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A POSTHUMAN IN SPORT?

A CASE STUDY OF OSCAR PISTORIUS
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Abstract

In this dissertation I will argue that the decision from the IAAF and IOC to ban Oscar Pistorius from able-bodied competitions is a good one. There are a number of related reasons for this. First I argue that Oscar Pistorius, due to his enhancement of two carbon fibre prosthetics, can no longer be considered a human in the competitive sports context. One important necessary condition of humanness is that a human exhibits limitations, and weaknesses. Pistorius’ use of prosthetics in sport breaches this important feature of humanness.

Secondly, I argue that Pistorius’ enhancement are incompatible with good sport competition. Seven necessary conditions identify the good sports contest, namely a comparison of abilities, that those abilities are physical, that the contest is governed by constitutive rules, and that the contest be between humans and that these Humans employ strategies and tactics, the contest is a mutual quest for excellence and involves overcoming unnecessary obstacles. Pistorius’ use of prosthetics is essentially a test of his prosthetics rather than his physical capabilities, therefore this is not a valid comparison with an able-bodied athlete. I have argued that Pistorius is a physical Posthuman, not a Human, and therefore not eligible to compete. Pistorius breaks the constitutive rules using prosthetics, they are an unsuitable form of tactical advantage. Pistorius cannot be allowed to compete in able-bodied competitions, his participation would remove the true purpose of sport; a comparison of physical capabilities.
CHAPTER I

INTRODUCTION
1.1 Introduction

Oscar Pistorius is a South African bilateral amputee runner holding world Paralympic records in the 100, 200 and 400 metres. As a bilateral amputee Pistorius has had both legs amputated below the knee and currently competes in the Paralympics in the T43 and T44 categories; T43 have a single leg amputated and use a single prosthetic leg, T44 have both legs amputated and therefore use two prosthetic legs (www.ossur.com 24/02/08). Along with holding records in Paralympic events, Pistorius has qualified for able-bodied events. In March 2007 Pistorius competed in the South African 400 metre championships, finishing second against a fully able-bodied field (www.nytimes.com 24/02/08). In August 2007 Pistorius yet again competed against able bodied athletes at the Norwich Union British Grand Prix athletics event in Sheffield. Pistorius is continued to challenge for participation in able-bodied events believing; “I don’t see myself as disabled, there’s nothing I can’t do that able-bodied athletes can do (Oscar Pistorius, www.ossur.com, 24/02.08). Pistorius applied to the IOC for entry to the 2008 games in Beijing believing that if he could run the qualifying time he should be able to race against the able-bodied athletes. However, on January 14th 2008 the IOC and IAAF after rigorous testing determined that the prosthetics that Pistorius used offered him an advantage and he would not be allowed to compete in the Olympic games or any IAAF competition (www.bbc.co.uk/sport 24/02/08). The aim of this dissertation is to examine whether Pistorius should be allowed to compete against able-bodied athletes using clear philosophical arguments.
In order to discuss this issue my dissertation will be split into two clear chapters; the first chapter will be broken into three sub sections. The first section of chapter one is concerned with what makes a human being unique. A human being cannot be reduced to an essence, a factor X, one idea (Fukuyama, 2002) and therefore it is necessary to construct a list of necessary requirements for a human being. As Butcher and Schneider (2000) discuss how we cannot understand human enhancement without understanding what constitutes a human being.

This leads onto the second section; ‘Transhuman? Posthuman? What comes next?’ This section describes what happens when certain necessary requirements of a human being are removed or enhanced such as person, physical capabilities and behavioural capabilities. In current literature the terms ‘Transhuman’ and ‘Posthuman’ seem to be used to mean the same thing, however a distinction will help develop a clearer understanding in how specific change in the necessary conditions of a human being will effect how the new being can be treated or considered.

The third section of this chapter concerns how Oscar Pistorius can be considered. An account of his level of enhancement and how that changes the necessary components of a human being will be given. From these changes and the definitions of a Transhuman and Posthuman, Oscar Pistorius can be pigeon holed, or classified to better understand how he, and future athletes can be considered in sport.
The second section of this paper concerns the unique properties of Sport. The ideas that sport is a contest, a comparison, to find the best and challenge individuals (Boxill, 2003, Leamen, 1995, Suits, 1995) will allow me to argue concisely that Oscar Pistorius does not belong in the 400 metres.

1.2 Background Information on Oscar Pistorius

Oscar Pistorius is a 20 year old track athlete competing for South Africa. He was born without the fibula in both legs and aged 11 months his parents had his lower leg amputated. Pistorius specialises in the 400 metres but also competes in the 200 and 100 metres. Pistorius currently uses prosthetics from the knee down to enable him to walk and run. Pistorius is a hugely successful athlete in Paralympic competitions; currently holding the world record in the 100, 200 and 400 metres, (www.ossur.com).

Pistorius could be considered especially ‘talented’ or ‘able’ for two main reasons. Firstly he achieved a world record over 100 metres in what was his first proper athletics competition with only two months of training. Then later in that year; 2004, Pistorius competed in the Paralympic games, finishing second in the 100m and setting a new world record in the 200 metres. This is clearly an astonishing result highlighting phenomenal capabilities, possibly an unprecedented capability.

Pistorius finished in second place in the 2007 South African 400m championships, competing alongside able bodied athletes. Oscar Pistorius is clearly at the head of the
field in Paralympic championships and challenging ‘able-bodied’ athletes, in fact, he is challenging the term able-bodied and disables as he is clearly very able. However, it could be argued that he is too able, his performances are above what should be possible or what is acceptable. (http://www.ossur.com/?PageID=3364#profile)

Oscar Pistorius uses two carbon fibre ‘Cheetah’ flex feet to replace his lower leg, (http://www.ossur.com/?pageid=3547). According to Ossur the manufacturer these carbon fibre limbs are a custom foot for track and field sprinters, popular with many professional athletes. These legs are a single piece of carbon fibre, bent slightly designed to spring and flex with no pivots or joints.
CHAPTER II

WHAT PRECEDES A HUMAN?
This section of the paper will outline a series of necessary conditions for a Human. A Human must be a person, genetically homo sapien and display a level of vulnerability and limitations. From this series of necessary conditions an account of a Transhuman and Posthuman will be given. Both a Posthuman and Transhuman are enhanced Humans, however they are differentiated as a Posthuman remains genetically homo sapien, a Transhuman is no longer genetically homo sapien. The term Posthuman can then be divided into two different beings, a physical Posthuman and behavioural Posthuman based upon the type of enhancement. The final section of this chapter determined the classification of Pistorius, giving an account describing Pistorius’ classification as a physical Posthuman.

Pepperel (2005) discusses in detail the nature of Human existence and how Humans are unique in his article; Posthumans and Extended Experience. Pepperel (2005, p28) discusses the problem defining what constitutes a Human and attempts to describe how Humans are distinct from “everything else in the world.” If Humans are distinct or unique it seems logical that there must be an essence or series of necessary conditions separating a Human from anything else. However, Pepperel (2005) elaborates upon this point adding that the picture of a Human is incredibly complex and that the Human experience cannot be reduced to an essence. Pepperel (2005) is suggesting that the concept of Human is so broad and complex that it seems illogical or impossible to reduce it to an essence or one major theme. Following from this it appears evident that if the concept of a Human cannot be reduced to an essence it must be a series of necessary
conditions. These necessary conditions will be highlighted by looking at three different authors thoughts on the uniqueness of Humans.

2.1 Person

The concept of person is discussed at great length by Taylor (1993). According to Taylor (1993) the idea of person is an essential component of a Human. Being a person is a necessary condition of being Human, therefore it is crucial that the condition of person is fully understand. Taylor (1993) believes there cannot be an essence or a simply synonym for a ‘Human’ or ‘person’(p97), however Taylor (1993) attempts to discover possible necessary conditions for a person. Many necessary conditions can be outlined, Taylor (1993) concentrates on mental, cognitive and behavioural aspects of a person and how they differ from animals and machines.

Taylor (1993) believes that one of the key necessary conditions of a person is having a point of view or has a sense of self. This is related to how a person feels, or their opinion on a subject or act. This point of view, according to Taylor (1993) is related to a person’s moral status. Loland (2002) states that morality can be understood as a sub-class of social norms and values. These norms and values regulate interaction, they control how an individual acts, or as Loland (2002) describes, they prescribe how we should act so as to do good to others.
According to Taylor (1993) morality is related to a set of standards. In order to qualify as a person an individual should have predictable behaviour and can be predicted in various situations. This predictability comes from moral status or knowledge of morality. However, Taylor (1993) believes this morality is rooted in the principle of reflective awareness. Reflective awareness helps to predict behaviour, however, being able to predict behaviour does not mean reflective awareness is taking place, as Taylor (1993) explains with the analogy of feeding his cat.

Taylor (1993) knows that his cat will not eat food below a certain quality, and the behaviour of the cat can therefore be predicted if it is given poor quality food. However this is simply following a standard, or learned behaviour. Taylor (1993) explains that persons go beyond this with “reflective awareness of the standards one is living by” (pp102). By this, Taylor (1993) means that persons can distinguish between what one wants to do, needs to do, and what is worthy of doing. This consciousness of what to do distinguishes people, in part, from other animals or machines.

Another necessary component that Taylor (1993) discusses is the idea of planning and a notion of the future. This is related to conceiving different possibilities, how to achieve a goal, the steps needed to be completed. This planning is known as strategy; the power to plan.
The various capacities of a person are understood in terms of this power to plan. Central to this is the power to represent things clearly. We can plan well when we can lay out the possibilities clearly, when we can calculate their value to us in terms of our goals, as well as the probabilities and cost of their attainment. (Taylor, 1993, p104.)

This statement relates to being able to set goals and target to then evaluate the action. By planning actions, a person can attempt a problem with maximum certainty of achieving their goal.

This planning and evaluating leads Taylor (1993), onto the next necessary component of a person; feelings and emotions. Taylor, (1993) describes how feelings are very specific to the situation they take place in, for example, shame is only felt in a humiliating experience, fear is felt when exposed to danger and want to escape.

This section has outlined some necessary conditions of a person, however I cannot state that these necessary conditions are sufficient conditions of being a person. This section has outlined the necessary conditions of most relevance to this paper. The necessary conditions of a person can be summarised as having a sense of self or a point of view, this point of view is reflected in an individuals morality and therefore their reactions to situations. The final necessary conditions described the ability to plan and use strategy.
2.2 Physical conception of a Human.

The necessary physical components of a Human need to be described as Humans clearly differ physically from all other animals and machines. McNamee (2007) discusses an element of being Human related to limitations. McNamee (2007) describes how Humans have a vulnerability to disease, ageing and death. This vulnerability or limitations is what McNamee (2007) describes as the “naturalness” (p9) of Humans. To understand the inherent vulnerability or limitation of a Human a comparison needs to be made. For instance one limitation of a Human is we cannot breathe underwater; a fish can. Therefore when compared with fish a Human is very vulnerable in water and certainly limited. However, when on land this limitation is not an issue, and in fact, when compared with a fish once again Humans are at a great advantage. This suggests that many limitations of Humans are some what context specific, especially when compared with other animals. Williams (1995) describes that Humans are fundamentally animals; evolved from primates and therefore continue to be a form of primate.

Williams (1995) believes that although Humans are animals, Humans are not any kind of machine. A machine differs from a Human in a multitude of ways. Tomasi (2008) describes how machines are created solely in the pursuit of a goal, they serve an instrumental purpose. Machines are manufactured by Humans to assist or replace Humans in specific roles. Machines however lack biological status, they are not a person, they lack autonomy. From this it seems logical that a Human must be very different from a machine and the principle of limitations and vulnerability can be used to
illustrate this. Machines surround us in modern society and are constantly used to replace or aid Humans. Take for example a comparison between a computer controlled fork lift truck and a Human. The fork lift truck is programmed to move around a warehouse by a computer, moving objects to wherever the computer instructs the truck. The computer may have been previously programmed by a Human, but in industry much of these programs, once initiated run without the need for input from Humans. This fork lift truck, for the sake of this example is able to lift objects up to 1 tonne, and as it’s a machine will lift them tirelessly 24 hours a day, 7 days a week. This truck will also lift all the objects at the same speed, regardless of weight up to the max, and will either lift, or fail to lift the weight with low chance of damages.

A comparison with a Human immediately highlights clear limitations. It is accepted that a Human, at least currently, is not capable of lifting and moving an object weighing a tonne, Humans have strength limitations. A Human cannot lift and move objects repetitively with out stopping, Humans need to eat and sleep, Humans tire and fatigue; physiologically a Human cannot continue working without rest. Another clear limitation is the risk of injury, a Human can be injured, either by falling objects or lifting something fat too heavy and causing muscular damage. Linked in with this injury is disease, as mentioned previously, Humans are susceptible to disease that can temporarily or permanently affect quality of life and capabilities of that individual; something machines are not affected by. Although a machine can become old and no longer function to its optimum, a direct copy can be produced and perform in an identical fashion; this does not apply to Humans. Every Human is unique both
cognitively, with relation to person as discussed previously, and physically. This physical uniqueness and limitation is what makes Humans ‘natural,’ the naturalness of Humans relates to the point made earlier by Pepperel (2003); that Humans are not distinct from nature and are the ‘crescendo’ of Darwin’s evolution (Darwin, 1928).

This comparison has highlighted the difficulty in describing unique properties of a Human without a comparison of some kind. A list of necessary components has been drawn up with regards to the cognitive aspect of a Human with the principle of person. However these necessary conditions are not sufficient in order to give an account of what constitutes a Human. Following on from this concern, Culbertson (2007) believes that the concept of Human is context specific. “We can only make sense of talk of Human-ness by reference to particular ways that something might be dehumanising, or someone might be dehumanised” (Culbertson, 2007, p200).

Culbertson (2007) is suggesting that it is not simply difficult, but impossible to give a set of necessary conditions for a Human without a direct comparison. However, Culbertson (2007) adds that there are two distinct uses of the term Human or how a Human can be defined; physical and behavioural. The physical aspect; for example, “The blood is Human,” (Culbertson, 2007, p208) is related to being part of the Homo sapiens species and not for example a horse. The second way Human is used or described is; “his behaviour was inHuman,” (Culbertson, 2007, p208) for example a sports man behaved more like an animal; aggressive, biting, in such a way that Humans are not expected to do so. The second issue raised; behaviour, is the idea of person.
However, the problem with the second description of Human is that behaving in a non-Human way or possibly displaying non-Human characteristics does not stop the individual having the blood of a homo sapien or belonging to the homo sapien species. Having the blood or genetic make up of homo sapien clearly is an important physical component of a Human. In order to be identified as a Human an individual should have the genetic make up of a home sapien; however, this raises issues with a person. If an individual shows genetic make up of a homo sapien but no characteristics of a person, are they Human? The answer must be no, being a person is has been outlined as a necessary.

If a being can be genetically homo sapien but not Human it is fair to say that another title needs to be given to these new beings. Culbertson (2007) describes many forms of ‘Humans,’ these can be used to outline some necessary components of a Human. These forms offer a comparison to better outline necessary physical components of a Human.

Humans given the title of machine exhibit very high levels of consistency, they can repeatedly carry out the same task exactly (Culbertson, 2007). This relates back to the issue raised previously, a machine does not fatigue, does not get injured and can repeat a task over and over again identically. Part of what makes a Human separate from machines is getting tired, changing slightly, perhaps making mistakes.

A Cyborg, according to Culbertson (2007) is an advanced Human, outperforming Humans physically, perhaps stronger, fitter, better endurance. However, what makes a
Cyborg unique is that this advancement is seen through the use of technology; enhancement surgery, genetic modification or another form of technological manipulation. For example, if an individual was genetically modified so that they would not catch any disease, a limitation is removed and they have become a Cyborg. Or if the individual had robotic arms fitted that did not tire or get injured he could be classed as a Cyborg.

Culbertson (2007) describes that there is an overlap between the terms machine and Cyborg and how they can be dealt with. Culbertson (2007) adds that beings fitting under either of these headings would be deemed “un-natural.” By comparing a Human to these ‘beings’ a sense of what constitutes a Human can be developed. This allows a series of necessary conditions to be constructed. A Human must be genetically homo sapien as stated earlier. Humans evolved through the process of natural selection and developed the genetic make up of homo sapien. The natural breeding process continues and the genetic make up remains. However, it is possible that natural selection could continue and produce a new being that is not genetically homo sapien. This does not change the need for the necessary condition of a Human to be genetically homo sapien. However it highlights that a being that is not genetically homo sapien must be given a new title and not considered Human. Limitations and a lack of excessive consistency must be present in order to be a Human. This idea is potentially very difficult to judge, however when based on comparison should become more clear. The use of technology should not be present to change the way the individual behaves physically, moves, responds to stimuli or if they remove limitation or the risk of injury. Finally, as discussed previously, an individual must show me characteristics of a person; they must be a person to be fully
considered Human. If a being is not a person, it would logically follow that they could still be genetically homo sapien and exhibit all the key physical criteria, however lacking this key necessary component would stop them being classed as a Human.

2.3 What precedes a Human?

So far in this paper I have stated that in order to be a Human a number of necessary conditions must be fulfilled. However, if a necessary condition is not fulfilled it is fair to say that a new being, or at least a non Human exists. Culbertson (2007) attempts to describe these beings with the titles of machine and Cyborg. However, Culbertson (2007) adds that these new beings have their own set of necessary conditions, some shared with Humans, some not. Culbertson (2007) states that both a machine and Cyborg share the necessary condition of un-natural or the classification of advanced Human. McNamee (2007) would place both these beings under the heading of a Transhuman.

Transhumanism, according to McNamee (2007) is centred around over coming the limitations of Humans. These limitations were mentioned earlier with relation to the essence of a Human; or necessary conditions. What is clearly evident already is that Transhumanism is concerned with changing a Human. Limitations have already been stated to be a necessary condition for a Human. Transhumans lack these limitations and therefore cannot be considered Human.
A Transhuman is not a Human, or fails to continue to be a Human as a key necessary component is removed; limitations. McNamee (2007) elaborates upon limitations adding that they include overcoming the limitation of ageing, lifespan and vulnerability. These limitations have already been outlined previously as necessary conditions for a Human, therefore it can be seen clearly that a Transhuman is not a Human. Transhumanism is concerned with more than simply overcoming physical limitations, McNamee (2007) describes how Transhumanism is also concerned with overcoming the limitations of person, or changing what constitutes person for this new type of being. The extreme of this, according to McNamee (2007) is that Transhumanism and the associated technology is all associated with continuing the evolution of Humans without the need for random mutations; “tailoring the development of Humans to an ideal blueprint,” (McNamee, 2007, p8).

The advantages of Transhumanism are outlined by McNamee (2007) under two clear headings; health and the future of the Human race. The health concern or health benefits of Transhumanism are, in the view of McNamee (2007) hugely beneficial to society. McNamee (2007) describes the benefits as for all Humans. The possible benefits of Transhumanism could be increasing health, work capabilities, and general quality of life. This increased health should therefore increase life expectancy, and McNamee (2007) believes it should increase individual’s autonomy within their life; be more in control of their future.
2.4 Transhuman or Posthuman?

Smith (2005) uses Posthuman as a broad term encompassing Transhuman and Posthuman. A Posthuman, according to Smith (2005) is “an individual of unprecedented physical, intellectual and psychological capacities” (p1). Posthuman is clearly a complex idea involving changing the three areas of Human uniqueness or properties. Earlier in this paper the cognitive and physical aspects of a Human were discussed with necessary requirements stated, a Posthuman or Posthumanism is concerned with changing both of these elements. However, a distinction between a being with changed cognitive and physical components, and an individual who has one component unchanged; for example unprecedented physical capabilities but is still a person needs to be made.

Fukuyama (2002) adds a different definition, or suggestion of a Posthuman; a biotechnologically mutated non-Human, a creature that remains biologically encased but divorced from its natural origin. This statement ties in with Culbertson (2007) ideas about Humanity. As described earlier, Culbertson (2007) believes that “an individual cannot, not be Human as they will remain genetically homo sapien;” the biological encasing that Fukuyama (2002) mentions. However, Fukuyama (2002) is suggesting that the idea of a homo sapien, although the same genetically, may be very different.

Smith (2005) believes that Posthumanism will lead eventually to the extinction of the Human race. This contradicts entirely the previous statement that a Posthuman would
essentially be a homo sapien still. The idea of a Posthuman, according to Smith (2005) was discussed earlier. Smith (2005) believes that a Posthuman will be developed through the means of genetic technology, transgenic technology, bionic implants and brain/computer interface. The method of genetic technology could prove to be a way of developing a Posthuman that is not genetically a homo sapien.

Miah (2003) describes the possibilities of genetic technology to enhance Humans. Genetic technology is still in the early days of development with very few practical possibilities possible, however there is much theorised about its potential. The aim of genetic technology, according to Miah (2003) is to have “functioning genes inserted to correct genetic errors or add a new function” (pp44), this technology is usually referred to as gene transfer technology.

Genetic technology in sport is considered by Munthe (2000, in Miah, 2003). Four main categories are considered within genetic technology, or possible methods of genetic technology;

- **Genomics** – Using genetic technology to improve methods of performance enhancement by creating more effective drugs and treatment.
- **Somatic Cell Modification** – altering non-hereditary cells of the body, for example those specific to muscle growth.
- **Germ-line Modification** – altering hereditary cells in the body very early on in life.
Genetic pre-selection – using information of a person’s genotype to conclude suitability for sport either at embryonic stage or infantile stage.

The first method described; Genomics could indeed have Posthuman possibilities. The process of genomics could create new drugs and training methods to allow individuals to have unprecedented physical capabilities; a necessary component as outlined by Smith (2005). However, these methods would not alter the genetic state of an individual and they would remain a homo sapien. By remaining a homo sapien this technology enables a Posthuman to be created within the confined of the definition by Fukuyama (2002), the individual would remain biologically encased, even though they are very much advanced.

Somatic cell modification, according the Miah (2003) could be used to develop modified red blood cells with extra oxygen carrying capacity. This ability would once again produce someone of unprecedented physical capability; a post Human. Although, this ability would be present in an individual with a slightly different genetic make up and therefore they would no longer be a home sapien.

As discussed earlier, defining a Human is a difficult and complex task. A Human is made up of a large series of necessary conditions, one of which is the genetic state. Being genetically homo sapien is a key necessary condition of a Human, but by no means a sufficient condition. Removal of this necessary condition would result in a being that could no longer be considered Human; it would need a new classification.
However, a being that continued to be genetically homo sapien but exhibited physical capabilities not seen in Humans, or for example had the ability to never be injured, to be invincible would be missing a necessary component of a Human and therefore would also need a new classification. However, what is clear is that both these new beings would be different, they are missing a different necessary condition, and although they could both be considered an adapted Human or altered Human differentiating between a modified homo sapien and a non homo sapien is essential. The reason for differentiating between a being which is enhanced yet remains genetically homo sapien and one that doesn’t will become clear later in the paper.

Being a person is another necessary requirement of being a Human. I have already stated in this chapter that if a necessary condition is not fulfilled then the being cannot be considered Human. It follows from this that if the necessary condition of a person is not fulfilled the being is not Human. For example if an individual shows no emotion they are missing a necessary component of person. This individual would no longer exhibit the necessary component of person and therefore cannot be a Human even though they may well be genetically homo sapien and exhibit normal physical capabilities. Finally, the possibilities of individuals who exhibit the component of person, but show far superior physical capabilities, these individuals could potentially exist both as genetically homo sapien; through enhancement technology, or not genetically homo sapien through genetic technology. Listed here are four clear possibilities that remain partly Human, or maintain some necessary components and not others. In order to properly understand how to treat these examples later in the paper,
and in future research, the examples need to be classified. As described earlier, a post Human is an advanced Human with unprecedented physical, intellectual and psychological capacity but still encased biologically; still homo sapien.

A Posthuman can now be said to be a being that remains genetically homo sapien but is an advanced Human through the utilisation of enhancement technology. A distinction must now be made between Posthumans that are advanced physically and behaviourally. The key necessary components for a Posthuman therefore are remaining genetically homo sapien and being advanced. For the purpose of this paper a development on this term will be made, a physical and behavioural Posthuman. A physical Posthuman is a being that remains a person; exhibits normal intellectual and psychological capacity, remains genetically homo sapien but exhibits unprecedented physical capabilities. The second term; a behavioural Posthuman is an individual that exhibits normal physical capabilities and remains genetically homo sapien yet shows far superior intellectual or psychological capacity. These superior intellectual or psychological capabilities result in this Posthuman not fulfilling the necessary conditions of a person. If the necessary conditions of a person are not fulfilled the being can be considered a behavioural post Human.

The earlier discussion of Transhumanism described one of the aims as overcoming the limitations of the Human race and being able to plan the evolution of Humans without random mutations. A Transhuman differs from a Posthuman as the genetic state of homo sapien is removed; a Transhuman is not homo sapien. A Transhuman clearly is also
concerned with enhancement and fails to fulfil the necessary requirement of limitations. Both categorisations of Posthuman would become Transhumans if they were no longer genetically homo sapien. The term Transhuman can also be divided into two sub groups, as with Posthumans, or behavioural and physical Transhumans. It follows from this that the necessary condition distinguishing a Posthuman from a Transhuman is the genetic make up of homo sapien.

2.5 Implications of Posthumans and Transhumans.

As has already been stated a Posthuman is a Human that has utilised technology to become enhanced. However, a distinction must be made between technology which creates an enhancement and technology which is used as therapy to repair or restore function. This distinction must be made due to its specific association with Oscar Pistorius. Pistorius, as has been mentioned was born without his fibula’s and therefore required mechanical prosthetics to resort his legs and enable him to walk. A clear distinction between restoration and enhancement will clarify how Pistorius’ prosthetics can be classed, enhancement or restoration, and therefore allow classification of Pistorius. Fukuyama (2002) describes how it is often believed that the therapy or enhancement debate cannot be solved in theory, and therefore cannot be solved in practice. The difficulty with distinguishing between enhancement and therapy in practice is based entirely on what needs to be changed, what is natural, what is normal. Fukuyama (2002) describes that almost all conditions that may justify therapy are only considered for therapy on the basis of norms. Fukuyama (2002) uses the example of
dwarfism; Human heights are distributed along a scale, some people are very tall, some short, and some sit somewhere in the middle. However, children and individuals below a certain height are given growth hormone to stimulate growth. This individual may have only grown to a height of 5 feet without the hormone, but due to taking it can reach a height of 6 feet for example. However, as individual who is capable of reaching 5 feet 2 inches in height is not given growth hormone and therefore does not become any taller. The first individual was given therapy to help them grow but it has lead to enhancement above the second individual and many more of the population.

If a Posthuman is an individual who exhibits unprecedented abilities from enhancement technology, it logically follows that something would be classified as an enhancement if it allows an individual to develop unprecedented abilities. Determining how an ability is unprecedented is incredibly difficult due to the variation in the Human population. Classifying individuals is based entirely on normal levels of ability for a population. The example used previously relies on norm heights at certain ages of development to determine whether a child requires treatment. If the example of sports performance is used the difficulty in assessing performance becomes much clearer. Currently the world record for the men’s 100 metres in 9.74 seconds (www.IAAF.org 28/02/08), therefore is seems that it should be deemed acceptable for a Human to achieve this time, or slower, it would not be considered unprecedented as it has previously been achieved. However, this world record has been achieved after years of specialist training, if an individual achieved or beat this time with little or no training or prior experience it would be fair to say the performance would be unexpected and unprecedented. This example shows that
an unprecedented performance, for this example at least, would not be solely dependent upon the time achieved. Further criteria needs to be introduced to judge the performance, not purely the time.

The Paralympic games can be used as a practical example of classification between individuals. The Paralympic games uses a system of tests to categorize individuals according to their disability, they are grouped according to their ability to complete certain tasks, (Jones and Howe, 2005). The classification of disabled athletes in the Paralympics is based upon a general level of physical functioning not performance. This system of classifying individuals shows that it is possible to group and determine individual’s capabilities. It also shows that enhancement should be identifiable, for example if an individual has enhanced their aerobic system it should function in general tests very differently to the rest of the population. What the Paralympic system shows however is that enhancement needs to be judged on a series of tests and conditions not simply performance, if enhancement was judged purely on performance an individual born with superb ability may well be penalised more so than an individual who has undergone enhancement but only to restore to an ‘acceptable’ level.

The IOC and WADA set benchmark standards and levels for individuals with regards to drugs in sport. Performers in each sport are allowed certain levels, of for example growth hormone, present in the bloodstream. This level is based upon the premise that all individuals have a small amount naturally and an average figure can be gained. However, if an individual has excessively high amounts it is deemed that they have
enhanced themselves to an unnatural level and are no longer allowed to compete. These benchmarks are the basis behind substances or practices being prohibited or controlled in sport. Substances and practices that are controlled, monitored or banned are very specific to the sport. For example, beta blockers are banned in shooting as they lower the heart rate and therefore aid relaxation; a desirable ability in shooting. However, beta blockers are not tested for in sprinters as they pose no advantageous properties. This shows that not only do sports governing bodies set benchmark figures; they are also only concerned with relevant forms of enhancement. There are however implications to these specific controls; having an abnormally low heart rate could be considered a physical enhancement, particularly in an activity like shooting. An individual with a very low heart rate who competes in shooting would be considered to have unprecedented physical capabilities, normal behavioural and still be genetically homo sapien; they would therefore fit under the classification of physical Posthuman. However, an individual who is a sprinter with a very low heart rate would not be considered enhanced as it would not be advantageous, if anything it would be detrimental to performance. Therefore this individual would not be considered to have unprecedented physical capabilities and therefore would not be considered a physical Posthuman. A logical conclusion from this would be that an individual being classified as a Posthuman, at least in the context of sport and the governing bodies, is context specific. Just as the IOC would not test for beta blocker abuse in sprinters as it would not be classed as a form of enhancement, they would not be concerned about an individual exhibiting unprecedented physical capabilities specifically relating to for example shooting and having no effect upon sprinting.
2.6 Is Oscar Pistorius Human?

In order to illustrate this point, a case study of Oscar Pistorius will be used. As previously mentioned in this chapter, Pistorius has broken a large amount of Paralympic records after what many would regard as a short amount of time in specific sprint training. Pistorius is able to run times far superior to the rest of the Paralympic field, clearly shown by his array or world records. Pistorius is also the first paralympian to challenge for entry into the Olympic Games in a track event. These issues suggest that Pistorius is performing at an unprecedented ability. However, as he is currently not as fast as elite Olympic 400 metre competitors, other criteria need to be described to determine whether he is enhanced to perform at an unprecedented level. Classifications described by Culbertson (2007) can be used to illustrate Pistorius’ status and attempt to classify Pistorius.

Culbertson (2007) described the idea of technology in sport. With spectators and other performers possibly believing that the technology is responsible for any performance seen, not the individual. It seems logical to suggest that the carbon fibre ‘feet’ or ‘blades’ that Pistorius uses certainly look very technological and nothing like a ‘natural’ Human leg. The producers of the ‘blades;’ Ossur, state that they use “innovative technology,” (http://www.ossur.com/About-Ossur) to develop their prosthetics. It seems clear that Pistorius is utilising technology to aid his performance, in fact, Pistorius relies on this technology to run, he is unable to run purely using his own body.
Pistorius’ reliance on the technology of his prosthesis is what separates his use of technology to other athletes. If the example of running spikes is used this issue becomes clear. It is widely accepted that wearing specific running spikes allows an athlete to run faster, the spikes therefore enhance performance. However, if an athlete removed the spikes and ran barefoot they would still be able to run, albeit slower. However, if Pistorius removes his prosthetics he cannot run, he cannot even walk, he relies fully on his prosthesis. It is this dependence upon the technology to function and perform that separates this technology from others in sport.

Pistorius also fits under Culbertson’s (2007) heading of un-natural. Culbertson (2007) believes that an un-natural performer has utilised technology to enhance performance and performs in an un-natural way. The carbon fibre blades that Pistorius uses do not move like a Human leg, they do not bend, they have no ankle or knee; he moves in a way that is dehumanising.

Culbertson (2007) uses another category linked with McNamee (2007) idea of limitations. According to McNamee (2007) a necessary component of a Human is having a weakness, or limitation. Humans beings are susceptible to injury, death and reduced quality of life, Humans are not perfect. Culbertson (2007, p210) places this idea under the heading of an “Automaton…lacking the failings of Humans…consistently performs well.” Pistorius fits under this heading due to his use of prosthetic limbs. His prosthetics cannot be injured, they do not tire, they cannot die and therefore they lack
some key limitations of a Human. The carbon fibre blades that Pistorius uses also perform the same every day, without fail; they do not have ‘a bad day’ or become chronically fatigued like many elite athletes due to constant training. The carbon blades certainly have a much greater level of consistency than a Human leg.

It could be argued that Pistorius’ dominance in the Paralympic games classes him as a mutant based upon Culbertson’ (2007) description. A mutant, according to Culbertson (2007, p211) is an athlete who “possesses physiological advantages beyond those commonly found in the most gifted athletes…” However, as discussed previously, Pistorius is a clear example of the use of technology in sport. Pistorius’ ability could be due primarily to his prosthetics and therefore he fails to show physiological advantages, he cannot be a mutant.

However, the classification of a Cyborg does apply to Pistorius. An individual who classifies as a Cyborg according to Culbertson (2007) is an individual who has used some form of enhancement to aid performance, be it genetic technology, surgery or another form or enhancement. Pistorius has used the enhancement of advanced prosthetics to enable a high performance in sport.

It has so far been argued that Pistorius utilises technology, he is un-natural and has removed some of the limitations of Humans. The final necessary condition to determine is whether Pistorius is enhanced. Pistorius recently applied to be allowed to run the 400m in the Olympic Games, however, after conclusive testing from the IOC he has not
been permitted to take part on the grounds that his prosthetics give him an enhancement, (www.iaaf.org 15/01/08).

Independent testing was carried out studying biomechanical and physiological aspects or Pistorius compared with five able-bodied athletes of a similar ability; able-bodied describing athletes with out prosthetic limbs. The testing shows that once Pistorius had reached top speed he used 25% less energy than the other athletes in order to maintain that speed. Returned energy from the running blade was recorded as almost three times higher than a normal ankle joint leading to overall mechanical efficiency advantage of nearly 30%. These clear advantages in performance highlight that Pistorius is enhanced above that of other athletes. The IAAF have concluded that the prosthetic limb that Pistorius uses is a technical aid breaking rule 144.2 and Pistorius is therefore not permitted to take part on the grounds that his prosthetics give him an enhancement, (www.iaaf.org 15/01/08). This decision from the IAAF is based upon a similar principle to Paralympic classification. Pistorius has not been discriminated against due to his performance capabilities; he is currently not exceeding the ability of ‘able-bodied’ athletes in the Olympic Games, his times are slightly lower than the elite. However, he has been classed as enhanced due to his efficiency when running and his style. According to the IAAF testing Pistorius shows much less vertical movement during running than ‘able-bodied’ athletes, he exhibits capabilities un-accessible by Humans with natural legs. It is these two factors that allow the IAAF to classify Pistorius as enhanced and not allow him to compete in the Olympic Games.
Earlier in this paper it was stated that the necessary requirements for a physical post Human were that the being had used some form of technology as an enhancement, they had unprecedented physical capacity but would remain encased biologically as a homo sapien. Oscar Pistorius fulfils all of these necessary requirements and therefore can be classed as a physical Posthuman.

Pistorius’ carbon fibre prosthetics have been identified as technology that enhances performance fulfilling the first necessary requirement. Pistorius’ exhibits unprecedented physical capabilities. He is achieving remarkable results, he is the first Paralympic athlete in track events to challenge ‘able-bodied’ athletes and has smashed current Paralympic records. However, what makes Pistorius more remarkable or adds to the argument of unprecedented ability is the evidence from the IAAF; Pistorius’ ability to maintain velocity with less energy requirement and showing less vertical movement and therefore a more efficient running style is what makes Pistorius different from other Humans.

Pistorius uses prosthetic lower limbs, however, no other part of his body is changed, and therefore he maintains a homo-sapien, fulfilling the last necessary component. ‘Ossur’ the producers of the prosthetic limbs seem to understand that they enhance performance and push the boundaries of Human; or as identified, create post Humans. ‘Ossur’ state that they use; “a precise fusion of artificial intelligence and Human physiology that is transforming the landscape” (www.ossur.com 15/01/08), with an aim to “restore maximum biological function,” (www.iaaf.org 15/01/08). This restoration has been
clearly proved to have failed; the IAAF identified baseline acceptable figures for performance in a 400m race during testing, and has shown that Pistorius, using the prosthetics created by ‘Ossur’, has been restored to far above normal or natural biological function. This evidence clearly shows that Pistorius can be classed as a physical Posthuman, however the next issue to address is whether this should affect his participation in sport, were the IOC and IAAF correct in their decision?
CHAPTER III

DOES OSCAR PISTORIUS BELONG IN SPORTS COMPETITIONS?
This chapter will give an account of sport by describing seven necessary conditions, these will not be sufficient conditions but will however be the most relevant to this dissertation. Sport is a complex activity with many necessary requirements, however this chapter will focus on seven necessary conditions of sport. The central purpose of sport, according to Dixon (2001), is to provide a comparison to find the superior team or player. The seven necessary conditions described in this chapter allow sport to fulfil this purpose. The seven necessary conditions are, sport is a competition and comparison, a test of physical capabilities, between humans, a mutual quest for excellence, structured with constitutive rules to allow tactics and the process of overcoming unnecessary obstacles. This chapter will also outline that Oscar Pistorius cannot fit within the confines of the seven necessary requirements and therefore should not be permitted to compete in sport.

3.1 Necessary Conditions of Sport

The first necessary condition I will discuss is described by Boxill (2003), sport is designed as a comparison or a competition to discover the best, or as Simon (1995) states; “search for excellence in performance (p209).” This desire to achieve the best is existent in competition and individually, or competing with oneself, (Boxill, 2003). As the central purpose of sport is a comparison it would follow from this that sport requires competitors. Competition in sport must require other individuals to compare standards and performance. As Loland (2002) describes, sports are social practices that not only measure a performer’s ability but compare with others. Competition is a necessary
condition of sport but by no means a sufficient condition, another necessary condition is the constitutive rules.

The constitutive rules are the second necessary condition of sport in this chapter, they describe the acts needed to be completed in order to be playing the sport. Constitutive rules dictate the activity being played and therefore if the constitutive rules are broken it logically follows that a different activity is being played. For example, the game of football requires the ball to be kicked and not carried in the hands of the player. If a player decided to carry the ball, he or she has broken one of the constitutive rules and is no longer playing football. It follows from this therefore that a performer can only win the sport if the constitutive rules are followed, “winning in a sport is logically dependent upon using only the means defined in its constitutive rules” (Loland, 2002, p4).

These constitutive rules allow sport to fulfil Suits (1995) idea of what a sports contest should be. Suits (1995) believes a sports contest is “a voluntary attempt to overcome unnecessary obstacles” (p8). The constitutive rules determine the obstacles needed to be overcome. These unnecessary obstacles are the third necessary condition of sport, for example, the game of golf in its simplest essence is very simply, place the ball in the hole. This aim is obviously easily achieved if the participant can carry the ball to the hole and place it in. However, the constitutive rules of golf add the obstacles of having to hit the ball with a club from a fixed point away from the hole. It is these less efficient means, as Suits (1995) describes, that separate sport from other activities. The un-
necessary obstacles are how sports performers are compared, they are the essence of each competition.

The comparisons in sport take place in the form of physical prowess, skill and tactical ability. The unnecessary obstacles can also take the form of a physical challenge, for example covering 400 metres is not a difficult task for most of the population. However the 400 metre competition becomes difficult as it is a maximal event, running as fast as possible over the distance. This demonstrates the fourth necessary condition of sport as stated by Meier (1995), sports contests should demonstrate, and be a comparison of physical prowess. This demonstration of physical capabilities is part of what makes sport so popular with society, there is a search for excellence (Boxill, 2003). Simon (1995) describes sports contests as “a mutual quest for excellence through challenge” (p212). This statement suggests that people involved in sport strive to achieve more through to principle of competition and comparison. Sport should be a test of physical capabilities that is either innate or developed (Simon, 1995). Simon (1995) believes this is key to a fair sports performance, the final result, the winner, should dependent on the individual that showcases the greatest innate ability or developed ability. The developed ability should come through training, dedication, courage and motivation. This developed ability will be discussed further in this chapter with the example of Oscar Pistorius. According to Simon (1995) these innate and developed abilities determine the variation in performance, the differing times and the ability to rank individuals. The point of an athletic competition, according to Simon (1995) is to determine those athletes who “run the fastest, swing the hardest or jump the furthest” (p213). However,
these differences should be based entirely on physical capabilities and tactical awareness. The physical capability of a performer should be a combination of innate ability and response to training. Tactical awareness will be discussed later in this chapter.

As previously stated, Simon (1995) describes sport as a “mutual quest…” (p212), this idea of a mutual quest shows that the individuals need to all desire to take part and respond to choices, Simon (1995) describes this as highlighting that sport must be a contest between persons. Sport is a showcase for many of the capabilities of a person, the necessary conditions for a person were described earlier in this dissertation as the ability to use logic, set goals and targets, have a point of view and be able to plan actions. These abilities all relate to sport, the first that has started to be discussed is the mutual quest. In order for the sports contest to be a mutual quest for excellence as Simon (1995) described, is for the performers to be able to choose to compete. Without this autonomy of thought and decision making the sports contest cannot take place. This mutual quest is the fifth necessary condition of sports contests.

Further abilities of a person are showcased through the use of tactics and strategy, Meier (1995) believes that tactics and strategy are a necessary component of a sports performance, they are the sixth necessary component described in this chapter. Tactics and strategy define how an individual uses their physical capabilities to maximum benefit. Tactics and strategy are used to gain an advantage over an opponent to enable victory. Loland (2002) describes tactics and strategies as a way of gaining an informal
advantage, tactics are not described in the rules but must sit inside the rules. For example a 1500 metre runner may position himself at the front of the leading group at the start to the last lap to have a clear run to the finish, this action is not described by the rules, but does not break any constitutive rules. A tactic of tripping a fellow runner to gain the lead would be against the rules and therefore not an acceptable way of gaining an informal advantage. The ability to use tactics involves planning and decision making and use a logical tactic for the situation, these are necessary conditions of a person and show that a sports performer must be a person.

This chapter has so far highlighted six necessary conditions of sport and a sports performance. Failure to fulfil these necessary requirements would result in the performance not being classified as a sport, or a performer not being able to compete in sport. The necessary conditions have been outlined as the necessity for a competition and comparison of physical capabilities, overcoming un-necessary obstacles within the constitutive rules. Performers should use tactics and strategies that stay within the confines of the constitutive rules to gain an advantage and use their physical capabilities to maximum benefit. The purpose of sport is to seek excellence and strive for greater performances of the human body. As Suits (1995) states “people play games so that they can realise in themselves capabilities not realisable in pursuit of ordinary everyday activities” (p8), this statement summarises the desire of competitors to achieve and pursue excellence in the arena of sport. This pursuit of excellence in sport is not without its control. Sport holds an inherent value that controls how sport should progress and improve, how times should drop and distance thrown increase.
Progression, development and the pursuit of excellence in sport is centred around human athletic performance and the capabilities of humans to respond to training, dedication, motivation and innate abilities. Simon (1995) describes that if sport was purely centred around improving performance then robots would be engineered to cover 100 m much faster than any human athlete. Simon (1995) believes that sports performances should be a test of persons, however, the idea of person according to Simon (1995) appears very different to the idea of person in this dissertation. Simon (1995) appears to be comparing person with a robot, this appear to be more of a human – robot distinction. It seems fair to say that by this statement Simon (1995) does not mean to refer to person as purely behavioural characteristics, person according to Simon (1995) seems to refer to a human. A robot would fit into the description of a machine used previously in this dissertation, as engineered for a specific purpose. Simon (1995) is suggesting that there is no place in sport for machines, sport is an arena for showcasing human capabilities. Sport is about enhanced human performance through training techniques and tactical ability not the use of robots or machines. This shows the seventh necessary condition of sport described in this chapter, sport must be between humans.
3.2 Does Oscar Pistorius belong in Sport?

In order to determine whether Pistorius belongs in sport each necessary condition stated previously in the chapter will be discussed with relevance to Pistorius’ capabilities and use of prosthetics. Earlier in this dissertation I determined that Pistorius utilises technology as an enhancement, this confirmed his status as a physical Posthuman. The implications of technology and enhancement in sport need to be discussed to elucidate whether Pistorius belongs in sport.

As the purpose of sport is the constant strive for excellence and greater ability it could logically follow from this that technology should be favoured in sport. Hoberman (1995) describes how technology is beneficial to sport, the essence of sport, according to Hoberman (1995) is to continue to improve, strive for greater performance and it’s the use of technology and enhancements that enable this. Hoberman (1995) describes the use of drugs as equivalent to the use of a high-tech pole in pole vault. There are many concerns with this argument. Firstly, Hoberman (1995) has a very different idea of technology in sport, believing that, “sport science does not physically hybridize humans and machines,” (p206). There is clearly an error in this statement with the evidence of Oscar Pistorius; I have given Pistorius the title of Physical Post human in this dissertation. Pistorius is an example of how technology is utilised to enhance performance, Pistorius shows a fusion of human and machine to produce a for of enhance human, a post human. There is clearly a large amount of difference between
technology being used to boost performance and to simply enable to action to take place. Pistorius would not be able to run without his prosthetics, a pole vaulter can vault with a different pole, these forms of enhancement are different with the prosthetics of Pistorius a much more dramatic form. The distinction I am trying to make here was discussed in part previously in the dissertation. The competition of pole vault describes using a pole in its constitutive rules, the object of the pole vault is to use a pole to clear the bar, and therefore, regardless of what pole is used the basis of pole vault remains. The distinction between technological development in poles for pole vault is grounds for another dissertation, however one consideration is that regardless of how technologically advanced the poles are, all competitors could use the pole and in principle if the pole allows for a 10% performance increase, all performers should see the increase, the principle of the sport should not change. This principle can also be applied to running spikes, the example used previously in the dissertation. Running spikes may improve running times, however the event of the 100 metres, the test of human performance, still exists regardless of whether spikes are worn or not.

The concern with Pistorius’ is that his prosthetics stop him experiencing and competing in the same physical challenge as all other athletes. Pistorius’ utilises technology to not only enhance performance but to perform at all. By this I mean that without his prosthetics he cannot run at all, he depends upon them. The 400 metres, as discussed previously in the chapter is a test of physical ability, specifically how well a performer copes with fatigue in their legs to maintain a maximal effort. The object of sport has been determined to rank competitors based upon innate and developed ability with the
performance judged upon athletic performance. Pistorius, through the use of prosthetics avoids the comparison of athletic performance. Pistorius has not developed his ability, at least not fully, through determination, motivation, innate ability and training. Pistorius has developed his ability, in part, due to using advanced technology in the form of prosthetics. This stops Pistorius being able to challenge himself physically and therefore a physical comparison cannot be made.

This physical challenge is discussed further by Gardner (1995) with reference to how enhancement technology can detract from physical performance. Gardner (1995) uses the idea mentioned previously in this dissertation; Suits (1995) definition that sport is “a voluntary attempt to overcome unnecessary obstacles (p12).” The purpose of the 400m race is to cover the distance on foot and in the process the competitors experience and attempt to overcome fatigue of the legs and rest of the body (Simon, 1995). The 400 metre race would not be so difficult if it was not judged on lowest speed, the unnecessary obstacle is the need for it to be maximal. Pistorius’ has removed or lessened the extent to which this unnecessary obstacle effects performance. Pistorius competes in the 400 metres but the same principle applies, a 400 metre athlete must try to cope with severe fatigue; something Pistorius does not suffer to the same effect. The carbon fibre prosthetics Pistorius uses do not fatigue or tire, Pistorius does not need to contend with fatigue in lower limbs, and as the IAAF testing mentioned earlier found; he is much more efficient and will therefore suffer much less fatigue. The idea here is that Pistorius is competing in a different competition; he is not completing a 400 metre race on human legs.
Cheating in sport is the act through which the manifestly agreed upon conditions for winning such a contest are changed in favour of one side. As a result the principle of equality of chance beyond differences in skill and strategy are violated. (Leamen, 1995, p193).

The manifestly agreed upon conditions in the 400 metres are that performances should challenge their bodies capability to complete the distance as fast as possible. Pistorius on the other hand challenges his body to use carbon fibre prosthetics for maximum benefit. Clearly the agreed conditions have changed, Pistorius has gained an advantage, he does not fatigue to the same degree as other athletes and therefore it can be said that he is cheating.

As just mentioned, Pistorius competes using prosthetic legs which stops the physical challenge taking place. Pistorius does not compete on human legs, and in fact I have argued that he is a physical Posthuman as his enhancement no longer allows him to be considered human in the narrow sense defined in this dissertation. This classification as non-human directly contradicts the necessary requirement of sport being a comparison of human performance. As described previously in the chapter, Simon (1995) believes that creating robots to out perform human athletes would not correspond with the ideals of sport. It follows from this that Pistorius, with his classification as a physical Posthuman does not correspond with the ideals of sport as a comparison of human performance.
The necessary condition of tactics and strategy were discussed previously as a method of gaining an advantage. However, it was stated that tactics must stay within the confines of the constitutive rules. The constitutive rules not only define the activity but also make sure the activity continues to fulfil the aims of sport. It could be argued that Pistorius using carbon prosthetics is a form of tactic, he has chosen to use this equipment to attempt to gain an advantage. However, as has been described in this chapter this advantage does not coincide with the principles of sport, it has been argued that Pistorius should not compete in sport. Therefore is appears clear that Pistorius’ choice of tactic is not appropriate in the 400 metres.
CHAPTER IV

CONCLUSION
4.1 Conclusion

This dissertation has argued that Oscar Pistorius ought not to compete in any sport that utilises the use of his legs. In this dissertation it has been argued that a human is made up of a complex series of necessary conditions. It has been argued that in order for a being to be classified as a human is must be genetically homo sapien, exhibit limitations and weaknesses, be a person and….? These are necessary conditions but not sufficient conditions, I cannot say that I have given a compete list of necessary conditions, however the conditions most relevant to this dissertation have been stated.

By outlining these necessary conditions it can be succinctly stated when a being no longer fulfils the criteria of a human. This dissertation has discussed two distinct classifications of beings that do not fall into the category of human, Posthumans and Transhumans. These two beings share many necessary conditions, both are advanced humans through the utilisation of enhancement technology, both fit within the category of un-natural given by Culbertson (2007). These two beings however are separated by their genetic status, Posthumans remain genetically homo sapien however Transhumans do not. As Posthumans remain genetically homo sapien it has been argued that the status of a Posthuman can be considered context specific. The term Posthuman has been divided into the terms physical Posthuman, a being enhanced physically but not intellectually, and a behavioural Posthuman, a being that is enhanced behaviourally and intellectually but remains un-enhanced physically. Oscar Pistorius has been defined as a physical Posthuman as he exhibits a physical enhancement in the form of his prosthetics,
he can therefore be classified as un-natural. However, as he remains genetically homo sapien, Pistorius is a valid example of how a Posthuman remains context specific. Pistorius is an enhanced human due to his prosthetic legs, however any action requiring solely the use of his mind or his upper body in some how would show no enhancement or un-natural properties. He therefore would not, and should not be considered enhanced in these situations.

The second chapter of this dissertation discussed the unique properties of sport in order to highlight reasons for Pistorius not competing in sport. Sport has been described as a comparison of both innate and developed physical capabilities. Sport must be a voluntary and involve overcoming un-necessary obstacles (Suits, 1995), these obstacles should be dictated by constitutive rules. Competitors should gain an advantage solely by their physical ability and tactical awareness.

I have argued that Pistorius does cannot compete in any sport utilising his legs as he breaks the necessary conditions. Pistorius depends upon the technology of prosthetics to run and therefore it is far to say that part of the challenge of sport for Pistorius is how the prosthetics perform. Pistorius is therefore no longer testing his physical capabilities, the obstacle of physical challenge to overcome is removed and a true comparison of physical capabilities with other athletes cannot take place. Finally, sport is a contest for human beings, as I have stated, Pistorius, in the context of the 400 metres and any other sporting event using his prosthetics he is a physical Posthuman, not a human, and therefore not eligible to compete. However, the context specific nature of a physical
Posthuman shows that there is no reason to stop Pistorius competing in a sport that does not use his prosthetics in anyway. For example, gymnastics events such as the rings do not require the use of the legs, Pistorius would not need to use his prosthetics in anyway. It follows from this that he should be allowed to permit in this event.
CHAPTER V

REFERENCES


