympic sport. Part of the answer to address this problem is to try to ensure that the distribution of advantage in each class is determined by differences in the natural talents of

athletes (i.e. relevant skills, abilities, and effort) and not by external factors such as the use of sophisticated technology. This can only be achieved by the introduction of greater regulation in Paralympic sport, including a significant review of the IPC Policy on Sport Equipment, 2011.

9.7 Outcomes Fairness ('OF')

Finally, I have formulated the following proposition as the third and final stage in the Fair Equality of Opportunity model, which I have called '*Outcomes Fairness*':

'Unequal treatment in the distribution of advantage between Paralympic athletes should reflect differences in athletic performance.'

I have already acknowledged that there are many factors that may contaminate the fairness of Paralympic classification and competition, including luck, corruption and match-fixing, adjudication errors, cheating, and doping, and Intentional Misrepresentation ('IM'). I have also argued that unequal treatment in the distribution of advantage between Paralympic athletes should reflect differences in athletic performance and should not be unnecessarily influenced by those external factors. In other words, if we are successful in achieving Background Fairness and Procedural Fairness in paralympic classification and competition, this should *ipso facto* result in the *outcome* of the competition also being fair.

I have already stated that the FEO2 model is processual in nature. Consequently, there is a sense in which outcomes fairness will only be realised if both Background Fairness and Procedural Fairness in Paralympic classification are achieved. In other words, it should necessarily follow that if background conditions and procedural fairness in Paralympic classification are fair and just, then so should the outcome of Paralympic competition.

Meaningful competition

Another aspect of outcomes fairness that we can examine as part of a fair classification system in Paralympic sport (and sport in general) is to endeavour to ensure that meaningful competition is achieved between athletes. You will recall that in Chapter 8, I argued that competition in elite sport, including Paralympic competition, should be meaningful. I explained that meaningful competition necessarily involved (i) results that were unpredictable; (ii)

outcomes that were close; (iii) competitors being evenly matched with others of a similar level of ability; and (iv) all competitors having a credible prospect of success.

If we are successful in avoiding the competition being tainted by certain external factors such as corruption/match-fixing, cheating, doping, and Intentional Misrepresentation, the results of paralympic competition should be unpredictable, thus achieving (i) above. A fair classification system that incorporates Background Fairness and Procedural Fairness can certainly assist in producing close outcomes and competitors being evenly matched. I would also argue, however, that greater fairness can be determined by analysing the results of Paralympic events post-competition to determine whether the class to which an athlete was allocated was correct. This is a type of evidence-based form of classification that involves ‘calibrating’ the results of each event after they have taken place on a scientific and/or statistical basis to determine whether there are any ‘outliers’ in that event who have been incorrectly classified. This draws similarities with the later work of Tweedy et al on evidence-based classification together with the scientific experiment of which Loland speaks. This is an entirely novel concept and one that necessarily requires further development.

9.8 Summary and Conclusions

In this chapter, I have set out a detailed explanation of my alternative FEO2 model for classification in Paralympic sport to address the third of the stated objectives of this thesis which I identified at the outset, which is to consider the development of an alternative theoretical and conceptual framework for a fair and just classification system in Paralympic sport from an ethical and philosophical perspective.. I have argued that the purpose of, and rationale for, classification in Paralympic sport is to provide all competitors with an equal opportunity to perform in meaningful competition. I have also argued that if we are to achieve a fair classification system in Paralympic sport, this should be based on the principle of fair equality of opportunity. I have proposed a three-stage framework for Paralympic classification which I have called the Fair Equality of Opportunity 2 (‘FEO2’) model that adapts and extends Loland’s model and incorporates but distinguishes the separate equal opportunity theories of Jacobs and Roemer.

The first stage in this model is to establish that natural differences of Paralympic athletes that cannot be controlled but have a significant effect on athletic performance should be recognised

by grouping athletes into relevant classes, which I have called “*Background Fairness*”, or “*BF*”.

I have argued that fair equality of opportunity requires that all competitions, including Paralympic competition, should take place against fair background conditions, that is to say, the circumstances of all individuals immediately before the given competition should be roughly equal, such that the individuals then enter the competition on a broadly level playing field. Contra Rawls, I have argued that decisions relating to Paralympic classification should not be taken behind a veil of ignorance, but should instead be taken with full knowledge of an athlete’s individual characteristics in the original pre-competition position, including the nature and severity of all relevant impairments. This involves a comparison of the similarities and differences between those impairments and coheres with Jacobs’ concept of *status equality*, under which all individuals have the same moral standing in the initial position immediately before competition. In Paralympic sport, status equality between athletes is therefore achieved by adopting a fair classification system.

I have argued, with Roemer, that Paralympic athletes should be divided into distinct ‘types’ (classes) based on their ‘ability’, that is to say, their propensity to transform relevant background circumstances into achievement. I have also argued that an individual’s circumstances are those background factors that they are unable to influence or control, and for which they are not responsible. In Paralympic sport, this includes an individual’s socio-economic circumstances and the type and severity of their impairments.

I have argued that Paralympic athletes should initially be divided into classes based on the *type* of their impairment in the first instance, which would enable competitors with the same similarities and differences to compete together in the same class. I have also argued, however, that each of those primary classes should then be further sub-divided into smaller classes based on an athlete’s functional ability and the extent to which their ability to perform a particular sport or event is limited or restricted. I have therefore combined the medical and social models of disability and the medical and functional classification systems by creating a hybrid system that comprises elements of both models/systems. I have accepted that this mode of classification will draw criticism because of the number of classes that will be created and the time and therefore amount of resources that are needed to hold competitions but stressed that my primary focus is to establish a more fair and just classification system for Paralympic sport.

I have also argued that all Paralympic athletes should have the same access to resources before, and during competition, regardless of their background circumstances. This would allow athletes from developing countries to compete fairly with their counterparts from more developed nations which would, in turn, ensure that all athletes are afforded a level playing field during the relevant event or competition in question.

The second stage in the FEO2 model is to ensure that the distribution of advantage in each class reflects differences in athletic performance based on *natural* intrinsic talents (i.e. relevant skills and abilities) rather than extrinsic factors such as technology, which I have called “Procedural Fairness”, or “PF”.

Whilst Roemer argues that the distribution of advantage in each class, once determined, should be based on effort alone, I have argued that in Paralympic competition, the distribution of advantage in each class should be determined by differences in the natural talents of athletes (i.e. relevant skills and abilities, and not just effort) within the ethos and rules of the sport. I have also argued that social inequalities such as the provision of technology should be eliminated or compensated for by regulating the competition structure and/or standardising equipment.

The third and final stage of the FEO2 model is to provide that unequal treatment in the distribution of advantage between Paralympic athletes reflects differences in performance, such that if we are successful in achieving BF and PF, the outcome of the competition should also be fair, which I have called “Outcomes Fairness”, or “OF”.

I have argued that such unequal treatment in the distribution of advantage between Paralympic athletes should reflect differences in athletic performance and not be contaminated by extraneous factors such as luck, corruption/match-fixing, adjudication errors, and various forms of cheating such as doping, Intentional Misrepresentation (‘IM’), autonomic dysreflexia (‘boosting’) and elective amputation. Finally, I have argued that classification should be capable of producing meaningful competition between athletes, such that (i) results are unpredictable; (ii) outcomes are close; (iii) competitors are evenly matched with others of a similar level of ability; and (iv) competitors have a credible chance of success. I have argued that outcomes of Paralympic competition should be analysed post-competition to determine whether the class to which an athlete was allocated was correct, and that this is a form of

Evidence-Based Classification that involves ‘calibrating’ each event and therefore draws similarities to Tweedy’s later work and the scientific experiment of which Loland speaks.

Having concluded the final substantive chapter of this study, I now move to the final chapter, which sets out my conclusions and also provides several specific recommendations to the International Paralympic Committee (‘IPC’) for the improvement of the classification of Paralympic competition. In so doing, I will address the fourth and final objective for my thesis which I stated at the outset.

CHAPTER 10 – SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

In this study, I have argued that fairness is one of the most important ethical issues in sporting competition and is a particular problem in Paralympic sport due to differences in the nature and severity of athletes' impairments. I have also established that a fair and just classification system is fundamental to the integrity of Paralympic sport (and by extension, the International Paralympic Committee ('IPC') as the international organising and regulatory body of Paralympic competition and the quadrennial Paralympic Games). I have shown that a classification system that ensures that athletes with a similar level of impairment and function compete against one another lies at the heart of the Paralympic movement. I have also stated that the fundamental challenge for the IPC is how to maintain fair and meaningful competition between athletes with different types and severity of impairments, whilst also recognising that even athletes with the same type of impairment may have very different functional and other abilities and therefore levels of performance. I have explained that the IPC has responded to this challenge by developing classification systems in Paralympic sport that categorises participants into different groups or classes so that athletes with similar characteristics such as the same type or severity of impairment or functional ability compete against one another. I have also argued, however, that the IPC classification system is both confusing and complex and is therefore difficult for athletes, coaches, and spectators to understand. In addition, I have demonstrated that there are many ethical and other issues that are associated with the current system of Paralympic classification that are unfair.

The principal aim of this thesis at the outset was to present a philosophical argument defending the recommendation of a different approach to classification in Paralympic sport. In particular, the thesis set out to address each of the following specific objectives:

- (i) to critically review the fairness of the current Paralympic classification system adopted by the IPC;
- (ii) to critically assess the adequacy of Loland's ethical model to determine whether this provides for fairness and fair play in Paralympic sport and sporting classification;

- (iii) to construct the development of an alternative theoretical and conceptual framework for a fair and just classification system in Paralympic sport from an ethical and philosophical perspective; and
- (iv) to make recommendations for the improvement of the Paralympic classification system based on this preferred model, which I have called the Fair Equality of Opportunity 2 ('FEO2') model.

I now summarise the case made for these four aims below.

First Aim: To critically review the fairness of the current Paralympic classification system adopted by the International Paralympic Committee ('IPC')

The first stated objective of my thesis from the outset was to critically review the fairness of the current Paralympic classification system adopted by the IPC. In Chapter 4, I, therefore, provided an overview of the background to the historical development of Paralympic sport and the Paralympic Games and considered the present structure and composition of the IPC as an organisation by way of an introduction to the problems with which I was concerned in this study. In particular, I examined the origins of what we now recognise as the Paralympic Games by considering the rehabilitative work undertaken by Dr. Ludwig Guttman with those military veterans at the Stoke Mandeville Hospital who had suffered spinal cord injuries during the Second World War. I also considered the development of the modern Paralympic Games during the period from 1960 until 1989 when the IPC was formed. After providing a summary of the various international federations that govern Paralympic sport, I reviewed the organisational structure of the IPC, and in particular, the circumstances in which decisions relating to classification are taken. This also provided more context to the discussion of the current system of Paralympic classification in the following chapter.

In Chapter 5, I examined classification in sport in general terms, before considering Paralympic classification specifically. In particular, I reviewed the different types of classification systems used in Paralympic sport, including medical and functional classification together with the most recent forms of classification system, including classification based on taxonomic principles and Evidence-Based Classification ('EBC'). I also analysed the advantages and disadvantages of those classification systems, before concluding the chapter with a summary of the current

IPC classification process that is used in Paralympic sport. This analysis was necessary to better understand how regulatory bodies responsible for organising Paralympic sport, including the IPC, have historically classified athletes, both in terms of the athlete's type and severity of impairment, their functional ability, and the particular sport or event in which they wish to participate. Such analysis has helped to inform us as to the relative strengths and weaknesses of those classification systems and assist in the design of a potential alternative framework, which is one of the aims of this study.

Second Aim: To critically assess the adequacy of Loland's ethical model to determine whether this provides fairness and fair play in Paralympic sport and sporting classification

The second of my stated objectives was to critically assess Loland's ethical model to determine whether this provides for fairness and fair play in Paralympic sport and sporting classification. I have considered the issue of fairness in sport and acknowledged that although Loland has established the most sophisticated ethical model for evaluating fairness and fair play in sport, his model makes no distinction between able-bodied and disability sport. I have provided an overview of Loland's moral norm system as a precursor to establishing whether this is capable of being applied to Paralympic sport in its current form, or whether and to what extent it requires adaptation or even rejection. In particular, I have considered Loland's reliance on Rawlsian Justice as Fairness social contract theory in his model and in particular, the concepts of the original position and the veil of ignorance.

Following Nussbaum's critical analysis of Rawls, I have also raised concerns as to whether there is an important lacuna in Rawls's theory that is exposed when relating to those individuals with impairments relative to justice considerations such as Paralympic athletes in Paralympic competition. I have not discussed their broader disability-related needs. I have demonstrated that Rawls's social contract theory denies justice to individuals with physical and mental impairments, not only in general terms but by extension to Paralympic athletes specifically. I have also argued that there is, however, an important additional reason to reject Rawlsian theory within the context of deriving principles of fairness and justice for Paralympic classification which Nussbaum does not address.

I have argued that there is a distinction between the Rawlsian account (via the original position and veil of ignorance) of how principles of justice should be derived in general terms, and the ways in which those principles should be applied in the context of Paralympic sport. Whilst Rawls relies on his veil of ignorance to determine the relevant principles of justice, I have argued that decisions relating to the classification of Paralympic athletes that are necessarily taken in the original pre-competition position should not be made behind a veil of ignorance since this would lack any knowledge of the nature and severity of the athlete's impairment(s) and the extent to which that impairment impacted upon their ability to perform the tasks required of their chosen sport or event. Instead, I have argued that such decisions should involve a comparison of the relevant similarities and differences of Paralympic athletes with full knowledge of their individual characteristics (including the nature and severity of any impairment(s)) by grouping athletes into relevant classes in the original position before the competition and that Paralympic sporting classification would be better served by acknowledging and confirming specific differences within particular groups (i.e. Paralympic athletes).

I have therefore concluded that we cannot rely on the Rawlsian aspect of Loland's model as a basis upon which to provide fairness in Paralympic classification. I have, however, preserved the Aristotelian aspect of Loland's moral norm system in my ethical framework for Paralympic classification. In particular, I have modified and extended the Aristotelian aspects of Loland's model to demonstrate fairness in Paralympic sport by proposing a mixed ethical theory that combines Aristotelian formal justice with an equal opportunities model that includes elements of Jacob's three-dimensional model of equal opportunities as a regulative ideal and John Roemer's equal opportunities framework (Jacobs 2004; Roemer 1998).

I have critically evaluated the purpose and rationale of Paralympic classification and argued, extending Loland's view, that the main purpose of classification in Paralympic sport is to provide every Paralympic athlete with a fair and equal opportunity to perform in meaningful competition regardless of their particular impairment or impairment category. The phrase "meaningful competition" is becoming an increasing object of philosophical attention but was not central at the time that Loland wrote his classic work. It is important to include the reference to 'meaningful competition' in my alternative framework for Paralympic classification because in addition to fairness and equality of opportunity, this is precisely what sport in general, and Paralympic classification in particular, should strive to achieve between athletes.

Third Aim: To construct an alternative theoretical and conceptual framework for a fair and just classification system in Paralympic sport from an ethical and philosophical perspective

The third of my stated aims of this thesis was to construct an alternative theoretical and conceptual framework for a fair classification system in paralympic sport from an ethical and philosophical perspective. Having reviewed Lesley Jacobs' three-dimensional model of equal opportunities as a regulative ideal (Jacobs, 2004) and John Roemer's equality of opportunity theory (Roemer, 1998), I have concluded that this alternative framework should be based on the principle of fair equality of opportunity. I have argued that there is significant merit in incorporating certain aspects the three-dimensional aspects of Jacobs' model (that is to say, background fairness, procedural fairness, and stakes fairness) together with several elements of Roemer's theory, including his proposed classification of populations by reference to those background circumstances that he or she is unable to influence or control, and for which they have no responsibility, and his argument that the distribution of advantage within each class should be determined by reference to an individual's ability to transform those background circumstances into achievement. I do not, however, wish to reject Loland's model altogether. I have argued that although there are certain similarities with Loland's moral norm system, the separate equal opportunities theories of Roemer and Jacobs provide a better starting position to provide fairness in Paralympic sport because this adds normative strength, specificity, and applicability of the ethical analysis to enhance the Paralympic classification system. Consequently, I have constructed a novel alternative ethical framework for Paralympic classification that embeds the principle of fair equality of opportunity in Paralympic classification, which I have called the Fair Equality of Opportunity 2 ('FEO2') model. By developing Loland's model and incorporating elements of the separate equal opportunities theories of Jacobs and Roemer, I have proposed a three-stage equal opportunities model for Paralympic classification.

Stage 1 - Background Fairness, 'BF'

The first stage of this process occurs in the original position before the start of the competition and endeavours to establish that natural differences of Paralympic athletes that cannot be controlled but have a significant effect on athletic performance should be recognised by grouping athletes into relevant classes, which I have called "Background Fairness", or "BF".

I have argued that fair equality of opportunity requires that all competitions, including Paralympic competition, should take place against fair background conditions, that is to say, the circumstances of all individuals immediately before the given competition should be roughly equal, such that the individuals then enter the competition on a broadly level playing field. Contra Rawls, who argues in his *original position* that decisions should be taken behind the *veil of ignorance*, I have argued that to provide for a fair classification system in Paralympic competition, we need to compare the similarities and differences of Paralympic athletes with full knowledge of their individual characteristics before the competition, including the nature and severity of all relevant impairments, so that they can be classified correctly. This coheres with Jacobs' concept of *status equality*, under which all individuals have the same moral standing in the initial position immediately before the competition. In Paralympic sport, status equality between athletes is therefore achieved by adopting a fair classification system.

I have argued, adopting and adapting Roemer's notion of equal opportunities, that Paralympic athletes should be divided into distinct 'types' (classes) based on their 'ability', that is to say, their propensity to transform relevant background circumstances into achievement which is subtly different from the physical functionalist model of the IPC. I have also argued that an individual's circumstances are those background factors that they are unable to influence or control, and for which they are not responsible, and here I have followed Loland. In Paralympic sport, this includes an individual's socio-economic circumstances (including access to resources such as prosthetics and other technology) and the type and severity of their impairments. I recognise that this brings about certain challenges, but that these are beyond the immediate scope of this thesis.

I have argued that Paralympic athletes should initially be divided into classes based on the type of their impairment in the first instance, which would enable competitors with the same similarities and differences to compete together in the same class. I have also argued, however, that each of those primary classes should then be further sub-divided into smaller classes based on an athlete's functional ability and the extent to which their ability to perform a particular sport or event is limited or restricted. I have therefore combined the medical and social models of disability and the medical and functional classification systems by creating a hybrid system that comprises elements of both models/systems. I have accepted that this mode of classification will draw criticism because of the number of classes that will be created and the time and therefore amount of resources that are needed to hold such competitions but have also

stressed that my primary focus here is to establish a more fair and just classification system for Paralympic sport.

I have also argued that all Paralympic athletes should have the same (or broadly similar) access to resources before, and during competition, regardless of their background conditions. I have also argued for the standardisation of equipment such as prosthetics and other technology, where appropriate. These would allow athletes from developing countries to compete fairly with their counterparts from more developed nations which would, in turn, ensure that all athletes are afforded a level playing field during the relevant event or competition in question. I acknowledge that this may be easier to achieve in some para-sports than others.

Stage 2 – Procedural Fairness, ‘PF’

The second stage in the FEO2 model is to ensure that the distribution of advantage in each class reflects differences in athletic performance based on natural intrinsic talents (i.e. relevant skills and abilities) rather than extrinsic factors such as technology, which I have called “Procedural Fairness”, or “PF”.

Whilst Roemer argues that the distribution of advantage in each class, once determined, should be based on effort alone, I have argued that in Paralympic competition, the distribution of advantage in each class should be determined by differences in the natural talents of athletes (i.e. relevant skills and abilities, and not just effort) within the ethos and rules of the sport. I have also argued that social inequalities such as the provision of technology should be eliminated or compensated for by regulating the competition structure and/or standardising equipment such as prosthetics and other technology.

Stage 3 – Outcomes Fairness, ‘OF’

The third and final stage of the FEO2 model is to provide that unequal treatment in the distribution of advantage between Paralympic athletes reflects differences in performance. In other words, if we are successful in achieving BF and PF, the outcome of the competition should also be fair. I have called this “Outcomes Fairness”, or “OF”.

I have argued that such unequal treatment in the distribution of advantage between Paralympic athletes should reflect differences in athletic performance and not be contaminated by extraneous factors such as luck, corruption/match-fixing, adjudication errors, and various forms of cheating such as doping, Intentional Misrepresentation ('IM'), autonomic dysreflexia ('boosting') and elective amputation. Finally, I have argued that we can assess whether the FEO2 model has been successful in providing meaningful competition between athletes, such that (i) results are unpredictable; (ii) outcomes are close; (iii) competitors are evenly matched with others of a similar level of ability; and (iv) competitors have a credible chance of winning. I have argued that the results of Paralympic competition should be analysed post-competition to determine whether the class to which an athlete was allocated was correct, and that this is a form of evidence-based classification that involves 'calibrating' each event. This is in sympathy with Tweedy's later work in this area and the 'scientific experiment' analogy of Loland who has articulated a conception of sport that focuses on the recording, measuring, and ranking of performances.

As I have acknowledged from the outset, there is no 'perfect' classification system that will address the ethical and other problems that arise in Paralympic sport with the result that the suggestions, recommendations, and conclusions which I have put forward in this study can only ever be tentative at best. By developing Sigmund Loland's (2002) moral norm system for fairness and fair play in sport and relying on the separate equal opportunities theories of the economist John Roemer (1998) and philosopher Lesley Jacobs (2004), I have, however, concluded that the FEO2 model would provide for a better approach to Paralympic classification than the current IPC system. In particular, I have concluded that the FEO2 model for Paralympic classification is preferable to the present IPC classification system because it embeds the principle of fair equality of opportunity in each of the three critical stages of sporting competition (i.e. before, during, and after, competition), and thereby places greater emphasis on an athlete's background circumstances and incorporates an additional and novel element of fairness, namely Outcomes Fairness, which does not feature in the current IPC classification process.

Fourth Aim: To make recommendations for the improvement of the Paralympic classification system based on the preferred alternative model which I have called the Fair Equality of Opportunity 2 ('FEO2') model.

My fourth and final aim of this thesis was to attempt to make some tentative recommendations to improve the current Paralympic classification system using my proposed model. I have therefore set out below several recommendations to improve the current IPC classification system in Paralympic sport based on the alternative ethical framework that I have proposed in this thesis. As stated in paragraph 1.5 above, my aim here was not to undertake a fundamental change in relation to how Paralympic classification is undertaken, but rather to seek to refine and improve this by placing more emphasis on the concept of fair equality of opportunity to create a greater sense of fairness and justice in Paralympic sport and sporting competition.

I argue that the IPC should consider adopting the following changes to the current classification system:

- (i) The IPC should amend its stated purpose of classification by confirming that this is to ensure that all athletes are provided with a fair and equal opportunity to perform in meaningful competition and not, as the IPC states, to minimise the impact of impairment on athletic performance;
- (ii) Paralympic athletes should initially be divided into classes based on the *type* of their impairment in the first instance, which would enable competitors with the same similarities and differences to compete together in the same class. Each of those primary classes should then be further sub-divided into smaller classes based on the severity of the athlete's impairment together with their functional ability, that is to say, the extent to which their ability to perform a particular sport or event is limited or restricted;
- (iii) All Paralympic athletes should have the same access to resources before, and during competition, regardless of their background conditions. This would allow athletes from developing countries to compete fairly with their counterparts from more developed nations which would, in turn, ensure that all athletes are afforded a level playing field during the relevant event or competition in question;
- (iv) The use of prosthetics and other technology should be standardised wherever possible and increasingly regulated. In particular, there should be an immediate and urgent review of the IPC's Sport Equipment Policy of 2011 to ensure that more

detailed rules are put in place concerning, for example, the use of prosthetics and other technology in Paralympic sport;

- (v) The IPC should consider establishing an independent body to regulate classification in Paralympic sport by undertaking regular and random testing of an athlete's classification in a similar way that the World Anti-Doping Agency was created to regulate the use of performance-enhancing drugs and substances in sport; and
- (vi) The IPC should consider introducing a system to measure and 'calibrate' the outcome of events post-competition to determine whether the class to which an athlete was allocated is correct and to ensure meaningful competition between Paralympic athletes.

These are just some of the significant challenges relating to athlete classification that the International Paralympic Committee must resolve to maintain their integrity and credibility in an increasingly confusing and complex area and to discharge their responsibility as the regulatory body of Paralympic classification and competition and the organisers of the Paralympic Games.

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