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***Transhumanism and the
Transformation of the Experience and
Spectacle in the Art of Boxing***

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Submitted in fulfilment of the requirements for the degree of PhD

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Abstract

Going beyond the biological and physiological limitations imposed on us by the human body is something which the human race has strived to do throughout its history. There is something about our human nature that compels us to strive for improvement and enhancement in our physical and mental performance, and to stretch ever further the boundaries of human accomplishment. Nowhere can a stronger desire for enhanced performance be found than in the realm of competitive sport and, it is certainly arguable that, there are very few sports that can rival the competitiveness, endurance and physical exertion involved in the sport of boxing.

Transhumanism is borne of this desire for continuous improvement and the refusal to resign ourselves to the restrictions placed on us by our natural biological constitution and environment, enhancing human capabilities and capacities by way of new and emergent technologies. With regard to sport, transhumanism could provide us with the ability to train longer, run, swim or cycle faster, jump higher, throw further and, in the case of boxing, punch harder. However, it is not restricted or confined to the enhancement of our physical powers, but could equally-well serve to improve our psychological capacities and alter the way in which we perceive and experience the world. In this way transhumanism could be employed to change the content of experience.

Alterations can be motivated by a range of concerns including medical, therapeutic, aesthetic and intellectual. I will examine the nature of such alterations and analyse the moral and political issues that arise and are associated with them; primarily my concern will lie with the neo-liberal objective of establishing an elite who should be able to enhance themselves and pull ahead of the rest of humanity, for this will change the phenomenology of sporting engagement and the nature of sport itself.

The groundwork for this enquiry will be phenomenological, primarily concentrating on the work of Husserl with regard to the transcendental structures of experience, and Merleau-Ponty with regard to the body, bodily habit, kinaesthetic memory and melody. This work will be developed through an enquiry into how such changes would affect our intersubjective engagement with other agents and with our environment.

With the use of the term ‘enhancement’ there is an explicit implication that the transhumanist use of emerging technologies will always be beneficial, and whilst this might be the case, it is

by no means necessarily so. I will offer a critical examination of the assumption that, although participants in boxing – and other combative sports – could gain positively through the transformation of phenomenological structures, it will change the essential nature of the sport. So, whilst it is certainly true that alterations in the temporality of a participant’s experience are caused by the manipulation of their emotional and evaluative responses, their capacity for concentration, and the acuity of their spatial awareness, could provide any individual participant with a vastly improved level of performance. They could, if the inequality of a neo-liberal transhumanist agenda is pursued, destroy the ethos of sporting engagement in terms of its assumptions of fairness, respect, justice and sportsmanship.

Finally, I will look at the ethical questions that will inevitably arise as a result of these enhancements, questions that become particularly pertinent when applied to the sport of boxing because any enhancement in one fighter’s performance will almost certainly present an increased risk to the well-being of his opponent. Indeed, there have been instances of fighters suffering serious brain injuries – and on occasion being killed – as a result of their participation in professional boxing. I will examine the ethical implications of enhancing a boxer’s performance in order that they may more adeptly act upon the motivations which drive them to inflict damage upon other people; actions and desires which, in other areas of a civilised society would, very likely, be deemed to be the worst part of human nature. I will, therefore, look at whether or not we have a responsibility to limit the extent to which we permit physical and psychological enhancement within boxing, if only for the welfare and safety of its participants. Certainly, one feasible conclusion is that the transhumanist urge to adapt and enhance, whether democratically- or neo-liberally-driven, is ethically indefensible in the case of combative sports like boxing.

Having already introduced a brief anatomy of boxing, including the physicality of the sport and the nature of spatial and movement perception in the opening chapter, I will develop, in Chapter 2, a phenomenology of boxing. My aim in this chapter is not to provide a phenomenological description but to examine the nature of the essential structures of experience. These will include: emotions, non-sympathetic empathy, temporal awareness and a drawing of the distinction between the experiences of being an acting subject and an acted-upon object. This chapter closes with an examination of the phenomenology of the surrender of the will in the experience of being beaten by one’s opponent. This in turn becomes the starting point for Chapter 3 where I examine the impact of these changes and how they manifest

themselves in a shift in how the boxer perceives himself, moving from the experience of acting subject to acted-upon object. In turn, I will show that such an experiential swing will impact greatly on the fighter's perceived affordances and his ability to move fluidly. In Chapter 4 I shift gear to present an overview of how transhumanism might be used to enhance performance and, with that, bring about alterations in the phenomenology associated with boxing. In Chapter 5 I examine the transhumanist agenda, with particular attention paid to the proposal of technological and pharmaceutical 'enhancement' within the domain of boxing. I will consider the ethics of 'enhancement', concluding that although transhuman enhancement is an inevitable consequence of the quest for sporting excellence, it is essential that we examine the limits which should be placed on such enhancement to minimise the physical and psychological threat to boxers. The whole thesis is brought together in a concluding chapter in which I offer suggestions for developing the way forward for transhumanist enhancement in the sport of boxing.

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For my parents, to whom I owe everything.

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Prologue

Since I am writing about experience and, in particular, the experience of boxing, I will attempt to give an account of that experience. A phenomenological account of this kind is difficult, but it discloses habitual predispositions and conceptual prejudices, ways of being in the world which have otherwise become opaque.

Having been involved in boxing for several years, I have acquired patterns of thought which give rise to certain expectations of my opponent, including the fact that he has similar thoughts and desires for victory as I do, and that he will attempt to partake in actions designed to deliver punches to certain target areas on my face, head and body. It now becomes incumbent upon me to subvert his plans by employing the skills, knowledge and bodily habits I have developed to deliver punches of my own.

However, it is important to note that I do not at any time apprehend the opponent (the intended object) in isolation. At any point in a contest, there is a whole host of outer perceptual horizons to which I could have attended at any time - Husserl terms these 'potentialities' - and might include the presence of the referee, the cheers of the audience, the brightness of the lights above the ring or the smell of leather on the gloves. These things serve to provide a background to my experience of facing an opponent in a boxing ring, with each of them contributing to the shaping of my experience, but extensive training has given rise to a habit of focusing solely on the opponent for the entire three minutes of a round; to do otherwise could prove extremely costly. This background however, makes the experience the kind of experience that it is, an experience that comes laden with heightened nerves and determination, along with certain expectations of the man with whom I'm sharing a ring. Having a large audience, a certain type of gloves, lights above the ring and a referee, separates this experience from sparring in the gym, for example, even if the sparring involves the same man in the opposite corner. In any case, if I am to be successful in the contest, I must leave these outer perceptual horizons on the periphery since my expectation is that my opponent will attempt to land punches on my face and body, an expectation that arises both from my understanding of boxing and my years of involvement in the sport itself. I must do everything I can to ensure not only that I evade the punches directed at me, but also that I land enough of my own punches to deter my opponent, or at least to claim a victory. But what does it feel like to land a punch?

This is a difficult question since there are so many punches that can be delivered with varying

degrees of force to different parts of the head and body; and how successfully the punch lands on its intended target will also have an impact on the experience felt by the boxer. Also, the word 'thrown' is perhaps not entirely accurate since the punch is not merely thrown, but is *directed* towards a specific target area, whether this is the face, head, rib, midsection or a combination which targets all of these areas. However, many fighters will describe the feeling of landing a clean, solid punch as "going right up the arm", a sensation that is felt from the knuckles to the shoulder when the fist lands perfectly on the intended target. A similar sensation might be understood by anyone who has hit a ball with a tennis racquet or golf club, where the connection is made on the "sweet spot" and a feeling of a perfect connection emerges. At the instant of attack, a target area is selected and the punch is thrown with an expectation of being succeeded by this sensation - even though statistically far fewer than 50% of punches will actually land. Naturally, the more regularly these sensations occur, the more confident – and often more aggressive - I will feel as the fight goes on. On the other hand, against an elusive opponent, the repeated failure to experience this sensation by being unable to land punches on the intended target area will cause me to feel more tired, frustrated and despondent, which in turn may cause the length of the rounds to feel as though they are passing more slowly.

With respect to what it feels like to receive a punch, this is slightly more problematic since there are so many punches which can land on so many areas of the body with varying effects. Being on the receiving end of a punch to the chin or head which results in a knockdown or knockout quite often doesn't feel like anything at all; one second I'm standing and the next I'm looking up at the ceiling, with no feelings or sensations at all. I will have an awareness of the importance of standing up and moving forward, but my legs fail to obey as my scrambled senses impair my equilibrium, causing me to stagger and sway, if I am able to stand at all. This inability for coherent movement is accompanied by a sense of frustration at being unable to bring my legs back under my control. However, receiving a fight-ending punch to the ribs or anywhere on the body feels different; it feels as though death is imminent. It is impossible to stand, impossible to sit and air is neither entering nor leaving the body as each desperate gasp feels as though it is being taken in a vacuum; there is an all-consuming, unlocatable pain which nullifies both thought and movement, leaving me crumpled in a pitiable heap as the referee reaches the count of ten.

Not all punches result in knockouts however, otherwise most boxing contests would end very quickly. As to the forceful punches to the head which don't result in knockouts, these can

sometimes cause what many fighters call a “flash” where, for the tiniest fraction of a second, there is no conscious thought or perceptual awareness and often the legs are known to “buckle” and a short period of unsteadiness ensues from which it can often take several seconds to fully recover. However, in a closely fought contest, the majority of punches are merely “scoring punches”, punches which land on the target area but which do not, in isolation, bring about any of the scenarios described above or cause any real damage to an opponent. When I land as many as these punches as I receive, I am driven to continue my attempt to assert my will on my opponent and, in fact, there is even an element of pleasure to be derived from being involved in a close fight in which I am landing and receiving punches in equal measure. However, if things begin to change and I begin to receive considerably more scoring punches than I am able to deliver, things start to change; tiredness and fatigue set in, time begins to pass more slowly as the three-minute round seems to elongate and despondency may set in. Perhaps more tellingly, as the fatigue and dejection become worse, I become more aware of what my opponent can do to me, rather than what I can do to him. Put otherwise, I become more aware of myself as an object which can be hurt and less as a subject capable of causing hurt. At this point I am likely to enter “survival mode” in which my thoughts and movements become focused upon self-preservation and getting to the end of the round, my punches will now be thrown with little conviction and will become little more than an attempt to deter my opponent, rather than to defeat him.

Chapter 1

Phenomenology and the Physicality of Boxing

Human beings have had a long-standing and insatiable desire for filling the gaps in their knowledge, and, through knowledge, controlling and enhancing their abilities, performance, and even life-span. There is nowhere better to see this than in our development of technologies which take us beyond the biological and physiological limitations imposed on us by our bodies. Our technologies, whether napped tools, telephones, or kidney dialysis machines, have changed our once 'natural' landscape beyond recognition, impacting and enhancing our life-world. However, enhancements can come at a cost: plastic bags are choking our seas and our sea life, nuclear deterrents hang over us as an unclouded threat, and transhumanist technologies strive for an elusive excellence which will forever transcend its powers. And yet, as Kranzberg states in his first law: “Technology is neither good nor bad; nor is it neutral” (1986), implying that we must rethink our moral territory with regard to our creation, adaptation and use of technologies. Undeterred by these concerns, transhumanists are welcoming a new age for sport and sporting achievement. This new age will be characterized by such physical and cognitive enhancement that the limits of sporting triumph will no longer be hampered by the natural, that is unaugmented, biological body. There are two main aims to this thesis: firstly to examine the phenomenological structures in the sport of boxing and how transhuman enhancement might be used to alter these in order to increase athletic efficiency in the sport; and secondly, in light of these enhancements, to assess the limits that should be placed on these augmentations with regard to what can be considered ‘sporting’ and to the safety and well-being of the athletes.

In this chapter, my aim is to establish the importance of phenomenological structures with respect to transhuman enhancement and to look at a number of aspects pertaining to the physicality of boxing and combat sports in general, where the aim is to inflict physical damage on an opponent.

1. Boxing

Professional boxing can be, and very often is, brutal. The Roman Emperor, Theodoric the Great, banned it around 400 AD due to its barbarity and the number of deaths and disfigurements it caused (Griffiths, 2014). Indeed, boxing only made its public comeback over a millennium later when reports of boxing matches began to surface in London around the late 17th and early 18th centuries. In the 1860s John Douglas, the 9th Marquis of Queensbury, sponsored the *Queensbury Rules for the sport of boxing*¹, written by the Welshman John Graham Chambers, which are still used today.

We have undoubtedly made significant progress² since Roman, pre-Gladiatorial, times where combatants would fight to the death, or even since the late 19th century where fights would last as long as the combatants could stand³. Yet it wasn't until the 1980s that the championship distance was reduced from fifteen rounds to twelve after the death of South Korean fighter Duk Koo Kim at the hands of Ray Mancini in a keenly contested world title fight on 13th November 1982 at Caesars Palace, Las Vegas. Kim collapsed minutes after the bell and was rushed to hospital with a subdural haematoma and died four days later. Despite this, boxing continues to have its share of severe brain injuries and fatalities as a result of repeated blows to the head. The following are some examples of the most notable.

At White Hart Lane football ground on 21st September 1991, Michael Watson suffered near-fatal brain injuries after being caught with an uppercut by Chris Eubank in the eleventh round of their world title fight. After six years in a wheelchair and six brain operations later, Watson is able to live a relatively normal life⁴, although he still suffers from severe motor skills impairments.

On 25th February 1995, Gerald McLellan fought Britain's Nigel Benn for the WBC Super Middleweight title and looked certain to win when he had Benn knocked out of the ring in the

¹ For the full list of these rules see: <http://www.britannica.com/sports/Marquess-of-Queensberry-rules>

² The number of rounds has been reduced to 12 for championship fights, gloves weighing at least 10oz are now worn, paramedics must be in attendance at all events, boxers are required to have annual brain scans and must attend a medical on the night of the fight.

³ In 1825, before the introduction of the Queensbury Rules, Jack Jones beat Patsy Tunney over 276 rounds, although a round only lasted until a knockdown occurred. On April 6 1893, after the introduction of these rules, Andy Bowen and Jack Burk fought for over 7 hours, or 111 three minute rounds, before both men retired, too fatigued to continue. The fight was declared a 'No Contest'.

⁴ Watson completed the London Marathon in 2003, taking six days to complete the race by walking two hours in the morning and two hours in the afternoon.

first round, knocking him down again in the eighth and appearing to have Benn in trouble at several other points in the fight. However, Benn made an incredible comeback, knocking McLellan down twice in the tenth round and forcing him to retire. McLellan collapsed in the ring and lost consciousness due to a blood clot in his brain, he is now blind, almost entirely deaf and is unable to walk unassisted, meaning he requires round the clock care. One of the most intimidating fighters and vicious punchers of his time is now unable to perform the simplest of tasks.

On October 13th 1995, Scottish Bantamweight fighter James Murray died of a traumatic brain injury two days after being knocked out by fellow Scot Drew Docherty. Doctors believed that around the sixth round a vein in Murray's skull had started to leak, causing a blood clot. These fatal injuries continue to occur on an almost annual basis as a consequence of entering the boxing ring. In just the last fifteen years these have included: Pedro Alcazar (2002), Martin Sanchez (2002), Brad Rone (2003), Levander Johnson (2005), Cho Hi (2008), Daniel Aguillon (2008), Benjamin Flores (2009), Karlo Maquinto (2012), Francisco Leal (2013), Teshin Okada (2014), Davey Browne Jr. (2015), Mike Towell (2016) and Scott Westgarth (2018). Indeed, an article in the Independent website reports that approximately 500 fighters have died as a result of injuries they have sustained during fights since the Queensbury Rules were first introduced (Independent.co.uk, 2011, author not cited), which is an average of just under four fighters per year.

In fact, such statistics led John Hardy, a leading neuroscientist at University College London, to brand boxing as '*demeaning and dangerous*' in an article in the New Scientist magazine (2013):

... damage to the brain is caused largely by rotational acceleration of the cerebral cortex around the much smaller midbrain and spinal cord. This damage may be aggravated by boxing gloves since they add weight and thus energy to punches, causing more rotational acceleration ... When the head is hit, especially with a rotational movement, one of two things can happen. Either a blood vessel can snap, leading to a haemorrhage, or there can be microscopic tearing of the tissue around the vessel ... Large haemorrhages are what cause boxers to fall into comas and occasionally die during bouts, but the microscopic tears to blood vessels can be no less damaging in the long run ... Clearly, considerable effort should be expended in all sports to minimise head injuries. Boxing, however, is a special case. No

other sport has the express goal of causing injury to the brain. That is certainly the aim of professional boxing. Even in amateur boxing blows to the head are crucial, and protective headgear may not stop injury from rotational acceleration ... I also think it is demeaning as a society for people to get pleasure out of watching others fight and that we should consign this public spectacle, as we have done public executions, to the dustbin of history.

Offering a moral or medical defence of boxing is not among the aims of this thesis; indeed it may well be the case that there is no such defence and that boxing is both morally and medically indefensible.

What is of concern to me however, both in terms of this thesis and as a trainer who is responsible for the safety and well-being boxers, is that the sport remains as safe as it can possibly be given its violent nature, and that any steps towards performance enhancement are taken with the fighters' safety remaining steadfastly at the core of our considerations. It is for this reason that a consideration of the transhumanist agenda will form a significant part of this work; any effort made towards human enhancement can improve a fighter's performance, it can also increase the risks to his – and his opponent's - welfare. It would be churlish to deny the dangers posed by a sport where the main aim is to inflict physical damage on another person, but this is not to say that we can remain passive in allowing an individual to increase his proficiency at inflicting such damage without raising certain well-considered objections. Transhumanism then, must find a balance between the natural human proclivities for continual self-improvement and the limits that can be reached before such improvements exceed the acceptable level of risk to fighters. Before going on to address these issues in more detail, I need to present a few assumptions I will be making to establish the scope of this thesis.

2. The role of phenomenological structures in boxing

One aim of phenomenological enquiry is to examine an individual's experiences of the world, to give an account of his or her lived experience through a first-person account. Descriptive phenomenology, such as that postulated by Husserl, introduces us to the epochē or “bracketing”:

[P]henomenological reduction is the method for effecting radical purification of the phenomenological field of consciousness from all obtrusions from Objective actualities and for keeping it pure of them. Consider the following: Nature, the universe of spatiotemporal Objectivity, is given to us constantly; in the natural attitude, it already is the field for our investigations in the natural sciences and for our practical purposes ...

The actuality of all of material nature is ... kept out of action and that of all corporeality along with it, including the actuality of my body, the body of the cognizing subject ...

If we put every experienced actuality out of action, we still have indubitably given every phenomenon of experience. This is true for the whole Objective world as well. We are forbidden to make use of the actuality of the Objective world; for us, the Objective world is as if it were placed in brackets. (Husserl, 2017)

In the phenomenological attitude, rather than attempt to examine the object itself, we reflect on our experience of the object: “We look at what we normally look through...” (Sokolowski, 2000, p.50). So, rather than looking through the everyday experience of boxing, we are looking at it, so to speak. The experience of boxing as the subject of enquiry is now the focus of description, and self-reflection. The examination of the lived experience of fighters is critical to my project for two significant reasons.

Firstly, it will not only allow a deeper insight into the experiences undergone by a boxer, but it will also provide an understanding of how, and to what extent, these experiences impact on a fighter’s performance and his chances of success in the ring. It will be argued in the course of this work that a boxer’s phenomenological experiences have a significant effect on both his physical and psychological conditions, which in turn alter his perceived possibilities of action during the course of a fight.

In particular, I will consider the effects of temporal awareness, empathy, continuity of action and emotions on a boxer’s performance. In addition, I will examine how these can lead him to experiencing himself not only as a subject, capable of acting and influencing the physical and mental condition of his opponent, but also as an object on which actions can be performed. Later in this thesis I will argue that an inevitable consequence of a transition from subject to object is that the boxer will become less active and more passive, which in turn means that that

his opponent will become more active and less passive, increasing his belief, self-confidence and possibly, I will argue, energy.

Secondly, an understanding of the phenomenological structures and their impact on boxing will allow for more accurate and specific transhumanist enhancements to be identified in order that a boxer's overall performance can be improved. Already there are a number of performance-enhancing substances, both legal and illegal, which are available to athletes at all levels of their respective sports. In boxing over the last few years, fighters have been caught taking a range of substances including: Clenbuterol and Ephedrine (for weight loss), Norandosterone (increased testosterone), Synthetic Testosterone (increased endurance, strength and aggression) and Stanozolol (increased muscle mass with lower water retention). All of these substances each provide the fighter with an advantage in a different way, but nearly all of them focus purely on physical aspects such as weight loss, increased strength and higher muscle mass. However, there are other aspects of experience which, if enhanced, could also go some way towards enhancing a fighter's performance. What if we could directly manipulate a fighter's experience of the passage of time, especially when we know that our awareness of the passing of time influences our capacity to experience suffering?

It can certainly be argued that the awareness we have of a painful experience having persisted through an extended period of time, and of the likelihood of it persisting into the future, is what moves us from pain to suffering. In theory at least, a boxer who has not done particularly well in a preceding round could go into each round with a renewed sense of hope if he was somehow able to experience each round as having passed more quickly and so to experience less discomfort. If the boxer could somehow experience the three minutes as having passed much more quickly than they actually did, the boxer could feel as though he had taken far less punishment, which again would prevent his confidence from being lowered. I will examine both Husserl's and Heidegger's notions of temporal awareness and show how these might be used to explain the phenomenon of time slowing down when a fighter starts to feel fatigued or under pressure.

Another advantage might come from an increased ability to "mind-read" an opponent so that barely noticeable changes become obvious distress signals. Later, and in more detail, I will discuss how Mike Tyson, upon noticing a split-second glance towards the floor by his opponent, almost glistens with self-confidence and aggression. It is easy to see how the gaining of greater access to an opponent's thoughts and feelings would give a fighter a significant

advantage over his opponent. Of course, this would require an increased detachment from the opponent, since an increased awareness of his mental and physical frailties are of little use unless the boxer is prepared to act upon them and not be concerned by their suffering; he's unlikely to act if he feels too much concern or identifies too much with the other.

In the next chapter of this work I will look at how a fighter might gain access to an opponent's inner thoughts and how access to the other's inner thoughts give rise to a greater self-confidence and, as a result, the importance of disguising negative emotions.

How transhumanism might actually achieve a "selective memory process" or "improved access to the other" is another matter, but transhuman enhancement, in theory at least, could offer beneficial transformations beyond the ingesting of drugs for purely physiological improvements. Gaining a deeper understanding of a boxer's experiential structures will allow us to make more accurate, useful and effective transhumanist enhancements, and it is for this reason that descriptive phenomenology will play a vital role in the claims made in this thesis.

3. Basic assumptions

There are many reasons why people get involved in boxing. There are those who dream of fame and money, of reaching the very top and to fight in places such as Madison Square Garden in New York, or in one of the major Las Vegas casinos for the championship of the world. Some people fight simply because they enjoy fighting; they take pleasure in physical combat and fight more or less as a hobby; a very difficult and painful hobby. Others see fighting as a way out of poverty and hardship, they box because they grew up in areas where boxing is one of the very few ways they can earn enough money to feed their families. In amateur boxing there is a similar sliding scale where there are those who dream of representing their country in the Olympic Games and those who simply enjoy taking part in the challenges of the sport. For the most part however, irrespective of the reasons for fighting or the height of his ambitions, the boxer will be doing everything he can to have his hand raised at the end of the fight. Yet there is one possible exception to this: the Journeyman.

Perhaps two of the most accurate and succinct descriptions of a journeyman's place in boxing came from Johnny Greaves, who won only 4 of his 100 professional contests, and Peter Buckley who won a mere 44 of his 300 contests. Greaves' job, as he describes it was to '*Turn*

up, fight, lose, get paid, happy days’, while Buckley, in a similar manner explains: ‘*I was a professional loser, that’s what I got paid to do*’ (BBC Sport online, 2014). For all intents and purposes, journeymen are paid to fight against younger prospects in order for the younger fighters to learn their trade, but they are rarely expected to win. That is not to say that they are without talent or ability, quite the opposite in fact, but they employ these skills to ensure that they get through the fight without being knocked out, something that would prevent them from working and earning a living in the ring for at least 28 days. For journeymen their experiences before, during and after a fight will be quite different from the fighter whose main objective is to win.

I mention journeymen to highlight one of the many attitudes to fighting and the different reasons why people enter a boxing ring. However, for a journeyman, the approach to boxing will lead to different experiences, both immediately before and during a fight, to that of someone whose main objective is to gain a victory.⁵

Further, I will work under the assumption that the fighter is continually striving for self-improvement and is attempting to reach his physical peak in order to reach an elite status, having the necessary tools to dominate and defeat opponents at any level. In looking at transhumanism, my focus will mainly be on committed, highly-motivated athletes who are looking for that extra 1-2% improvement in order to become the best in their field. So, I will restrict the scope of this work to athletes who are at, or are very near to, the peak of their chosen sport.

However, the question of what makes an elite boxer is not an easy or straightforward one since there have been fighters over the years who have been defined as ‘greats’ and yet share few similarities in the way they fight or train. The lightning-fast reflexes and ballet-like movements of Sugar Ray Leonard were a far cry from the ferocious knockout power of Roberto Duran. Indeed, these two fighters could not have been more different, not only in how they fought, but also in how they trained and in their attitudes to fighting in general, and yet, despite their wildly

⁵ For example, with someone like Johnny Greaves, the movements are more likely to be defensive than offensive, his emotions are likely to be more in check since there is no burden on him to win and he has had years of experience, unlike the young professional who has just come out of the amateurs and who now stands before him. Although the journeyman’s experiences are extremely interesting – as are those of children who box - my focus will mainly be on professional, or at least high-level amateur, boxing and will concentrate on evenly-matched opponents (at least on paper) with the same desire to win.

different approaches to the sport, both have earned their rightful title as boxing legends. In actual fact, it is not only boxing to which this can be applied; discussions regularly take place about who is currently the best footballer on the planet: Manchester Real Madrid's Cristiano Ronaldo or Barcelona's Lionel Messi, neither of whom is remotely like the other in terms of their style of play. In tennis, Roger Federer, Rafael Nadal and Bjorn Borg all had their own approaches to the game, but are all considered modern greats of the sport.

I also do not intend to look at the general things such as motivation, dedication, or any of the standard and predictable words used when athletes are asked about their success; this is for three main reasons. Firstly, I contend that these things should be the absolute minimum expected of any elite athlete. Secondly, no matter how hard they try, some people will forever fail in their attempts to reach any kind of competence in certain sporting activities. Commitment, dedication and motivation are crucial to the success of any athlete, but all the dedication in the world will never be enough to transform Butterbean (Eric Esch) into Muhammad Ali, and even the most fanatical commitment will never fully compensate for cruel biological or genetic deficiency. Thirdly, these things fall outwith the focus of this work, which is concerned with a phenomenology of boxing, how the world appears to the fighter during active combat, and how this might be altered using transhumanist methods. Therefore, I do not intend to focus, for example, on the stages or processes of getting fitter, sharper and stronger, but instead to examine the effects on the fighter's altered experience as a result of these things, as well as how they might be improved as a result of transhumanism. It is also, important to understand what it feels like to be "good at something" and to attempt to grasp the differences in phenomenological experience between a novice and an expert. It is to this that I will now turn.

4. Phenomenology, physicality, and the expert-novice distinction

Phenomenology, as the first-person study of the invariant structures of consciousness, has the potential to make a significant contribution to our understanding of experience within the field of sport. As humans going about our daily life with its various routines, we undergo a vast range of experiences and partake in activities which demand an innumerable array of anticipatory and coping mechanisms. These activities can be of a very simple nature such as getting out of bed, opening doors or making the morning coffee; or can be of the more complex

variety which might include driving to work, operating machinery or interacting with work colleagues. These activities will involve varying types and degrees of, thought, emotion, bodily movement, perceptual experience, object manipulation and, depending on the place of work, interaction with other people. Also, depending on how quiet or hectic the day has been, time may seem to pass incredibly quickly or appear to pass interminably slowly. For the most part, we are able to get through the average day without too many setbacks, indeed the word ‘routine’ would suggest this. However, there are times when high physical, interpersonal, cognitive and emotional demands are placed on the individual, and it is certainly the case that one such time is when an individual enters a professional sporting arena.

During sporting competition, we are often, although not always, faced with situations which place far greater demands on our anticipatory mechanisms and coping skills. In the field of play, reaction times must often be far quicker, emotions are heightened, bodily responses must be more or less instantaneous and, depending on whether or not things are going our way, fatigue can set in and time can seem to pass more slowly.⁶ Further, a greater demand on the capacity for anticipating the actions of others may be placed on the athlete in order to gain the upper hand, or at least to prevent the opponent gaining it. This increased intensity means that there is a stark phenomenological difference in how we experience our “daily routine world” and the experiences we undergo in the sporting arena.

Any athlete must understand the importance of engaging smoothly, efficiently and effortlessly in his or her environment, particularly under stressful or hostile circumstances. It is crucial to their success that the correct ‘body knowledge’ can be enacted and adapted, while in motion or progress, and so in the right circumstances at the right time, and through practice they must learn to shift between cognitive abilities and physical actions in order to perform at their peak. Further, an understanding of temporal experience may help to provide an explanation for the experience of ‘time slowing down’, a phenomenon often reported by athletes who become fatigued and are on the point of exhaustion, or who have been beaten to the point where they have no chance of winning. In short, by giving an athlete the understanding of how their experience is structured during competition may lead to developing ways of enhancing and reinforcing the positive experiences while at the same time diminishing the negative ones in order to improve performance overall.

⁶ An experience which will be examined in the next chapter.

So why is boxing so interesting? Towards the end of *The Iliad*, written around 750 BC, Homer describes how Achilles organises funeral games in honour of his fallen friend, Patroclus. Among the events in these games were boxing, wrestling, archery, chariot-racing as well as throwing events and, although designed to honour Patroclus, the activity was competitive with developing rivalries. One possible reason for this driven desire for victory could simply be that significant prizes were awarded to the victor which could often be of a lavish nature. However, another reason is offered by Kyle (2013) who suggests that athletics was used as ‘surrogate combat’ (p.22) where men, whose occupation in life was to assert their superiority in order to vanquish opponents on the battlefield, could continue to display this superiority to other men in the absence of any foe to conquer. Essentially, this is what competitive sport is: it is the attempt to demonstrate one’s superiority, firstly over an immediate opponent and then, over time, over every other possible opponent. Of course, there are other reasons, perfectly valid reasons, which are given for the participation in competitive sport, reasons such as: self-improvement, socialising, health, the achievement of personal goals and general enjoyment or pleasure⁷. Ultimately however, a high proportion of competitors are driven to win.⁸

Most sport involves the attempt to influence opponents and exert authority over them, whether it is physically or psychologically; how this is achieved will vary depending on the sport. Whether it is Formula 1 racing, tennis, rugby or lawn bowls, competitive sport involves acting to bring about reactions from others. Boxing, along with other “full-contact” combat sports such as mixed martial arts and full-contact karate, differs from other sports in that the interaction between each competitor is of a much more intimate and lonely nature, an interaction which necessarily involves the infliction of painful contact designed to inhibit the opponent’s actions, to limit their options and to conclude with their defeat. Naturally, the opponent’s aims are the same and this is what creates competition. In boxing, like most sports, an empathy with or understanding of an opponent’s feelings and emotions⁹ can provide a decisive advantage, but this empathy cannot turn to sympathy during the course of a fight if a fighter is to be victorious. Of course, this desire to demonstrate superiority may come from

⁷ The number of “fun-runners” in the various marathons around the world are a testament to this and help to draw an important distinction between competing/competitor and participating/participant.

⁸ Of course, the idea of winning may not always apply to all sporting competitions. Some marathons have very competitive runners in them, the majority of them with no thought that they will in fact win the race (or even come in the top 10% of finishers, say). These runners are doing it primarily for the other reasons mentioned. However, in boxing, there are only two competitors and so finishing second is losing.

⁹ Empathy and emotions will be discussed in Chapter 2.

bigger, more long-term objectives such as to be the best in one's own country, continent and eventually the world, but this begins with achieving the short-term goal of exerting supremacy over an immediate opponent, something in which emotional dominance can play a significant part.

Although emotional and psychological dominance can play a major role in the achievement of these goals, physical preparation is vitally important if a boxer is to succeed in his aims of defeating his opponent. This preparation is, for the most part, carried out in the gym where hundreds of hours of bag work, pad work, drills and sparring have taken place in order to fully prepare the fighter for the contest ahead. It is hoped that when the first bell finally rings, the fighter's body will automatically engage and perform these actions without hesitation or thought.

It is undoubtedly true that those who have practised an activity over a period of time generally perform the activity with far greater ease, poise and competence than those who are termed novices. In the context of sporting activities (as with all of the practical arts), theoretical knowledge, regardless of how extensive this knowledge may be, is a weak and inadequate substitute for practical experience. It is now fairly common knowledge that practice accompanied by reflection and theoretical knowledge is usually the best way to master an art.

A possible exception to this might be in something like chess, where theoretical knowledge might be equally advantageous to practical experience. However, two things can be said about this. Firstly, it is one thing to learn the intricacies of Grandmaster level Chess from the comfort of one's own home, it would be quite another to then apply this knowledge during active competition with the current world champion, Magnus, sitting across the table. Secondly, chess differs from the examples above in that it is far less reliant on kinaesthetic knowledge which can only be improved through practical experiences. Therefore, our responses to the three examples above would seem to be fairly obvious: that theoretical knowledge of a practical activity is little or no substitute for actual, 'hands-on' experience. But why is this?

Hubert and Stuart Dreyfus (1986) outline a five-stage development process charting the advancement from novice to expert. During the learning process, the novice begins by receiving "context-free" features which are easily recognisable to the student, despite the lack of experience, and is then given rules for acting upon or perceiving these features, similar to following a recipe for cooking or baking. Dreyfus and Dreyfus use the example of a novice

chess player who learns the value of each of the pieces and is then instructed to always exchange a less valuable piece for one of greater value when the opportunity presents itself. As a starting point, this is very good advice but, after a while, this rule fails to work when the novice comes up against a more proficient opponent who understands the value of strategic sacrifices. As time goes on, the novice becomes more practised and begins to rely less on referring to these rules, which become internalised and so are applied more efficiently: '*no longer is the spell of involvement broken by conscious planning*' (*ibid.*). By the time the student has moved to expert level she is able to take the appropriate action, or make the appropriate moves, with little or no deliberation, judgement or the explicit, self-conscious application of rules.

For Dreyfus and Dreyfus, the expert feels no need for deliberation or reasoning, she simply '*spontaneously acts*'. Again, they use the example of a master chess player, Julio Kaplan who, during an experiment, was set the task of playing five-second-a-move chess with a player of slightly less proficiency, while at the same time adding random numbers given to him at a rate of one per second. Kaplan, it seems, performed very well in both the adding of the numbers and in the chess match itself, which shows that he executed the moves with a high degree of competence despite being denied any time to think, plan or deliberate; his actions were spontaneous.

The crucial difference then between novices and experts, is that novices act upon reference to set rules or instructions, while the expert acts spontaneously or intuitively and without the necessity of consulting these rules. The expert is far more proficient because: '*He does not reason. He does not even act deliberately. He simply spontaneously does what has normally worked and, naturally, it normally works*'. (*ibid.*)

Bryan Hogeveen (2011), in the context of Brazilian Jiu Jitsu, provides some insight into why beginners are so much less fluid and competent in their movements in comparison to practised experts:

The novice is not nearly so eloquent. Beginners are, by comparison, relatively clumsy in their movements and deliberate in their thoughts...[they] are painfully aware of their actions and relative lack of 'flow'. Movements that are considered natural to the expert are the thing of painstaking thought and practice for the novice. (*ibid.* p.8)

This idea of 'flow' is described by Csikszentmihalyi (1990):

Flow leads to integration because thoughts, intentions, feelings and the senses are focused on the same goal ... The most important trait of people who find flow even during adversity is non-self conscious individualism, i.e. a strongly directed purpose that is not self seeking. Because of their intrinsic motivation, they are not easily disturbed by external events. (p3)

This is similar to what Hockey and Collinson (2007) describe as 'being in the zone, where time just flies' as there is an 'optimal engagement' in the activity (pp. 117-119). The idea of feeling as though "time just flies" will be examined in Chapter 2 of this work. However, for now it is important to note that there is a clear distinction in the kinaesthetic and physical experiences of the novice and the expert, where the novice is far more aware of the movement of each of her individual body parts, while the expert experiences the 'flow' of all of her body parts working in unison to successfully accomplish a particular goal. For an activity such as boxing, these movements must be learned, but such learning cannot be:

...handed down through the medium of theory, but must instead be practically implanted, so to speak, into the fighter through direct embodiment. (Wacquant, 1995, p.504)

Wacquant (2004) repeats this point in a later work *Body & Soul*, in which he recounts his experience of preparing for an amateur bout in a gym situated in a rough Chicago neighbourhood:

For the rules of the pugilistic art boil down to bodily moves that can be fully apprehended only in action and place it at the very edge of that which can be intellectually grasped and communicated...To understand the universe of boxing requires one to immerse oneself in it firsthand, to learn it and experience its constitutive moments from the inside. (*ibid.* p.59)

This flow will also include one of the most important aspects of successful performance in any sport, none more so than in boxing: timing. If a fighter's timing is out it will lead to missed punches, poor judgement of distance and, more often than not, receiving more punishment than usual due to the inability to time an opponent's movements.

Flow here is crucial; it is unlikely that anyone would agree to fly with someone who has to make recourse to cognitive processes when these processes are slower and non-automatic. As a consequence of focusing on what has to be done, even if it means protecting her own body, the novice's movements become slow, deliberate, effortful and often clumsy, as opposed to the fluid, graceful and apparently effortless movements of the experienced practitioner.

This focused awareness the novice has of his or her own body creates a *discontinuous unity* (Young, 1980), essentially an inability to execute an action with flow, poise and competence as a result of focusing on other intended goals (the other goals include for Young self-preservation and pain avoidance as a result of historical social conditioning in females). This idea of a discontinuous unity will be examined later in this work, but for now it is enough to say that, for any practical activity, a beginner's performance is encumbered largely by the necessity of focusing on performing the correct procedures which utilise specific bodily movements rather than the achievement of the intended goal. The novice overly concerns herself with making a movement (or set of movements) X, in order to perform an action Y so that she can achieve an objective Z. The expert on the other hand has little need to concern herself with X, she enacts Y instinctively, which instantly brings forth a world which is likely to lead to the achieving of Z. Throughout the course of this work I will show, with reference to the work of Young, and others, that, in the sport of boxing, when things start to go wrong for the fighter, there will be a stronger focus on X, which will often result in a reversion towards the movements usually attributed to a novice.

Another interesting difference between novices and more experienced boxers is that the novice tires much more quickly, often looking at the clock during sparring to tell him how long is left in the round. A more experienced fighter on the other hand, is much more relaxed, focusing on the job at hand and is much better equipped to "see the rounds out", a phrase which essentially refers to a boxer's ability to get to the end of a fight while still remaining active and competitive. Fatigue and how it can affect our temporal experiences will be examined later but, at present, it is enough to say that the rapidly diminishing energy levels of the novice are, in part at least, a result of his or her movements being forced and unnatural, rather than fluid and effortless like that of the experienced boxer. This idea is not only restricted to boxing, or in fact sport. During my time working on building sites, I observed men in their sixties shoveling for hours, but could hardly climb a flight of stairs at the end of the shift, whereas their 17-year-

old apprentices – fit young men - could hardly shovel for two minutes without gasping for breath.

Success in competitive sport requires that, during competition, the experiences should consist mostly, if not entirely, of the success or failure of the intended goal rather than on the bodily actions implemented to achieve this goal. The accomplished athlete's experience should be one of being on 'autopilot', of total relaxation, at least in terms of his or her own bodily movements. The adjustments and alterations in the body's movement and effort should occur automatically as circumstances in the athlete's environment change. These environmental changes will vary depending on the sport and, more than likely, the opponent, but the bodily adjustment should occur in the absence of a focus on the movement of individual body parts, otherwise the athlete will perform like a novice. This idea of 'thinking without thinking' will be looked at in more detail during the course of this thesis. However, at this point it is worth noting that although it is essential for the athlete's focus to remain fixed on the achievement of a goal or goals, the body and its movements cannot be completely banished from awareness, which is another aspect of the phenomenology of sport which will be examined in Chapter 2.

5. Spatiality, movement, & the confined sporting environment

Another aspect of sporting competition is that it takes place within a confined environment consisting of, among other things, physical boundaries, agreed upon rules and regulations and, necessarily, other competitors. In other words, competitive sport takes place in an intersubjective environment with agreed upon restrictions, limitations and shared, yet conflicting, objectives. We will begin by addressing intersubjectivity.

For Husserl, intersubjectivity requires that we have the capacity of attributing intentional acts to other subjects and to empathise with them, to place ourselves in the 'other's' shoes', to gain access to another person's mind through observation of her bodily behaviour. Intersubjectivity then, is fundamental to the very idea of competition; it is only through the recognition that the other competitors have the same desired objectives as I do that the idea of competition can be in any way meaningful to me. If, for example, in a 100 metres race, athlete A desires to run the race as quickly as she can, while athlete B desires only to demonstrate a superior running posture, then it cannot be sensibly claimed that they are in any way competing against each other. Only through an awareness of common objectives in the other, i.e. winning and beating

all of the other competitors in the field, can the athletes be deemed to be participating in anything resembling competition. This intersubjectivity, as well as being necessary for the very idea of competition, also affects how a competitor performs.

Obviously in sports like boxing the influence of one competitor on the other is very direct, to the point of intentionally inflicting physical damage, but even in sports like golf the performance of one player can be affected by the other player's performance, attitude and demeanour. In fact, there are even times when one competitor can gain the decisive upper hand even before the event takes place.

On 18th March 1995 Ireland's Steve Collins met the previously unbeaten Chris Eubank for the WBO world title in 'Rebel County', Cork. Before the fight, Collins and Eubank came face to face. In an interview with Peter Carroll, Collins explained:

I walked straight up to him, and got nose to nose with him. I told him, 'I'm the new champ, I'm going to win'. He looked at me like I had ten heads and I just kept telling him that I was going to win. I said it so many times that it became a mantra—I looked like a lunatic.

He backed off a bit and I could see that I had scared him. Someone said to me 'what's going on here', and I told him that I had been hypnotized and that I had a hypnotist with me in the room. I could see him react to that immediately, he wasn't comfortable with it at all. (fightland.com, 2015)

Collins went on to tell the media that the hypnosis would help him in blocking out any pain or negative feeling, allowing him to fight at an intensity that would result in a decisive victory.

In response to this, on the day of the fight, Eubank was quoted as saying:

That's why I would call the fight off if I could now, it is unknown territory. For the 43 fights I've had in the past I've always known what I was going in to.

I don't know what I'm dealing with tonight. I'm fighting someone that has been mechanically altered and that's an unknown area. I shouldn't be put into this situation.

Despite having Collins in serious trouble on more than one occasion during the fight, Eubank committed the cardinal sin for any professional boxer and backed away, rather than deliver the decisive blow that would almost certainly have seen him gain victory. Consequently, Collins went on to win the fight by unanimous decision.

What is significant here is that not only was Eubank able to empathise with Collins' desire to win, along with his willingness to go to extreme lengths in order to do so, but his own actions were inhibited by his, albeit false, beliefs about Collins' state of mind. For Collins, his tactics worked to perfection; by utilising his knowledge of fellow fighters and how they think, he was able to gain a decisive advantage over his opponent. Clearly, during an actual contest, the intersubjective dealings are less calculated and more immediate than this, but how well an opponent performs in terms of the effectiveness of their attacking, defensive and counter movements will have an effect on a competitor, limiting his possibilities for action and causing him to experience a diminishing number of horizons, something which again will be examined in greater detail in the next chapter of this work. Indeed, it can be of even greater benefit if a boxer is able to "read" his opponent and to anticipate his opponent's actions in order to make his own evasive or counter actions. This idea of "reading" an opponent will be discussed in Chapter 2 of this work with close reference to Smith (1759), Goldman (1995), (1991) and Gallagher (2008), Thompson (2001), Zahavi (2011) and Dutton (2012).

In addition to the limiting effect of an opponent, the physical environment and the rules of the contest also play a significant part in the phenomenological experiences of a sporting competitor. In fact, this is where sport becomes unlike most other, everyday living: competitors are expected to act freely and without constraint in extremely restrictive environments. Of course, it could be argued that there are certain other environments where this is also true, for example operations on the factory floor, artistic performances or even school children in the playground. However, not all of our everyday actions come with the added aspect of competitiveness, or the prospect of winning or losing. A band such as U2, performing in front of 50,000 fans will require a certain focus but, unless something goes spectacularly wrong, they can't "lose" in any meaningful sense. In our everyday lives, restrictions aren't placed in order to determine "who is the best at...".

In any case, these restrictions can be both external and internal, and the external restrictions come in three main forms. Firstly, there is the physical environment, or the field of play, which can be anything from a golf course, football pitch, tennis court or boxing ring. These place all

kinds of restrictions on sports competitors in terms of where and how they can move as well as the types of actions they can perform; and the phenomenology of spatial awareness will be examined in Chapter 2 of this work. Secondly there are the rules and regulations to which the competitor must adhere, even if he or she is doing so on an automated subliminal level. Again, these rules limit the actions and movements of the athlete. A boxer knows that he cannot kick an opponent; a football player knows that the rules forbid him from touching the ball with his hands and a golfer is restricted by any number of rules and regulations such as furthest away from the hole plays first. Thirdly, as mentioned earlier, the opponent can also place restrictions on an athlete in a variety of ways including their own athletic performance, by things that they say or even just their general demeanour.

Of course, there are other limiting factors placed on the athlete: emotional responses, nerves, the pressure of performing in front of a large crowd, or even the apprehension of being on TV can create an adverse environment for any athlete. Things like fatigue, the realisation of the superiority of an opponent or even fear can have a negative impact on the athlete's ability to focus on the desired objectives. This idea of losing focus on the original objective and retreating to a position of self-preservation leads us to Young's work on inhibited intentionality which will be analysed in greater detail in Chapter 3, with further examination of the work of Husserl (1917), Heidegger (1927) and Merleau-Ponty (1945). Further, the work of Lazarus (1991), Gross (1998) and Ekman (2004) will be examined in order to gain an insight into a fighter's emotional responses.

A professional sports competitor is required to maintain a natural, fluent, effortless and assured performance in the most unnatural and confining of environments. This is something which, I contend, requires a *continuous unity* (Young, 1980), a complete pre-reflective focus on the objective at hand with little or no agentic experience, which will allow the athlete to successfully perform fluent, intended actions within confined, often hostile, environments.

6. Transhumanism & phenomenological alterations

Transhumanism is a movement that has gained considerable momentum over the last few years, with rapid advancement in technology creating an ever-expanding range of possibilities in terms of the alteration of the human condition. Crucially, transhumanists reject the idea that the 'human condition' is constant or fixed, or indeed the idea that it ever has been:

Present-day processes can be fine-tuned; wealth can be increased and redistributed; tools can be developed and refined; culture can change, sometimes drastically; but human nature itself is not up for grabs. This assumption no longer holds true. Arguably it has never been true. Such innovations as speech, written language, printing, engines, modern medicine and computers have had a profound impact not just on how people live their lives, but on who and what they are... Transhumanism has gained currency as the name for a new way of thinking that challenges the premise that the human condition is and will remain essentially unalterable. (Bostrom, 2001)

Consequently, the transhumanist movement sees itself as a continuation of the evolutionary process - a process which they claim contradicts the idea of the human condition being permanent and unchangeable - with the main difference of their enterprise resting in the fact that the process is accelerated.

Some of these suggested adaptations to the human condition do seem like the work of science-fiction, including space colonisation, vastly extended lifespans, the uploading of consciousness to supercomputers and the reanimation of cryogenically frozen patients, and yet there have already been numerous scientific developments which have made it possible for athletes, both legally and illegally, to enhance their performance.

Possibly one of the most famous cases in recent times is that of Oscar Pistorius, whose prosthetic legs allowed him not only to compete among athletes with similar disabilities – both of his legs were amputated below the knee - but allowed him to take part in the non-para Olympics in London (2012) where he ran in the men's 400 metres. Before his conviction for murder, there was some debate as to whether Pistorius should be allowed to compete in either the Paralympics or the Olympics because his prosthetic legs might have given him an unfair advantage. One such advantage was that his prosthetics would never tire or suffer injury, though we might note that his legs are not isolated from the rest of his body which would tire at a similar rate to the bodies of other sportsmen.

In other sports there have been attempts to gain advantages through the use of performance enhancing drugs, although the use of stimulants in sporting events is not a new thing. The World Anti-Doping Agency (WADA) reports that Ancient Greek athletes used special potions and diets to improve their performance and; in the 19th century, cyclists used strychnine,

caffeine, cocaine and alcohol to improve endurance and later, in 1904, Thomas Hicks won the marathon in St. Louis after dosing himself with a concoction of raw eggs, strychnine injections and brandy. In the late 1920s the International Association of Athletics Federation (IAAF) and the Federation Internationale de Football Association (FIFA) introduced steps to ban the use of any substances which could be considered stimulants.

More recently performance enhancing drugs have been used for various reasons including: stimulants to increase awareness, steroids to increase muscle mass, diuretics to reduce weight, analgesics to mask pain and peptides to increase energy levels (BBC.co.uk). There is also the infamous case of Lance Armstrong, the seven-time Tour de France “winner”, who was stripped of his titles after being found guilty of blood-doping and eventually exposed by Irish sports journalist David Walsh (2013), who for thirteen years had followed Armstrong’s career with a biting cynicism, particularly after his Tour de France successes upon his return from cancer treatment. Armstrong was eventually found to have been using synthetic Erythropoietin (EPO) which increases the production of red blood cells, allowing the blood to carry more oxygen to the muscles, thus increasing aerobic capacity and endurance levels.

Also, there have been cases of sportsmen and women using beta blockers, particularly in sports where a slowed heart rate allows the competitor to keep a steadier hand, a definite advantage in sports such as archery and golf. Of course, the transhumanist could argue that, these are simply another step in the process of the evolving human condition, and that alterations to the human body are no different to the improvement we have seen in sporting equipment over the years. A comparison of any modern golf club, tennis racquet, football boot, archer’s bow or athlete’s shoe to those of fifty years ago will certainly serve as a credible testament to this. For the transhumanist, there is no such thing as a fixed or constant human condition or ‘human nature’ and in this conviction they may find an unlikely ally in the form of Jean Paul Sartre, for whom there is no such thing as human nature.

If man as existentialists conceive of him cannot be defined, it is because to begin with he is nothing. He will not be anything until later, and then he will be what he makes of himself. Thus, there is no human nature since there is no God to conceive of it ... man is nothing other than what he makes of himself. (Sartre, 1946/2007, p.22)

Sartre, in a similar way to the transhumanists, refers instead to the ‘universal human condition’ which places restrictions and limitations on all humans, which for Sartre includes things such as being in the world, interacting with other people and the certainty that one will die. It is these universal limitations which allow us to understand the projects of other humans, even children and, Sartre generously points out, idiots (*ibid.* p.42). However, the important point for the purpose of this thesis is that any objection to transhumanism in sport on the grounds of it going against human nature, or being unnatural, would be unfounded, since there is no such thing. For Sartre, each of us, including sports competitors presumably, make decisions based on an image we have of how man should be:

... there is not a single one of our actions that does not at the same time create an image of man as we think he ought to be. (*ibid.* p.24)

For transhumanists, and indeed for highly competitive elite athletes, this could simply be taken to mean that man *ought* to be as fit, fast, strong, powerful, alert, balanced and confident as he can possibly be; that he ought to strive to be the finest, most effective physical and athletic specimen possible – so long as he accepts that everyone else should do the same. So, since he didn’t think there is a human nature to be altered, would Sartre have been an existentialist cheerleader for a transhumanist route to sporting excellence? Not necessarily.

Leon Culbertson (2011) describes how Sartre, in *Search for a Method and Critique of Dialectical Reason 1 & 2*, develops the idea of *Praxis* which, for Sartre, is:

... historical action, action that inscribes itself in matter or alters the world in some way. Praxis may be individual or collective ... and involves altering the world in light of a project. (p.239)

It should be noted, claims Culbertson, that praxis is not the same as action, since praxis involves altering the world in some way. Culbertson gives the example of running a marathon (action) and building a house (praxis), with the former having no impact on the physical state of the world and, even if there is, this alteration is not part of the intended goal. Further, these alterations mean that we then not only encounter the world as different, but also that there are unintended consequences which arise, consequences which restrict future praxis. This restriction of future praxis is known as ‘practico-inert’, which creates ‘anti-praxis’, described by Culbertson as:

... a deviation of our current praxis by the inscription of previous praxis (our own praxis and/or that of people of other groups, institutions etc.). (*ibid.* p.239)

For Sartre, individual freedom is not possible by way of individual praxis, but only through collective praxis. However, very often this collective praxis creates horrific and distorted versions of the original project, resulting in consequences that are nothing like those which were intended. Therefore, if we, as Culbertson does, apply this to the human body, then it seems that transhumanism may not be such a good idea after all, since there is no possible way we could anticipate all of the negative consequences brought about through anti-praxis. This uncertainty is brought into even sharper focus if Sartre is in fact right about there being no human nature, since this anti-praxis would vary within, and so be unique to, each individual, making it nigh on impossible to foresee and pre-empt any negative after effects. However, although it may not be possible to predict every negative consequence associated with transhuman enhancement, it is possible to examine some of the downsides which might transpire.

One consequence of transhuman enhancement is that it could well result in contempt for the athletes and possibly even apathy towards sport in general. Although there may be several other reasons as to why elite athletes are placed on a pedestal, one of the more prominent reasons is fairly simple: they can do things the average person can only dream about. Further, they can do these things with, more or less, the same physiological and anatomical features as we possess, a fact which allows us to identify with the impressiveness of their exploits, whether it is on a football field, boxing ring, running track or a gymnast's mat. Even if we believe that their talents are "God-given", we still discover something admirable in a person's ability to manoeuvre their body with the skill, speed, grace, balance and competence most people can only imagine. In essence, these people are like us, only special.

If, however, an athlete becomes enhanced to such an extent that they are no longer "like us", then this admiration greatly reduces as our ability to identify with them diminishes. Indeed, I am unlikely to elicit much praise or adulation by having my feet replaced with rocket-powered roller skates and then breaking the world record for the 100 metres sprint, or by winning the high-jump in virtue of having pogo sticks for legs. Watching these events may still be hugely entertaining and in their own way may seem impressive to a certain audience, but it can hardly be said that these sporting events have remained unchanged. So although transhumanists, and probably Sartre, would argue that these alterations don't change the fact that I am still human,

my “running” and “jumping” prowess would certainly seem far less remarkable and inspiring to anyone who suffers from a lack of rocket feet or pogo legs. Essentially then transhuman enhancement need not be a question of morality or integrity, it may simply be the case that audiences become incapable of identifying with competitors and, consequently, sport losing its appeal and fascination. If a person is not ‘enhanced’, then it would become very difficult for that person to place any real value on performances by those who are, a point which I will examine in greater detail in Chapter 5 with respect to Agar’s *veridical engagement*. Sport, especially at an elite level, derives its sustenance in no small way from its spectators; if we value sport it would be a grave error to alienate these people because, without them, there would be no professional sport. The case of Oscar Pistorius may lend further weight to this claim.

Pistorius, as a result of his struggle to conquer adversity after having both legs amputated before he was one year old, was lavished with praise and admiration when it was confirmed he would take part in both the Paralympic and Olympic games, and showered in adoration when he was finally eliminated at the semi-final stage. The acclaim he received, at the time at least, appeared to be thoroughly justified given the life that he had led and the determination he had shown to eventually reach his goals. But what if he’d won gold? Would the fact that his carbon-fibre prosthetic differed so much from the other competitors’ legs been an issue? Prior to the Olympics, Pistorius’ personal best time was such that there was never any real prospect of him getting to the final, far less going home with a medal, and so the discussion was never really raised. However, it does not seem wildly controversial to suggest that, had Pistorius won a medal of any colour, his achievement would have been followed by a media procession of “yes buts...” as a result of his physiological dissimilarity to that of his fellow competitors. Irrespective of the veneration felt for Pistorius at that time, the fact that the other competitors had run on skin, bone, muscle and tissue, while the winner had run on carbon fibre, would certainly have raised questions about fairness and equality.

Which brings us to another problem the transhumanist faces: that of equality. One of the major criticisms levelled at Formula 1 racing is that it is the car, and not the driver, that will determine the outcome of the F1 driver’s championship. Although there is no doubting the skill and ability of the drivers who are crowned champions every year, a brilliant driver in a mediocre car is unlikely to finish ahead of a mediocre driver in a brilliant car and, in fact, it is unlikely that the former will get anywhere near a podium finish in any race. This has led to criticisms of Formula

1 being boring and predictable, since it is the technology that is the most important determinant in any race rather than the human driver. If transhumanism became the norm in the sporting arena, similar problems could arise. If, in any sport, the same few competitors continually triumphed as a result of having the best technology or the most advanced genetic enhancements, then similar problems to those described above could arise, with audiences becoming bored, unimpressed and disconnected. That is not to say audiences become bored with a particular athlete's domination in their sport, the admiration Usain Bolt receives is testament to this, but a domination arising from financial advantage would be far less well-received.

It is worth noting at this juncture that I have made no mention of the moral and ethical implications of the transhumanist position, only the negative consequences that may arise for professional sport as a spectacle, as a source of entertainment for the general public. The reason for this is that, in sports such as running, swimming and cycling, the main ethical objection pertains to the advantages gained by those who have adopted performance-enhancing methods over those who haven't, in which case it is considered cheating. However, in sports such as these, legalising the use of performance-enhancing methods, whether it be through drugs, prosthetics, implants, genetic modification or any other means, merely results in the athlete running, swimming or cycling faster which, other than the audience disengagement discussed above, does not seem to have any overly disturbing moral implications, so long as any enhancements are undergone correctly, safely and with equal access to all competitors. For boxing, or any combat sport for that matter, where the objective is to inflict physical damage on an opponent, the implications are a little more serious. In the words of Loic Wacquant (1995):

... competition in the ring aims not at thwarting or corralling the moves of the opponent but at delivering potent blows to his head and upper body so as to inflict superior physical damage and, if possible, render him incapable or unwilling to sustain the contest ... Injuries and bodily deterioration are not incidental to the game, they are the necessary outcome of proper professional exertion. One plays basketball and even football; one does not "play" at boxing. (p.495-496)

As discussed above, it is my intention during the course of this thesis, to examine the phenomenology of boxing and how a boxer's phenomenological experiences could be transformed in ways which allow the fighter to control his emotions, to anticipate an

opponent's moves, the possibility of experiencing time passing more quickly so as to feel 'fresher' and to balance the experience of being both an acting subject and an object or target, all serving to increase the horizon of possibilities presented to the fighter during a fight. However, I will do so while at the same time remaining acutely aware of the fact that increased performance through transhuman enhancement could, and most likely will, pose a greater threat to professional fighters. It is not only the punishment that a fighter inflicts that could be enhanced, but also the level of punishment he is able to take which could become a major concern in the enhancement of a boxer's performance levels.

In Sartrean terms, the anti-praxis could lead to unintended, yet life-threatening, consequences; these consequences will be examined in Chapter 5 of this work.

It is my contention that the ideas of some of the pre-eminent phenomenological philosophers can prove useful in the understanding of the phenomenological structures involved in sporting activity, more precisely, boxing. My concern will be in the alteration of these phenomenological structures in order to improve athletic performance and the dangers that might arise from allowing these alterations to go unchecked.

Theodoric the Great was right, boxing is a very dangerous sport, and we need to understand as much as we possibly can about the mechanics of its physiology as well as the mechanics of participants' experience if we are to appreciate the limitations and possibilities of future enhancement. To this end, Husserl, Heidegger, Sartre and Merleau-Ponty will be used to provide an insight into a number of aspects which are vital to successful sporting performance.

Chapter 2

Temporality, Emotion and Non-Sympathetic Empathy

Transhumanism is often thought of as making alterations to humans in order to improve performance and in our case the improvements would be with regard to sport and, more specifically, boxing. However, these improvements, particularly with regard to sport, tend to be thought of as physical in nature and are often associated with things such as increased muscle mass, lowered heart rate or improved stamina; all improvements which have can have a significant impact on an athlete's physical attributes and sometimes on their psychological state.

However, there is another aspect which I will look at in this chapter: how the athlete's experience of his or her or world might be modified as a consequence of how they are performing at any particular time. Specifically, I will examine three main phenomenological areas: temporality, emotion and non-sympathetic empathy. I will begin by offering my instrumental definition of empathy, and then turn my attention to some of the important phenomenological structures in the art of boxing.

1. Empathy, Sympathy and Compassion

It is my view that, within the unforgiving environment of the boxing ring, empathy provides the fighter with an understanding of the relative threat posed by an opponent; it is an understanding gained by way of sensing when the opponent is weakened or distressed, invigorated or vitalised. But when it is weakness or distress which is sensed, it is a non-sympathetic empathy which ensues. Observing vulnerability will compel the fighter to act in a manner which exploits weakness, and which will attempt to compound the distress felt by his opponent, leading to what Ricky Hatton (2008) describes as ‘overdrive’. More specifically, the fighter will throw more punches with more harmful intent, completely unencumbered by any concern for the welfare of the other boxer and focusing solely on maximising the damage to his beleaguered foe. Empathy, as I have defined it, does not lead to any feeling of compassion, any notion of Adam Smith’s ‘fellow feeling’, or of anything that might be regarded as sympathy.

Sympathy leads to compassion. Like empathy, sympathy allows for the understanding of the distress being endured by another, but it comes laden with a feeling of sorrow for the other, along with a desire to alleviate their distress. This desire to lessen another person’s anguish is what I call compassion which, by its very nature, runs in direct opposition to a fighter’s intentions during a contest; that is, to compound the anguish. It becomes clear to see why sympathy and compassion are two of the most undesirable traits in a fighter during a contest. If a fighter experiences even the slightest modicum of compassion for his opponent, he will be unable to fully commit to the aim of bringing the fight to a swift and decisive conclusion. In the words of Iris Marion Young the fighter will suffer from ‘inhibited intentionality’ as his focus becomes split between going for the knockout and refraining from further injuring his opponent. This division in intention will almost certainly lead to hesitation, which in turn may yield opportunities to an empathetic opponent. Even a split second of hesitancy or indecision during a fight can be costly and can turn certain victory into devastating defeat.

Does this compulsion to exacerbate another person’s suffering lead to the conclusion that boxers are psychopaths? No, yet at the time a boxer goes into ‘overdrive’, there are glaring comparisons that can be drawn between the two. Psychopaths are endowed with a keen ability to identify vulnerabilities in individuals and to exploit them to their own advantage, meaning another’s distress does not lead to a feeling of compassion. Also, I contend, they cannot be

entirely devoid of emotion or feeling since they have, in many cases, a desire to exploit the vulnerable and can experience a level of pleasure in doing so. That is not to say that I take actions to be a requisite for the definition of psychopathy, I contend that it is perfectly possible to feel completely unmoved by another person's suffering without acting to inflict even greater distress, but during a fight sensing another's vulnerability does lead to such actions. In short, I take a psychopath to be someone who: can keenly observe and understand another's distress and vulnerabilities; does not experience sympathy or compassion at such observations; and may or may not derive some form of pleasurable experience from the exploitation of these vulnerabilities. Let us take this outline of psychopathy and return to the boxer who goes into 'overdrive' at the sight of an anguished opponent.

With respect to the first condition, it has been shown from examples by both Ricky Hatton and Mike Tyson (section II of this chapter), that fighters have an acute understanding of when an opponent starts to wilt or comes to the ring burdened with fear. Secondly, these observations of distress do not engender anything resembling compassion in either fighter and, in fact, serve only to imbue them with the confidence to attack their opponents with a much greater zeal and brutality. Finally, the enjoyment they obtained from acting in this way can be shown by the fact that, between them, they amassed 76 knockouts, that's 76 people they punched into submission, many of them long after each of them had reached the status of multi-millionaire, meaning there were no financial pressures to continue fighting; they did it because they loved it. This enjoyment can also be sensed from the quotations from Hatton and Tyson that I have used in this work, where there are no mentions of regret or remorse and certainly none of compassion for any of their beaten challengers.

In respect of these definitions, it is my assertion that, during a contest, a fighter displays traits and characteristics conducive to the attribution of psychopathy when he finds his opponent in trouble. His ability to empathise without sympathising allows him to identify torment in his opponent and to turn this torment into torture, an act from which he derives great pleasure. It is for this reason that we must tread carefully with transhumanist adaptations so that these characteristics emerge only within the confines of the boxing ring.

2. Discomfort, Exhaustion & Temporal Experience

*'There's no f*****g way that was three minutes!'*

Aqeel Ahmed

Scottish Internationalist, Keir Hardie ABC

(i) Alterations in Experiential Time

Blood drips down the side of a face ballooned to twice its normal size, two plum-sized welts force closed each of his eyes, above which bruises, cuts and scratches give his forehead the appearance of a stained, bloodied dirty pub carpet. His right hand swollen and staved, possibly broken, and every forward step unleashes a sharp and biting pain up through his ribs and into his weakened shoulder as he struggles to breathe through his crushed nose. A dislocated jaw moves tentatively, agonisingly forging a pained smile through lacerated lips while he strains to hear the announcer's decision through the ringing in his battered ears. Meet the winner.

Boxing, especially professional boxing, can be and very often is a brutal sport in which one of the objectives is to inflict as much (non-permanent) physical damage on the opponent as possible, or at least render him incapable of continuing the fight. Indeed, although genuine boxing aficionados will admire things such as movement, timing, hand speed, elusiveness, counter-punching and general boxing ability, the quality of a fight is more often than not judged on the level of punishment the combatants inflict on each other.

A respected online site, Boxrec.com, voted Muhammad Ali's famous third meeting with Joe Frazier, The Thrilla in Manila, as the greatest fight of all time:

As Ali began to tire, Frazier turned up his own offence and began punishing Ali to the body and the head with his trademark hooks ... Finally, in the tenth round, Frazier began to slow down and tire, and Ali slowly turned the tide. In the 11th round, he used his speed to dance more and to unload a series of fast combinations on Frazier, which severely disfigured his face by the end of the round, swelling Frazier's eyes to the point that nothing but a tiny slit remained open ... About a minute into the 13th round, Ali landed another blistering combination on Frazier, sending the injured fighter's mouthpiece flying into the crowd ... In the 14th round, Frazier was almost blind as he stepped in and was met once more with punishing blows from Ali. It was later revealed that Frazier actually had a cataract in his left

eye and, with the punishment from Ali closing his right eye, was effectively fighting blind in the last rounds of the fight ... Ali was declared the victor. He got up from his stool, raised his arm in victory, and then collapsed onto the canvas. He was completely spent. Ali claimed that this was the closest to dying he has ever been.

In point of fact, to list the number of fights that have been remembered and labelled ‘classics’ in virtue of the level of sustained punishment each of the fighters managed to deliver and endure, would lie on the cusp of impossibility. Actually, there have been supremely gifted boxers, including most recently Floyd Mayweather and Roy Jones before him, who were so talented, skilful and so far ahead of their competition, that they often went through twelve rounds of boxing without ever having to ‘get involved’, without ever taking a single clean shot to the head or body and who, at the end of the contest, looked as though they hadn’t even been in a fight. Fighters like these are, in some quarters, often described as boring due in part to the one-sided nature of their contests, but also in part due to their unwillingness to ‘stand and trade’, thus opening up the possibility of being hit. So there is a pressure of sorts on fighters to ‘entertain’, to get involved in contests which take them to their limits of pain, stamina and endurance. What is interesting from the point of view of this work is that, as the boxer becomes tired, even exhausted, time seems to slow down and the rounds appear to last longer. Indeed, such an experience is not limited to fighting.

The eloquent and articulate quotation at the top of this section comes from Aqeel Ahmed, an international amateur boxer from Motherwell in Lanarkshire, upon his return to training after the Christmas holidays. After a year of intense, six-days-a-week training for international contests, national championships and various local bouts, he went off at the end of November for a well-earned rest (including a trip to Amsterdam). When he returned to training on the second week in January and was going through a pad-work session, something which he did comfortably for 7 or 8 three-minute rounds prior to his Christmas sabbatical, towards the middle of the third round, the snap left his punches, the power began to lessen and he began to breathe heavily, often dropping his hands by his side to take a deep breath before continuing. As the round went on there was practically no snap or power in his punches and the breaks for deep breaths became more regular until, after two minutes, after another struggled intake of oxygen he asked ‘how long?’. On being informed that there was a minute left, he shook his head and reluctantly continued and, with about 20 seconds to go he uttered the quotation above,

adamant that I had got the timing wrong, or had failed to hear the buzzer for time up. Only the buzzing sound from the digital clock on the wall about five seconds after his protestations confirmed for him that I had not in fact made an error and he slumped dejectedly onto the ring apron.

Time appearing to pass slowly is not restricted to training or to physical exertions. A further example, this time anecdotal, of the slowing of subjective time was when I, with the greatest of reluctance, attended a performance of Swan Lake with a girlfriend who had reassured me that it would last ‘only a couple of hours’. She was, of course, referring to objective time, and after what seemed like hours of watching what appeared to be the same dance performed again and again to the same tune that I had begun to loathe, the curtain finally came down. I summoned every last wisp of willpower in order to restrain the outpouring of my joy at finally reaching the end of that interminable performance, only to discover that it was the interval. I would have sworn that more than an hour had passed, in fact, it felt more like two, but certainly it was never more clear to me that subjective experiential time can be utterly distinct from objective time.

Hancock and Weaver (2005) describe several experiments, conducted by various institutions, designed to determine if stressful conditions did in fact lead to alterations in the experience of time. One particularly interesting experiment they describe was carried out by Watts and Sharrock (1984) who attempted to ascertain whether or not fear caused individuals to lengthen their estimations of time intervals by placing 35 sufferers of arachnophobia into a room and sat them a short distance from a glass jar containing a large spider. The experiment was repeated with a group of people who had no such fear of spiders and the estimates of this second group were considerably shorter than the phobics. This led them to conclude that stress does in fact have an impact on our experience of time. In another experiment, conducted by Gupta and Cummings (1989), it was found that more pleasant experiences were adjudged to have passed more quickly than those of a less pleasant nature.

It may have been a seemingly interminable meeting at work, being forced to sit through a friend or neighbour’s plethora of holiday photos, enduring a dull class or lecture, or even being subjected to a sporting event in which we have no interest, it is fairly safe to assert that we have

all been confronted with some experience or other of this kind.¹⁰ There are however, also uncomfortable occasions where, rather than slowing down, time appears to quicken. Being late for work and getting stuck in a traffic jam or behind a learner driver, watching the clock run down as you wait on your team scoring an equaliser in the Cup Final, or taking the journey towards a place or event that you are dreading, all seem to make the minutes pass more quickly. In general, it seems often to be the case that, in times of discomfort¹¹, experiential time appears to alter depending on the reason(s) for our discomfort and the type of discomfort we are forced to endure¹², a notion not lost on Dunbar, an officer in Joseph Heller's classic novel *Catch-22*, whose desire to live longer motivates him to embrace boredom, annoyance and other negative emotions in order that time passes more slowly.

Loic Wacquant (2008) sums this up rather nicely in his account of a sparring session between himself and a far more experienced partner:

I don't have the strength to return his punches. Shoot, it should be over by now!
This round's so damn long! I keep whining to myself in my head: "Time out! Time out!" Come on DeeDee! Fuck, what's the matter, has he forgotten us or what? We must have been boxing for a good five minutes! (*ibid.* p.90)

Of course, the round only lasted three minutes, not the five minutes perceived by Wacquant but, certainly within the environs of the boxing ring, there does seem to be a correlation between fatigue and our experience of the passing of time.

(ii) Time and the Necessity of Perception

Augustine begins from the premise that both the past and the future do not exist in any objective sense and, in fact, even the existence of the present is problematic due to its fleeting, flowing and temporary quality, a quality that Augustine sees as essential since if it were not this way, time would appear never to move. Mensch cites Augustine:

¹⁰ I contend that it is also fairly uncontroversial to assert that the reverse is also true, that time seems to pass quickly when we are engaged in an activity that we really enjoy.

¹¹ This can be any type of discomfort, both mental and physical, and can include, among others, physical exhaustion, boredom, panic, stress or worry.

¹² In fact, there may even be times when both of these things seem true. If we are in a terrible hurry experiential time appears to quicken, but if we are waiting on someone getting ready, for example, everything they do seems to take longer.

... if the present were always present and never flowed away into the past, it would not be time at all, but eternity. But if the present is only time because it flows away into the past, how can we say that it is?

I can observe the digital clock counting down the seconds of the round, from three minutes to zero, and when the buzzer sounds I am satisfied that one-hundred and eighty seconds have elapsed since the beginning of the round, but how am I to confirm that it has been one-hundred and eighty seconds of *equal length* that have elapsed? Augustine puts this down to our having an internal sense of time, a sense which is quite distinct from objective time or the enumeration of motion.

Augustine avoids the problem of the non-existence of the past and future by firstly asserting that they do in fact exist, internally, with the past existing as memories which we can recall and bring into present consciousness and the future existing as the expectation of things to come. For Augustine then, three types of time exist, all with different modes of being presented in the mind: a present of things past (memory), a present of things present (sight) and a present of things future (expectation). Secondly, Augustine goes on to say that when we measure time we are, as Mensch explains, 'measuring a passage through a present now'. For Augustine, what is present is all that exists, but the present is in a constant state of becoming the past or 'not now', it is continually fading away and it is our awareness of this fading away which allows us to measure the passage of time. Again, Mensch explains:

... only what is present exists. What is present is the now. The now, however, exists in passing away. It "is" in its constant passage to the not-now. Given this, time only exists in such passage and, hence, can only be measured *as something existent* in this passage. Our inner sense of the duration of time must, then, be of this passage ... Time, then, exists as this ongoing impress of things in the mind, an impress that leaves their impressions or likenesses behind. In containing these likenesses, which are present as memories, the mind has a kind of extension in the now, one where the past and present are co-present.

As for the future, Augustine explains that it exists in our minds as anticipation, as the projecting forward of the past to provide us with an expectation of what will come. Therefore, for Augustine, the sense of the passage of time we get from the internal processes of anticipation, direct perception and memories of these direct perceptions. Further, he has provided us with

the ability to make a distinction between ‘past’ and ‘future’ or ‘before and ‘after’, through his requirement for memory and anticipation for the capacity to experience the passing of time. Essentially, the mind’s capacity for holding the past, present and future together through memory, perception and expectation is what allows us to gain a sense of the passage of time.

However, Augustine runs into one major problem. Mensch puts it thus:

... having reduced the past and future to their present “likenesses” in our minds, he provides no explanation of how something present can yield our sense of something not present, be this the past or the future. Our ability to apprehend the past *as past* is not explained by referring to things’ impressing the mind as they pass and this impress remaining after their departure. Given that impress is present, how would we distinguish its apprehension from that of the impress made by a present perception? As regards the future, we cannot really speak of *its* presence in terms of impressions. By definition, nothing has yet come to pass to leave the “impress” of future things on the mind. To speak of its presence as that of the past projected forward, which Husserl will also do, has a good sense insofar as we do anticipate on the basis of our past experience. But this does not per se solve the problem of the “presence” of the future in the mind or how we can move from the apprehension of a present content to a grasp of what is not present, but only will be such.

Basically, the problem Augustine faces is that if any ‘impress’ must be present, including that of past events, it seems that he owes us an account of how we manage to distinguish between an ‘impress’ of a past experience and that of a current experience. Augustine seems to provide no such account. With respect to the future, nothing has yet occurred which could have left an ‘impress’ so it is difficult to see how the future could any way be described as being ‘present’ in the mind.

Essentially then, Augustine does provide us with a way ordering time, by marking changes in our perceptions or ‘nows’ by placing markers – ‘before’ and ‘after’ – and enumerating the elapsed time between these markers. Through Augustine, we then have an account of how we are able to assign these markers through the mind’s tripartite capacity for memory, perception and anticipation. However, we are still some way short of an account of how we are able to distinguish perceptions from ‘present’ past or future experiences. Later in this section, I intend

to examine two accounts of time consciousness, postulated by Husserl and Heidegger, which try to overcome the criticisms faced by Augustine and to look for an explanation as to how we can make the distinction between perception and ‘present’ past experiences.

(iii) Husserl’s Phenomenology: Consciousness & Temporal Awareness

In this case of Newtonian time, each tone spreads its content out in a corresponding now but each now and thus each tone remains separated from every other. Newtonian time can explain the separation of moments in time but not the continuity of these moments. (Kelly, IEP, 2008)

For example, take hearing the following sentence: *‘I am the Greatest’*, where each word or syllable will give rise to four different perceptions (five if we deem each syllable to be a separate perception), each one occurring at a different point in time. Clearly, this is not enough for me to grasp the meaning of the sentence, or indeed to even understand it as a sentence at all since all that can be said is that I have a perception of ‘I’, followed by a perception of ‘Am’, followed by a perception of ‘The’ which in turn is followed by a perception of ‘Greatest’. If the absolutist position is correct, then each of these perceptions will be placed at different points of a temporal container, or conveyor belt, and labelled using the socially agreed conventions of identifying objective time. However, as mentioned above, there is still something missing, something which presents the sentence to us as a sentence, and not merely an awareness of four successive perceptions. Indeed, in the absence of some kind of ‘glue’ to hold our perceptions together, it is unlikely that we could function on any level as social, self-aware, reflective, intelligent cognizant beings. Robert Sokolowski (1999) uses the analogy of film frames to elucidate this point:

We tend to say that temporal experience is very much like a film being run with one exposure (one presence) quickly following another ... But our experience of temporal duration could not be like this; if it were, we would never get the sense of a duration, of a continual temporal process, because all we would have at any given moment would be the frame in the film that is given at that moment ... we would be jumping from one experience to the next, and we would never have a sense that we are seeing something that goes beyond the frame that is being given at that instant ... The sense of continuous flow would never arise for us ... what

we experience would be nothing but momentary flashes, momentary presences, momentary exposures. (*ibid.* p.133-134)

Sokolowski goes on to say that even if we try to say that we have memories of past ‘flashes’ or ‘frames’, we remember some of the frames that have preceded, but this fails to provide a satisfactory explanation of how we experience things and events over time, since recalling a preceding frame would merely give us another present frame and so no sense of the past could ever arise.

Additionally, if time does exist independently of perceiving observers and is a constantly moving metaphysical container heading towards the future as it gets ‘filled’ with events and occurrences as it passes, we must still find an explanation for why it appears to us to speed up and slow down depending on, it would seem, how much pleasure or pain we experience. Returning to our dejected and forlorn boxer, each second of a round can be viewed as a point on the temporal line, filled with various events such as punching, being punched, slipping, moving around the ring, bleeding, hearing the referee’s instructions and so on. Each round contains one-hundred-and-eighty seconds, but as the rounds go on and as he is forced to endure more punishment, for the boxer on the end of the beating the rounds appear to last longer; even though he always knows each round lasts three minutes, the more difficult rounds simply ‘feel’ longer.

Essentially then, even if the absolutist is correct to assert that time exists independently of perceivers, two questions still remain for the boxer: a) how does he become aware of the connection between his perception of events in the first second of the round to his perceptions of events in the second, third, fourth, fifth and eventually one-hundred-and-eightieth second of the round?; and b) why, when he is perfectly aware of the length of each round do some rounds feel longer than others, particularly those in which he is being bested? For a better understanding of these questions, we now turn to a phenomenological account of time consciousness.

Edmund Husserl, in *On the Phenomenology of the Consciousness of Internal Time*, makes the claim that if we were merely conscious of individual perceptions, separate and distinct from one another, then we could never gain an awareness of an object enduring over a period of time. Further, we could never apprehend that all of our experiences belonged to one and the same enduring consciousness. In a similar fashion to the sentence described in the preceding

section, Husserl uses the example of a melody to highlight the issue. If, Husserl argues, we were only ever conscious of separate, distinct perceptions then, instead of hearing a melody, we would have ‘a chord of simultaneous tones, or rather a disharmonious tangle of sound (1893/1992, p.11).’ Also, Husserl, contrary to the Newtonian view of time, conceives of past, present and future as modes of presentation or modes of appearing: no longer (past), now (present) and not yet (future). Husserl goes on to distinguish between three levels of time: objective time, subjective personal or immanent time and consciousness of internal time.

Objective time (Level 3) is the time by which we make measurements using such things as clocks, calendars, watches or sundials. Subjective or Immanent time (Level 2) is our internal time, the way in which we, as individuals, experience time. For example, Act One of Swan Lake began at 7.30pm and ended at approximately 8.30pm, so everybody in the theatre agreed that one hour of objective time had passed. However, for me, in my state of abject boredom, it seemed as though a much longer period of time had passed, whereas for others in the theatre, time ‘flew’. For Husserl, in a similar fashion to Aristotle, we can only have objective time due to the fact we are conscious of a succession of events or occurrences. Effectively, objective time is dependent on immanent or personal time; Sokolowski puts it thus:

Worldly things can be measured by clocks and calendars, and can be experienced as enduring, only because we experience a succession of mental activities in our subjective life ... the noematic structure of world time thus depends on the noetic structure of internal time. (*ibid.* p.132)

For Husserl however, two levels of time are insufficient in any explanation of how we are able to perceive temporal objects as enduring over time and so he introduces a third level: consciousness of internal time (level 1). In order to explain how we are able to perceive a temporal object such as a sentence across the succession of its parts, Husserl examines the lived experience of consciousness. Sokolowski explains that, for Husserl, consciousness must have a “width”, it cannot merely consist of the awareness or perception of ‘nows’, but must also involve both retentions of the past and protentions towards the future. These, along with our ‘primal impressions’, our consciousness of ‘nows’, Husserl calls the Living Present, which he takes to be fundamental to our being able to perceive temporal objects across the succession of its parts.

There is one unique flow of consciousness in which both the unity of the tone in immanent time and the unity of the flow of consciousness it's become constituted at once. (Husserl, 1893/1992, p§§ 39)

To return to the example of the sentence, it is this living present which allows us to perceive it as a sentence, despite it being composed of separate, distinct and individual words. It is this living present to which I will now turn my attention.

William James (1892/1999) argues that within each personal consciousness, '*states are always changing*' and that '*each personal consciousness is sensibly continuous*' (p.4). He goes on to say that our state of mind is never precisely the same at any given point and, although these states are constantly changing, consciousness feels continuous, with any changes from one moment to the next never being '*absolutely abrupt*' (p.9). He, like Aristotle, places change among the most important features of consciousness:

A permanently existing '*idea*' which makes its appearance before the footlights of consciousness at periodical intervals is as mythological an entity as the Jack of Spades.

However, this change is never disjointed, or fragmented; it seems to flow continuously from one moment to the next in the absence of any sudden or abrupt changes, hence the term "Stream" of Consciousness. Husserl makes a similar point when he talks about the notes of a melody and how we are able to perceive it as a melody rather than simply perceiving one, distinct and separate note after the other, which would not give us the perception of anything meaningful. In order to extend consciousness beyond primal impressions, or 'the now', he introduces the ideas of retention and protention.

According to Augustine, we are able to attend to temporal objects by way of bringing 'things no longer' back into perception by way of memory, effectively making present perceptions that have already passed. However, as discussed earlier, this leaves us with no explanation of how we are able to distinguish these 'regenerated' perceptions from those which we are currently having and Augustine seems either reluctant or unable to provide such an explanation. Husserl however, distinguishes retention from memory (recollection) in a number of ways, including the fact that memory refers to things more temporally distant and that it involves some kind of deliberate mental act, while retention is more immediate, more passive and involves a 'conscious awareness of *the elapsed phase of conscious experience*' (Kelly, 2005). Retention

is different from immediate perception in that it is a presentation in our consciousness of a perception which has recently passed; and it differs from memory in that it is passive, involuntary and remains present, in some form, in our consciousness. Michael Kelly (2005) uses the example of the sentence ‘*Peter Piper picked a pack of pickled peppers*’:

... this account allows that the words, “Peter Piper,” have passed, metaphysically, but remain on hand in this apprehension of “picked” thanks to consciousness’ retention of its past phase of experience wherein it heard the related words, “Peter Piper.” As a moment of the intentional relationship between the phases of consciousness’ living-present, retention “automatically” experiences its intuitively present conscious life and determinately provides a consciousness of the past of the experience.

In this example, the words ‘Peter’ and ‘Piper’ are not remembered in the conventional sense, but are retained, after they have passed from immediate perception, in the apprehension of the word ‘picked’ and each subsequent word. It is only after a longer period of time¹³, a while after the sentence has been uttered and the perception of these words is in the distant past, that we use the voluntary act of memory to bring them back into our present consciousness. However, Husserl sees the Living Present as having three parts, the final piece of the tripartite jigsaw, a part which Husserl devotes very little time to, is *protention*.

Protention works in a similar way to retention, with respect to the future although, given it is directed towards the future, it can never be as accurate or precise as retention, which contains that which has already passed. However, it does make it possible for us to anticipate that ‘something is coming’:

... protention, the future-directed counterpart of retention, is not the same as full-scale anticipation or projection, in which we imagine ourselves into a new situation. Protention is more basic ... it gives us the first and original sense of something coming ... (Sokolowski, *ibid.* p.137)

In the Peter Piper example above, protention could possibly be said to be at work when I have an expectation that the final word will begin with the letter ‘P’; an expectation which is met

¹³ An indeterminate duration, which Husserl appears not have defined.

when I hear the word ‘Peppers’. If, however, the sentence ends with some other word, for example ‘cabbages’, then my expectation is not met, and I am forced to re-evaluate my experience. In other words, my expectation was founded in the experience of the previous words starting with P, coupled with a knowledge of the prevalence of alliteration in my culture’s use of language, but my expectation has been confuted.

Effectively then, with Husserl’s notion of an ‘inner time consciousness’, moments we would term ‘recently past’, although they are objectively in the past, are retained in our subjective experience; they are ‘retentive’, meaning that they resonate in our subjective present. Further, Husserl’s idea of our experience being ‘protentive’ - where there is an expectation, based on what’s gone before, of what will happen in the immediate future means that there are no isolated and individual moments; each ‘now’ moment contains traces of past moments as well as a pre-noetic expectation of what’s to come. In fact, retention is slightly more complex than this; it’s not just that in our present experience we retain the past experience of previous notes, it’s that we retain the past experiences (which themselves contain past experiences, ad infinitum). Our consciousness of internal time is necessary for subjective time since *‘consciousness of internal time provides a consciousness of succession that makes possible the apprehension and unification of successive mental states’* (Kelly, 2005). Subjective time, as we have already seen, is necessary for objective time since objective time is only possible due to our consciousness of a succession of mental events. Therefore, our ability to experience both subjective and objective time is dependent on this consciousness of internal time.

(iv) Heidegger

For Heidegger, temporality is an activity – ‘a person generated process of temporalizing, of putting events in a temporal order’ (Foulds, 2012). According to Heidegger, being is time and that to be simply means to exist temporally:

Temporalizing does not signify that ecstases come in a ‘succession’. The future is not later than having been, and having-been is not earlier than the Present. Temporality temporalizes itself as a future which makes present in a process of having been. (*Being and Time* 68: 401)

To iterate, for Heidegger temporality and living are synonyms and it is we who objectify past, present and future as standing out, the “ecstases”. For Heidegger, our being in the world involves three significant aspects: existentiality, facticity and fallenness.

Existentiality is based on the fact that we are continually living, projecting ourselves, towards the future by way of selecting and actualising certain possibilities rather than others, and we are doing so in the absence of any predetermination or external force outside of us. Facticity, essentially, is all the facts about us and our circumstances which have come about as a result of past experiences, events and choices; facts which can range from the merely incidental such as height, date of birth and eye colour to the grandest of our achievements or most regrettable of errors. Fallenness describes what happens when we become entangled in normal, everyday activities, concerning ourselves with the mundane, day-to-day events of normal life, defined by the time, place and era of the culture into which we were born. It’s also an absorption into Being-with-one-another. Foulds (2012) describes Existence as being-towards the future, Facticity as being-towards the past and Fallenness as being-towards the present, although perhaps ‘being-towards’ the present isn’t an entirely appropriate definition of fallenness. Fallenness for Heidegger includes ambiguity, where a person makes no attempt to actualise possibilities or potentialities and so lacks the direction and purpose required for an authentic life and so, strictly speaking, isn’t ‘towards’ anything.

Heidegger asserts that we are thrown into the world at a time not of our choosing, a world filled with things which have meaning for us, a world which offers innumerable possibilities to us and, in order to exist as a person, we must be continually evaluating, selecting and actualising them. Foulds explains:

In the same way you cannot exist as a driver without driving something, or as a gardener without growing something, so you cannot exist as a person without engaging with a world. This is because existing is, like driving or gardening, an activity that can be undertaken only over time and only by variously exploiting or neglecting the possibilities which only a world can provide ... Being-in-the-world as a person discloses that the world in which you exist is not just a bunch of things in space, but a working environment for existing in one way or another. (*ibid.* Loc. 205)

This is perhaps a different take on what it means to be a person from what is commonly thought, since people often attempt to define themselves in terms of categories into which they can be placed or groups to which they can belong. Examples of this might be age, sex, gender, occupation or religion. This can be described as an 'ontic' way of defining oneself; this practice is for a person to attempt to define themselves as a particular 'kind' of person, whereas Heidegger is seeking ontological grounds, he is interested in what makes a person a person. For Heidegger existence involves the choosing of certain possibilities at the expense of not choosing others. Crucially however, having selected one possibility over another, this act of choosing now becomes something which 'has been' and so now becomes part of our facticity, which is in turn used to inform our next actualising of a possibility.

A further point to note with respect to Heidegger's account of temporality is that past, present and future are all brought together in a unity as we go about living our lives, choosing some possibilities over others. The notions of past, present and future are created by humans in order to make sense of experience and events in our lives, yet according to Heidegger they characterise our experience simultaneously as part of a temporal unity. Existing as a person means that I make use of my being-towards-the-past (facticity), my current circumstances and situation (fallenness) and what circumstances I want to bring about (existence) when deciding on how to project myself into the future. Principally, we must always be projecting ourselves towards the future, using how we've been (what we've experienced and done), how we are (what we're experiencing and doing) and how we want to be (what we anticipate experiencing and doing) as a guide to choosing which possibilities to actualise. Husserl distinguishes between objective time, subjective time, and internal time consciousness. Heidegger does not object to the retentive-impulsive-protentive structure of internal time consciousness, but rather extends it into the existential, that is, the living, cultural, human being. So, we can say of Husserl that he is speaking of the transcendental structure of temporal experience, and Heidegger is speaking of the human being as social entity or person. For Heidegger, we are continually, by way of anticipation, projecting ourselves towards the future and, although we are aware of how things are in the world, we also have an awareness of how it potentially could be and so we must, in a sense, plan ahead so as to exist as fully and authentically as possible. Trevor Coffrin (2013) explains:

... we create our essence through our free choices. Thus, we ought not to be defined by what we might currently be, but rather, by what we may potentially become ...

Heidegger reinforces this notion by saying that not only do we create ourselves through our actions, but it is a necessary part of our being that we define ourselves through possibility ...

When we live authentically, we turn away from fallenness, away from immersing ourselves in the trivialities of everyday life and instead turn our attention to the fact that we exist as potentialities-for-being with the ability to choose from an incalculable number of possibilities in order to ‘project’ ourselves towards the future. Michael Wheeler (2011) explains that:

... in authenticity, the constraints and possibilities determined by Dasein's cultural-historical past are grasped by Dasein in the present so that it may project itself into the future in a fully authentic manner ... (*ibid.* SEP)

Inauthenticity, on the other hand, is when we allow ourselves to become fallen, when we concern ourselves with the present and the commonplace activities of everyday life, rather than being-towards-the-future where we realise and actualise the possibilities available to us without being drawn into the mundane; effectively we live inauthentically when we prioritise the present or live towards the past. Foulds (*op. cit.*) explains that authentic temporalising ‘anticipates the future right now’, whereas inauthentic temporalising ‘merely awaits it’.

Essentially then, Heidegger’s idea of time differs from Husserl in two main areas. Firstly, he places the future at the front and centre of his view on temporality, making our projections towards the future – whilst retaining our lived past and present – the most significant aspect of time. Husserl’s primary concern, on the other hand, is with demonstrating that we retain elements of the past as we experience the present and anticipate the future, and he does most work on the retentional, but the protentional is there with its anticipatory projection. Heidegger takes the ‘authentic’ life as one which takes an awareness of the past and present and uses this to determine how we will project ourselves towards the future. Husserl, on the other hand, places greater emphasis on retention within the living present, with very little reference to the anticipation of the future, or protention as Husserl labelled it. Secondly, Husserl attempts to work his way towards an absolute (pure) consciousness via his phenomenological reduction, where he puts out of play, or ‘brackets’, the external world. Husserl, as a phenomenologist, is concerned with how things are experienced in consciousness, the perceptual content or *noema*, irrespective of whether or not this content relates to real objects in the physical world. Such

content may even come from illusions or hallucinations since these also give rise to perceptual content despite the lack of a corresponding object in the physical world.

Essentially then, Husserl is only concerned with the perceptual content which remains unchanged irrespective of the veridicality of the perceived experience and so requires the suspension, or ‘bracketing’, of our belief in objects of perception. For Husserl, it’s not that our belief is converted into disbelief or even doubt, it’s that we choose not to use the belief in our phenomenological description, or subsequent analysis. Heidegger’s starting point however is the very opposite, a starting point which involves us being in and interacting with a world into which we are thrown. We are in the world as part of it; it is not, as it were, external to us.

(v) Husserl, Heidegger & the Hapless Boxer’s Temporality

So where does all of this leave our bruised and beaten fighter, Aqeel, our disgruntled and out-of-condition amateur, or even a sullen and aggrieved member of the Swan Lake audience? Can a Husserlian or Heideggerian notion of time tell us anything about why time seems to slow for the boxer as the rounds go by and he becomes battered, beaten and exhausted?

For a starting point, it seems fair to say that objective or worldly time ticks by unaffected by any one individual’s discomfort, pain or enervation. When a fighter enters the ring, particularly a high-profile fighter, there is usually a considerable live audience, TV production teams, TV viewers, reporters, commentators, judges, corner men, a referee and, most importantly, an official timekeeper whose job it is to ensure that each round lasts the regulation three minutes. All of these people, for their own reasons, have a vested interest in the timing of the fight and rarely is there any disagreement over the length of time that a round has lasted.¹⁴

Of course, in the same way my phenomenological experience of ‘green’ may be the equivalent to your experience of ‘red’, it can be argued that my felt experience of one minute may be the equivalent of your experience of ninety seconds and there is no way of verifying this unless I can somehow ‘get inside your head’ to experience what you do. So even if we sit side-by-side and observe the hand of a clock go round before coming to an agreement that sixty seconds

¹⁴ There are however, on occasion, arguments over the length of a referee’s count when a fighter gets knocked down. See http://en.wikipedia.org/wiki/Long_Count

have passed¹⁵, there is no way of determining if your felt experience of the temporal properties of that sixty seconds was the same as mine.

Our agreement over objective time, the duration of each interval which constitutes a minute and each interval which constitutes an hour and so on, serves us exceptionally well and has facilitated our ability to arrange, plan and organise innumerable events in our lives with incredible accuracy, as well as come to agreements on appropriate durations for various activities. So the feeling of time somehow ‘slowing down’ is a subjective phenomenon which is impacted, at least in part, by our physiological and psychological states at that particular moment in time.

For William James, the stream of consciousness would flow more slowly, for Heidegger our projection towards the future would become increasingly difficult and, for Husserl, our inner consciousness of time would be conscious of our subjective or personal time operating at a slower rate, but how can this ‘slower rate’ be explained phenomenologically?

One possibility, starting from the Aristotelian view that observable change is a prerequisite for the formation of a notion of the passing of time, could be that the less change we observe the slower time passes. In Husserlian terms, if the content of each of our retentions varies very little from our primal impression and, if this continues across several retentions, which help inform our expectations of what’s to come, then we would anticipate little or no change in our protention towards the future. Put otherwise, we would just expect ‘more of the same’, with each phenomenological experience bearing a strong resemblance to the next. With regard to the discomfort experienced by the tiring boxer, it may simply be the case that his exhaustion impacts on his ability to observe changes in his world. Certainly, his own physical body will take longer to move, the speed at which he throws punches will decrease and his reflexes will slow down. Further, as he tires, he will become more and more focused on the punishment he is receiving and will concentrate on simply ‘getting to the end’, actively desiring the end of the round, and so will become less and less concentrated on other changes in his world which could make his subjective time quicken. At the point of exhaustion, focus turns more towards hearing

¹⁵ This is assuming that our experiences aren’t affected by my love, or your loathing, of watching clocks, or my boredom or your joy on the day of our experiment.

the bell, which seems to take longer as he becomes more tired, rather than on any actions he might take to win the fight.¹⁶

Conversely, the boxer who is administering the punishment as he lands more and more punches on his dejected opponent may experience a range of alterations in his world such as his opponent's breathing becoming heavier, his reluctance to come forward, his punches losing snap and power, his head dropping, cuts opening up, his volume of punches decreasing and his punch resistance waning. The 'mind-reading' aspect of this is discussed in the next chapter of this work, but all of these things, among several others, mark significant changes to his experienced world, arguably these changes are magnified in a boxing ring, which is a fairly restricted environment. In Husserlian (and Aristotelian) terms, these changes could cause a high level of variety in the content of his retentions and his subjective experience would be of time passing much more quickly than for his bested opponent.

However, regular observable changes to our environment, whether it be mental events or to the outside world, don't seem sufficient for the explanation for the slowing of subjective time. Albert Einstein has been quoted as saying: *'When a man sits with a pretty girl for an hour, it seems like a minute. But let him sit on a hot stove for a minute -- then it's longer than any hour'*. Staring at the same face for an hour, regardless of how 'pretty' that face may be, involves very little change in phenomenological experience, yet Einstein still felt that time passed quickly. It seems that there must be more to the slowing and quickening of subjective time than a variation in the content of our experience.

When I was a child, I used to visit my grandparents every Saturday and, weather permitting, would often find my granddad in the back garden, sitting in a favourite deckchair, staring out across the hills and fields that faced the back of his house. Being a child, I would ask the same question – what are you doing granddad? – every Saturday and each time I would be given the same response: 'Just enjoying the scenery son, I could look at that view for hours'. Again, being a child, I got bored after five minutes and left him to it. Hours later my grandma would call him in for dinner and would receive the same response every week: 'is that the time already?!'

¹⁶ An example of this can be found at: http://www.dailymotion.com/video/x2avfmt_nathan-cleverly-vs-tony-bellew-2-22-11-2014_fun (36 minutes onwards).

The important point to note here however is that, although there was little or no observable change to my granddad's environment, save for a disoriented cow wandering by every so often, rather than experiencing any kind of discomfort, he actually took pleasure in the quiet, unchanging scenery and time for him passed very quickly. This is not an unusual phenomenon. People often find enjoyment in things such as this, whether it be hills, rivers or works of art, things which some people can happily and contentedly look at for hours despite little or no observable change occurring to their environment. Indeed, we are capable of watching the same movies, listening to the same songs, visiting the same places and reading the same books over and over again not only in the absence of discomfort, but often with considerable pleasure. Therefore, it seems that the level of interest we have in the things we perceive, how much they stimulate positive or negative emotions, also plays a significant part in our subjective temporal awareness.

Returning to the Newtonian 'temporal container', in order to avoid the unpleasant feeling of time 'dragging in', it is not enough that we merely fill the container, but we must fill it with things – events, experiences and perceptions – which hold an interest for us, things which stimulate us or, at the very least, things which do not bring us pain or discomfort, either physiologically or psychologically. In terms of Husserl's living present, it is not necessarily important that our retentions are retentions of high levels of observable change, although some form of change is necessary for the awareness of time passing, but of pain-free experiences which hold a certain level of interest for us.¹⁷ For the exhausted fighter, receiving repeated blows to the head and body 'pain-free' is a term which simply does not apply, and he is also hindered by the fact that his consciousness is filled with retentions of impressions which are similar enough to make the stream of consciousness flow painfully slowly. At the very least, his pain or exhaustion affects his ability to observe changes in his environment or, in Heideggerian terms to seize control of the present so that he can project himself into an 'authentic future', and three minutes suddenly becomes a very long time.

For Heidegger - who takes an 'authentic' life as one in which we take hold of the present and use it to make decisions as we project ourselves into the future - rather than barely-changing retentions, tiredness and exhaustion would somehow hinder this projection. For Heidegger, we are never stuck in the present, but must take hold of the present and plan ahead, in a sense,

¹⁷ These experiences do not, necessarily, have to be pleasant. Time can pass very quickly if, for example, we are in a hurry and are trying to find our keys.

so that we are able to live as authentically as possible. However, for a boxer suffering from tiredness and exhaustion, especially in the face of an opponent who experiences neither of these things, there are limited options for planning ahead, he has become more of an object than a subject capable of decision making, of actualising possibilities, and finds projection towards the future increasingly difficult, or slow. Effectively, from a Heideggerian perspective, the possibilities available to the boxer on the receiving end of the punishment are far more limited than they are for the fighter administering said punishment. The losing fighter's subjective experience is, existentially, of limited possibilities, of an overwhelming facticity and fallenness which make it far more difficult for him to think beyond the present in order to project himself towards the future.

Both Husserl and Heidegger's theories on temporality can therefore provide explanations as to why time has the appearance of 'speeding up' or 'slowing down', depending on the circumstances on which we find ourselves. For Husserl, a lack of variation in the impressions we retain result in the feeling of 'sameness', of the primal impression being engulfed in the retained past, which grips hold of us, pulling us back and prohibiting us from moving forward. In terms of Heidegger's temporality, the dearth of possibilities inhibits us in our attempt to 'choose our way out' of the now, consigning us to an overwhelming facticity and a fallen, forcibly inauthentic existence.

3. Emotion

Appear weak when you are strong, and strong when you are weak.

(Sun Tzu, The Art of War)

(i) Emotions & Sporting Performance

The range of emotions experienced by a sports competitor can be vast and can include elation, dejection, excitement, frustration, anger, fear and even, on occasion, embarrassment. Clearly, positive emotions can bring about positive results, but negative emotions can have the opposite effect. Taylor (2010) explains:

Negative emotions can hurt performance both physically and mentally. They first cause you to lose your prime intensity. With frustration and anger, your intensity

goes up and leads to muscle tension, breathing difficulties, and a loss of coordination ... you no longer have the physical capabilities to perform well ... negative emotions draw your attention onto all of the negative aspects of your performance ... Emotions come from past experiences in similar athletic situations in the form of beliefs and attitudes you hold about performing and competing. The emotions associated with these beliefs and attitudes are commonly known as the "baggage" you carry from your past. Your perceptions from the past impact your present even though the emotions may not be appropriate or useful in the present situation. (*ibid.*)

Very often in boxing gyms, and probably in other sporting facilities too, the shout “keep your shape” can often be heard, which is usually used to encourage a tired boxer to refrain from stooping from fatigue, lowering the arms through tiredness, or even from swinging wildly through anger or frustration. Losing the shape is a definite indicator of fatigue, or of frustration and anger when a fighter finds that he is not only unable to land his own shots, but that he is at the same time eating several of the shots thrown by his opponent. Conversely, the ability to hold the shape is a sign – even a false one – that the fighter is still relatively fresh and continues to pose a threat. It is therefore imperative that negative emotions are kept in check, but it is equally vital for a boxer to attempt to create an environment where his opponent experiences as many negative emotions as possible. This can be achieved as Steve Collins did with Chris Eubank through psychological trickery, by outclassing an opponent by way of a higher level skill set or simply through brute force. In any case, if a boxer or any athlete can bring his opponent to such a point of dejection where he feels he can no longer win, then that athlete is well on his or her way to victory.

Negative emotions then, can lead the athlete’s focus away from the intended goal, causing her attention to turn towards things other than that which she wishes to achieve and to cause her movements to become like the novice’s described above. She will focus on what she can’t do, or hasn’t done, rather than on what needs to be done, her horizon of possibilities will diminish and the movement, which was once fluent and effortless, will become forced. Alternatively, with strong emotions such as anger and rage, the athlete’s movements can become wild and erratic, again resulting in a loss of shape and therefore deterioration in performance.

(ii) Tyson: The Baddest Man on the Planet

In boxing, like in any other sport it must be assumed, emotional response and the control of these responses plays a significant part in determining the level of performance. Paramount to good performance is the finding of a balance between what might appear to be conflicting emotions or tapering down those emotions which might appear at first glance to be seen as positive or beneficial, but which in fact can be harmful, for example, ebullience. A perfect example of the first of these, finding a balance, is when we hear of fighters talking about nerves being a good thing in that they prevent them from rushing in and making silly errors, but on the other hand not expending too much nervous energy which can have a serious impact on energy levels or, worse still, succumbing completely to paralysing fear. In terms of the second type of emotional control, confidence and the belief in one's own abilities is essential to performing at a high level but, if allowed to run unchecked, can lead to complacency and the fatal underestimation of an adversary.

There are also emotions which a boxer may feel that he never wants to experience, because these can restrict his ability to move freely and to perform effectively, but even this might not be as straightforward as it first seems. Emotions such as fear, intimidation and anxiety can cause a fighter to go into his shell and to become nothing more than a target for his opponent; something all too familiar to the opponents of Mike Tyson, at least before his incarceration cut short what could have become a legendary career. In a 2010 interview Tyson explains:

Most guys were pretty much intimidated, they lost the fight before they even got hit ... I knew how to beat these guys psychologically ...

But Tyson, in the same interview, explains the conflicting emotions he experienced immediately before a fight:

... I have supreme confidence, I'm scared to death, I'm totally afraid, I'm afraid of everything. I'm afraid of losing, I'm afraid of being humiliated, but I'm totally confident. The closer to the ring I get, the more confident I get. All during my training I've been afraid of this man, I thought this man might be capable of beating me, I've dreamed of him beating me ... once I'm in the ring I'm a god, no one can beat me. I walk around the ring, but I never take my eyes off my opponent. I keep my eyes on my him, I keep my eyes on him, I keep my eyes on him, I keep my eyes on him and then BOOM!, one of his eyes may move and then I know I have

him ... he made that mistake when he looked down for that one tenth of a second ... I know I've already broke his spirit. During the fight I'm supremely confident.¹⁸

There are at least four interesting things going on here. The first is that Tyson derives confidence from a) his own abilities, and b) from the fact that he provokes a feeling of fear and intimidation in his opponent. The second is from the perspective of his opponents, whose fear Tyson exacerbates and then uses against them to devastating effect. The third thing is that Tyson is also driven by his own fear; his fear of defeat, his fear of being embarrassed and the fear that that both this defeat and embarrassment will take place in a very public forum – “for the thousands in attendance...and the millions watching around the world”, as exquisitely delivered by the world-renowned ring announcer, Michael Buffer. Tyson’s fear, unlike his opponents’ paralyzing fear, becomes a powerful driving force, compels him to act without hesitation or trepidation; his fear of failure, his fear of his opponent and his fear of being publicly humiliated come together and manifest themselves in what at one time was the most complete and devastating fighting machine of a generation. Fourthly, Tyson explains that during the fight he experiences a supreme confidence, which suggests that any fear he has had left him by the time the first bell rings; a phenomenon described by several boxers both amateur and professional alike.

Boxers are no different to everybody else in that they exhibit fear and distress through their body language and facial expressions. Furthermore, there can be few more effective ways of completely rupturing an opponent’s confidence than by instilling in him a mortal fear; and there are few things which infuse a fighter with greater confidence than the observation of this physical manifestation of trepidation in an opponent. Having ripped away his opponent’s confidence, he can now be confident that he will lose his ability to focus on the task at hand; and this means that the opponent’s movements will become restricted and almost certainly defensive, and he will become nothing more than an object over which the confident fighter can exert his will. So, ability to disguise negative emotions is every bit as important as exuding positive ones; that being able to display a veneer of confidence is crucial in combat sports because, although it may not on every occasion intimidate an opponent, it can at the very least prevent him from gaining an initial and devastating advantage. Of course, even intimidation

¹⁸ *Viz.* <https://www.youtube.com/watch?v=S9MtJ164XJI>

can have its limitations and this has rarely been illustrated so clearly than in one of the most iconic fights in history, a fight which took place in the early 1960s.

Sonny Liston, one of the most fearsome fighters of the 1950s and early 1960s, took intimidation to new levels and was as terrifying outside the ring as he was intimidating inside. During his time in prison, where he spent five years on charges of larceny and first-degree robbery, Liston was introduced to boxing and upon his release went on to become the Heavyweight Champion of the World in September of 1962. With incredible punching power, intimidating physical presence and a stare which petrified opponents, Liston was seen as invincible among boxing fans and writers of the time. But then came along a young, zealous, brash and supremely confident figure known as Cassius Clay, who simply refused to be intimidated and went on to hand Liston consecutive defeats, the first of which resulted in an outclassed Liston refusing to answer the bell for the seventh round. The second fight was a more spurious affair, with Liston being knocked out in the first round by the now infamous “phantom punch”. Crucially however, when Liston lost one of his most potent weapons, his ability to intimidate, he effectively lost the fight whereas Clay, in his refusal to succumb to intimidation, was able to perform at scintillating levels of speed, movement and accuracy.

(iii) The necessity of cognition in emotions

One of the more straightforward theories of emotion is that which makes the claim that emotions are simply feelings associated with physiological changes. This idea was first postulated by William James and Carl Lange in the 1880s, and proposes that we theoretically remove the experience of the physiological changes associated with the emotion and to consider what we might be left with if we do so. For James, we are left with very little. For example, if we remove the experience of the increased heartrate, the tightening of the chest and the various other physiological alterations from the feeling of anger, then, for James, there is no anger. James is led to conclude from this that we are able to separate our emotions from our sensations in virtue of how we experience them and that emotions are feelings caused by our perception of physiological alterations. In our perception of danger, for example, we undergo a collection of bodily responses and our awareness of these responses is what equates to fear. An often-cited consequence of this theory is that ‘we feel sorry because we cry, angry because we strike, afraid because we tremble ...’ (James 1884, p.190). For those unfortunate enough to become one of Mike Tyson’s many knockout victims, James would say that they entered the ring and perceived an angry-looking Mike Tyson; this observation led to

physiological alterations – trembling, quickened heart rate and sweating, for example - and an awareness of these alterations constituted their fear. On the other hand, Tyson's own observation of a scared and psychologically crushed opponent would have led to physiological alterations in him which, as soon as he became aware of them, might have caused him to feel much more powerful, much more excited and much more aggressive.

However, the problem with this idea of perception of physiological alterations is that many of the physiological changes would be similar or indeed identical. If each emotion we experience is identifiable by the perception of a unique set of bodily changes, then no two emotions would be accompanied by exactly the same set of physiological transformations. However, it has been demonstrated that 'the visceral reactions characteristic of distinct emotions such as fear and anger are identical and so these reactions cannot be what allow us to tell emotions apart' (de Souza, 2014). In terms of Tyson and his opponent, they both may well undergo physiological alterations including trembling, intense sweating, dry throats and quickened heart rates, but the emotions they are experiencing are nothing alike: one of them is filled with fear and anxiety, while the other is bursting with relish and eagerness at what is to come. Stanley Schacter and Jerome Singer (1962) conducted an experiment where subjects were injected with epinephrine (adrenaline) which caused visceral alterations in the participants including fast breathing, a quickened heartbeat, sweating, restlessness and shaking. Some of the participants were put in a room with an actor behaving angrily and some put in room with an actor playing the part of someone experiencing euphoria. At the end of the experiment each participant tended to describe their mood as one which reflected that being conveyed by the actor they were watching. Essentially, although each of the participants experienced the same physiological alterations, they describe different emotions, depending on which room they happened to be in. The conclusion to be drawn from this is that physiological states alone do not provide a satisfactory explanation of how we are able to distinguish between one emotion and another, a point also noted by Walter Cannon and Philip Bard (1927).

Another problem with identifying emotions simply as bodily feelings is that no account is taken of context or the fact that they can be rationalised and justified or, as de Souza puts it: 'Emotions however, are capable of being not only explained, but also justified – they are closely related to the reasons that give rise to them' (de Souza, 2014). If, for example, someone makes me angry then I can cite reasons such as their attitude, behaviour or tone of voice; if Mike Tyson scares me then I can point to his physical attributes, his intimidating presence, his violent

intentions or his incredible effectiveness as a fighter. By claiming that emotions are identifiable with feelings, such justifications or explanations are not available to me. An awareness of physiological changes then, is insufficient for the identification of emotions; it's not just that I'm shaking, sweating and suffering a rapid heartbeat, or even the fact that Mike Tyson is standing in front of me; it's also because I believe that he has bad intentions towards me and is very likely to be successful in his endeavours to execute these intentions. Therefore, it would appear that some kind of evaluation or appraisal of my environment is also required before an experience can be described as in any way emotional.

Richard Lazarus (1991) conducted research which showed that our experiences of emotions are very much dependent on how we appraise or evaluate our situations and surroundings. This appraisal has a two-step process: a primary appraisal and a secondary appraisal. The primary appraisal is concerned with how a subject's well-being might be affected within a particular situation, providing a direct correlation between how serious a situation we find ourselves in and the intensity of the emotion(s) we experience. The secondary appraisal is more concerned with the methods we can employ to help us in our situation, or in determining where the accountability should be placed for the creation of the situation. Let's take the example of someone losing a game of squash, assessing the situation, and then employing a method of secondary appraisal as a way to cope with the loss and the anger that accompanies it by blaming the racquet and smashing it to pieces.

The significant difference between this theory and that held by William James, is that the appraisal theory postulated by Lazarus allows for mental processes to play their part in determining emotional experiences, as well as leaving room for the possibility of the same physiological occurrences accompanying different emotions. The most important part of this theory is the subject's interpretation of the event or situation in which she finds herself. A hypothetical example might be two best friends who take a flight in a two-seater plane. One of the friends has that very day passed her pilot's licence and the other is only going along because she feels a duty to her friend to be her first ever passenger. As the plane climbs into the air the first friend, the pilot, will feel a sense of exhilaration, excitement and happiness as she enjoys her new-found freedom and the breath-taking views from the cockpit. The second woman on the other hand, may have a profound fear of flying and will have thoughts of all of the terrible things that might happen to her, especially with such an inexperienced pilot at the controls, and will experience worry, anxiety and fear during the course of the flight. In short, the first woman

focuses on the beauty of scenery and her mastery of the controls while the second focuses on the danger she perceives. Both women may undergo the same or similar physiological alterations – increased heart rate and quickened breathing for example - but by evaluating how the situation affects them individually, they will experience very different emotional experiences.

With respect to Mike Tyson and his opponents then, we may have found a starting point in terms of describing their differing emotional responses when they enter the ring. The crowd, the lights the atmosphere, the sense of occasion, the walk to the ring, the coming face-to-face with an opponent who they know has trained to hurt them and the knowledge that they are being watched by thousands – sometimes millions – of people on TV could all serve to provoke the same visceral changes in both men: sweating, shaking, quickened heartbeat, dry throats and tingling of the skin. But they don't experience the same emotions when they come to the centre of the ring because, in their evaluations or appraisals of how they will be affected by the situation in which they find themselves, they come to very different conclusions. In one corner is a man who feels he is there to launch ferocious and merciless attacks upon an overmatched opponent until the referee – or lack of consciousness – brings proceedings to a compassionate conclusion; in the other corner, more often than not, is his prey. The opponent, like Tyson, will have beads of sweat running down his trembling body; his heart, like Tyson's, will be beating fast and his stomach will be filled with butterflies just as Tyson's will. The difference is in how the opponent appraises the situation and how he anticipates he might be affected. Further, his secondary appraisal with regards to the tools he has at his disposal will exacerbate his fear as he comes to the realisation that these tools are probably inadequate.

Another way to look at this might be from the point of view of Tyson possessing greater 'cultural capital', described by Bourdieu (1977/1995). Bourdieu (2000), in *Pascalian Mediations* talks of a 'body knowledge' which allows us to act in the absence of conscious thought:

The world is comprehensible, immediately endowed with meaning, because the body, thanks to its senses and its brain, has the capacity to be present to what is outside itself, in the world, and to be impressed and durably modified by it, has been protractedly ... exposed to its regularities, it is inclined and able to anticipate them practically in behaviours ... These practical principles of organization of the

given are constructed from the experience of frequently encountered situations and can be revised in the event of repeated failure. (pp. 135-136)

And later:

We learn bodily. The social order inscribes itself in bodies through this permanent confrontation, which may be more or less dramatic but is always largely marked by affectivity and, more precisely, by affective transactions with the environment. (*ibid.* p.141)

For Bourdieu, we develop what he calls *habitus*, which refers to the various skills and dispositions we acquire, unconsciously, as we go about our daily lives within the social environment(s) in which we operate. Under the correct circumstances, habitus provides us with the necessary tools to function effectively in our environment. In the 1983 movie *Trading Places*, two wealthy brothers, following an argument about whether it is a person's environment or their heredity which is most significant in determining how well that person does in life, bring about a scenario in which one of their successful employees, Louis Winthorpe III (Dan Aykroyd) switches lives with a notorious ghetto hustler Billy Ray Valentine (Eddie Murphy). Crucially, each of the characters is forced to adapt to an environment in which they have, it would seem, neither the skills nor the knowhow to successfully function. Winthorpe III a wealthy, successful and educated man is stripped of everything and placed in a setting in which everything he knows is of little use to him. He is forced to live without money, platinum credit cards, membership of exclusive clubs, wealthy friends and eventually to take up residence with a prostitute (Jamie Lee Curtis) in a bedsit, situated in a dilapidated area of Philadelphia. He eventually fails to commit suicide while standing alone, soaked and dejected in a thunderstorm. Winthorpe's feeling of helplessness is the consequence of his lacking the necessary tools to function in his new environment, to the point where his inability to cope forces him to rely on the prostitute for food, clothing and shelter. Interestingly though, Billy Ray Valentine finds that the street smarts he has acquired during his ghetto upbringing serve him very well in his new found role as a high-powered businessman. However, in reality, it seems likely that Valentine would have been equally at a loss if he was thrust into this new environment as quickly as he was. Essentially, the education, skills, habits and behaviours which made Winthorpe a huge success in one environment, failed him completely when he was plunged into another.

Habitus refers to the physical embodiment of what Bourdieu terms *Cultural Capital*, which is the various elements of our constitution which we acquire through our interactions with the world and which are often determined by our social class, these include: skills, clothing, taste, local vernacular, habits and personal possessions. In short, cultural capital provides us with the tools to act and behave correctly and competently within certain '*fields*'.

To clarify this claim, Bourdieu goes on to quote Emile Durkheim and the influence of what Durkheim calls 'yesterday's man':

... in each of us, in varying proportions, there is part of yesterday's man; it is yesterday's man who inevitably predominates in us, since the present amounts to little compared with the long past in the course of which we were formed ... Yet we do not sense this man of the past because he is inveterate in us; he makes up the unconscious part of ourselves. Consequently we are led to take no account of him ... (*ibid.* p.79)

The "yesterday's man" is the accumulation of our past experiences, choices, decisions and actions, which we have subconsciously undergone during our daily functioning within the various fields of social interaction, he is the sum of the dispositions that allow us to perform fluently within familiar social environments and, it could be argued, is essential to our very survival. However, it should be noted that this yesterday's man does not always serve to benefit us and can, at times, inhibit and confound us. For example, if a boxer has fought and lost to the same opponent five times his future expectations could go one of two ways: either the defeats make the boxer all the more determined to win the sixth contest, or he develops a fear of his opponent's strength and superiority in which case his movements become restricted and inhibited, something which is examined later in this chapter.

Although it is not entirely clear if Bourdieu uses "unconscious" in the way Tim Bayne (2008) does, where agentive content is relegated to the fringes of consciousness rather than banished from it completely, there is no doubt that our past actions and experiences, irrespective of how strongly they are perceived, play a vital role in our everyday social functioning. We therefore have a system of dispositions, described by Bourdieu as '*a past which survives in the present*' (*ibid.*, p.90). These dispositions serve to structure our future actions, allowing us to engage our bodies in a way similar to that described by Merleau-Ponty, whose idea of body knowledge is

of that which allows us to interact with the world in the absence of a constant reference to our higher cognitive processes, which serve only to reduce the efficiency of action.

The idea of endowing ‘yesterday’s man’ with sufficient cultural capital to allow us to function efficiently in the fields we enter, as well as the idea of this learning happening without conscious awareness, does seem to have genuine merit. For example, we talk to young children in a very different way to how we address adults and we often use varying levels of formality depending on the person we are interacting with and the environment in which we are doing so. Further, we seem to be instinctively aware of remaining an appropriate distance away from people during conversations, as well as a suitable volume for our voice. Other examples might be our ability to correctly use a knife and fork or how to pick up and answer a phone. None of these things appear to have involved conscious learning but rather are a product of bodily learning due to our inculcation in our environment.

As they enter the ring, Tyson brings with him more cultural capital in the guise of strength, power, ability, confidence, aggression along with his generally intimidating and terrifying presence. Therefore, as he appraises how he might be affected by his situation and then appraises the tools he possesses to cope with that situation, the realisation that he has a wealth of cultural capital upon which to draw will almost certainly lead him to experience different emotions to that of his opponent.

On some level then, emotional experiences are dependent on what we bring to the situation in which we find ourselves, whether it be in terms of our talents, abilities or even our natural tendencies and proclivities. The appraisal of how a particular situation might affect us, in addition to an evaluation of how well-equipped we are to cope in that situation appears crucial to the type of emotions we will experience. Further, and perhaps crucially for boxers performing in a highly-pressurised environment, a practical application of a cognitive appraisal has the potential for allowing a fighter to bring emotion under control, or to alter its intensity in a way which becomes advantageous. If we are able, in some way, to alter our analysis or evaluation of a situation in which we find ourselves then, in theory at least, we will be able to control or alter our emotional states. The idea of controlling or regulating emotion will be examined in greater detail in Chapter 4, but for now it is enough to say that the power of positive thinking can serve as evidence to support a theory which includes cognitive appraisal.

(iv) The importance of emotional control

Clearly then, although it may not lead to any guarantee of victory for Tyson's opponents, the ability to control (or disguise) their emotions would certainly have done them no harm. The fact that Tyson was able to observe even the most fleeting glimpse of fear was enough to allow him to add further to his self-confidence and to solidify his belief that he would win. So even if some kind of emotional control failed to contribute much to the opponent's armoury, it would, at least, prevent the further strengthening of Tyson's. However, before examining the difficulties of exercising control over the emotions, it is worth looking at why we feel emotions at all.

Paul Ekman (2004/2012) explains that the most common way in which emotions occur is when *'we sense, rightly or wrongly, that something that seriously affects our welfare, for better or worse, is happening or about to happen'* (Loc. 457). Emotional responses are mostly commonly derived from our ability to sense to what extent a particular event will impact on me, where primary emotions such as fear are caused by our perception of things which directly affect our welfare. Examples of this ilk are not hard to find if we consider how the current refugees crisis, famine in a part of the world to which we've never been or an air disaster in which none of the victims are known to us affect us emotionally. These examples also highlight another important point about how the strength of an emotion is closely linked with proximity. It is not hard to imagine the intensity of our emotion increasing with the level of closeness to the people involved in the preceding examples if we start from stranger to acquaintance, to workmate, to friend, to close friend, to immediate family member.

Another aspect of emotions is that they play a crucial role in allowing us to cope with important occurrences in our lives, whether they are in our interactions with people, or in dangerous and life-threatening situations. For Ekman, following Richard Lazarus, this evolutionary advantage is a result of what Ekman calls *'automatic appraising mechanisms'* which are constantly engaged in the subconscious scanning of our environment, continually on the lookout for things which will have an impact on our welfare and survival. Ekman gives the example of driving a car and swerving out of the way of sudden danger:

You would not have survived that near-miss car accident if part of you weren't continually monitoring the world for signs of danger. Nor would you have survived if you had to think consciously about what you should do with the danger once it

was apparent. Emotions do this without your knowing it is happening, and much of the time that's good ... (*ibid.*)

This type of evolutionary advantageous aversion to fear can also be found in various areas of the animal kingdom, where the presence of a predator provokes evasive action in its prey. However, this sudden springing into action to avoid a dangerous or deadly event doesn't explain the fear felt by Tyson's opponents; for this we need to examine the distinction Ekman makes between '*theme*' and '*variation*'. Themes are sensations that we experience which require very little evaluation – Ekman gives the example of a chair on which we are sitting suddenly collapsing from under us – and these trigger emotions which are more or less instantaneous. Ekman claims that if we were able to identify how these themes were acquired, it would go a considerable way in helping us learn to remove or modify them. If, for example, we could identify how we acquired the theme of fear then, theoretically at least, we could learn how to “unacquire” it or at the very least reduce its presence in our consciousness.¹⁹ However, at present, there is little or no evidence with regard to how humans have acquired these themes, although there are only, broadly at least, two possibilities: either they were learned or they weren't, but there are problems with the idea that they were learned. Ekman's research found that the same themes were found in a variety of different cultures; if these themes are learned then everyone across a plethora of different cultures must have gone through the same learning experiences, something defined as *species-constant learning*. Further, children who suffer from congenital blindness were found to display facial expressions that are comparable to those shown by sighted children. Also, species-constant learning is unable to provide an explanation for the fact that emotions such as anger and fear are accompanied by physiological alterations including: increased heart rate, sweating, temperature and an alteration in the flow of blood. This leads Ekman to claim that he was forced to the conclusion that:

‘... themes are given, not acquired; it is only the variations and elaborations of the themes that are learned ... we are born prepared, with an unfolding sensitivity to the events that were relevant to the survival of our species in its ancestral environment as hunters and gatherers. (*ibid.* Loc. 572-592)

Emotions, argues Ekman, would have been useful since those with them were better equipped to respond to occurrences which interfered with a particular desired goal, whether this goal

¹⁹ “Talking treatments” and “Cognitive Behavioural Therapy” have been found to be effective treatment for phobias (NHS.uk <http://www.nhs.uk/Conditions/Phobias/Pages/Treatment.aspx>)

included the acquiring of food or a mate, which would have allowed a greater chance of survival and thus procreation.

Variations, unlike themes, can differ from person to person and they are more likely to be things that we learn as we grow up. They are not emotional triggers which deal with situations which are more ambiguous, situations to which *'the automatic-autoappraising mechanisms are not already tuned'* (*ibid.* Loc. 675). Crucially our *'autoappraisers'* take longer to evaluate these variations and eventually they become so far removed from the themes, that the point of *'reflective appraisal'* occurs and this where the evaluative process enters our consciousness. During this reflective appraisal we are aware of the evaluative processes that go on, we are conscious of what is happening. The acquisition of these personal emotional triggers is a more straightforward affair; they are acquired through our experiences of our world. This notion of reflective appraisal comes with a crucial advantage and disadvantage, both of which are in respect of time. On the negative side, such reflection would be considered a danger to us if it was required in every situation; there are times where automatic appraisals save us from wandering into disaster, which most certainly ensue if they were replaced by periods of time in which we took to evaluate our circumstances. However, on a more positive note, reflective appraisals allow us more time to evaluate the situation and to possibly influence our circumstances, which in turn would perhaps allow us some form of control over our emotional responses. In virtue of getting to know what causes in us strong emotional responses - what Ekman calls *hot triggers* – then we can try to prevent these things from taking over and colouring or judgement of the situation²⁰. So how exactly do we go about altering the things we become emotional about?

Citing the brain research of Joseph LeDoux, Ekman considers how we might gain some form of control over our learned emotional triggers, how it might be possible to unlearn variations that we acquire as we grow and live in the world. According to LeDoux's research, each time we learn a new emotional trigger there are new connections made between certain cells in the brain to form what LeDoux calls a *cell assembly*. These assemblies:

²⁰ Ekman also gives seven other, secondary causes of emotion: memories of past experiences, re-experiencing past emotions, imagination, empathy, others instructing us in what to be emotional about and the witnessing of the violation of social norms (Loc. 770).

... contain the memory of that learned trigger [and] seem to be permanent physiological records of what we have learned ... However, we can learn to interrupt the connection between those cell assemblies and our emotional behaviour. The trigger still sets off the established cell assembly, but the connection between the cell assembly and our emotional behaviour can be broken, at least for a time. We are afraid, but we don't act as if we're afraid. (Loc. 891)

Whether or not the connections between cell assemblies and our behaviour can be completely interrupted is a matter of some conjecture, but even a diminishing in the strength of these connections could prove useful in the boxing arena as well as in our general daily lives. The problem even with the weakening of our emotional triggers is that there are so many factors which contribute to the learning of them in the first place.

From what has been said so far then, the best the opponent can hope for is that he will be able to bring his emotional behaviour down to some form of moderation and to attempt to suppress the expression of his emotions. In this sense, he will find himself in the middle of an inner conflict between his instinctive and involuntary emotional response and his deliberate intentions of keeping these responses hidden or controlled. One reason for this desire has already been addressed: he does not want to add further confidence and self-assurance to Tyson, who will almost certainly have his own positive emotional response if he observes even the slightest sign of fear or apprehension. As Ekman explains: '*...emotions are not private.*' (*ibid.* Loc. 1092). Unless we make a deliberate, often strenuous, effort to keep our expressions of emotion in check, other people will be able to tell how we are feeling and, even if we make such a strenuous effort, it is extremely difficult to completely disguise our feelings, especially for a prolonged period of time. In terms of how this might be achieved and how the boxer might even change how he is feeling, this would require the ability to take a step back in order to ascertain whether or not the behaviour he is being driven to is appropriate or desirable; or whether he should choose to act differently.²¹

In theory, both Lazarus' and Ekman's idea of an appraisal of the circumstances, which includes both the environment and a person's ability to cope with the environment, looks like it will yield positive results, but this might not be the case. If the frightened opponent takes a step back before the fight and examines the reason(s) for his fear and then begins to carry out an

²¹ For this Ekman suggests turning to the Buddhist idea of mindfulness.

inventory of the tools he has at his disposal, he could quickly arrive at the realisation that his fear is not only justified, but also that his circumstances are worse than he originally observed. Through these reflections he may, for example, realise that Tyson is much more athletic than he is, that only one of Tyson's last twenty fights have gone the full distance and that he has decisively demolished every opponent they have both faced in the past. As these things begin to rack up, it seems that they will serve only to exacerbate the fear and, worse, it is likely that he could be in the ring for up to fifteen minutes before the first bell actually rings, which is a long time to think when you're suffering from severe nervous anxiety. Basically, the thing about these cognitive appraisals is that they could only work in any practical sense (to overcome negative emotion) if the subject: a) believes there are positive things for which to search; and b) he actually finds these things. If, on the other hand, the subject carries out a reflective appraisal and discovers nothing or, worse, more negative aspects of his situation his emotional state will almost certainly deteriorate and the battle to maintain that inner balance between voluntary and involuntary response will become so much harder.

So far, much of what has been discussed has centred around fear, the inhibitions caused by fear and how an opponent can use this fear as a way to fortify his own confidence and self-belief. However, I have no reason to doubt that the controlling of the other emotions would be as equally beneficial to a combatant. It is not hard to see how it might be advantageous for a fighter to suppress the anger that ensues from the dislike of his opponent, for example. There may even be good reason to suppose that allowing positive emotions to take over could be to the detriment of a boxer who might become over-confident which in turn will lead to the making of potentially disastrous mistakes. Further, so far I have only discussed the intimidation and emotional response of Tyson's opponents prior to the sound of the opening bell, fights which were, more often than not, complete mismatches in light of Tyson's total dominance over the Heavyweight division at the time. Thus far, I have made no reference to the range of emotions experienced during the course of a fight, particularly fights which, unlike most of Tyson's, are evenly matched and competitive. It is to these I now turn.

(v) Emotion during combat

During the course of a contest, depending on how well or badly it goes for a boxer, a range of emotions can be experienced, including periods where little or no emotion is felt at all. Most fighters, at least those who believe they have a chance of winning and are not completely overmatched, will say that feelings of nerves or apprehension dissipate when the first bell goes,

that is the waiting for that opening bell that is by far the worst part. What is certainly true of evenly-matched professional boxing, is that after the first few seconds or minutes of the contest, the fear leaves and is hopefully replaced by a confident calmness as the fighter settles into the fight. However, as the fight goes on and one fighter begins to gain the upper hand, or if it is just a particularly grueling contest, other emotions begin to play their part and it can be critical for the fighter if he is able to disguise the negative emotions (or put on display positive ones) since, as explained earlier, expressions of negativity can lead to an increase in the opponent's confidence. One example of such a negative emotion can be frustration.

On September 17th 2011, Victor Ortiz challenged Floyd Mayweather for the WBC Welterweight Championship. From the opening bell, Mayweather demonstrated a far superior skill set to that of his opponent, who began to swing with wild futility as Mayweather continually parried, dodged and blocked his attacks. In the fourth round this continued as Mayweather lay on the ropes as Ortiz continued to swing violently but unsuccessfully until Ortiz could take no more and intentionally head-butted Mayweather in the mouth. Crucially Ortiz, due to his inability to suppress his emotions, allowed them to spill over and consequently lost the fight. Ortiz' actions provided a clear display of his emotions to Mayweather, who would have used this to further provoke Ortiz and lead him into further frustration and possibly even greater mistakes.²²

Elsewhere in this work, I have described a 2005 fight between Ricky Hatton and Kostya Tszyu where Hatton, upon observing signs of Tszyu feeling dejected, went into "overdrive" and eventually Tszyu failed to answer the bell for the final round. Tszyu's inability to disguise his emotional deterioration led to Hatton gaining in confidence and in energy levels; Tszyu's enervation led to Hatton's invigoration.

What is clear in both of these examples is that failure to hide or disguise a weakness can provide an opponent with all the encouragement and confidence he needs to go on and exert himself and gain dominance. Further, like Tyson did before a fight, forcing an opponent to feel negative emotions can allow a fighter to gain physical and psychological dominance during the course

²² It could also be said his feeling of frustration resulted from his quickly narrowing horizon of action possibilities.

of a fight, particularly if the opponent is led to a point where he can no longer mask these inner feelings of negativity.

In addition to allowing an opponent to derive extra confidence from a display of weakness, negative emotions also cause a shift in focus from the distressed boxer. His focus shifts towards himself, rather than the task at hand, where he becomes more aware of himself and his own pain and fatigue.

However, since, the disguising of these emotions becomes more difficult as the emotion itself becomes stronger, we now have a case where transhumanist alteration could play a significant role in the stifling of emotional behaviour in ways which could enhance performance.

4. Mindreading & direct access to “the other”

(i) Adam Smith: Imagination & “Fellow-Feelings”

In his *Theory of Moral Sentiments*, Adam Smith (1759/1976) describes our ability and propensity to empathise with others²³ by experiencing what he describes as a “fellow feeling”.²⁴ Smith takes the imagination as the vehicle which allows us to feel what others feel since we do not have immediate access to their emotions:

As we have no immediate experience of what other men feel, we can form no idea of the manner in which they are affected, but by conceiving what we ourselves should feel in the like situation ... our senses will never inform us of what he suffers ... and it is by the imagination only that we can form any conception of what are his sensations. (Smith, 1759/1976, p.9)

For Smith then, there is no direct or immediate access to the pain, suffering or emotions of those we observe, we reflect on the emotions we would experience if placed in the same or similar circumstances. If we find that we can share the feelings and emotions of the person we observe, then we morally approve and if we cannot then we disapprove or, put another way, we either sympathise or we don't. However, this ability to project ourselves into the other's

²³ Although he never actually uses the term ‘empathy’, in the *Theory of Moral Sentiments*, Smith's definition of sympathy seems closer to what today would be described as empathy.

²⁴ Smith defines this “fellow feeling” as sympathy.

predicament is partly conditional on an understanding of the circumstances and events that have given rise to his emotions. Smith uses the example of observing the aggressive and angry behaviour of a furious individual, an observation which is likely to exasperate us rather than to enter any kind of “fellow feeling” with him. It is only when we later discover the root of the man’s feeling of anger that we can truly sympathise with him and gain any kind of meaningful understanding of what it might be like to feel what he is feeling.

Another condition that Smith insists must be met before we can enter into “fellow feeling” with the other is that of propriety:

The propriety of every passion excited by objects peculiarly related to ourselves, the pitch which the spectator can go along with, must lie, it is evident, in a certain mediocrity. If the passion is too high, or if it is too low, he cannot enter into it.
(*ibid.* p.27)

For Smith, the line between propriety and impropriety varies depending on the emotion being experienced. However, the important point to note is that we must consider a person’s reactions or behaviour to be within moderation in order for us to be able to place ourselves in their shoes. Indeed, this claim seems to have some merit since we often find ourselves at total odds with others when we witness what we consider to be overreactions to certain situations or events. Old videos showing the feral and uncontrollable screams at the sight of John, Paul, George and Ringo, the foul-mouthed and profanity laden castigations of football referees, or even the mass outpouring of grief for a public figure barely acquainted with his or her mourners, are all examples of emotions where we may, as a result of the excessiveness of their behaviour, find it difficult to enter into what Smith would describe as “fellow feeling” with those whom we observe.

There is nothing controversial in the claim that we all have varying conceptions of propriety. Smith only postulates the necessity of imagination to enter into a fellow feeling with others; this does not commit him to the idea of everyone having the same sense of propriety or of entering into the same fellow feelings for the same reasons. There is nothing contradictory in the claim that I can feel immense sympathy for person A for reason X, whereas his predicament leaves you relatively unmoved.

Further to his claim that we employ our imagination to enter into the feelings of others in order to feel what they feel, Smith also makes the claim that this harmonising of emotions is pleasurable for both the subject and for the object of his sympathy:

... nothing pleases us more than to observe in other men a fellow-feeling with all the emotions of our own breast; nor as we ever so much shocked as by the appearance of the contrary. (*ibid.* p.13)

He goes on to say that in addition to the object's gladness at being able to welcome our sympathy and his disappointment at our lack thereof, we too feel glad when we can sympathise and disappointed or 'hurt' when we are unable to do so. Again, there is merit to this claim.

We can often find great comfort in the belief that there are others who are going through – or at least who have gone through – the same negative or adverse experiences, feelings or emotions as we are. Indeed, the derivation of such comfort has given rise to several sayings in folk psychology such as 'a sympathetic ear', 'misery loves company' and 'a problem shared is a problem halved'.

With respect to boxing then, for Smith the ability to attain an understanding of an opponent's feeling of weakness, fear or dispiritedness could come from the fighter's capacity for imagining himself in his opponent's position. He would gain an understanding of his opponent's predicament by trying to imagine the emotional experiences he would undergo if forced to endure a similar physical onslaught, entering into a "fellow feeling" with him and then acting accordingly. Further, given that both the subject and the object are both fighters in a common environment with common objectives and desires, the imagination doesn't have too far to go to allow the subject to enter into such a "fellow feeling". However, the problem with Smith's idea of entering into such a harmony of feelings, at least in terms of using his theory as a basis for a practical methodology for training boxers, is that it is seemingly necessarily accompanied by compassion and a desire to alleviate suffering:

His agonies, when they are thus brought home to ourselves, when we have thus adopted and made them our own, begin at last to affect us, and then we tremble and shudder at the thought of what he feels. (*ibid.* p. 9)

An explanation of this capacity to enter into another's feelings without going as far as to being moved to compassion is required. Further, the suggestion that our only access to other people's

emotional responses is through an observation of their behaviour and circumstances, followed by the employment of our imagination to enter into their feelings, is not without its criticisms, which will be examined below.

(ii) Simulation Theory

The idea of trying to put ourselves in another's position - as Adam Smith claims we do - whether it be for making predictions on how the other person is likely to behave, how they will feel, or even to assist us in our own decision-making can also be found in more recent works including Fuller (1995), Harris (1995), Gordon (1995) and Goldman (1995 & 2008).

Martin Michlmayr explains that Simulation Theory demands that:

... we use our own mental apparatus to form predictions and explanations of someone by putting ourselves in the shoes of another person and simulating them ... The basic idea of simulation theory is that one uses one's own mental apparatus to simulate others and thereby comes to predictions and explanations. (Michlmayr, 2002, pp. 24-25)

The idea of the subject only arriving at predictions and explanations, without any apparent need for compassion, seems to get round the problem with Adam Smith's account described above, with the problem being that his account doesn't stand up during a contest where 'fellow feeling' doesn't give rise to sympathy, but in fact has the opposite effect. There is no doubt that in many situations an empathic understanding of someone's suffering leads to a feeling of sympathy, but in boxing this leads to a desire to compound the suffering.²⁵ One question which arises from this is whether the simulation process is a skill that we can develop and enhance, or knowledge that we learn as we grow, mature and gain experience of the world and of other people. This, I contend is an important question since, in terms of a fighter striving towards improving his performance in the ring, the enhancement of his ability to 'mindread' would certainly give him a significant advantage over his opponent. Mastering the ability to read the thoughts, feelings and, in particular, the fears of an opponent, or to predict how he is likely to react to certain circumstances, would make it more difficult for the opponent to hide the true nature of his inner thoughts both before and during the fight. Indeed, looking out for signs of any potentially exploitable weaknesses is already a strategy being employed by fighters (as

²⁵ This is an example of empathy without sympathy and will look at this in greater detail in Chapter 4.

described by Ricky Hatton earlier), a strategy that is already highly effective in providing the fighter with additional strength and encouragement. Making the fighter more acutely aware of how his opponent is feeling, thus predicting how he might act, would bring significant, possibly decisive, advantages. Perhaps drawing a distinction between two proponents of Simulation Theory will allow us to arrive at an answer to this question.

Alvin Goldman claims that we place ourselves in the other person's shoes and then arrive at conclusions or predictions based on how we would feel if we were in the same predicament:

Our default procedure is to mindread in a fundamentally biased, egocentric fashion. We project our own conceptual, combinatorial, and ontological dispositions onto others ... Moreover, they are initially projected not only onto people but also onto animals or anything else we mindread. (Goldman, 2008, pp.177-9)

Fundamentally then, we place ourselves in the other person's shoes and then simulate that other person by generating the feelings and emotions in ourselves. However, it is important that we 'quarantine' our own mental states in order that they do not interfere with the 'pretend states'; a failure to implement this quarantining process could cause an inaccurate evaluation of the other's mental states. Michlmayr (2002) explains that Goldman does not suggest that such simulation is either perfect or sufficient for ascribing mental states to others, and that there are often times where people cannot or do not draw accurate conclusions about the mental states of others. However, Goldman does suggest that simulation is "the fundamental method used for arriving at mental ascriptions of others". (*Op Cit*, p. 83)

A stronger, more radical version of Simulation Theory is postulated by Robert Gordon (1995), who argues that the introspection and inference described by Goldman are not sufficient for simulation to work and leave the theory open to all manner of criticisms. As opposed to introspection and inference, Gordon talks not only of a simulation, but of a 'transformation'. Michlmayr (2002) quotes Gordon (1995):

My own view [. . .] is that the method we ordinarily use is limited to identifying states in the first person, but, thanks to our capacity for imaginatively transforming ourselves into other "first persons", it is not exclusively a one-person method. It is just as well suited for labelling another's states as it is to labelling our own, provided we represent these states in the first person, that is, by an egocentric shift. (p.54)

Effectively then, at the point of this ‘egocentric shift’, when we refer to ‘I’, we are no longer referring to ourselves, but to the other, the person whose feelings and emotions we are attempting to empathise with. This transformation is made possible by what Gordon calls ‘ascent routines’ whereby questions about beliefs are treated as questions about facts, so the question “Do you believe that P?” is treated simply as “Is it the case that P?”. Therefore, the question is not about mental states, but becomes a question about P and a statement such as “I believe that P” are non-committal statements about P rather than about any kind of mental state. Finally, as Nichols and Stich (2003) explain: “These are facts that must be kept in mind in interpreting the results of experiments on mindreading and self-awareness.”

Whether we subscribe to Goldman’s version of the Simulation Theory, or to Gordon’s more radical view, they both have the advantage over Adam Smith’s ‘fellow feeling’ in that we take the other person’s perspective and can make predictions and assertions based on our findings without being burdened or, in the case of the boxer inhibited, by compassion. There seems nothing contradictory in the assertion that the boxer can simulate (or transform into) the opponent to gain a deep and thorough understanding of his mental and emotional states and to exploit this understanding to gain the upper hand and to break his opponent’s will.

However, one objection to Simulation Theory, or at least to Goldman’s version of it, is that it makes a tacit assumption that other people are like us in certain respects. Newen and Schlicht put it thus:

Goldman’s account makes use of a further hidden premise before the projection stage. The attributor tacitly believes that people are equipped with the same decision-making mechanisms and arrive at pretty much the same decisions, given certain beliefs and desires. Otherwise, the attributor would have no justification (or weaker, motivation) whatsoever to assume that her own pretend belief, desire and decision – arrived at by enactment imagination – resembles or even matches the target’s belief, desire and decision. So the attributor believes that the target is like her in relevant (cognitive) respects. (Newen & Schlicht, 2009, p. 16)

It seems perfectly reasonable to assert that it is far easier for a boxer to enter a simulation with another boxer than it is for someone who has never boxed. However, this is problematic in that it seems to provide added confirmation of opponents of Simulation Theory’s original claim

that it can only be successful if we start with the assumption that others are like us, or similar to us, in certain respects.

Further, the assumption that all boxers are alike with regard to how they react to pain, tiredness, fatigue or pressure is manifestly not true. Many fighters have often been derided for having a ‘glass jaw’ or ‘no heart’, while others are lauded for their ‘granite chin’ or ‘iron will’.²⁶ Further, there are fighters who, when hurt or injured, react like caged or wounded animals, viciously lashing out in order to prevent further attacks; but there are also those who shy away, those who simply wilt, capitulate and eventually surrender under the sheer force of a sustained, two-fisted onslaught coming from a willful and determined opponent. There are also fighters who have never had their ‘chin tested’ for a period of their career, meaning that nobody really knows how they will react until they are faced with such a test. Again, some pass with flying colours while others are knocked unconscious. So, although there are some similarities with respect to boxers’ physical and psychological constitutions, not all fighters are alike and even if they were, the problem of Simulation Theory only achieving success under the assumption that others are like us remains.

Perhaps then, some form of folk psychology or theory-theory can offer a more credible explanation of our ability to understand the thoughts and actions of others.

(iii) Theory-Theory

Proponents of the theory-theory claim that our ability to empathise comes from our knowledge of a set of laws or rules constituting a folk-psychological theory, contained within our brains. Although we use these rules and laws constantly in our everyday lives, they are tacit in nature and so we are unable to articulate what these rule and laws actually are. Michlmayr (2002) quotes Churchland (1990):

Each of us understands others, as well as we do, because we share a tacit command of an integrated body of lore concerning the lawlike relations holding among external circumstances, internal states, and overt behaviour. Given its nature and

²⁶ Notable contemporary British fighters on opposite ends of this spectrum are Amir Khan who, despite possessing a wealth of boxing skills, has been knocked out on two separate occasions and badly shaken on several others, and current Super-Middleweight world champion Carl Froch who has gained a reputation around the world for his incredible ability to ‘take a punch’.

functions, this body of lore may quite aptly be called “folk psychology”. (*ibid.* p.13)

Fundamentally, the idea is that we possess an internal theory which gives rise to our ability to understand another person’s mental states allows us to explain what they think or how they behave. The theory is evaluated based on how successful it is when it comes to providing explanations and predictions of others’ actions and behaviour.

Hutto (2007) identifies a problem with traditional theory-theories:

... any such ‘theory’ would require an infinite number of principles is enough to cast its possibility into doubt. Yet even if we were prepared to countenance its possible existence, questions would loom large about how anyone could possibly wield it sensitively in real-time, practical applications ... There is no formula for achieving this ... There is simply no algorithm, however complex, that would enable us to anticipate such possibilities. (Hutto, 2007, p.18)

Hutto uses the example of understanding someone’s explanation for reaching for a glass filled with water because they are thirsty. In order to understand this explanation, there is a tacit assumption that I am aware of the properties of water or as Hutto states ‘I must know what anyone can be expected to know about the relevant properties of water’. But this would require providing ‘all possible inferential liaisons’ and a laying out of all common-sense knowledge on all topics, with the assumption that it would be possible to do so as a set of rules or laws: an impossible undertaking according to Hutto. It is not only the sheer volume of required knowledge that makes this so implausible, but also the practicality of implementing a complex theory of mind in real-time situations, where observations and conclusions about the others’ state of mind often happen instantaneously, without any apparent delay caused by the necessity for selecting which of these facts are relevant to our current situation.

A similar point can be made about the understanding Ricky Hatton had of his opponent’s thoughts and emotions, described earlier. Observing his opponent, Kostya Tszyu, begin to exhibit negative body language, shortness of breath and woeful facial expressions, Hatton’s reaction was instant, he knew immediately Tszyu was tired and instinctively went ‘*into overdrive*’. There seemed to be no obvious reference to a theory or any requirement for the separation of the relevant and irrelevant facts about body language, breathlessness or pained facial expressions. Indeed, there is no apparent need for theorising whatsoever. Of course,

Ricky Hatton can tell a propositionally-laden story after the event, where he can explicate his reason for doing X (increasing the intensity of his attacks), based on his observation of Y (Tszyu's tiredness) and his desire for Z (to win), but any fighter will confirm that no such propositional reasoning takes place in the heat of combat, particularly during moments which proffer the opportunity of a swift and decisive victory.

Of course, the requirement for instantaneousness does not necessarily rule out the possibility of a sort of folk psychology explaining our ability to understand others. Proponents of the theory-theory can simply claim that access of the relevant facts does in fact happen near-instantaneously, particularly in situations which have recurred several times before, such as the case of an experienced fighter reacting with intensified aggression to the exhibition of distress signals by an opponent. This may well be true. But the potentially infinite number of facts or inferences, as well as the demand for an instantaneous response to observations of behaviour, particularly in combative sports, certainly raises considerable doubts.

(iv) Direct Access & the Extraneousness of Additional Cognitive Processes in Everyday Encounters With Others

With regard to boxing, in particular with respect to the fighter's ability to understand his opponent's mental states, neither Simulation Theory nor Theory-Theory seem to provide satisfactory explanations. Evan Thompson (2001) explains that each of these theories are unsatisfactory because:

[They] both take mind-reading to be a matter of how we infer from outward behaviour that others possess unobservable inner mental states ... and thereby they foster a conception of the mental as an inner realm separated from outward behaviour by an epistemic gulf that can be crossed only by inference. (*ibid.* p.13)

Each of these theories begins with the premise that we cannot gain direct access to another's inner mental states and both implement inner apparatus to make a 'best guess' at how another person might be feeling, what they might be thinking or why they might have acted in a particular way. Simulation theory falls short since it relies on the assumption that the person we observe is like us in certain ways and will act in a rational manner, while theory-theory suffers from the infinite number of possible facts - and permutations of these facts - which make the instantaneous responses required for everyday life unlikely, or at least problematic. There is however another train of thought, one to which I subscribe, which claims that other

people's inner states *are*, at least to some extent, accessible to us, without the need for theories of mind or any simulations which allow us to step into the other's shoes.

Both the Theory-Theory and Simulation Theory begin with the premise that other people's mental states are inaccessible to us, that they are somehow hidden from us and so both theories contrive to devise methods of gaining access to another person's inner mental states: in one case reference to a psychological theory and in the other "off-line" simulations or transformations. Shaun Gallagher (2008), following Max Scheler (1954), claims however, that our perceptions are 'smart' and richly enough informed to negate the necessity for extra cognitive processes:

Pre-reflectively, however, that is, as we live through our perceptions, our experience is a richly informed direct grasp of whatever is presented ... The question about direct perception, whether of objects or of others is not simply about how direct it is, or what directness means, but how smart, how richly informed, it is. The smarter the perception is, the more work it does; the dumber it is, the more it requires extra cognitive processes (theory, simulation) to get the job done. The direct perception theorist is claiming that social perception is very smart and that in the usual circumstances of social interaction it does most of the work without the need of extra cognitive (theoretical or simulationist) processes. (*ibid.* p.538)

Gallagher goes on to say that human infants are able to display a '*wide range of facial expressions, complex emotional, gestural, prosodic, and tactile face-to-face interaction*' (*ibid.*) all in the absence of any apparent theory or simulative ability. Without the ability to mind-read or mentalise in any way, the infant is able to recognise bodily movements and facial expressions as displays of emotion. Further, in our everyday interactions and encounters with others, we do not tend to seek ways of going from our perceptions of others into their inner mental states. Instead, we tend to observe and draw upon their actions, behaviour, body-language, the environment, cultural norms, as well as our previous experiences with both that person and with other people in a similar environment.

I do not have to start thinking about what might be going on in the other person's mind since everything I need for understanding her is there in her action and in our shared world ... What we call social cognition is often nothing more than that social interaction ... (*ibid.* p.540)

Gallagher does not claim that direct perception allows us ‘enter the soul’ of other people to gain access to their innermost thoughts and feelings, or that we can never be misled by what we observe²⁷, but is simply asserting that direct perception provides us with enough understanding to navigate our way through our everyday encounters with others.

Stuart (2006, 2008, 2012) and Shusterman (2012) take embodiment to be fundamental to conscious awareness and the assigning of beliefs, desires, feelings and intentions to others:

We routinely spill into the bodily experiences of others for it is this which establishes the community and reciprocity of our affective co-engagement. We might say that we inhabit the other’s activity, for that’s how we learn, how we become encultured and how we develop our sensory and kinaesthetic and enkinaesthetic imagination that enables us to anticipate what the other might do... Thus, we are always, without fail, in dialogue with our world, and it becomes uncontroversial to claim that all action is interaction ... Our enkinaesthetic background enables us to slide easily from ego to alter ego, spilling over into the experiential life of the other, in our on-going plenivalent prehending and apprehending enquiry. (Stuart, 2012, pp 170-171)

Humans come into the world already equipped with the ability to perform a variety of movements and actions which ‘make it possible to engage in an enkinaesthetic dialogical intimacy so soon after birth’ (Stuart, 2012, p.173). As we grow and mature, this ‘enkinaesthetic dialogical intimacy’ continues as we live in the world observing, performing actions, feeling emotions and gaining experiences, all the while developing and enhancing our ability to be ‘dialogically intimate’ with others.

Support for this idea can also be found in the field of neuroscience and the discovery of mirror neurons. Giacomo Rizzolatti and Maddalena Fabbri Destro (2008) explain:

Mirror neurons represent a distinctive class of neurons that discharge both when the monkey executes a motor act and when it observes another individual (a human being or another monkey) performing the same or a similar motor act ... There are

²⁷ Gallagher acknowledges that other methods of gaining access, including a version of folk psychology, might be needed for this.

two distinct series of information that one can get observing an action done by another individual. One is "what" the actor is doing; the other is "why" the actor is doing it. If we see, for example, a girl grasping an apple, we understand that she is grasping an object. Often, we can also understand, in addition, why she is doing it, that is, we can understand her intention. We can infer if she is grasping the apple for eating it, or for putting it into a basket ... A series of hypotheses such as action understanding, imitation, intention understanding, and empathy have been put forward ... (*ibid.* p.89)

Whether or not these neurons are part of our neurological makeup at the foetal stage, birth, or whether they evolve, or increase in number, as we mature and live through more experiences, is unclear. What is clear however is that their discovery does suggest that we can, at least to some extent, live through others' experiences without the necessity for linguistics, theories, simulations or any propositional attitudes regarding the intentions, desires, beliefs or emotional states of others.

In relation to boxing then, there is no requirement for a fighter to attempt to simulate, theorise, or break things down propositionally with regard to his opponent's desires, intentions or "state of mind", either before or during the fight. As a result of past experiences – hours of sparring sessions and/or previous fights – he will then understand that the object (man) across the ring is preparing to inflict harm on him and so he will react accordingly. At this point, everything about the boxer's environment is familiar to him and so long as nothing "out of the ordinary" occurs he is in what Stuart describes as 'harmonious dialogue' with his world, without the need for propositional beliefs or, I contend, any attempted simulation, transformation or theorising, about anything he currently experiences.

Further, the immediacy of having direct access to an opponent's emotional states provides the fighter with the information he needs instantly without the slower and more cumbersome, it could be argued, process of simulation or reference to a theory. Indeed, it may be even be argued that the idea of attempting to enter into how the opponent feels may in fact give the fighter time to reflect on his opponent's misfortunes and, as Adam Smith would have it, begin to experience compassion at his opponent's plight, thus blunting the fighter's killer instinct; a potentially career-ending consequence.

In the next chapter I will go on to show the importance of temporality, emotion and empathy to the execution of action in the sporting arena in general and then, more specifically, the boxing ring.

Chapter 3

Affordances & The Significance of the Subject-Object Distinction

In the previous chapter I discussed some of the phenomenological experiences undergone by a boxer and how these might alter depending on how well he is doing at any particular point in a fight. This included altered experience of time, changes in emotion and the importance of empathy, or lack thereof, in professional fighting and how these changes might impact on a fighter's performance.

In this chapter I intend to show the extent of the impact of these changes and how they manifest themselves in a shift in how the boxer perceives himself; a shift which involves moving from the experience of being a subject capable of acting to an object capable of being acted upon. I will argue that this experiential swing from subject to object has significant implications for the boxer's perceived horizon of possibilities as well as his fluidity of movement and commitment to action.

1. The subject-object distinction

All sports, by definition, have targets (archery butts, golf holes or another boxer's chin) and objectives (winning or achieving a knockout). The runner's objective is to run as quickly she possibly can in order to cross the line before her fellow competitors, the golfer's objective is to get the ball in the hole in as few strokes as possible, and the tennis player's objective is to strike the ball in such a way as to make it impossible for the opponent to make a return. The targets in each of these sports vary significantly from the others in terms of the size, distance and method with which the objective is achieved, but they have one common quality in that they involve the aiming at or reaching a target or goal shared by their fellow competitors. Each competitor competes under the assumption that there are opponents who possess roughly the same aims, objectives and will to win as they do; such is the nature of competition. It is a shared belief that plays a significant role in driving a sportsman or woman to perform at the peak of their powers.

Boxing, or any full-contact, combative sport, is different from the sports already mentioned. The boxer is not only aware of an opponent with similar desires and aims, he is also acutely aware that he himself is in fact the target his opponent must hit in order to realise the objective of winning the fight. Further, the boxer, as a result of his desire to inflict physical damage - and where possible to render his opponent physically incapable of continuing²⁸ - is also acutely aware of his opponent's conflicting desire to reciprocate this damage. The boxer, like any other sports competitor, has a target at which to aim, a desire to win, a supremely high level of focused concentration, as well as an awareness of an opponent with shared aims and him as the target. However, unlike the 100m runner for example, the boxer must be aware of being both the subject and object of this joint activity that he is both the subject of his experience and the object of his opponent's experience. Failure to achieve the correct balance will not only result in defeat, but will almost certainly ensure his experience of physical pain and the very real possibility of being knocked unconscious.

A competitor in any sport who makes a mistake is likely to suffer negative consequences such as conceding a goal or a point, or losing a race, but when a boxer makes a mistake, he faces the likelihood of suffering severe physical punishment inflicted on him by a skilled athlete trained for that very purpose. If the boxer, unlike the 100m runner, for example, does not pay sufficient attention to the fact that he is an object on which his opponent is focused, then he is likely to act with dangerous abandon in the belief that there is no risk of being hit and/or hurt, something that will inevitably lead to him taking foolish risks and experiencing these very consequences. Acting in this way is analogous to driving as though you are the only person on the road, and this will frequently end badly.

On the other hand, by being overly aware of being an object capable of being hurt the boxer will be in similar peril since it will almost certainly create within him a hesitancy and a reticence which will restrict his movements and prohibit him from acting with fluidity and conviction. Consequently, his opponent will hand out a systematic beating until such time as the boxer somehow regains a stronger realisation of the fact that he too is a subject capable of influencing events. If this realisation fails to occur the boxer will, at best, lose. The boxer must believe that his opponent, is capable of being hurt, feeling pain and suffering distress, otherwise he will believe that all of his actions are futile and he will regress to feeling more like the object

²⁸This only applies to the fight itself; very few fighters desire the infliction of permanent damage on an opponent and those who do would be very foolish to admit it publicly.

of his opponent's actions rather than a subject capable of acting in a way that can take control of the fight. If this continues he will be likely to go into survival mode²⁹ and will attempt to "see out the fight" with virtually no prospect of victory.

One consequence of going into survival mode is that the boxer who senses wilting or weakening will grow stronger and more confident, a phenomenon described by Mike Tyson and discussed in the preceding chapter. The belief that an opponent is hurt, weary or dispirited can galvanise even the most exhausted of fighters and allow him to summon reserves of energy inaccessible to his disheartened and enervated adversary.

By the eighth, I knew the fight was turning anyway. I knew I had him ... you know when you have got your opponent on the run. Their breathing patterns change and their body language alters, and Kostya's body language wasn't the same ... I could see it in his eyes that he was wilting and the spark and snap that he had earlier on in the fight had gone ... After the eighth I went into overdrive. (Hatton 2008, p.19)

This is an interesting phenomenon because this extra vitality does not emanate from any obvious physiological alterations undergone by the boxer, but merely from an observation of his opponent's physical – and psychological – deterioration. This observation, allied with his newly found vivacity will, more often than not, cause the boxer to 'go for the finish' and end the contest by way of knockout or by the referee's stoppage. At this point the boxer is most certainly a subject possessed of a desire to win and of a powerful 'killer instinct' which drives him to seek a quick conclusion to the contest, but at the same time there must also be an empathy with his opponent which engenders his belief that a swift end to the fight is imminent and which gives rise to his increased energy levels. The boxer, amidst his desire to inflict on his opponent the punishment which will bring an end to the contest, must also be able to grasp or empathise with his opponent's feeling of tiredness, dejection, fatigue, apprehension, hopelessness and so on if these are to be the basis of his apparent upsurge in energy levels. However, at no point can this empathy become a sympathy for his opponent; such a sentiment

²⁹This is a term applied to a boxer who, rather than make any genuine attempt at winning, will merely take defensive actions which allow him to get to the end of the fight, sustaining the minimum of damage and thus avoiding knockdowns or knockouts.

could cause the boxer to hesitate and may allow the punch which turns the contest back in his opponent's favour. We have an instance of empathy without sympathy.³⁰

So what gives rise to this feeling of going into “overdrive”? Perhaps a good place to begin is with the work of Iris Marion Young who, in her 1980 paper, *Throwing Like a Girl*, tries to explain ‘the remarkable difference in the manner of throwing of the two sexes’, first observed by Erwin Straus in his 1966 paper *Upright Posture*. Young begins by criticising Straus’ explanation for the difference in how boys and girls throw. Straus claims that a femininity of action develops as a result of biological differences in females, namely weaker muscle power. Instead Young, following Simone de Beauvoir, claims that every human existence is ‘defined by its situation’ and that women, traditionally having grown up under very different socio-historical circumstances, were afforded fewer physical opportunities than their male counterparts.

The main differences in how girls and boys throw are described by Young as follows:

... girls do not bring their whole bodies into motion as much as the boys. They do not reach back, twist, move backwards, step and lean forward ... girls tend to remain relatively immobile except for their arms, and even the arm is not extended as far as it could be. (*ibid.* p.142)

Young goes on to say that a failure to make full use of the body's ‘spatial and lateral potentialities’ is not restricted to throwing, but can be found in any number of physical activities including walking, sitting, standing, hitting, climbing, running and carrying, and that the difference in how each of the sexes performs a task is not entirely down to brute strength or having a particular physiology. How women perform in certain tasks is often down to how they approach the task, and if they believe themselves incapable of successfully completing a task will fail to put their whole bodies into the motion in the way that men would be more likely to do.

For many women as they move in sport, a space surrounds them in imagination which we are not free to move beyond; the space available to our movement is a constricted space ... Women often approach a physical engagement with timidity,

³⁰ I have discussed this as a possibility in the previous chapter.

hesitancy and uncertainty. Typically, we lack an entire trust in our bodies to carry us to our aims. (*ibid.* p.143)

Young puts this hesitancy and uncertainty down to two main things: a lack of confidence and a taught fear of getting hurt. She explains that girls often experience their bodies as a ‘fragile encumbrance’ and feel more of a need to focus on their body to ensure that it is performing as it should, as well as to the damage that can be done to it, rather than paying attention to what they want to achieve *through* the body in activities. Feminine movement, according to Young, is hindered by three key modalities: *ambiguous transcendence*, *inhibited intentionality* and a *discontinuous unity* with its surroundings. These, she argues, are the result of the girl experiencing her body both as ‘a *thing* at the same time she experiences it as a capacity’ and her movements become ‘rooted in immanence’ (*ibid.* p.145) where she is unable to fully commit herself to successful performance and instead attends to the movement of only a limited part of the body.

Before going any further, it is worth clarifying Young’s use of ‘immanence’. It is based on Simone de Beauvoir’s use of the term. In this sense, immanence describes the ‘*historic domain assigned to women*’: this domain is one in which women are immersed in themselves, looking inward rather than outward. Immanence can perhaps be better understood in relation to the opposing term of ‘*transcendence*’ which, for de Beauvoir, is the domain inhabited by the male which not only bestows upon him the liberty to become powerful, creative and active, but allows him to propel himself into the world with greater freedom and confidence. Cindy Sherman (2013) explains this term of immanence thus:

Being condemned to immanence is for consciousness the experience of not being able to actualize its transcendence, being riveted to one’s corporeal being or a person’s inability to escape from being seen as one’s body. The impossibility of making one’s freedom effective in the world implies the inertia of existence ...
(Sherman, zeynepdirek.com, 2013)

This failure to ‘escape from being seen as one’s body’ prohibits women from fully extending themselves into the world when carrying out actions. Whilst performing an action she remains partly attentive to the fact that she is an object to which things can happen rather than being fully focused on the task at hand and, as a result, she fails to fully commit her entire body to the accomplishment of the task. Young describes such actions as being ‘rooted’ or ‘overlaid’

with immanence. Therefore, largely based de Beauvoir's idea of immanence, and on Merleau-Ponty's idea of transcending the body to act directly upon the world, found in his *Phenomenology of Perception* (1962), Young argues that women are less able to achieve transcendence in the way that men might, since their transcendence is 'overlaid with immanence' - hence the term *ambiguous transcendence* and the fact that their performance of tasks has less conviction and assuredness. Further, for a task to be performed with confidence and conviction, with freedom and fluidity, there needs to be an *uninhibited intentionality*, which:

... projects the aim to be accomplished and connects the body's motion toward that end in an unbroken directedness which organises and unifies the body's activity. (*op. cit.* p.146)

For Young, a girl's intentionality is inhibited as a consequence of her '*projecting her intentionality*' towards the achievement of an end or goal, while at the same time refraining from committing her body fully to the completion of the act. This lack of commitment evolves in part due to her lack of belief and in part due to her assumed fragility, both of which arise as a result of her being 'rooted in immanence'. Rather than unifying her body to perform the task, the girl, utilises only one part of her body, meaning that only that part of the body is transcending towards the aim or goal, while the rest of the body remains static or withdraws into a more protective action. Consequently, during the throwing motion, the moving part becomes discontinuous with the rest of the body, there is no bodily unity, and there becomes little connection between the intended aim and the action itself.

Essentially, for Young, women are more aware of being objects to which things can happen than of being subjects capable of successfully performing physical acts with any degree of confidence or certainty. Their attention is often split between the achievement of the goal and the awareness of the bodily movement utilised to achieve the goal, which serves to restrict movement and present to the female a number of "I cannots", which in turn negate the "I cans" and fill the woman with doubt and hesitation. It could be said that, according to Young, females see themselves more as objects than as subjects.

'*Inhibited intentionality*' describes the way women have been 'historically and culturally taught to navigate space' (Ames, 2008). The most significant consequence of this is that women experience their bodies as objects, which Young, using Merleau-Ponty, argues inhibits bodily

activity in the world. However, the term ‘inhibited intentionality’ doesn’t seem to quite describe what happens in Young’s account of the female reticence in the performing of actions. Seemingly, Young has used the term ‘intentionality’ in a very different way to the philosophical, and in particular Husserlian, use of the term. For Husserl intentionality lies at the heart of consciousness and, for the Husserl of the *Logical Investigations*, consists of three key features: the intentional act, the intentional object and the intentional content.

The intentional act is simply the kind or type of act that is being performed and can include, among other things, perceiving, believing or remembering, while the intentional object is the thing or subject that the intentional act is about. For example, if I see a red Ferrari, then the intentional act is that of perception, with the Ferrari being the intentional object. The third feature of Husserl’s intentionality is intentional content, which is essentially the how of the noematic givenness.

In this sense, intentionality is a property of mental states that is directed towards or about some object. For Husserl however, this object does not necessarily have to exist in the external, physical world since, for example, I am perfectly capable of forming mental representations of a unicorn, a dragon and a Minotaur – or even a hybrid of the three – despite the lack of a referent of my representations in the physical world. As a result, Husserl rejected the notion of an “object-causal-relational” view and asserted that an act’s intentionality is independent of whether or not the object actually exists. Ronald McIntyre and David Woodruff Smith, in *Theory of Intentionality* (1989), call this feature of intentionality “existence-independence”.

However, even when there does exist a physical object on which an intentional act is performed, the intentionality of the act is independent of anything which might be true of that object. McIntyre and Woodruff-Smith use an example from Greek mythology to highlight this point:

Oedipus despised the man he killed on the road from Delphi although he did not despise his own father; he desired to marry the Queen although he did not desire to marry his own mother; and he loathed the murderer of King Laius before he came to loathe himself. (*ibid.* p.4)

Of course, the man Oedipus killed *was* his father and the Queen he married *was* his mother and so an explanation is required as to how Oedipus could hold seemingly incompatible desires simultaneously. The answer, according to McIntyre and Woodruff-Smith, lies within Oedipus’

mental states and that his desire was not “*for* Jocasta”: it was for “Jocasta *conceived* in a particular way”. The intentionality of an act is not then dependent on the representation of an object, but the manner in which the object is *conceived* by the subject. McIntyre and Woodruff-Smith call this ‘*conception-dependence*’. As a result of this ‘existence-independence’ and ‘conception-dependence’ Husserl sees intentionality as internal to experience, rather than subscribing to any kind of ‘object theory’ (*Viz.* Berkeley 1710/1988 and Locke 1689/2004). He rejects the idea that the external object is an essential part of the act’s intentionality and asserts that it is in fact the act’s content which makes it intentional. Further, different intentional contents can be directed towards the same object, with each content representing the object in a different way. So, fearing the Minotaur or admiring it, for example.

Taken in the above sense, Young’s notion of intentionality being in any way inhibited is very difficult to grasp since intentionality, by its very nature, is always ‘of’ or ‘about’ something which, for Husserl, is fundamental to our having conscious awareness. Intentionality is the feature of the mind which allows us to form representations, and so for Young to suggest that this feature could in some way be ‘inhibited’ suggests that females are somehow less capable of forming such representations, that their capacity for forming them has in some way been diminished and they become less consciously aware. However, this seems to contradict her idea that women fail to perform certain tasks with the competence and proficiency of their male counterparts as a result of being overly *aware* of their bodies, overly *aware* of the pain or damage they may suffer as a result of fully committing themselves to the tasks and overly *aware* of themselves as objects rather than subjects. Yet this does not leave Young’s idea entirely without merit. Rather than talking about a woman’s ‘inhibited intentionality’, which seems to lead to the conclusion that she is somehow less able to form mental representations, it might be better to assert that, as a result of socio-historical conditioning, the female *intentional content* is different from that of a male.

In the case of catching a ball, for example, the male and female both perform the same intentional act (perception) and perceive the same intentional object (the ball), but their intentional content differs in that the male’s conception of the ball is that of something to be caught, while the female’s conception, although of something which can be caught, is also of something which could be painful to catch or be dirty. As a result of this differing intentional content, the male will ‘throw’ himself into the world, moving through his body, fully transcendent, in order to reach out and catch the ball. The female, on the other hand, aware of

her body as an object which is to be protected, will simultaneously move towards and withdraw from the ball, perhaps raising only her hands or arms while at the same time attempting to protect her face or other parts of her body. This creates two possibilities. The first is that female intentional content is different to male intentional content, and the second is that Young means 'intention' and not 'intentionality'. A difference in intentional content implies a difference in action possibility and so the above example of catching the ball is not a case of inhibited intentionality, it is a case of variation in intentional content.

In any case, there is discontinuous unity, where the failure to "forget" the unmoving or protected part of the body results in '*ambiguous transcendence*'. The immanent remains immanent even though there is pressure to transcend, resulting in hesitation and discontinuity of action and, in the case of catching the ball, will often lead to the female turning away and failing to achieve a successful catch.

So let's now return to Ricky Hatton and the feeling of 'overdrive'. Hatton, in the earlier quotation, describes how he sensed his opponent beginning to 'wilt', an observation which propelled him into 'overdrive'. When a boxer prepares for a fight he will, provided he has a coach of any worth, work on a variety of both offensive and defensive techniques. There is very little value in perfecting powerful, offensive combinations if the fighter is unable to elude at least some of the punches and combinations that come in the other direction. Further, if the opponent is known beforehand³¹, the defensive techniques being worked on will be structured around the opponent's strengths, weaknesses and habits. Training in a way that takes into account the capabilities of the opponent, in particular his strengths, is a tacit recognition of that opponent as a subject, an intentional agent, capable of performing actions intended to inflict damage. This is vastly different from working on a punch-bag, where the boxer is focused more on the punches, angles and movements which will allow him to land his own combinations, without being overly attentive to anything coming back at him in any meaningful way. In other words, with the punch bag, he is more focused on performing an action on an object than on being acted upon, which allows him more freedom to punch and move as he pleases, as well as to dictate intensity and work rate, a freedom which is significantly reduced when faced with a live opponent in sparring or in a contest. However, this does not remain the case throughout the entirety of the fight.

³¹ This is not always the case in amateur boxing, where a draw is made at bigger tournaments.

Kostya Tszyu, Ricky Hatton's opponent, came with the reputation of having explosive power, particularly in his right hand, and had accumulated twenty-five knockouts in only thirty fights; certainly an impressive statistic. Consequently, although Hatton wouldn't have been scared, as such, he would certainly have been under strict instructions not to 'rush in' since this would have greatly increased the chances of him being caught on the way in and almost certainly knocked-out himself. Hence, he didn't 'go into overdrive' early on in the fight. Indeed, this would have gone against Hatton's natural instincts since he made his name as an all-action, come-forward fighter who himself had stopped twenty-nine of his previous thirty-eight opponents earlier, albeit not with the one-punch power that Tszyu had displayed throughout his career. However, by the eighth round, as a result of Tszyu 'wilting' and his 'spark and snap' beginning to wane, Hatton saw him as less of a threat, less of a subject capable of performing actions, and more of an object on which he could perform his actions more freely and with less inhibition. Hatton then became more focused, more attentive, on the action he wished to perform and less restricted by any concerns he may have had of being caught himself.

Although Young didn't have boxing in mind when she published *Throwing Like a Girl*, much of what she said can be applied to Hatton in the early stages of the Tszyu fight. Firstly, although not scared, Hatton would certainly have been apprehensive in the early stages of the fight and would have been, among other things, making sure he was moving his head away from Tszyu's right hand, keeping his own left hand high, keeping his feet the correct distance between himself and Tszyu, and ensuring he used his body to smother Tszyu's work after he had thrown his own punches. All of these things involve attending to his own body, preventing him from engaging in an all-out attack. In other words, his movement, rather than being fully 'transcendent', was 'discontinuous', experiencing his body as a 'thing' and at the same time a 'capacity' and so he didn't fully commit himself to his attacks in the manner he usually would. Further, his attentional focus was narrowed and his possibility of action limited in that he did not fully commit himself to his aim of inflicting damage on his opponent since he was aware of his own fragility, his own susceptibility to being hurt due to the reputation and physical presence of his opponent. As a result, the directedness towards the aim is not unbroken, since even during his own attacks he remains apprehensive and these attacks become laden with the extra aim of taking evasive action. Although Hatton may have thrown punches which he intended landing on Tszyu's head and body, he was, at the same time, moving other parts of his body in a way which allowed him to take evasive action, but which prevented him from going into an all-out attack. In the eighth round things changed.

The most significant change was that, as a result of Kostya Tszyu losing his ‘spark and snap’, Hatton then saw him as less of a threat, less as a subject capable of inflicting damage and more of an object on which he, Hatton, could act upon. In other words, there was a shift in the *intentional content* of his attitude towards his opponent which allowed Hatton to see Tszyu less as something which could hurt him and more like something he could hurt. Put otherwise, there was an expansion of his horizon of possibilities or opportunities. This allowed Hatton to throw more punches and to do so with a greater degree of confidence and conviction since his movements were no longer restricted by attention to his own susceptibilities. His transcendence was no longer ‘overlaid with immanence’ and his focus became solely on one aim: to hit his opponent as often as he could with his fists, but this time without the ‘discontinuousness’ of having to employ other parts of his body in taking evasive action. He had reached a point where his body was unified and moving towards a single aim, his body’s motion was towards an ‘unbroken directedness’ with his intended goal.

All of the above has been described from the experiential perspective of the winner of the contest, but what of his vanquished opponent? What is the phenomenological experience of a wilting fighter on the receiving end of the punishment? Basically, things happen in reverse. At the turning point of the fight, when the fight starts to get away from the losing fighter, he becomes much more aware of certain things to which he had previously not attended. As he tires, he will become more aware of the speed and depth of his breathing, the weight of his arms, the tiredness in his legs and the time it takes for the bell to ring to mark the end of seemingly lengthened rounds. However, more crucially at this point, the fighter will become far more focused on the damage his opponent can inflict on him than he will on inflicting his own damage, his movements will become more restricted and most of the movements he does make will be defensive: reactive rather than proactive. Every so often, he may throw a wild, winging and looping punch, with very little chance of success of landing, in the hope that he may gain some respite from the onslaught of his more energised and invigorated opponent, but generally any movement he will make will be designed to limit the damage he receives rather than to mete out any of his own. In other words, he will become restricted by a pervading immanence and he will become more aware of being an object to which things can happen than of being a subject which can make things happen.

As with the females described by Young, the losing fighter will become more aware of his fragility – that is, the likelihood that the receiving of much more punishment will end the fight

for him – and so he will not, or cannot, commit his body fully to the action of punching with any genuine conviction. Although his weakening punches will move part of his body closer to his opponent, his real objective will be to keep a safe distance between them. His desire for self-preservation will keep him ‘rooted in immanence’ and this will in turn cause his intentional content to shift, viewing his opponent as someone who can inflict damage upon him, he will be aware of his own fragility, and his body will not move in a continuous unity. The seconds will tick pass much more slowly and the rounds will seem far longer than the scheduled three minutes as he becomes increasingly enervated and drained of confidence. His aims now alter from victory to survival, but the actions and movements in the former are of his own volition, while the actions and movements in the latter are a result of his opponent forcing him into a position of limited choices and volitions.

2. Pain, fatigue & limited affordances

Another way of looking at what happens to the losing boxer is that he has a diminishing horizon of action possibilities or what are commonly called *affordances*:

The affordances of the environment are what it offers the animal, what it provides or furnishes, either for good or ill. (Gibson, 1979, p.127)

Affordances can be considered to be properties or features of objects which allow us, as subjects, to perform certain actions. For example, a coffee mug offers, among others, the affordance of being filled with hot or cold liquid. It also offers other affordances for which it wasn't designed, such as being thrown, kicked or smashed. So, affordances can be things for which the object was originally designed, but they need not necessarily be so. A book is designed to be read or written on, but it can just as easily be, among innumerable other things, thrown, eaten, torn or even burned as fuel for a fire. Naturally, the more affordances something has for us, the greater the number of action possibilities it presents for us. Furthermore, as Chemero (2003) notes, in order for an object to have affordances, a subject with ‘the capabilities to perceive and use it’ is required, thus the book only offers the affordance of being read to a subject capable of reading it; the book would lack such an affordance to a subject who was illiterate, non-human or unfamiliar with the language in which the book has been written. Therefore, perhaps most interestingly for this work, the number of affordances available to us seems to increase with our capabilities, and decreases as our capabilities diminish. It doesn't

seem overly-controversial to assert, for example, that a book has more affordances for a human than it does for a fish or a donkey, or for a literate human than an illiterate one, although it could be supposed that this might depend on the scope and limits of one's imagination.

This idea of 'perceived affordances' could then help us to further understand the differences described by Iris Marion Young with regard to the restricted movements of women, or indeed the constrained, inhibited actions of the losing boxer. However, before we do that, we should note that it is widely accepted that affordances are what Chemero calls animal-relative properties, and that there are contrasting ideas about what affordances are and how they are perceived.

This section will look at three such ideas: a selectionist view as postulated by Reed (1996) where affordances are properties of the environment which exist independently of any perceiving subject, affordances as dispositional properties argued for by Michael Turvey (1992) and a third offering from Anthony Chemero (2003) who sees affordances not as properties but as relations between animals and their environments.

Edward Reed offers a selectionist, almost Darwinian, view of affordances and claims that affordances are animal-relative properties of the environment which somehow influence the animal in terms of how they develop both their perceptual systems and their behaviour:

The affordances of an animal's environment exert selection pressure both developmentally and evolutionarily on the course of animal's activities. But affordances are merely facts of the environment ... (Reed, 1996, p.47)

For Reed, the environment has a major part to play in an animal's evolutionary process since the animal's perceptual systems, behaviours and habits are formed through adapting to the contingencies that arise in its environment and the affordances that they offer. Reed gives the example of a fruit tree from which a bird or mammal picks a piece of fruit for the first time. The piece of fruit only lasts for '*a single bout of eating*' but over time the animal is able to adapt its eating behaviour in accordance to certain features of the fruit which it cannot eat or digest, such as rotten parts or seeds. Over time, the animal adapts its behaviour such that it is able to pick and eat the fruit in the quickest and easiest way possible and, since the tree remains there for several years, the descendants of the original animal also respond to the affordances offered by the tree in similar ways. Further, since a forest may consist of several of these trees spread over a vast area, the trees can '*exert selection pressure*' on a variety of species and

animals. A similar evolutionary story can be told about the giraffe, whose long necks evolved as a result of being in competition with other animals, such as antelopes and elephants, for the lower, easily reachable leaves. Not only was their competition for leaves, but these would have already been in short supply given that the giraffe lived in the mostly dry, arid plains of Africa. Charles Darwin, in his *Origin of Species* (1872), illustrates this point:

The giraffe, by its lofty stature, much elongated neck, fore-legs, head and tongue, has its whole frame beautifully adapted for browsing on the higher branches of trees ... Those individuals which had some one part or several parts of their bodies rather more elongated than usual, would generally have survived. These will have intercrossed and left offspring, either inheriting the same bodily peculiarities, or with a tendency to vary again in the same manner; whilst the individuals, less favoured in the same respects will have been the most liable to perish ... (Loc. 3488)

Over time, giraffes – or their evolutionary predecessors - born with longer necks were therefore more likely to survive as a result of being able to reach the higher leaves. Reed would view the high leaves on the tree, combined with the existence of competing grazing animals, as exerting ‘selection pressure’ on the giraffes by bringing about an evolutionary change in their physiological composition. Importantly for Reed then, since affordances are properties of the environment which regulate the animal’s evolution and behaviour, these affordances can exist without the presence of any animals to perceive them.

In contrast to Reed’s selectionist view of affordances is Michael Turvey’s (1992) claim that affordances are in fact *dispositional properties* of the environment, properties which, for Turvey, have three main characteristics:

- a) ‘The disposition to do Y is prior to doing Y, b) dispositionals come in pairs. Complementarity occurs in the very definition of a dispositional property’, and c) ‘Dispositionals never fail to be actualised when conjoined with suitable circumstances. Dispositionals and suitable circumstances equal actuality.’ (p.178)

For Turvey then, *dispositional properties* allow an object to display other properties if and when the correct circumstances are created; Chemero calls these ‘*actualising circumstances*’. For example, sugar has the dispositional property of being soluble, where only under certain circumstances it dissolves and water has the dispositional property of being frozen, where only

under the correct actualising circumstances it freezes. Further, under the correct actualising circumstances, sugar will *always* dissolve and water will *always* freeze. Similarly for Turvey, affordances are dispositional properties of the environment in that, under the correct conditions, the environment will necessarily display certain other properties. An example of this would be something being potable only if there exists an organism which is capable of swallowing and digesting the liquid. Turvey's account agrees with Reed's in that they both take affordances to be animal-relative properties of the environment, but differs from Reed's in that the environment does not (cannot) 'exert selection pressure' on the animal and, also contrary to Reed, no property of the environment can be considered an affordance unless it is accompanied by complementary properties of animals which create the correct actualising circumstances. The properties of animals which create this complementarity are their abilities or, as Turvey terms them, *effectivities*, which allow animals to exploit the affordances offered to them by the environment.

Chemero (2003) offers another account. For him, affordances are not properties, nor do they exist in the environment, they are 'relations between particular aspects of animals and particular aspects of situations'. In terms of affordances not being properties, Chemero draws a distinction between perceiving properties and placing features. Chemero gives the following example to help draw out the distinction:

Compare, for example, realizing that your car is dented with realizing that it is raining. In the former case, the perception of a property of the car, you must (a) perceive a particular entity; (b) know its identity, that it is your car; (c) know what it is to be dented; and (d) perceive that this particular entity (your car) has this particular property. In the last case, the placing of a feature, there is no need to know anything about any particular entity. All that is necessary is the ability to recognize a feature of situations (raininess). To see this, consider that the *it* in "it is raining" is never the same thing; it refers to a situation (what is going on right here, right now) that will never happen again ... perceiving affordances is the placing of features, and because features are not properties, any view of affordances that takes them to be properties is mistaken. (p.185)

Given that Chemero sees affordances as features of whole situations and, given that animals are parts of these situations, perceiving something about any particular situation must involve the animal as perceiver and cannot be solely about the environment. Indeed, Chemero goes

further than merely asserting that affordances are some kind of animal-environment system, but goes on to claim that they are relations and not properties. In this sense, affordances are something like “taller-than”, which has no physical existence in the environment. “A is taller than B”, is perfectly comprehensible and yet not only does “taller-than” not exist in the environment, it also not inherent in either Subject A or B. Of course, phrases like “taller-than” are two place predicates, where A and B are the predicates, but they can also be multi-place predicates, and in any complex environment they will be.

Chemero, also argues that abilities are not dispositions, primarily because dispositions are guaranteed to happen under the correct circumstances, in the way, for example, that sugar is guaranteed to dissolve when it is placed in water. Abilities, on the other hand, *should* give rise to certain behaviour in individuals under the right circumstances, but this behaviour does not always become manifest and Chemero gives the example of the possibility of falling, even under the ideal conditions for walking. Instead, Chemero describes abilities as *functional properties*, which are dependent on an animal’s evolution and how it has developed during the course of its history. These are properties which have, at some point in the past, assisted the animal in its quest for survival, but which do not always come to the fore under the same or similar circumstances due to what Chemero calls *malfunctions*, which are impossible in the case of dispositions due to the fact that dispositions invariably become manifest under the appropriate actualising circumstances. It may be worth noting here that the sugar example described above involves chemicals and physical processes which, under the correct actualising circumstances, always become manifest. Further, in the sugar example, the circumstances are fairly simplistic – adding sugar to water - but Chemero is talking about intentional agents whose environment is laden with a far greater number of complexities which can cause an agent’s functional properties to malfunction.

Whether they are taken to be properties of the environment, dispositions or relations between animals and the environment, this idea of ‘perceived affordances’ could help us to further understand the differences described by Iris Marion Young with regard to the restricted movements of women, or indeed the constrained, inhibited actions of the losing boxer.

3. Temporality, affordances & discontinuous unity of action

The *discontinuous unity* described by Young occurs, she argues, as a result of a female's actions being 'rooted in immanence', which causes her to become overly aware of her own fragility and, consequently, approaches a task with less confidence and self-assurance than a man would. Young gives an example from the field of sport:

... in softball, or volleyball, women tend to remain in one place more often than men, neither jumping to reach nor running to approach the ball. Men more often move out toward a ball in flight and confront it with their own countermotion ... We [women] frequently respond to the motion of a ball coming toward us as though it were coming *at us*, and our immediate bodily impulse is to flee, duck or otherwise protect ourselves from its flight. (1980, p.143)

Essentially then, women tend to see the ball as something which can hit or even hurt them, whereas men, according to Young, view the ball as something they can catch, hit, strike or attack. It could then be said that the woman perceives the ball as having fewer - or at least different - *affordances* than men do. Of course, as stated earlier, these observations must be placed in historical context and Young was writing at a time where women were less involved in sports or physical activities than they are now, but even taking these observations in isolation, it still seems to be the case that women perceived fewer – or separate - affordances than men. Returning to the boxing ring, a similar story can be told of the beaten fighter's affordances.

Although operating within a confined environment - the boxing ring - a fighter has numerous options in terms of where he moves, the direction he moves in, as well as the type, number and variation of the punches he throws at his opponent. His opponent, and indeed the ring itself, offers the fighter a number of affordances – which could conceivably change from second to second as his opponent drifts in and out of punching range and manoeuvres around the ring - and how quickly he perceives and uses these affordances will determine how successful he is in terms of winning the fight. Of course, if his opponent perceives more affordances and acts upon them more effectively, then it is his opponent will gain the upper hand. So what would it mean to a fighter to perceive more affordances than his opponent?

There are often a number of reasons given as to why one fighter defeats another including: fitness, reflexes, footwork, power, "ringmanship", tactical preparation, hand-speed or even

luck.³² However, rarely in boxing media is a fighter's triumph ever described in terms of his greater perception and exploitation of affordances given to him by his opponent. But very often this is the reason.

On June 19, 1936, Joe Louis fought German fighter Max Schmeling. Schmeling's team had noticed, Louis continually brought his left hand back to his waist (rather than back to his chin) after he had thrown it, and this allowed Schmeling to wait for Louis throwing the punch and to counter with his own right hand. Despite being caught repeatedly with right hands, Louis continued to make the same mistake over and over until he was eventually stopped in the 12th round. Apart from the fact that Schmeling had found a weakness in Louis which twenty-four previous opponents had failed to identify, he was also able to exploit that weakness to his own advantage in order to gain the victory by stoppage. It could also be said that Louis' face, particularly the left side, offered an *affordance* which Schmeling was both capable of perceiving and exploiting to his advantage.

To be a gifted fighter then not only demands that the fighter has an array of physical abilities, but it also requires the perception of an opponent's weaknesses, the perception of the opponent as an object and the affordances he offers, namely the number of ways and areas in which he can be hit. In the early part of the fight, while Tszyu was sharp and dangerous, fewer affordances were perceived by Hatton and so his own movements and attacks were more guarded and circumspect. However, when Tszyu tired an alteration in Hatton's intentional content meant that, for Hatton, Tszyu became less of a subject and more of an object and the number of affordances multiplied, which in turn allowed him to act with less restraint, go into overdrive and go on to win the fight.

For Kostya Tszyu however, the reverse happened. As he became more tired, his arms became heavier and his legs weaker, his range of capabilities diminished and with that, the number of affordances available to him reduced dramatically. The number of affordances he perceived with respect to Hatton diminished as his capabilities began to decline through tiredness, pain and fatigue. As Hatton put him further and further into submission, he began to see Hatton less as an object offering affordances to him and more of a subject with the power to act upon him, and his movements became much less varied and far less free. Any punches he did throw,

³² There have also been several examples of corrupt or incompetent judges throughout boxing's chequered history which have wrongly declared a clearly beaten fighter as the winner.

which were likely to be very few as he worried about being painfully countered, would have been defensive ones, designed to prevent further onslaught, rather than offensive and they began to lack the necessary power or force to deter his hard-hitting and uncompromising opponent. He then, as with Iris Marion Young's reticent and fragile females, becomes *overlaid with immanence*, which caused him to be hesitant; which only served as a further invitation to his uncompromising foe to attack with greater confidence and conviction, powerful aggression and forceful brutality.

In the preceding chapter, the effect of fatigue on the experience of time was discussed in terms of the apparent relation between how tired a boxer feels and how quickly time passes for him, something which, I contend, can be examined in terms of the Husserlian notions of retention and protention. An exhausted boxer will go into a survival mode, with each action designed for self-preservation as the range of action possibilities decreases with each passing second. At least part of his focus will be on the passing of time which, as it appears to slow down, will only reinforce the feeling of complete exhaustion. The boxer's movements will become far more defensive and ungainly as he waits desperately for the sound of a bell which seems to take forever to ring. As the fight goes on, each round seems longer than the last for the losing boxer as his thoughts become only of remaining as elusive as his exhausted body will allow and the sound of the bell.

It seems now that we have a case for saying that there is an interrelation between fatigue, temporal awareness and inhibited intentionality which leads to a perceived narrowing of the horizon of possibilities. Further, the link between fatigue and the slowing of time might suggest that the reverse could also be true and that the quickening of a boxer's phenomenological experience of time could lead to the feeling of less fatigue, which in turn could open up his horizon of action possibilities and increase his chance of winning or, at least, make the process of losing feel far less like prolonged suffering.

In sections 4, 5 and 6 of this chapter I will examine the phenomenology associated with successful and unsuccessful execution of actions and how fluid, uninhibited movement is essential to successful sporting performance.

4. Volition

David Woodruff Smith in *Consciousness in Action* (1992) argues that acting intentionally involves volition, and that action itself is bodily movement caused by volition. Conscious action necessarily involves the awareness of both volition and bodily movement. The phenomenological problem, as seen by Smith, involves the understanding of what we are conscious of during the performance of an action. According to Woodruff Smith, when we perform an action, we have three modes of awareness: volitional awareness, kinaesthetic awareness and perceptual awareness. These three modes of awareness are interdependent and together constitute the overall experience in acting.

Experience of acting consists in my conscious volition, which occurs against the background of my relevant kinaesthetic and perceptual awareness ... I am attending to what I am willing rather than to what I see or what I feel of my bodily movement. (*ibid.* p.122)

But are we conscious of our volition? Smith argues that we are and cites an experiment carried out by Neurologist Wilder Penfield who attached electrodes to a particular section of a patient's motor cortex, causing the patient's hand to move. Upon seeing his hand move, the patient denies that he moved his hand by claiming "I didn't do that, you did!", which suggests that we do, in some way, experience the volition involved in our intentional actions, making it a fundamental part of the phenomenological structure of acting.³³ Further, this volition, for Smith, is the defining phenomenological difference between cognitive intentionality and practical intentionality or, put otherwise, thinking about carrying out an action and actually doing it. But what of the other two modes of awareness: kinesthesia and perception?

Smith uses the example of digging with a shovel to highlight the interdependence of volitional, kinaesthetic and perceptual awareness:

I normally cannot perform the conscious action of picking up the shovel, by my volition to pick it up, without having a kinaesthetic awareness of my movement

³³ One objection to this is that there is another obvious interpretation: the fact that the patient experienced the unwilling action as being done by someone else, does not entail that in normally willed actions there is any experience of a putative 'volition'. It seems that DW Smith needs some positive account of the awareness or experience of a volition. This objection is looked at in more depth below with respect to Bayne's (2008) notion of 'agentive experience'.

and a perceptual awareness of the shovel and its movement in my hands. (*ibid.* p.123)

Essentially then, although my volition to act causes my body to move in ways such as to complete the action, kinaesthetic and perceptual awareness are necessary in order for me to successfully do so. Interesting though, is Woodruff Smith's assertion that neither of these are in fact *attentive* types of awareness and that my attention is turned to what I am doing, rather than to "*my awareness of my doing it*", hence the reason kinaesthetic and perceptual awareness remain in the background acting, as it were, as guides to the completion of the action, as well as feedback channels which allow me to measure the success of my intended action. Returning to the shovel example then, I am willing that I pick up the shovel, I am kinaesthetically aware of my arms moving in a particular way and I have both visual and tactile perceptions of a shovel in my hands. I am conscious of acting then, in that I am aware of willing and performing the action against a background consciousness of kinesthesia and perception and our experience of acting is "an experience of consciously executing the action." (*ibid.* p.125)

Jack Reynolds quotes from Merleau-Ponty's *The Structure of Behaviour*:

[The football field] is pervaded with lines of force (the 'yard lines'; those which demarcate the penalty area) and articulated in sectors (for example, the 'openings' between the adversaries) which call for a certain mode of action and which initiate and guide the action as if the player were unaware of it. The field itself is not given to him, but present as the immanent term of his practical intentions; the player becomes one with it and feels the direction of the goal, for example just as immediately as the vertical and horizontal planes of his own body. (p.168)

Here then we have another example of an intentional action taking place, where both perceptual and kinaesthetic perception, despite being vitally important for the completion of the action, remain in the background. Although he must perceive the football field in order to achieve his goal, it is not necessary, as Reynolds puts it, that he be aware of perceiving it. As with the digging example, where we perceive the shovel, but only *attend* to the successful execution of our intention to dig, the footballer perceives – among several other things - the football field, but only *attends* to the scoring of a goal. In other words, it is not necessary that he *attends* to his perception of the field, but only that he has this perception, which will help provide feedback on the success of the volition.

Causation also has a role to play in Smith's phenomenology of action. It is not simply the case that I have an urge to act and then my body moves in a certain way, which so happens to satisfy my urge. Rather, there is an awareness of my movement being caused by my volition to act. Indeed, I am also aware of my bodily movement being the cause of other changes to the world, an awareness brought about by way of kinaesthetic and perceptual feedback which confirms the success of my volition, thus:

I experience this causation precisely insofar as I experience the volition, and collaboratively the kinesthesia and perception that attest to its causal efficacy ... In this way I experience the whole causal process of volition bringing about bodily movement ... (*op. cit.* p.126)

This would seem to be correct. It would seem unlikely that we would intentionally turn a desire or urge into a volition to act unless we believed that such volition would *cause* bodily movement, which in turn would bring about the desired changes to our world. Again however, as with kinaesthetic and perceptual awareness, it is not necessary that we *attend* to this causation, but only that we are conscious of the changes being brought about by the bodily movements which in turn are a consequence of our volition.

Crucially, for Smith, the physical body plays a significant role in what he calls 'practical intentionality'. Apart from the obvious necessity of bodily movement being involved in action, the experience of acting "involves the awareness of oneself as an acting, bodily 'I'". He explains:

... my body plays three distinct roles: as *part*, *means* and *end* of an action ... the movement of my body is part of the action ... this movement (caused by my volition) causes the intended effect ... the content of my volition prescribes a certain movement of my body caused by the volition ... (*op. cit.* p.137)

When I perform an action, I both move and experience my bodily movements or, as Smith puts it, "I experience myself moving". I do not experience myself as disembodied or somehow removed from the body performing the action, but rather I "experience myself as a moving, acting, bodily being, and this is central to the structure of my experience". Essentially then, the phenomenological experience of acting requires the awareness of an embodied self, an element of self-awareness which allows us to identify and experience ourselves as the agent

carrying out the action. This idea of intentional, perceptual and kinaesthetic awareness can easily be applied to the phenomenological experiences undergone in the boxing ring.

Clearly, there are times during a boxing contest where the actions performed are quick, varied and consist of extremely high levels of aggression. In some twelve-round contests upwards of 2000 punches can be thrown between the combatants which, in addition to feints, slips and foot movements, results in a considerable number of actions performed within a thirty-six minute time frame.³⁴ In terms of Smith's phenomenology of action, the boxer, despite being kinaesthetically aware of his bodily movements and perceptually aware of various things in his environment, does not attend to either of these things. Rather, he attends only to the successful execution of his volition or, put otherwise, that he lands the punches – or he doesn't - and combinations on the desired target, his opponent.

The background of kinaesthetic and perceptual awareness provide the fighter with feedback on how successfully executed his volition has been. In terms of perception, the fighter may see his opponent's head snap back, he may hear the breath leaving his opponent's body if a body-shot is landed or he may even see his opponent fall to the ground if the punches have been landed with sufficient force. With regard to kinaesthetic awareness, the fighter will be aware of the distance between himself and his opponent before and after the punches have landed, he will be aware of his hands moving towards his opponent or of his whole body moving forwards if his opponent retreats and moves back under the pressure of the punches raining down upon him.

Smith uses the term 'successful volition', of which we are made aware through our background perceptual and kinaesthetic awareness. However, is our experience of action more than just an experience of successful volition?

The phenomenology of agency is described by Jakob Hohwy as being:

... associated with a sense of a *minimal self*: the pre-reflective feeling that a given movement is performed by *me*, or that given perceptual experience is had by *me* ...
The minimal self is more like an instantaneous feeling of "mineness" with which experiences are labelled ... though somewhat elusive, it seems introspectively valid

³⁴ Assuming a twelve round contest, which is the length of most high-profile fights.

to say that our experiences come furnished with such a background feeling of mineness ... (2007, p.1)

Hohwy distinguishes between this 'minimal self', which is revealed as 'a sense of already being familiar with new sensory input' and the 'narrative self', which is a self which remains throughout our experiences. Although he acknowledges that such a minimal self is difficult, perhaps even impossible to identify or locate, Hohwy claims that each of experiences are endowed with a feeling of belonging to me.

Tim Bayne, in his paper *The Phenomenology of Agency*, begins by describing the experiences of attempting to flee a burning building and the decisions that have to be made in order to make the escape. Such decisions include which direction to turn, how to open doors and whether or not returning to save a copy of a half-finished manuscript is worth the risk (which it is, according to Bayne). The actions taken in light of these decisions cause Bayne (2008) to assert that there is a number of examples of 'agentive self-awareness' in the agent's attempt to escape:

You experience the movement of your arm towards the door as involving your own agency ... In reaching for the door you experience yourself as doing something in particular, namely, reaching for the door ... You experience yourself as exerting effort in pushing against the door ... You experience your decision to head right (rather than left) as autonomous, as 'up to you' ... You experience yourself as deliberating – as 'making up your mind' – about whether or not to go back for the manuscript. (*ibid.* p.183)

Although Bayne does acknowledge that not all of the above mentioned states need be taken as agentive phenomenon, he does go on to say that he would define such a mental event as 'an action of (of one's own), and action that one is in control of, an action that one is performing with a certain degree of effort and as an action that one is performing freely' (*ibid.* p.184). It is however, my contention that, although some of the events above can be properly described as 'experiences', this term does not accurately describe all of them.

Bayne then turns his attention towards two forms of scepticism with regard to the possibility of agentive experience. The first of these is what Bayne calls the 'Humean strategy' where, through the method of introspection, a failure to locate or identify anything that it is like to be an experiencing agent leads the sceptic to conclude that there is no such thing in either herself or anyone else, a claim which rests on the premise that everyone suffers from the same failure

in identifying agentive content. Such introspection, which seems key to Hohwy's identification of phenomenological agency, is never really addressed by Bayne however. Rather, Bayne identifies two problems with the failure of introspection to yield anything that it is like to experience agentive content: (i) the assumption that humans all experience the same range of phenomenal states may be exaggerated and; (ii) the sceptic may not have grasped certain features of experience which may lie on the edges of consciousness and so are not easily discerned. Indeed, Bayne asserts, proponents of agentive content often claim that agentive content is 'recessive' and 'on the margins of consciousness' (*ibid.*).

The second argument from scepticism is effectively that agentive content is 'experientially inadmissible', an argument Bayne takes from Christine Korsgaard, who claims that we cannot have experience of such activity since 'to experience something is (in part) to be passively receptive to it' (*ibid.*). Bayne finds this argument problematic in that there are other mental experiences which are both passive and 'experientially encoded'. One such example might be belief which tends to be thought as passive and yet it seems perfectly sensible to say that we have beliefs about activity. Bayne does see that a slightly more plausible claim would be to suggest that our consciousness has an innate, natural disposition to prevent agentive content from being part of our experience, although he offers very little in the way of any attempted rejection of this claim.

The challenge for sceptics, as Bayne sees it, is to provide an explanation for the seemingly agentive content in our experiences of acting, content which Bayne claims is easily and readily recognisable to us all. Essentially, why do we think that there is a phenomenology of agency if there is no such thing? Bayne rules out the possibility of bodily sensation being responsible for this apparent experiencing of agentive content, since there is a marked experiential difference between acting and moving, where the former is achieved by one's own volition and the latter by external force. Further, the reduction of agentive content to bodily sensation fails to provide an explanation for mental agency, where things such as mental effort, decision-making and the focusing and diverting of attention all likely involve movements in the head, but are not experienced as such.

Bayne also claims that any attempt to reduce agentive content to other types of mental judgements also fail to provide a satisfactory explanation since there are certain disorders in which the sufferer's 'agentive experience can be at odds with those of judgement' (*Ibid*, 186). The two disorders Bayne describes are the Anarchic Hand Syndrome, where the hand performs

actions not intended by the patient, and the Utilisation Syndrome, where sufferers are unable to desist from manipulating things within their reach. For Bayne, two patients, each suffering from one of these disorders, will report different mental content, with the US patient claiming ownership of his actions, while the patient with AHS will likely deny being the cause of his actions. Although it may be possible to convince the US patient that he is not responsible for his actions and to convince the AHS patient that he is in fact the author of his own actions, both patients' agentic experience will remain unaltered. Consequently, for Bayne, the experiential difference in acting between the two patients is a strong indication that we do in fact have a phenomenological experience of agentic content.

In response to Bayne, it seems reasonable to begin, as Bayne himself does, with the vignette of the person attempting to escape the burning building and the actions taken in order to do so. The actions as described by Bayne include, *reaching* for the door, *exerting* more effort when the door won't open, *deciding* to head right and *deliberating* on whether or not to go back for the manuscript. At this juncture, I don't intend to examine whether or not what are often described as 'mental actions', such as deciding or deliberating, come endowed with a sense of 'mineness' or of belonging to me and instead will focus only on physical actions and whether they are 'furnished with a background feeling of mineness'.

In discussing the Anarchic Hand and Utilisation syndromes, Bayne identifies the fact that there is a definite felt difference between acting and being moved, with the former being the result of one's own desire or volition and the latter being out with one's control, caused by an external force of sorts. Of this there is no question. There is a definite experiential difference between walking along the airport terminal and being carried along by the traveller, or deliberately turning to my left and being swept aside by a strong and sudden gust of wind: walking and turning are undoubtedly experientially different from being carried or being swept.

However, the experience of a lack of control in the latter does not necessarily entail agentic experience, or an experience of 'mineness' in the former. Although we partake in several actions during the course of any day, it doesn't seem plausible to say that every movement that I take is endowed with an experience of it being me who is the agent of these actions. It is only when there is an occurrence, brought about either by myself or some external force, which causes an alteration, or cessation, of my being able to perform the action do I become aware of it as *my action*. It does seem possible, therefore, that there are actions which do not come laden with the experience of that action being mine. Of course, it can be said, as Bayne does, that

during certain actions this agentic experience can remain on the ‘margins of consciousness’ meaning that we are not necessarily fully conscious of its presence. Apart from the fact the Bayne owes us an explanation of what the margins of consciousness might mean, or where they might be, it leaves open the suggestion of there being such a thing as an ‘unexperienced experience’, which is related to Merleau-Ponty’s (1945/2005) “a past which has never been present”. Contrary to Bayne’s claim, the absence of an external force which creates in us the experience of ‘being moved’ does not necessarily give rise to another experience, that of ‘mineness’ or a consciousness, marginal or otherwise, of an agentic experience. This point can be further enhanced by examining disorders of a ‘psychosomatic’ nature.

Jennifer Bullington (2013) in her book on psychosomatic disorders, quotes Katy Toombs, a phenomenologist who contracted muscular sclerosis:

I catch myself watching students running across the campus, or colleagues taking the stairs two-at-a-time, and I marvel at their effortless ability to do so. Try as I might, I can no longer remember how it was to move like that. It is not simply that I cannot recall the last occasion when I walked upright. It is that I cannot recollect, or re-imagine, the felt bodily sense of “walking”. (*ibid*, p.62)

One of the activities noted by Bullington is Ms. Toombs’ inability to recall or re-imagine the felt bodily sense of walking up the stairs to her classroom every day. This however, may not be a result of some psychological malfunction brought about as a result of her condition, it could simply be that due to the habitual and physical nature of walking up the stairs to her classroom, her internal systems prevented any agentic experience of doing so at the time when she was still able to do so. It seems highly unlikely that she would have similar problems recollecting this activity if she had struggled to the top of the stairs every day of her life. One possible way of looking at this may come from Merleau-Ponty.

In his *Phenomenology of Perception* Merleau-Ponty claims that we are neither mind nor body, but are always both, operating at different levels of each depending on the situations presented to us:

Man taken as a concrete being is not a psyche joined to an organism, but the movement to and fro of existence which at one time allows itself to take corporeal form and at others moves towards personal acts ... there is not a single impulse in a living body which is entirely fortuitous in relation to psychic intentions, not a

single mental act which has not found at least its germ or its general outline in physiological tendencies. (1945/2005, p.101)

For Merleau-Ponty there is no separate mind and body, no Cartesian 'ghost in the machine', we are at all times both mind and body, with the capacity for moving between them to a lesser or greater extent depending on what our situation demands. However, for Merleau-Ponty, this is not merely a shift between two levels (which would imply a dualism), but rather the phenomenon here is that there is something more basic than either mind or body; what he calls 'existence'. Merleau-Ponty offers us a sort of philosophy of ambiguity; suggesting that it's exceedingly rare that an action is purely 'mental' or purely 'bodily'. This is what Merleau-Ponty defines as the Lived Body³⁵, which comes prepared and equipped to attune itself to the world on a variety of levels or structures, moving between these structures depending on the demands of our circumstances. Further, through the virtue of being and acting in the world, we develop a sort of 'body knowledge' which Merleau-Ponty calls 'habit', a knowledge which allows us to interact with the world without the engagement of the higher, cognitive, levels of the lived body system. An often-cited example given by Merleau-Ponty is that of driving a car. An experienced driver, on any particular journey, will perform several actions between departing and arriving at the desired destination. Such actions will include, among others, turning the ignition, moving the gear stick, pressing the accelerator, indicating, lowering and releasing the clutch, braking and turning the steering wheel. However, unless a problem arises with the performing of any of these actions, there is no engagement with these actions at our cognitive or higher order structures; these actions have been performed at the level of embodied intelligence, an intelligence gained as a result of acquiring a 'habit', which in turn has been acquired through performing the actions until they no longer require engagement at a cognitive level. Indeed, it has been noted (See Baars 1988, Stamp-Dawkins 1993) that the engagement of higher order structures may even hinder the fluidity of the action to such an extent it is performed in a far less competent manner.

Returning to the unfortunate case of Katy Toombs, as described by Jennifer Bullington, the inability to recall the felt experience of walking up the stairs every day may simply be the result of this action being performed at the physical structure of the lived body, where only habitual embodied intelligence was being deployed. In short, there was no felt (or agentic) experience

³⁵ Merleau-Ponty never uses the expression 'lived body', perhaps because this common translation fails to give some of the connotations of the French. 'Le corps propre', which is perhaps better translated as 'one's own body'.

for her to bring to recollection. Conversely, it seems fair to say that if every day the stairs were wet, or if she had to continually avoid different obstacles or constantly step over people strewn across the steps, then these ‘avoidance strategies’ would have involved a shift towards the cognitive levels of the lived body, which in turn would have resulted in a felt experience or agentive content. Put otherwise, she is unable to recollect the felt experience of climbing the stairs because there never was one; her lived body perceived the stairs and employed embodied intelligence to perform the action, unobstructed by higher order structures.

In re-examining Bayne’s story of attempting to escape the burning building then, it can be said that although some of our actions do come laden with agentive content or *mineness*, it is not true of all of them. It may well be the case that making an effort to open a jammed door, stopping to think about which direction to turn, or making a decision to go back for the manuscript are things which require the implementation of higher structures in the lived body system. However, there are other actions performed during the attempted escape which might only require the embodied intelligence that we attain through habit, which could include: reaching for and turning a door handle, walking, running, stopping, turning, breathing and picking up a manuscript. Against a backdrop of the desire to leave the building, the lived body is constantly “re-tuning” itself, moving between the various structures of which it is composed, in order to carry out the particular tasks that will allow it to accomplish its goal. Further, it is only when a problem arises for which embodied intelligence has no solution - for example the jammed door – do the higher order structures of the lived body become activated and a conscious awareness of our actions becomes present.

It does not seem beyond the realms of possibility to suggest that we have a capacity for inhibiting conscious experience of the mundane and habitual so that we can function more smoothly, or to reserve cognitive capacity for other activity – and become more adept at escaping from burning buildings.

In any case, whether or not there is a felt experience between the desire to act and of perceiving a ‘successful volition’, it is still clear that the experience we undergo when we perceive such a volition needs further elucidation and it is to this which I now turn.

5. Thinking Without Thinking: The Phenomenology of Successful Volition

During active play, a sports competitor will often talk about being in “the zone”. At this point, the competitor will be focused solely on the task at hand, with little or no awareness of anything other than successfully achieving the objectives associated with that particular activity. The golfer’s attention will be on striking the ball straight and towards the intended target and the tennis player will be focused on placing the ball in a position that makes it difficult for the opponent to make a return. In neither instance are there propositional thoughts such as *I am holding a tennis racquet-I will use the racquet to strike the ball into area X-I am doing this because I want to win a point and thus the match* and so on. Indeed, when in “the zone”, the racquet can be said to become a part of, or at least an extension of, the tennis player’s physical body. If every time the tennis player wants to strike the ball she has to remind herself of, for example, the length and weight of the racquet, the size of the racquet head compared to the size of the ball and such things³⁶, her movements will become slow, fragmented and ponderous, and her performance will inevitably suffer. Heidegger would describe the racquet as being ‘ready-to-hand’, where the player, during active play, has no conscious experience of the racquet as an ‘independent object’ with its own set of properties and attributes. The racquet becomes absorbed into being part of the player herself and into the experience of the activity. The example Heidegger gives is that of a carpenter hammering a nail:

The less we just stare at the hammer-thing, and the more we seize hold of it and use it, the more primordial does our relationship to it become, and the more unveiledly is it encountered as that which it is—as equipment. The hammering itself uncovers the specific ‘manipulability’ of the hammer. The kind of Being which equipment possesses—in which it manifests itself in its own right—we call ‘readiness-to-hand’. (1927, 15: 98)

The carpenter then, during the act of hammering, has no conscious awareness of the hammer or, for that matter, the nail or the wood and this lack of conscious awareness continues for as long as the activity remains smooth and trouble-free. Michael Wheeler (2011) says that ‘tools-in-use’ (‘equipment’ for Heidegger) become phenomenologically transparent and that ‘Phenomenologically speaking, then, there are no subjects and no objects; there is only the experience of the ongoing task (e.g., hammering)’. Similarly, for the tennis player, it is

³⁶ Heidegger describes this type of analysis of things as treating things as ‘present-at-hand’.

essential that the racquet becomes ‘phenomenologically transparent’ and the distinction between subject and object vanishes if the player is to perform at the peak of her powers. According to Heidegger, it is only when something unexpected happens which interrupts the smoothness of the activity that we again become conscious of things other than the activity in which we are engaged. This could be a snapping of racquet string, an injury to the competitor or the head of the hammer coming off. In golf, if a competitor is performing particularly badly or if they are lacking in confidence, there are times when they describe their clubs as ‘feeling heavy’ or when they explain how they experience a feeling of discomfort when they address the ball. In other words, the player becomes more aware of the clubs as independent objects rather than a phenomenologically transparent part of himself, his actions and performance become un-smooth and he continues to perform badly.

This idea of ‘phenomenological transparency’ is also similar to David Woodruff-Smith’s awareness of volition against the background of perceptual and kinaesthetic awareness. In this case, the shovel would become ‘phenomenologically transparent’, in that when we are performing the action of digging, we only *attend* to the success of our volition (the soil moving), rather than the movement of our bodies or the shovel. It is not that we completely lose all perception of the tools during successful volitions but rather, that so long as the action remains ‘smooth’ and the soil continues to move, or the nail continues to go further into the wood, we attend only towards the success or smoothness of the intended action. ‘Phenomenological transparency’ then, does not entail a lack of perceptual or kinaesthetic awareness since these, as Woodruff-Smith claims, are necessary feedback channels which inform us of the ‘smoothness’ and success of our intended actions.

When the fighter is throwing or avoiding punches, Heidegger’s model of conscious experience certainly fits, since the boxer, like the tennis player, will not be consciously aware of having two hands on which there are two gloves, which he will attempt to land on the target area of his opponent with sufficient enough force to score a point, knockdown or knockout. He will, like the carpenter with the hammer, be fully immersed in the activity in which he is engaged and his entire consciousness will be fixed upon perceiving his opponent and the objective of bringing about changes to his opponent - by inflicting as much damage as possible - in the same way the carpenter is entirely focused on the experience of driving the nail into the wood. Further, like the nail, the wood and the workbench, the opponent becomes part of the experience and the attacking fighter is aware only of performing an action on him. But the two

activities are not totally analogous. This is because the carpenter, while hammering, gets immersed in an experience that involves only one repetitive motion or activity, namely bringing the hammer down on the nail. Boxing, on the other hand, will involve several independent, but linked, activities, some of which will fit Heidegger's ready-to-hand model and some of which will necessarily involve a return to the awareness of a subject-object distinction. In professional boxing a round lasts three minutes and during these three minutes the boxer is told to protect himself at all times and to break when the referee tells him to. Assuming that the fight is fairly evenly matched, the two boxers will spend as much time moving, slipping, ducking and blocking as they do punching. Crucially, there will be times during the course of a round where the fighters are doing none of these things and are merely facing each other, possibly sizing each other up, taking some respite or planning their next attack: in boxing terms, they are not engaging. A fighter may successfully initiate an attack with a particular punch or combination, for example, straight right-left hook. If the fighter manages to successfully land this combination on more than one occasion, he will then tell himself that his opponent is susceptible to this combination and remind himself to use it more often during the course of the fight. Two things have happened here. Firstly, Heidegger would say that the fighter is now treating his opponent as being *present-at-hand*, since he is now analysing an object (the other fighter) and summarising that object's attributes, qualities and weaknesses, even though he is, strictly speaking, heavily involved in a practical activity. Secondly, the attacking fighter has now become aware again of the subject-object distinction where he forms a belief that he has the power to inflict damage through the exploitation of a weakness he attributes to his object (opponent). This return to the awareness of a subject-object distinction will also occur if the reverse happens and the opponent lands a particular combination on the fighter, causing him to alter his movement and tactics. So, despite the fact that they are not, at certain points in the fight, throwing or avoiding punches, it still seems fair to say that fighters are engaged in an ongoing activity, during which there are moments or instances of present-to-hand or analytical experiences. However, there are those who dispute the idea of performing in the absence of propositional thoughts.

In a recent article, *Against Flow*, Barbara Montero (2017) disputes this idea of propositional thought being absent when an athlete or performer is performing at their peak:

... under the appearance of grace lies an abundance of grit is a hard-won truth running counter to the popular concept of 'flow': the seductive idea that when it's

time to perform – be it on stage or green, in the operating theatre or around the boardroom table – the true virtuoso leaves all striving behind ... Flow sounds appealing, and it seems to frequently coincide with some of our most pleasurable pinnacles of human experience, but it doesn't necessarily translate into optimal performance. In great athletes, performing artists, writers, chess-players, doctors, nurses, air-force pilots and others, beneath the surface of effortless flow is unrelenting determination ... (aeon.co, May 2017)

Montero argues that flow really just leads to complacency, which she sees as the 'ally of stagnation' and argues that, although being in a state of flow unquestionably is 'conducive to optimal experience', it says nothing about whether or not it leads to optimal performance. Put otherwise, flow may well make a performer *feel* better, but it does not necessarily make them *perform* better. She points to occasions where thinking critically during a ballet performance worked to her advantage: things like a poorly-positioned left shoulder, pausing longer between movements or grander flourishes during certain parts of the music have all led to improvements during performances. For Montero, it is often the case that a performer must focus so intently on the movements of their body that they relinquish the quest for pleasure in order to aspire to the perfect display of an activity. This, in effect, removes the idea of 'flow' as being sufficient for such a flawless performance; the dancer must focus intently on each and every movement to ensure that it is performed correctly, something which detracts from the pleasure one feels during a state of 'flow'. However, although it is true that some form of self-analysis is required during actions in order to assist error correction, Montero's claims are not without their problems.

Firstly, Montero's example of error correction during a dance routine is not analogous. Not every sport requires all actions to be performed with the strict precision demanded in a balletic performance, where mis-steps and errors are seen to detract aesthetically from the display. Bergamin (2016) explains that:

Ballet is an extremely concept-heavy example, being precisely choreographed to music that is written to be played precisely each time ... there are nevertheless so many fixed points in the choreography that the dancer's experience must certainly be drawn frequently into gaps of checking and reflection ... However, I maintain that is no argument against an un-minded level that the dancer enters in his *moments* of action ... As is also the case in ordinary life, we slip from *moments* of

smooth-coping into reflective thought and back again at incredibly frequent intervals. (pp. 412-413)

Boxing, as with most sports, involves a high degree of unpredictability which simply does not manifest itself in performance arts such as ballet, even if there are basic structures which allow certain actions to take place. These actions are practised and are used by the expert in ‘direct responses to the intricacies of the moment’ (*ibid.* p.416). To suggest that a boxer goes into the ring and stays in autopilot for every second of every round would be absurd, there are obviously times during the round where deliberation and planning are involved before certain actions – a combination of punches, for example – are executed. For Bergamin, the thought which Montero speaks of ‘appears in the gaps between or over’ (*ibid.*) the actions which are actually performed.

A second point is that, for a performance art, each action which is performed imperfectly detracts from the aesthetics of the display. In boxing however, this is certainly not the case. In what is considered to be one of the greatest, most entertaining fights in recent memory, the February 2000 meeting between sworn enemies Erik Morales and Marco Antonio Barrera, produced a win for the former, despite him landing only 319 (37%) of 868 punches thrown, compared to Barrera’s 299 (48%) of 618 thrown.³⁷ If, however, a ballet dancer performed only 37%, or even 57%, of the steps accurately, it is highly likely that he or she will have a very short-lived career. The point to note here is that, even with an accuracy rate of less than 50%, Morales and Barrera put on a display of such skill, courage and beauty that the fight has gained legendary status and led to the demand for a second and third fight between the two Mexican fighters. This was achieved in the absence of concentrated focus on the bodily movements involved in the delivery of the perfect punch 1486 times, the combined total of punches thrown in the fight.

Montero appears to equate an onlooker’s perception of a performer being in flow with that of there being little or no effort to the performance: ‘...the concept of flow implies a high degree of effortlessness...’ (*ibid.*). Although this may be said of a ballet audience, Montero has some work to do before establishing that this is the case in other activities. It seems perfectly plausible that one can admire the grace, poise and balance of a 100m runner in full ‘flow’ without the added assumption of there being no effort or determination involved; it is just the

³⁷ Figures taken from boxrec.com

case that the focus is fixed on the finishing line rather than the bodily movements used to achieve the intended goal. Also, if there was anybody who doubted the effort, grit and determination displayed by Morales and Barrera during their three gruelling contests, that person has yet to make themselves known.

Finally, there seems to be an inherent contradiction in Montero's claim. If the extreme focus on her bodily movements was present throughout the entirety of the dance routine, how is it possible that she performed the actions imperfectly in the first place? If her undivided focus was given to every movement during the performance, why was there a need for error correction? If it was within her ability to perform the action correctly the second time, why didn't she do so the first time? Was it that she wasn't focused enough? Also, could it be the case that the (attempted?) intense focus on her every bodily movement during the routine detracted from the flow, which in turn created the imperfections? Although her awareness that she performed certain actions imperfectly directs her future performance of these actions, this does not rule out the idea of her being in 'flow' would yield a better performance; perhaps the need for such an intense focus on achieving the perfect movement throughout the duration of the routine is what separates Montero from more accomplished dancers.

So, although Montero is perhaps right to assert that any performance, even one which occurs in an environment as unpredictable as a boxing ring, involves periods of thought, if actions are to be executed most efficiently they must be done so with an un-minded spontaneity.

6. Bodily awareness and error correction

Different sports, I contend, involve different levels of awareness of being a subject or an object at various points in the contest. For example, a 100m runner will know that, although there are several other competitors attempting to outperform him, when the race starts he will be, or at least should be, free to perform to the best of his ability without physical interference from any of the other runners. The 100m runner will perform at his best if he is able to focus solely on propelling himself forward at the greatest speed towards the finish line. In this respect, he is not too dissimilar to the carpenter wielding the hammer. However, what happens when our intended actions are not in fact successful?

Shusterman (2008) argues for the necessity of ‘disciplined, intelligently focused somatic introspection’ in order to counteract the bad habits developed through ‘spontaneous habit’. Spontaneous habit is similar to the ‘flow’ described in the actions of the expert in the previous section, where the body has become so accustomed to performing certain actions that no focus or intention on the individual body parts is required. However, complete reliance on these spontaneous actions can lead to the developing of bad habits, which must be both identified and corrected in order to perform the actions more effectively. For this, Shusterman claims, we require ‘somatic introspection’, which is based on the Alexander Technique of heightened focus on certain parts of the body in order to alter bad habits. Essentially, somatic introspection is necessary since we require a method of identifying and correcting these habits, which we can develop through ‘spontaneous habit’. Although ‘spontaneous habit’, Shusterman argues, allows us to perform more effectively, it can also cause us to form bad habits, which are impossible for us to correct unless we are aware of them. Somatic introspection then is necessary because it allows us to improve the way in which we perform actions as well as how we utilise the tools at our disposal.

During a fight, between Joe Louis and Max Schmeling, Louis suffered a shock defeat to his German opponent as a result of a fairly basic and fundamental error which he had been making for his entire boxing career, but which went unexploited until his bout with Schmeling in Yankee stadium, New York. Louis had developed the bad habit of continuously dropping his left hand to his waist after throwing his jab, which left the left hand side of his face exposed to a counter. Schmeling observed and exploited this error by waiting for Louis to throw the jab and then countered by throwing his own right hand. The lack of what Shusterman (2008) calls ‘somatic introspection’ cost Joe Louis the fight and allowed Schmeling to achieve an unlikely victory.³⁸ Of course, this attribution of cause and effect is a little simplistic, and it is likely that there were other contributions to Louis’ defeat. For example, perhaps his coach was partly to blame for failing to highlight the bad habit, or observations on film of previous contests should have alerted Louis to this particular weakness. However, at the level at which he was fighting, this is something he should have been able to identify and rectify on his own during the course of the fight. This could, of course, mean that his ability to “somatically introspect” was lacking, something which may be a key difference between great athletes and elite ones.

³⁸ Louis went on to win the rematch a short time later.

Essentially for Shusterman, this type of ‘phenomenological transparency’ works perfectly well until our perceptual and kinaesthetic awareness feeds back to us errors, discomfort or failures in performance, and it at this point that our attention shifts from the action we are attempting to execute, to the part of the body that we are using to perform the action. Something similar can be found in Heidegger (1927/1978). According to Heidegger, it is only when something unexpected happens which interrupts the smoothness of the flow of the activity that we again become conscious of things other than the activity and are forced to pay attention to the things causing this disruption so that we can make adjustments and return to performing or acting in a smooth manner.

Although one essential aspect of any sport is the ability to act and react without hesitation or uncertainty - and this is especially true in the sport of boxing where the shortest and slightest moment of indecision can have the severest of consequences³⁹ - this is not to say that boxers enter the ring with the intention of swinging their arms in a wild, mindless and uncontrolled manner. A considerable amount of thoughtful preparation goes into a fight beforehand; a boxer, with his coaching staff, will consider his strategies in relation to the opponent’s stance, height, strengths, weaknesses and style of fighting. Although it is impossible to predict or legislate for every possible eventuality, the boxer will train in a manner which prepares him for the opponent he will face, often employing sparring partners who can simulate the fighting style of his opponent. There would be little to be gained by employing sparring partners who are 5’2” short-armed brawlers if your opponent is a 5’11” counter puncher with octopus-like arms. There will also be pad work carried out which will condition the boxer to move in certain ways and throw rehearsed combinations thought to be the most effective against the upcoming opponent. These things are designed to ensure that when the boxer eventually enters the ring, he repeats these actions and tactics without having to engage in additional – time consuming – thinking, to make sure that the instructions given to him propositionally before the fight are carried out reflexively and without hesitation during the contest. However, as Robert Burns (1785) warns us, the best laid schemes don’t always go to plan and there will always be surprises when the bell rings.

If things go to plan, then the boxer will carry out the instructions and will be well prepared for the fight; he will automatically move in certain ways, attack and retreat at certain angles and

³⁹ This is also true for a variety of other, non-combative, sports.

throw the particular combinations and counter-punches he has spent weeks rehearsing in the gym. Come time to fight, all being well, these things are done spontaneously. All of this said, it wouldn't be the first time a boxer has entered the ring with the expectation of having to spend his evening avoiding the effects of a devastating left-hook, only to discover that the right hand also carries with it enough power to tip a horse, or to prepare for a war of attrition against a well-known scrapper who has spent the previous twelve weeks practising movement, feints, slips and aversion tactics and who doesn't stand still for a single second of the twelve round fight. Under these circumstances, the boxer has to adapt and think of how he will cope with the unexpected turn of events by changing his strategy, or by imposing himself on his opponent and forcing him to revert to type. In any case the boxer is now, albeit very quickly, thinking more; he had expectations which did not all turn out to be true, beliefs which would have allowed him to act far more freely, naturally and without any hint of hesitation and indecision. As a result, this puts in his path obstacles which inhibit him from moving and throwing punches as freely and as he would have liked. Of course, more experienced boxers may possibly adapt more quickly since the more a boxer fights the more styles and strategies he will have experienced, making it possible to shift approach with greater speed and confidence.

There certainly seems to be some merit in Shusterman's claims. When things are going smoothly, and the fight is going the fighter's way, with his punches finding the target with regularity and without taking too many hits in return, there is a certain phenomenological transparency where the only focus is on the intended outcome of any action. However, as it becomes apparent that what he is attempting is failing to bring him any success the fighter has to readjust and rethink his strategy. Failure to do so will result in a repetition which will allow his opponent to capitalise on his predictability through counterpunching. Having said this, it is of vital importance that, once the fighter has identified a new strategy, he is able to return to acting in a phenomenologically transparent way in order that he can commit and carry through his actions and be in no way hesitant or inhibited.

It appears to be the case that in order for a boxer, or indeed any athlete, to perform at his or her optimum level, there needs to be some form of pre-reflective somatic introspection - to allow errors to be corrected. However, Shusterman builds his somaesthetic consciousness on a type of long-term strategy of error correction, championing the Feldenkrais Method and Alexander

Technique in particular.⁴⁰ Clearly, neither of these could be applied during the course of a fight, at least with any great effect, but certainly a more immediate, “real-time” version of error correction through somaesthetic awareness would certainly be of benefit to a boxer.

⁴⁰ For more on these see: http://www.synidetics.com/resources/CAIM/alexander-and-feldenkrais_PMR-clinics.pdf

Chapter 4

Transhumanist Modifications and the Alteration of Experiential Time, Emotion and Empathy

Having looked at the experiential shift from acting subject to acted-upon object - I now turn to the impact transhumanist improvements might have on these experiences in order to enhance sporting performance.

I contend that the transhumanist drive for adaptations and modifications, even if physical in nature, will bring about significant changes to the experiences undergone by an athlete, and none more so than the boxer. My intention here is to look at how alterations in temporal, emotional and empathetic experience might be achieved and how these might endow the boxer with the tools to perform more effectively.

1. Temporality: moving from pain to suffering

Prolonged suffering, especially of the mind, passes into low spirits, grief, dejection and despair. (Darwin, 1872/2016, Loc. 1767)

It seems fairly uncontroversial to assert that if we are to undergo any painful experience we would much prefer that its duration be as short as possible, save for any tendencies towards masochism or flagellantism. On the other hand, we have a natural propensity to desire the prolonging of pleasant experiences, things which captivate us or from which we derive gratification. Unfortunately, however, all too often the reverse occurs and our painful or unpleasant experiences seem to cause time to pass sluggishly while our enjoyable times come to an end all too quickly. Indeed, such a perverse truth prompted the following quote, often attributed to Albert Einstein, in a simplified explanation of relativity:

Put your hand on a hot stove for a minute, and it seems like an hour. Sit with a pretty girl for an hour, and it seems like a minute. That's relativity.

Of course, the two experiences here differ in that the placing of a hand on a hot stove yields a physical pain, while the far more pleasant encounter of sitting with a pretty girl is psychological

or emotional in nature. However, the quote does provide us with a readily recognisable example of a familiar experience; that of time seeming to slow or quicken depending on the felt level of pleasure or pain.

It is my contention that in addition to the intensity of the felt pain or pleasure which alters our perception of time, it is our capacity for experiencing the passing of time which facilitates the move from a painful experience to one in which we can truly describe ourselves as suffering. Indeed, claims about the absence of this capacity in animals were, and still are, often used to justify their mistreatment, with the assertion that they only live in the present cited as a reason for their inability to experience suffering.⁴¹ For long enough now goldfish have been kept in tiny bowls or even water-filled bags, a practice apparently vindicated by the fact that goldfish have such short memories that renders impossible the feeling of boredom, isolation, frustration or suffering.⁴² Whether or not animals experience the passing of time is outwith the scope of this thesis, but these examples do illustrate that we take temporal experience to play at least some part in the capacity for suffering.

However, the experience of time having passed is not enough to create a sense of suffering beyond a few moments of pain; the expectation of a future and what it might bring is also vital in the shaping of our attitude towards pain. Having an awareness of the fact that the pain has endured over a period of time is one thing, but the expectation that it will persist into the future brings with it an additional level of stress and suffering. As Darwin explains:

Prolonged bodily pain, if not amounting to an agony, generally leads to the same state of mind. If we expect to suffer, we are anxious; if we have no hope of relief, we despair. (*op. cit.* Loc. 2128)

Acute, temporary pain is not further compounded by just the expectation of the continuation of discomfort into the future; it is the memory of the pain persisting over time, allied to the expectation that it persist beyond the present that takes us from pain to suffering. Indeed it was this persistence of pain and the expectation of its continuation into the future that inspired William Blake in his *Songs of Experience* (1794) to describe the poor of London as being

⁴¹ See Singer (2002) for examples involving monkeys.

⁴² See Gee (2003) for a refutation of this claim.

suppressed by '*mind-forg'd manacles*', which accentuated their dejection as their minds were shackled by hopelessness.

Suppose, for example, that I take a tumble down a set of stairs and break my arm. There is no doubt that I will experience terrible pain which, as time goes on and the pain remains, will lead to what can be described as suffering. In all likelihood, the longer the pain endures the more the suffering will be compounded. However, I am able to derive some form of consolation from the expectation that, in the future, my arm will begin to heal and the pain will eventually subside. Without this expectation of an improved future it is almost certain that I will become dejected and despondent at the thought of my predicament remaining unaltered; indeed, the expectation of recovery is perhaps a vital element in that recovery. The belief and expectation that the correct treatment will allow me to regain the full use of my arm will almost certainly drive me to partake fully in the rehabilitation process. In other words, the belief that I can take actions which will allow me to improve my future predicament plays a significant role in determining my attitude towards my pain and my suffering. This phenomenon has already been examined in chapter 2 of this work in terms of Husserl's (1927) inner time consciousness in which moments we would term 'recently past' are not, strictly speaking, in the past at all, but are 'retentive', meaning that they remain or resonate in the present. Husserl's idea of our experience being 'protentive' - where there is an expectation, based on what's gone before, of what will happen in the immediate future – seems sufficient for the creation of despondency and dejectedness. For Husserl, there are no isolated and individual moments; each 'now' moment contains traces of past moments as well as a pre-noetic expectation of what's to come. The experience of time slowing or quickening could then be explained in terms of the retentive moments being shortened or lengthened, depending on how positive or negative our experiences are. But is there any way that this might be explained in terms of the physiological or neurological processes going on which might be subject to transhuman modifications?

Tse, *et al.* (2004), cites a number of studies which suggest that distortions in time perception are, in part at least, due to a variation in *attentional orienting*:

The perception of duration is rooted in the perceptual processing of events. In cases of prospective duration judgements (i.e., when observers know that the experiment is about judging durations), when no concurrent processing of stimuli is required of observers, the ratio of judged duration to real duration generally increases ... However, when observers must process nondurational information about stimuli

during prospective tasks, the ratio of judged to real time generally *decreases* as a function of the amount of information processed. (*ibid.* p.1171)

When our attention is directed towards non-temporal concurrent occurrences, internal processing and resources⁴³ can be diverted from our “internal timer” and so the subjective experience of time can appear shorter. On the other hand, our experience of time will be lengthened if, for whatever reason, our attention is directed back towards the passing of time, and not to some distracting task. In a more basic way, the more our attentional processes are focused on the passing of time, the more slowly it will seem to pass.

So let’s place this in the context of boxing. Our fighter who is immersed in his fight will be distracted by the number of action possibilities; his punches will land home, he will feel his energy conserved, and he will be in control of protentional potentialities. The fighter who loses this immersion, loses the distractive capacity of smooth coping, and begins to feel the round, and so the bout, lengthening.

With respect to Husserl’s notion of the living present, turning our attention towards durational events will bring about a greater focus on retentive moments, causing them to appear longer to our internal timer. For Aqeel, our enervated boxer discussed in Chapter 2, tiredness caused his attention to shift from the event (punching, moving, slipping during pad-work) to a durational event (the numbers ticking down on the digital clock) and, as a result, he began to overestimate the length of real time that had expired. Further, the realisation that he had overestimated to such an extent, brought about an even greater focus on the clock which, in turn, caused the seconds to tick by even slower. Worse, he then developed the expectation that the time would not pass quickly and this added to his discomfort.

So now we have two aspects of temporal experience which contribute to the determination of whether one can be said to be experiencing pain or suffering: retention of the experience of the pain having endured over time and the expectation of its continuation into the future. With regard to boxing, both of these will heavily influence the fighter’s attitude towards himself, his opponent and the fight itself.

⁴³ What these processes are and how they might work is perhaps a job for the neuroscientist, and goes beyond the scope of this current thesis.

From the account given earlier in this work from Loic Wacquant (2008), there is a definite correlation between tiredness, fatigue and the feeling of time passing more slowly. For Wacquant, one three-minute round of sparring felt like five minutes as he succumbed to tiredness and eventually exhaustion. As he became more and more enervated, he became less physically equipped to bring about a change in his circumstances as his opponent gained more and more success. As the round went on and his tiredness worsened, his horizon of possibilities began to narrow and, for Wacquant at least, the seconds began to tick by more slowly. Crucially, the punches he absorbed at the beginning of the round would have brought him pain, the repeated punches and the inability to do anything to prevent them would have, along with the belief that they would continue, in some sense, caused him to suffer. Further, this feeling would have been exacerbated if he thought that he had another six rounds to endure before the end of the spar which, mercifully, he didn't.

It seems safe to suggest that there is a correlation between tiredness, temporal experience and how these might shape a fighter's attitude towards his own predicament. Put simply, the more tired he becomes the slower time seems to pass and more dejected he becomes. So what role could transhumanist enhancement play with regard to how a boxer experiences time?

Ivor Browne (1990) in his paper on psychological traumas, explained that the human body comes equipped with an innate disposition to block out extremely traumatising experiences:

... whenever we are faced with an overwhelming experience that we sense as potentially disintegrating, we have the ability to suspend it and "freeze" it in an unassimilated, inchoate form and maintain it in that state indefinitely, or for as long as necessary. Our biological structure seems able to specify in advance that to fully experience the meaning of the threatening encounter would destroy or disintegrate its core organization. (*ibid.* p.9)

In essence, this block prevents us from experiencing the full extent of any traumatising situations, presumably so that our coping mechanisms remain intact and we can go on functioning as effectively as before. Certainly, this mechanism would seem to be of great benefit to us, perhaps particularly so for children who undergo harrowing experiences and who have not yet developed the maturity to cope with them. But there may also seem to be an advantage to be found here for the blocking out of any negative experiences in the sporting arena. If, for example, every time Wacquant received a barrage of punches, his body could

somehow purge itself of this unpleasant memory, there would be no negative retentions or protentions at any point in the round. Further, there would be no recollection of negative experiences at the end of the round and he could go into every new round without the baggage of the previous negative experiences, and with only the recollections of the positives that occurred during that round. In theory at least, the removal of unpleasant experiences from his thoughts could potentially bring about an alteration in his temporal experience, making the three minutes seem to pass more quickly. Although there would still be an element of pain from the punches he takes, the apparent quickening of the passage of time would certainly make it feel much less like suffering, particularly if his expectations of future discomfort could also somehow be curbed.

Of course, how this disposition to expunge negative experiences from our memories might be achieved is a question for the scientist. There does however appear to be some merit in asserting that the immediate removal of negative experiences from our minds could operate in a similar way to Ivor Browne's blocking mechanism deployed in severely traumatic experiences. If the brain could somehow be altered in this way, it could lead to a quickening in the passing of time for the boxer, where he is no longer encumbered with lengthy retentions of negative past experiences or with the expectations of more negativity. However, there is at least one main concern which must be addressed before such an alteration is considered.

Negative experiences are necessary for error correction, adaptations to situations which aren't going well, and pre-reflective neuro-muscular anticipatory mechanisms. Although the boxer may feel as though each round has brought him only success and positive results since all negativity has been banished from his thoughts, the judges at ringside might well see things very differently. The boxer may be on the receiving end of a sustained and comprehensive beating, a fact apparent to everyone in the arena except for the boxer himself, who will remember only the positive experiences, of which there may be very few or none at all. Consequently, he will see no need to change tactics, take any required evasive action or make any alterations whatsoever despite the fact that he is clearly losing. It is easy to see how this might lead to the same mistakes being repeated over and over again and the injuries the boxer receives becoming worse as the minutes and rounds go on. Even in present times, there are fighters who, having been on the receiving end of several rounds of punishment, retain a misplaced belief that they are somehow able to change the course of the fight even though it is

apparent to everyone else that the fight should be stopped. It is for this reason that the referee has the authority to bring an end to a fight and that the corner men often “throw in the towel”.

Aside from the problem of receiving too many unanswered punches, some retention of negative experience is necessary for error correction. If, for example, a fighter has taken three or four powerful consecutive left-hooks to the head, retention of these experiences must endure in order for the fighter to attempt some form of anticipatory evasive action; preferably raising his right and moving to his left. In short, on some level, experiencing negative feedback is necessary for error correction and anticipation of an opponent’s movements. Previously I discussed Shusterman (2008) and the idea of a ‘somatic introspection’. Shusterman explains the necessity of what he calls *somaesthetic awareness* when things start to turn against us:

The most sensible practical attitude toward our habits and sensory feelings is (to borrow an old Hebrew maxim) “respect and suspect”. We rely on them until they prove problematic in experience – whether through failures in performance, errors in judgement, feelings of confusion, physical discomfort and pain ... to discern exactly which habits are misguiding us, which precise dimension of a habit needs correction, and which sort of correction is called for requires rigorous practical work in critical somaesthetic self-consciousness. (*ibid.* p.212)

This takes us back to Heidegger (1927/1978), who says that it is only when something unexpected happens which interrupts the smoothness of the flow of the activity that we again become conscious of things other than the activity.⁴⁴ It is at this point that we are forced to pay attention to the things causing this disruption, they become apparent in their interruption so that we can make adjustments and return to performing. In order to do this successfully the experience which causes this interruption must be retained long enough for the fighter to know that an adjustment is required.

So any transhumanist alteration in temporal experience cannot be designed to allow a fighter to live only in the present moment since this is likely to result in an inability to correct errors and, consequently, to have a greater degree of physical damage inflicted upon him. On the other hand, there certainly seems to be some merit in shortening the duration of these negative

⁴⁴ But only 'similar' - the sort of 'work' called for by Shusterman involves periods of time set aside for bodily introspection, whereas Heidegger's interruptions are typically short-lived and don't involve 'introspection' of any kind.

retentions to a minimum so that they don't become a longer-term suffering, in turn leading to dejection, despondency and inhibited action, which together would bring about an inevitable defeat.

However, the feeling of the three-minute rounds passing more quickly, allied to the entering of each round with only positive experiences from the rounds before, will almost certainly provide the fighter with greater confidence and motivation, and will allow him to perform with less inhibition. There might, therefore, be a case for saying that a temporal alteration would have an impact on his emotional experiences and it is to these experiences that I now turn.

2. Alterations in emotions & the enhancement of performance

A few interesting questions arise when we talk about emotions and the enhancement of sporting performance with respect to boxing: Would an alteration in the emotions have allowed Mike Tyson's overwhelmed victims to have performed any better than they did? Would a reduction in the levels of fear they experienced have elevated their performance to a level which would have presented Tyson with more of a challenge, or even have brought about an unlikely victory? Would the removal - or at least the lowering to negligible levels - of emotions have any serious impact on an athlete's performance? And, if emotions are to undergo some transhumanist alteration, what might these be like and what could they contribute in terms of enhanced sporting performance? Before looking at the impact of emotions on sporting performance, it might be helpful to look again at why we have emotions at all; an examination of the impact of emotions on our evolution might be useful in determining the extent of their impact in a boxing ring. Jenefer Robinson (1995) describes an emotional response as:

The registration of significance by physiological means is nature's way of enabling us to pick out from the mass of information that bombards our senses that particular information which is significant to our goals and desires ... nature has provided us with a means for quick responses where necessary: the information is registered automatically and the response is immediate. (*ibid.* p.66)

For Robinson, emotional response requires a bodily response which causes the organism to focus on something which is significant to its well-being. This 'bodily response' is similar in nature to what Ekman (2004) described as '*automatic appraising mechanisms*', the in-built

scanners deployed to detect things in our environment which will have an impact on our interests. These have been addressed in more detail in Chapter 2. Since this bodily response has observable characteristics – in particular facial expressions, and bodily positions and tensions – these emotional responses communicate to others the state of the organism. Further, Robinson makes the distinction between primitive emotional responses, which require no prior cognitive activity, and more sophisticated emotional responses which do require complex cognitive activity such as the indignation experienced at the United States’ foreign policies (Robinson’s own example); complex emotional responses of the latter kind would be more aligned to Lazarus’ (1991) idea of emotions requiring some form of cognitive appraisal.

Another aspect of emotions, discussed earlier in this work, is that they can arise extremely quickly and without warning, a fact which Ekman (2004) observes can either save or ruin our lives. It is not difficult, one would assume, to imagine the importance of fear if an unexpected obstacle appears on the road on which we are driving; in this case fear prompts swift, potentially life-saving aversive action. On the other hand, an emotion like anger can provoke a quick and reactionary response which may cause us to say or do things which we will later deeply regret. Another aspect of emotions noted by Ekman is that, throughout our lives, we constantly strive to ‘maximise the experience of positive emotions and minimise the experience of negative emotions’ (*ibid.* p.139). This striving towards positive emotions can be indirect, where people are prepared to undergo negative emotional experiences in order to gain future positive emotions. Even in cases where no positivity can be found, we still tend towards that which brings us the least negativity, again something with which we can readily identify. Some of Mike Tyson’s overmatched opponents might provide a perfect example of this where a few minutes of paralysing fear will be compensated by the promise of a \$1 million-dollar purse, which can buy a great number of future positive emotions. However, even in these cases, the opponent will still look to minimise the negative emotional experiences as much as he can. Further, the reverse is also true at times in our lives where we forego the things which promise positive experiences in order to avoid more serious negative consequences in the future. Again, boxing can provide the perfect example of this with regard to making weight⁴⁵; any boxer preparing for a fight who is tempted by the fleeting pleasures of chocolate, cakes or fried foods at the weekend will testify to the negative consequences experienced in the gym the following

⁴⁵ Reaching the required fighting weight.

Monday. At the very least, it seems fair to say that, even if we see no possibility of positive experiences, we will opt for those things which bring the least negativity.

A further feature of emotions is that, in some cases at least, they can be controlled through *emotional regulation*, defined by Gross (1998) as:

... the process by which individuals influence which emotion they have, when they have them and how they experience and express these emotions. (p.276)

There are clear evolutionary advantages to having a specific emotional response in particular situations; however these emotions may have served our ancestors very well, but may no longer be appropriate to contemporary living. Gross uses the example of technological advancement and the invention of the handgun to illustrate how an angry response can easily escalate and lead to death but which, thousands of years ago would more likely result in a punch-up. But we can also imagine modern day management structures which could lead to someone freezing in terror, which might be deemed appropriate when confronted by a polar bear, but inappropriate in an open office. In any case, emotional regulation mechanisms are evident in humans even from the early stages of social development (Rothbart, Ziaie & O'Boyle, 1992). In adults the absence of these mechanisms could very well lead to social and psychological dysfunction and it is easy to think of examples – remaining calm with a child who is having a tantrum, or patient and reasonable with a noisy neighbour - where the inhibition of our strongest emotional responses could have social, psychological and even legal advantages. So how exactly do we perform this regulation?

Gross begins with a modal model of emotion consisting of four stages: the awareness of an emotionally relevant situation; the direction of attention towards this situation; an appraisal and evaluation of the situation; and the generation of an emotion which can bring about changes in behaviour (Gross & Thompson, 2007). For Gross, each of these four stages can be regulated in one of five ways. It should be noted that this is not only about the generation of emotion, for emotion is always present; it is about the regulation of the emotions that already exist.

- *Situation selection* involves a decision whether or not to engage in a situation which is emotionally valenced, the avoidance of which will decrease the likelihood of generating an inappropriate or difficult emotion;
- *Situation modification*, involves the attempt to modify the situation in order to bring about an alteration in the situation's emotional impact;

- *Attentional deployment* involves deliberately focusing on an aspect of the situation;
- *Cognitive change* involves carrying out an appraisal of the situation in an attempt to alter its emotional relevance for us, it is this relevance which ‘gives rise to emotional response tendencies, including behavioural, experiential and physiological tendencies’;
- *Response modulation* involves attempting to influence these response tendencies through various methods, including the disguising of emotions by, for example, *expressive suppression*- disguising facial clues, drugs, exercise, diet and positive thinking (Gross, 1998, p.282). There is also no reason to suppose that such modulation cannot also be used in the generation of appropriate emotional responses where none exist.

So how might this process model of the generation of emotions be applied to boxing and what impact could transhuman alteration have on the process?

Of *situation selection*, there is very little to be said; the fighter has already made their decision in virtue of being in the ring; avoiding being in the ring would entail a range of other difficult emotions such as shame. Also, Gross’ stipulation that an element of self-knowledge is required in order to understand what type of situations makes one emotional fails to take us much further; we tend to know what kinds of circumstances will arouse in us antipathetic and sympathetic emotions. What can be said however, is that the emotion regulation process operates in a loop and so alterations in further stages of the process may bring about changes in an individual’s attitude to a particular situation.

With respect to *situation modification* and coping with an overwhelming positive or negative emotion, Folkman and Lazarus (2013) say:

Coping consists of cognitive and behavioural efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person. These cognitive and behavioural efforts are constantly changing as a function of continuous appraisals and reappraisals of the person-environment relationship, which is always changing. Some of the changes in relationship result, in part, from coping processes directed at altering the situation that is causing distress (problem-focused coping) ... (pp.315-6)

For Folkman and Lazarus, this is only part of the coping process, with the other part being what they describe as ‘emotion-focused coping’ which involves regulating emotion by way of

continuous feedback about what is happening. However, with regard to Gross' *situation modification*, it can be seen as analogous to Folkman and Lazarus' notion of *problem-focused coping*. For the nervous boxer, quivering with trepidation at the thought of engaging in a pugilistic interaction with Mike Tyson, it is easy to see the appeal of any positive modification of the situation in which he finds himself. The problem he faces however is that neither coping mechanism – problem-focused or emotion-focused – seems to offer him any viable route to controlling his fear. The problem he must focus on is Mike Tyson and his seemingly insatiable desire to inflict pain; there is no way around this problem. In terms of an emotion-focused solution, which would involve internal changes instigated by the type of cognitive appraisal postulated by Richard Lazarus and discussed in the previous chapter, this is only helpful to the anxious boxer if such an appraisal yields positive results, something which is by no means guaranteed.

Attentional deployment involves the decision to focus attention towards or away from a situation which may trigger emotions. Attentional focus can be altered through: *distraction* where there is an attentional shift away from the situation completely or, at least, its 'non-emotional aspects'; *concentration*, which Gross explains 'has the capacity to absorb cognitive resources', (*op. cit.* p.284) whereby focusing on an unrelated task helps remove, or at least temper, the emotion; and *ruminatio*n where the focus of attention is on our feelings and the consequences they bring about. Essentially, someone places themselves in a situation which requires modification, and they choose to attend to certain elements over others which are likely to influence their emotional responses. A boxer, confronted by Mike Tyson might modify his emotional fear response to one in which he, at least appears to, embody courage and tenacity thus allowing him to present the emotions of a person who is composed, controlled and unafraid.

However, although all of these things are essential aspects in the eliciting of emotional responses, more is required: *cognitive change*. Gross explains:

Even after emotion-eliciting features of the situation have been attended to, an emotional response is by no means a foregone conclusion. Emotion requires that percepts be imbued with meaning and that individuals evaluate their capacity to manage the situation. (*ibid.*)

The individual evaluates the significance and importance of each element in the situation, essentially appraising the situation in an attempt to bring about a change in its emotional meaning. This attempted change can be made in a variety of ways, such as: social comparisons and the idea that “there is always someone worse off”; the attempt to see humour in emotionally charged situations; and reappraisal where one might attempt to reinterpret a situation in order to bring about changes in our emotional response. An example of this might be the petrified boxer who is about to share a ring with Mike Tyson. On one hand, the boxer can view the situation as a terrifying ordeal involving a very public, potentially painful, beating at the hands of one of the most feared fighters on the planet or, on the other hand, he can simply see it as a short, one-hour, period of his life which will bring him great financial benefits and will be forgotten about by the public in a matter of days. The latter of these appraisals will certainly elicit a more favourable emotional response.

The final way in which Gross claims we regulate our emotions is through *response modulation*, which refers to our attempt to ‘influence physiological, experiential or behavioural responding’ (*ibid.* p.285). Already there are a number of methods we employ as we endeavour to bring about physiological and experiential modifications; things such as alcohol, drugs, exercise, hypnosis and various relaxation therapies have all been used to bring changes to our emotional state. Behaviour is another important factor which can affect emotions. In a study on facial expression David Matsumoto (1987) concluded that there may be some correlation between facial feedback and emotions, even if this correlation is only slight:

One can be sure that the overall relation between facial manipulation and self-reported emotion was positive ... However on the basis of the experimental paradigms used to date, the contribution of facial feedback to emotional experience is less than convincing. (*ibid.* pp.772-3)

Matsumoto’s experiments were designed to test a theory from the time of Darwin (1872), who argued that there was a direct link between bodily expressions and emotional processes. This gave rise to the *facial feedback hypothesis* in which ‘facial expressions provide feedback to the expresser that is either necessary or sufficient to affect emotional experience...’ (Matsumoto 1987, p.769). To date, there has been no definite conclusion as to whether the inhibition of emotional expressions has any impact on negative emotions, but the idea of trying to display

behaviour which suggests one emotion when we are really experiencing another, is nothing new, even if our attempts are altogether unconvincing.⁴⁶

Within this framework of emotional self-regulation it is now possible to examine the impact of transhumanist alteration on the emotions and how this might change a boxer's attitude to the fight.

With respect to *situation modification*, transhumanist adaptations will bring about significant changes to the competitor's situation. In the first instance physiological adaptations will allow the fighter to enter the ring physically better-equipped to handle the situation in which he finds himself. Knowing that he is faster, stronger, and less susceptible to the withering effects of pain and fatigue will imbue the fighter with the belief that he can alter his circumstances to his own advantage. Further, any *cognitive appraisal* he performs, assessing the tools he possesses to cope with his predicament, will yield positive results. Such an appraisal will also include the, perceived at least, inferiority of his opponent and how he might be defeated. Put otherwise, the opponent will no longer appear to him purely as a subject that can hurt him, but will become an object that he can hurt.

Secondly, this will allow the fighter to deploy his attention solely on his opponent, rather than on other distractions such as the hostility or expectation of the large crowd, the millions watching on television or the magnitude of the occasion. No strategies of distraction will be necessary, strategies which can, such as in the case of Mike Tyson's opponent discussed earlier, manifest themselves physically, providing an opponent with visual clues of fear or trepidation.

Another significant change will also affect the *cognitive change* aspect of Gross' model: it will simply not be required. The fighter's cognitive appraisal of his situation will yield such positive results that there will simply be no need to attempt to distract himself with thoughts other than how he intends to overpower, overwhelm and eventually overcome his opponent. Finally, in terms of *response modulation*, the fighter will not require strategies to give the appearance of being supremely confident and devoid of fear: he simply will be.

⁴⁶ One of the most striking examples of this was in North Korea, where the reaction to the news of Kim Jong-Il's death was met with an outpouring of "grief" rarely seen anywhere in the world:
<https://www.youtube.com/watch?v=tZsVP2WoE9E>

At this point it may be interesting to note that we may now have a fighter who is on an emotional par with the young Mike Tyson, described in Chapter 2, who described his animalistic instincts when he got into the ring. Let us remind ourselves again of Tyson's words:

... once I'm in the ring I'm a god, no one can beat me. I walk around the ring, but I never take my eyes off my opponent. I keep my eyes on my him, I keep my eyes on him, I keep my eyes on him, I keep my eyes on him and then BOOM!, one of his eyes may move and then I know I have him ... he made that mistake when he looked down for that one tenth of a second ... I know I've already broke [*sic.*] his spirit. During the fight I'm supremely confident ...

For Tyson here, there is no need for any attempted modification of the situation; he modifies the situation by his very presence. He is perfectly comfortable and "supremely confident" in his surroundings and his attention is deployed solely on his opponent, ceaselessly scanning for the tiniest intimation of his fear. In terms of *cognitive change*, things are exactly as Tyson wants them; as he evaluates his situation and his ability to manage it, only positive results come back causing his confidence to grow. Finally, the modulation of his emotional responses through altered behaviour is unnecessary; he already exudes a confident and predatory disposition which fills his opponent with anxious trepidation. Essentially, Tyson has faced his opponent and, before the fight even begins, has "broke his spirit".

Of course, it is a highly contentious issue as to whether we would want to enhance a fighter, or any sports person, to the extent that they become so hostile, aggressive and belligerent, and this issue will be discussed in the next chapter. However, for now it is enough to say that transhumanist alteration could, and probably would, have a significant impact on the emotional states of a sports competitor which, particularly in boxing, could have serious implications of the fighters and the sport itself.

3. Empathetic experience in the absence of sympathy

Empathy without sympathy is dangerous; sympathy without empathy is blind.
(Koffman, huffingtonpost.com, 2015)

The notion of empathy stems from the attempt to explain our apparent ability to read other minds. One such definition comes from Prinz (2011), who defines empathy as:

... a kind of vicarious emotion: it's feeling what one takes another to be feeling. And the "taking" here can be a matter of automatic contagion or the result of a complicated exercise of the imagination. (*ibid.* p.2)

Here Prinz' definition is similar to the notion of sympathy used by David Hume (1739)⁴⁷ and that of "fellow feeling" described by Adam Smith (1759), whereby the observation of emotion in another person gives rise to an analogous emotion in the observer. For some, such as Coplan (2011), empathy requires the observer to enter the same or similar emotional states, whereas Hoffman (2000) claims that empathy only requires:

... the involvement of psychological processes that make a person have feelings that are more congruent with another's situation than with his own situation (in Stueber, SEP, 2014)

In other words, for Hoffman, in order to feel empathy, it is not necessary for the observer and the observed to experience the same emotion, but only that the observer's emotions are altered in a way which make her feel for the other. A slightly different form of empathy comes from Bateson (2008) who talks about *empathic concern*:

... an other-oriented emotional response elicited by and congruent with the perceived welfare of someone in need. Empathic concern is other-oriented in that it involves feeling for the other. It includes feelings of sympathy, compassion, tenderness and the like. (*ibid.* p.8)

In each of the above cases, although the degree to which the observer's emotional state is similar to that of the observed differs, there is a fundamental requirement that the observer's emotions comes more into line - or becomes more congruent - with the person they observe in order for empathy to occur.

However, there may be a form of empathy which does not necessarily lead to the sympathy or fellow-feeling described above, empathy of the sort which provides us only with an

⁴⁷Hume uses the term sympathy to cover several phenomena, but does finally arrive at the idea of benevolence.

understanding of the emotions of the people we observe; such a capacity is described by Ickes (1993) as *empathic accuracy*.

Empathic accuracy is the capacity we possess to infer the emotions in other people's mental states, along with how this content might affect their thoughts and intentions. This area of study generally focuses on two aspects of what is, in essence, our ability to mind-read: the dependability of our capacity to recognise other people's attitudes, personality traits and mental states; as well as how this capacity might be impacted by various internal and external factors. For Ickes (1993), getting to know other people involves more than gaining knowledge of their aptitudes, attitudes, traits and temperaments, it also involves:

... making correct inferences about such unstable and transient dispositions as the thoughts they are having, the feelings they are experiencing, and the more immediate, short-term goals they are pursuing ... (*ibid*, p.587).

I have discussed how we might gain direct access to another's mental content in Chapter 2 of this work. However, the question which now arises is whether, after gaining access to another's thoughts or feelings, we can do so without entering fellow-feeling and experiencing sympathy or compassion and, following from this, how such an experience might be described. It is my contention that this is not only possible, but is a frequent occurrence in a boxing ring.

During the course of a fight, a boxer possesses an acute awareness of his opponent's negative mental content, but this perception does not come encumbered with the restrictive inconvenience of sympathy or compassion. In other words, boxing appears to provide us with a case of a non-sympathetic empathy and, as a result, contains elements of a psychopathic nature and traits similar to that of predation found in the animal world. However, before looking further at the boxer's non-sympathetic empathy, let us first examine what it means to possess psychopathic traits.

Scott Bonn (2014) claims that psychopaths have a lack of remorse or guilt, a disregard for the rights of others and a tendency to display violent behaviour. According to Bonn, psychopathy is:

... a personality disorder that is exhibited by people who employ a combination of manipulation, intimidation and sometimes violence to control others ... psychopaths are distinctly predatory in nature, and they tend to view others as either

competitive predators or prey ... their lack of feeling and bonding to others allows them to have unusual clarity in observing the behaviour of their intended victims. Moreover, they do not become encumbered by the anxieties and emotions that normal people experience in interpersonal encounters. (Loc. 1133-1150)

However, murder, or any form of violence, is not a necessary condition for psychopathy; only an unconcerned attitude for the feeling and suffering of others and a failure to experience guilt or remorse for one's own actions are required⁴⁸. As Dutton (2012) remarks:

Psychopaths are fearless, confident, charismatic, ruthless and focused. Yet, contrary to popular belief, not necessarily violent. (Loc. 314)

Despite the obvious negative connotations attached to psychopathy, there are other features of Bonn's definition which would seem extremely valuable to a fighter attempting to gain victory through the inflicting of physical pain on his opponent. Firstly, remaining cool and calm under severe pressure will have the obvious advantage of allowing the boxer to present an unperturbed exterior to his opponent as well as reducing the likelihood of making rash decisions and movements which could leave him exposed. Secondly, the psychopathic proclivity for distancing himself from blame will prevent him from charging wildly at his opponent every time he is hit. Thirdly, and most relevant to our present discussion, psychopaths have been found to be highly proficient in understanding how others are feeling; something which they often use to their own advantage.

Angela Brook (2009) and her colleagues at Brock University in Canada conducted research⁴⁹ which was loosely based on the claim by infamous rapist, kidnapper and serial killer Ted Bundy that he could tell a "good victim" simply by the way she walked.⁵⁰ The gait of twelve females were videotaped, some of whom had been criminally victimised, and the videos shown to a group of inmates with psychopathic tendencies. The inmates were able to tell, with incredible accuracy, which of the women had been victimised through observing how the women walked; it was just as Bundy had boasted. From this, there seems reason to suggest that psychopaths are not only able to recognise emotions, but that they are extremely good at it. Further, Fecteau

⁴⁸One famous case of this was in 2005 when neuroscientists James Fallon, while examining the brain scans of murderers, schizophrenics and psychopaths, discovered that his own scan showed decreased activity in the frontal and temporal lobes, the areas of the brain linked to empathy and morality.

⁴⁹See <http://www.nextreads.com/display2.aspx?recid=6290317&FC=1> for more details on the experiment.

⁵⁰Bundy confessed to at least 30 murders between 1974 and 1978, although there could have been more.

(2008) carried out a study at the Beth Israel Deaconess Medical Centre in Boston which suggested that psychopaths have a greater capacity for recognising emotions than non-psychopaths and that psychopaths:

... may actually perform better on some tasks that involve understanding another person's physical, emotional or affective state. (p.143)

The study suggests that psychopaths, rather than being unable to recognise emotions in others, are in fact endowed with a strong aptitude for emotion recognition. The problem, as Dutton sees it:

... lies not in emotion recognition *per se*, but in the dissociation between its sensory and affective components: in the disconnect between knowing what an emotion *is* and feeling what it's *like*. (*op. cit.* Loc. 2047)

Indeed, Dutton earlier explains that the psychopath 'gets the words, but not the music, of emotion' (Loc. 909) and makes the distinction between "hot and cold" empathy, where the former is perhaps more aligned with sympathy, where we feel what others feel, which in turn provokes a notion of compassion. The latter - "cold empathy" – on the other hand, facilitates the calculation of what of others might be feeling, but in a cold and dispassionate manner, and is better described as the 'understanding', rather than the 'feeling', of emotions. Such empathy seems more aligned to the empathic accuracy described above. There are clear and obvious advantages to possessing only the capacity for cold empathy for any individual who wishes to manipulate, persuade and exploit another person. Returning to Ted Bundy, this cool, disassociated empathy played a key role in his "success". Bundy often pretended to be disabled by way of using crutches or some other form of pretending to be injured or incapacitated in order to elicit the assistance of his victims which, one would assume, required an understanding of the emotional impact his predicament would have on the young girls he abducted. However, this "cold empathy" remained cold as he raped, tortured and murdered his victims without compunction. In addition to this cold detachment from his victims, Bundy also showed a remorseless and predatory nature, a nature which can be found throughout the animal kingdom.

In the correct context, predation is necessary: the lion could not survive in the absence of zebras, antelopes and buffaloes; the grizzly bear would find life difficult if there were no deer, elk or fish to feast upon; and the great white shark's very survival relies on a plentiful supply of fish, sea turtles, otters and small whales. In this context predation is an evolutionary

necessity. Indeed, a similar story can be told for the human species, whose existence was perpetuated by its ability to hunt and kill. But what do all of these predators have in common? Predators possess many attributes which give them advantages over their prey: they often have physiological advantages such as size and strength; when the time comes to act they do so without hesitation and with complete ruthlessness; they have an acute sense of fear in their prey and time their attacks for maximum effect; they become highly focused and have no discernible sympathy for their victims. Another notable feature often found with predators, or at least apex predators, in the wild is the painstaking preparation that goes into an attack⁵¹; the stalking, waiting and planning carried out before the assault is launched on a helpless target, usually the animal which it identifies as the weakest in the herd, which it manoeuvres into a position that makes it easier to catch. When it is finally time to strike, the predator does so with maximum speed and aggression, remaining totally committed to its action and moving without fear or inhibition. An apex predator is the subject capable of performing actions in the purest of forms.

Although the above description is used to depict the actions of apex predators, much of what has been said can easily be applied to the actions of Ted Bundy. Bundy, like a predatory animal, stalked his victims, who were chosen by him based on certain vulnerabilities or weaknesses he observed. He was also highly focused, planning his attacks with diligence before subjecting his victims to extreme forms of violence without sympathy or remorse, and with the coolest of demeanour. Indeed, his ability to plan and perform these odious and detestable acts without compunction, along with his high proficiency for identifying those most susceptible to manipulation and persuasion, made Bundy the ultimate predator. Perhaps slightly disconcerting for proponents of boxing is that these attributes and aspects of character would also have served him very well in the ring.

Before going any further, I feel that it is important to note that it is not my claim that all boxers are psychopaths – although there may well be some - or that any fighter willfully intends to inflict permanent damage on an opponent. It is also the case that the vast number of boxers, after getting the better of an opponent, are happy to allow for a scenario in which both he and his adversary to walk away relatively unharmed, which is, incidentally, a trait commonly found

⁵¹ Tigers have been known to take up to an hour between locating and attacking their prey. This is partly due to the fact that they can only run at top speed for around 100 feet.

among tigers, wolves and many other predatory animals in the wild. One does not have to be a psychopath to be a boxer, although it might help.

Psychopaths, we have already seen, can possess an extremely high competence for detecting emotions in others, as well as a strong capacity to exploit any weaknesses or vulnerabilities they observe. They can act calmly and dispassionately, even when they are carrying out the most violent of acts, displaying what Dutton (2012) has described as a “cold empathy” for their victims. In other words, they have a highly-developed aptitude for empathic accuracy. Further, psychopaths possess incredible focus, a level of which matches that of the deadliest of predators. At this point, it might be helpful to remind ourselves of the words of Ricky Hatton, a fighter who was as famous for his jovial, friendly and humorous nature outside of the ring as he was for his ruthless and fearsome reputation inside:

... I could see it in his eyes that he was wilting and the spark and snap that he had earlier on in the fight had gone ... After the eighth I went into overdrive. (Hatton 2008, p.19)

As discussed in Chapter 3, by going into “overdrive” Hatton would have thrown more punches with greater venom and less inhibition, the observing of his opponent’s weakness gave him the signal to launch an all-out attack. The perception of an alteration in his opponent’s emotional state and the discerning of a frailty, not only propelled Hatton forward, but also changed his attitude towards his opponent from something which could attack him, to something which he could attack without any fear of negative consequences. Further, despite displaying a highly-perceptive empathic accuracy, there is no sympathetic tone to Hatton’s words, no feeling of concern or regard for his beleaguered challenger, he has no thought other than to achieve his desired objective: to hit his opponent as hard and as often as he can until the opponent is either knocked out or beaten into total capitulation.

At the point where Hatton observes a weakness which he ruthlessly exploits for his own gain, there are definite elements of a predatory and psychopathic nature present. Hatton clearly has an understanding of his opponent’s physical and emotional state, but does not feel as his opponent does or, as Dutton would say: Hatton is getting the words but not the music; he experiences a “cold empathy” with his opponent - an empathy without sympathy. In fact, if we imagine for a second that the above quotation is given, but without the gloves, the boxing

ring and the referee then, at the point of “overdrive” we are not too far removed from a psychopathic predation.

We can now see how a transhumanist alteration might work in terms of increasing the levels of empathy while decreasing the levels of sympathy in a fighter. Presently there are stimulants available to athletes that increase levels of aggression and improve concentration, but transhumanist modifications would negate the need for these artificial stimulants. Such adaptations would cause an experiential shift towards feeling much more like a subject than an object – discussed in the previous chapter – by providing the fighter with a more intense focus, a calmness under pressure which would reduce the draining effects of nervous energy and, perhaps most importantly, a greater capacity for identifying weakness in an opponent both before and during a fight. Further, an enhanced capacity for observing vulnerabilities will yield more positive results from the cognitive appraisal conducted by the fighter, which in turn will serve to bolster his own emotional state as he gains in self-confidence. The ideal fighter then is one who remains calm and intensely focused as he continually scans for the minutest sign of physical or emotional distress, upon which he will pounce mercilessly and ruthlessly in order to inflict maximum damage on another human. An augmented capacity for mindreading will provide the fighter with greater opportunities to impose such severe acts upon his bested rival so long as, like the psychopath, his empathy remains cold.

4. Time, empathy, emotions and broadened horizons for action

At this point it is helpful to return to the thoughts of Iris Marion Young (1980) whose ‘inhibited intentionality’⁵² was the main cause of females failing to deploy their entire bodies when attempting to complete a highly physical action. For Young, such inhibition stemmed from social and cultural influences which taught females to regard themselves more as objects which can be acted upon than as subjects capable of performing actions. One consequence of this, discussed in Chapter 3, was that females were pre-programmed to perceive fewer – or at least different – affordances, or a reduced horizon of possibilities, also discussed in Chapter 3. The example of attempting to catch a ball was used by Young to illustrate these differences in affordance-perception, where the male’s intentional content allowed him to view the ball as

⁵²At present I will put to one side my contention that Young’s idea is better described as ‘intentional content’.

something to be caught, while the female saw the ball as something that could cause pain or which could dirty her clothes. Consequently, the male will ‘throw’ himself into the world, committing his entire body to the action of catching while the female will simultaneously move towards and away from the ball. She may, for example, raise her hands while at the same time moving in such a way as to protect her face, body or even her clothes. This inability to “forget” her body parts while she moves is what Young terms *ambiguous transcendence*.

This ambiguous transcendence is what most fighters experience in the early parts of a fight, where his movements and attacking manoeuvres are restricted by his awareness of himself as an object which can be hit and hurt by another subject. In these stages of the fight, although the boxer will commit to each punch he throws – to do otherwise would be dangerous and would leave him exposed – there will also be thoughts of protecting himself from counter attacks; this ambiguity in the boxer’s actions will continue until such time as he observes what he believes to be a weakness in his opponent. This display of weakness can come in the form of a grimace, a step back, a stiffening of the legs, the covering up of a certain part of the body, a circling of the ring, a move towards the ropes, a loud exhalation of breath, a distressed facial expression, or any other sign of discomfort or reluctance to engage. At this point the fighter will lose all thoughts of his opponent being a threat and will undergo the experiential shift towards being a subject capable of action, impelling him forward to “go in for the kill.” He will become more focused and the array of affordances he perceives will change, allowing him a wider horizon of possibilities for action as he sees his opponent simply as an object on which he can inflict more and greater damage. This widening horizon of possibilities is crucial to the boxer’s success. We can now return to temporality, emotion regulation and empathy and examine how transhumanist modifications will not only change these phenomena, but also how these changes will create a more effective fighter.

With respect to the fighter’s experience of temporality, there are now two strands to consider. Firstly, if some kind of neurological transformation could shorten the duration of negative temporal retentions, or if they could be erased altogether, then the fighter’s perceived horizon of possibilities would remain as extensive in the later stages of the fight as they were in the beginning. Further, this wider range of possibilities for action would create more varied and appealing retentions and the fighter would, in Heideggerian terms, move towards the future with greater relish without the increasing weight of negativity pulling him back towards the present and causing an experiential slowing of time. Additionally, such a transhumanist

transformation could, even in the event of defeat, prevent the shift from fleeting, short-lived pain to prolonged and drawn-out suffering as the experiential protentions come less loaded with the anticipation of more pain. Consequently, there would be less inhibition in the fighter's movements, he would act with a phenomenological transparency, and a smooth, uninterrupted flow as he attempts to strike his opponent. For Tim Bayne (2008), the fighter's agentive experience will remain on the margins of consciousness and his attention will remain firmly fixed on the objective at hand. By eliminating any negative and prohibitive retentions from his consciousness - perhaps through some form of synthetic blocking mechanism similar to the natural version described by Ivor Browne (1990) - the fighter's capacity for the perception of "I cans" would increase. Of course, retaining only the positive retentions of experience may only provide the fighter with a superficial perspective on how well he is performing in the fight, which would place far more responsibility on the trainers and referee to protect the fighter from himself, but there is certainly a case for saying that it could make a sustained beating a far less traumatic experience for a beaten boxer.

The second strand with respect to temporal experience relates to modifications which are more physical – and currently more scientifically achievable - in nature. Whether it be the manipulation of red blood cell count favoured by Lance Armstrong, the ingestion of anabolic steroids by Ben Johnson or even the implanting of more efficient organs considered possible in the future, all sportspeople crave greater strength and higher levels of stamina. The reason for this is simple: fatigue is inhibitive. An exhausted and enervated boxer runs into all sorts of problems both in terms of their own movement and that of their opponent - something which has already been discussed in length in previous chapters – and inevitably makes an unwanted experiential transition from acting subject to acted-upon object. However, while he remains strong and full of vigour, the three minutes which constitute a round will pass quickly, or at least more quickly than they did for a drained and dejected Loic Wacquant; as a result, there will be little or no anticipation of further, sustained suffering. This in turn will open up the range of perceived affordances available to the fighter and will likely result in a more assured and confident performance. So it is not only the case that improved athletic performance can cause a quickening of experiential time, but a transhumanist modification bringing about the quickening of time could well improve athletic performance. A similar story can be told with respect to emotion regulation and affordances.

Of course, boxers have already uncovered methods of altering their emotions and enhancing their performance; some of these methods have been legitimate, for example diet, psychotherapy and altered training regimes, while others have been downright illicit. Transhumanism however, is not restricted to diets, pills and mindfulness, but might also involve the permanent biological and genetic modification of humans in order to push the boundaries of athletic performance.

The first, and perhaps the most obvious, impact of transhumanist alterations would be on the *situation modification* stage of Gross' emotion regulation model; simply by making himself faster and stronger while increasing his levels of stamina, resilience and aggression, the fighter has already modified his situation dramatically. Irrespective of how these modifications are made, if one of Mike Tyson's hapless opponents comes to the ring believing that he is as quick, powerful, durable and aggressive as Tyson, then the dynamic of the interaction becomes very different. The opponent's *attentional deployment* will also likely change as he begins to focus on his own strengths and perhaps Tyson's weaknesses, which may bring about a subject-object transition in his, rather than Tyson's, favour. This transition will, as argued previously, open up his own horizon of possibilities and allow him to act more freely and with his attention deployed on the task at hand rather than his own trepid movements. Subsequently, there will be an automatic *cognitive change* as the opponent carries out an appraisal of his situation, an appraisal which now yields more favourable results as the opponent comes armed with the belief that he is Tyson's equal. There will now be no real requirement for a *response modulation* strategy in order to present a fearless and confident veneer; the opponent, as a result of his transhumanist alterations, will "naturally" have thrown off the shackles of fear and will march to the ring brimming with self-assuredness, possessing a far wider horizon of possibilities. Would this have guaranteed him victory? Probably not, it's still Mike Tyson in the other corner after all.

It might not seem particularly innovative to assert that our emotional attitude towards a particular activity is directly linked to our competence in performing said activity. However, it is important to understand the phenomenological structure of that emotional attitude, so that we can properly consider the moral, social and sporting consequences of synthetically enhancing our ability to regulate our emotions, as well as how we might achieve these enhancements. I will address these concerns in the next chapter but, for now, let's look at what

might be considered a less palatable aspect of boxing, empathy in the absence of sympathy, and the impact this has on affordances in the boxing ring.

It would not seem to be overly-controversial to assert that psychopaths perceive certain affordances that non-psychopaths do not, an assertion that would appear to be even less controversial when we discuss the affordances they perceive with regard to other people. The following quotations are from the infamous Ted Bundy after his arrest in 1975:

I have known people who radiate vulnerability. Their facial expressions say I am afraid of you. These people invite abuse. By expecting to be hurt, do they subtly encourage it?

Since this girl in front of him represented not a person, but again the image, or something desirable, the last thing we would expect him to want to do would be to personalize this person.

The first of these quotes is interesting because Bundy suggests that those who “radiate vulnerability” may inadvertently be inviting harm upon themselves, an invitation which he was only too willing to accept. Generally, we might expect that most of us, upon the observation of a person’s weakness and susceptibility to harm, would see this person as one whom we should defend and protect; we may even perhaps see this as an opportunity to do something good for another person. Bundy, on the other hand, viewed this weakness as something which he could exploit in order to satisfy his own desires, which he did on at least thirty separate occasions. In other words, the perceived possibilities afforded to Bundy by the other person’s weakness were directly opposite to those afforded to a non-psychopath. The second of these quotes explains that the girl is not viewed as a person to the killer, but simply as “something desirable” and, since personalising the girl is “the last thing” he’d want to do, this suggests it would somehow restrict him in his actions. However, since Bundy and several others like him have expressed a satisfaction in seeing their victims suffer, “depersonalising” their prey cannot be synonymous with viewing them purely as objects, since objects are unable to suffer and so could not provide the pleasure that the psychopathic killer sadistically craves. For the killer to derive any pleasure from the fear and suffering of his victim he must, as the psychopath does, possess the capacity for understanding that the victim undergoes certain feelings and emotions without the added burden of “fellow-feeling”, which will inevitably offer him a different, perhaps more altruistic, set of affordances which in turn will inhibit his actions. For the killing

to be of any “worth” to the killer, and for him to act in the ruthless manner he desires, there must be an *understanding* of the victim’s feelings without a *sharing* of these feelings, or the around all of pity or compassion; in other words, there must be empathy without sympathy.

In terms of the subject-object distinction discussed in previous chapters, the psychopath will possess an extremely strong sense of being a subject capable of acting and will view his victim as an object to be acted upon. However, the desire to act with cruel and murderous intent requires that there exists some sense of the other as a subject capable of experiencing desires and emotions since a similar action directed at an object will yield no pleasurable experience for the killer. It is the vulnerability and prospect of fear and pain in the victim that excites the psycho-killer to act; it is the lack of fellow-feeling for the other which allows him to do so without compunction or inhibition. Parallels can then, I contend, be drawn between the psychopath and the boxer as he begins to gain the upper hand in a fight.

The two fighters that have been discussed most so far are Ricky Hatton and Mike Tyson, both of whom have described situations in which they observed weaknesses and vulnerabilities in their respective opponents and have used these observations to drive their desire to inflict more damage. For Hatton it was his opponent beginning to wilt and lose his snap during the fight and for Tyson it was the quickest of glances towards the floor before the fight had even begun, but for both men the perceived vulnerability of their opponents sparked a powerful desire to see their opponents’ predicament worsen. For Hatton in particular, going into “overdrive” meant losing any inhibitions he may have had beforehand (Tyson never really seemed to have any) taking full advantage of Kostya’s Tszyu’s frailties and to eventually beat him into submission. Crucially, both Hatton and Tyson possessed a clear understanding of the physical and emotional suffering being experienced by their respective opponents and, like the psychopath, exploited this understanding to their own devastating advantage. The weaknesses they observed in their opponents opened up, or at least altered, the affordances they perceived which caused an experiential shift towards being a subject capable of action rather an object which can be acted upon. However, like the psycho-killer with his victim, the boxer must retain some sense of his opponent being a subject capable of experiencing emotions otherwise the external signals being given off by the opponent are meaningless. Like true predatory psychopaths, Hatton and Tyson experienced an empathic accuracy in the absence of any feelings of sympathy - a sympathy which would have restricted the affordances open to them - and they then exploited this sympathy-free empathy to exacerbate the distress of their already

beleaguered opponents. Indeed, if Nietzsche (1887/1910) is to be believed, the enhanced athletes may have a duty to exploit these weaknesses:

Who can attain to anything great if he does not feel in himself the force and will to inflict great pain? The ability to suffer is a small matter: in that line weak women and even slaves often attain masterliness. But not to perish from internal distress and doubt when one inflicts great suffering and hears the cry of it – that is great, that belongs to greatness. (*ibid.* Loc. 325)

The ruthless boxer's exploitation of his opponent's weakness would, for Nietzsche, certainly place him among the greats of our species.

Chapter 5:

Transhumanism and the Preservation of Sporting Integrity

Failing to understand the consequences of our inventions while we are in the rapture of discovery and innovation seems to be a common fault of scientists and technologists; we have long been driven by the overarching desire to know, that is the nature of science's quest, not stopping to notice that the progress to newer and more powerful technologies can take on a life of its own. (Joy, 2000)

In the preceding chapters I have examined the impact of transhumanist modifications on the phenomenological experiences undergone by a boxer, both immediately before and during a fight, along with sporting advantages that might be gained in virtue of these modifications.

In this chapter I intend to focus on a more general discussion relating to the transhumanist agenda and the moral objections put forward by those who oppose it. To date, much of the literature on enhancement in sport centres on the use of performance enhancing drugs (PEDs), although much of what is said can be applied to other forms of enhancement, including biotechnological modifications. In Chapter 1, I have examined the Sartrean notion of "anti-praxis" and the unintended negative consequences for which we cannot legislate in advance, but there are several concerns which can and must be examined in anticipation of future possibilities. With transhumanism we're dealing with a contingent science.

Among the concerns raised by opponents of transhumanism, is the breeding of an elite superclass of modified humans and what this might mean for sport and for society in general. There is also the nature of sport itself to consider and the importance of "the natural" in determining whether or not sporting achievements are deemed praiseworthy, and the impact that transhumanism might have on professional sport as a spectacle. After all, if the athletes excel but only as a result of extreme artificial enhancement, the spectators would no longer appreciate their performance as a 'miracle' of human endeavour.

There is, as I have already discussed, an added safety concern with boxing, that does not necessarily apply to other sports, that is, its prime objective is to inflict physical damage on an

opponent. There is the damage which may be done to the boxer's health and well-being, he may even kill his opponent, and there is also the self-inflicted damage which might be done to their health through modification or ingestion of PEDs, all concerns which reach beyond boxing and into many other sports. Further, there is an existential consideration with regards to the athletes themselves in that their feeling towards their achievements may be diminished if they have derived assistance from physiological, psychological or neurological enhancements. Finally, although in my view less significant, there is the position from religion that human evolution should be left to God, who will make whatever alterations to humans that He sees fit. The Church often opposes transhumanism because it's not natural and goes against the divine plan.

Although these objections are not without merit, and we'll discuss each in detail, I will maintain that they do not singly or collectively necessarily rule out the moral permissibility of the creation of superhumans. It is my contention that, even if the transhumanist agenda cannot be discarded completely, all such endeavours should proceed with extreme caution.

Before going on however, it is important to note that eugenics, although a large and complex topic which looms large in transhumanism and has several negative historical, social and racial connotations will not be examined in any great detail within this thesis, other than in a very liberal sense where biological enhancements are individual and free from interference by the state. Further, the enhancements discussed are from a sporting perspective only and are not predicated on race, ethnicity or intelligence.

1. Performance enhancement

Competitive sport, by its very definition, involves the attempt to perform in a manner which displays superiority over one's opponent(s). Further, continual improvement in athletic performance is a vital part of this competitiveness, with a massive emphasis placed on the breaking of world records, going into the "history books", and being mentioned alongside the greats of one's chosen sport. Indeed, the Olympic motto itself – *Citius, Altius, Fortius* - encourages us to become faster, higher and stronger, an ethos shared by most athletes as they endeavour to push back the limits of human achievement. It is also true that this desire becomes even stronger as the athlete comes within touching distance of reaching the pinnacle of his or her sport, only to fall short at the last hurdle, so to speak. For example, only the most ardent

of athletics fans will recall the sprinters who came 2nd and 3rd in the 100m sprint at the London Olympics in 2012. This is despite the fact that the athlete who came 2nd, Yohan Blake, finished a mere 0.12 of a second behind the winner, Usain Bolt. In fact, only one quarter of a second separated first from fifth in this particular event. Despite displaying physical feats most of us could only dream of, those who finish behind the victor are rarely remembered and certainly do not receive the level of admiration foisted upon the winners; a point noted by Darian Meacham (2013) who explains that, despite these athletes performing incredible feats: '*Their efforts and abilities go largely unremarked upon*' (*ibid.* p.126).

An improvement of minute proportions would have propelled Yohan Blake into first place, from runner-up to champion, with the concomitant glory, money, fame, adulation and adoration usually reserved for the gold medallist. Only a small difference that would have seen the years of dedication, training and sacrificing finally come to fruition as his dream of becoming Olympic champion was finally realised. In reality, all the years of dreaming, training and sacrificing culminated in losing out by one tenth of a second. At the very highest level of all sports, the difference in athletic prowess between the competitors is often infinitesimal, and it is not difficult to see the attraction of artificial means of gaining that little extra.

In addition to the individual athlete's personal desire to achieve sporting greatness there are, probably now more than ever, external factors which bring with them an added weight of expectation. One such factor is the expectations of fans and spectators, who have a tendency to elevate sportspeople to deity-like status, a phenomenon which can quickly turn to apathy or even demonisation if that athlete fails to meet these expectations or is discovered to have met the expectations artificially.

Andreas Escobar, a Colombian footballer scored an own goal against the United States during the 1994 FIFA World Cup, which led to Colombia's elimination from the tournament. Five days later, upon returning to his native Colombia, Escobar was shot and killed outside a nightclub after an argument which had started over his "crime". This is certainly an extreme example, but high-profile sporting "failures" are met with intense public scrutiny, sometimes ridicule, and occasionally violence. Boos ring out around stadia, replays of mistakes are shown again and again on TV, "experts" on radio stations discuss the performance to the point of minutiae, websites are viewed all over the world, and social media goes into hyper-drive when an athlete, or team of athletes, fails to perform to expectations. Recently, upon their elimination from the European Championships in France at the hands of Iceland, the England team were

described by the press and media as, among other things: embarrassing, shambolic, rubbish, terrible, humiliating, woeful, disastrous and, perhaps worst of all, lacking in skill, patience or character.

In boxing, there are very few moments more remembered than the 25th November 1980 fight between Roberto Duran and Sugar Ray Leonard; otherwise known as the “no mas” fight, where Duran sensationally turned his back near the end of the eighth round and refused to continue. For a boxer of Duran’s fearsome reputation as one of the toughest fighters on the planet – his nickname was Manos de Piedra - this was unthinkable. Not only was Duran a hero and inspiration to millions in his native, poverty-ravished Panama, he had 71 wins from 72 fights, including a victory over Leonard five months previously, and had gained almost sixty of these wins via knockout. The next day the New York Daily News ran the headline “Roberto Duran quits...” Despite being considered one of boxing's true legends, winning world titles at four different weights and winning over 103 fights in a career that spanned more than thirty years, Duran is still remembered all over the world - for that single fight where he said “no mas” and gave up.

So, whether it is to realise an all-consuming personal dream of reaching the pinnacle of any given sport, to leave a legacy which can be placed alongside other sporting greats, to satisfy the often fervent expectations of a demanding and unforgiving public, or a combination of all three, elite level athletes are placed under an intense pressure to succeed. Fortunately, or unfortunately as the case may be, there has been no shortage of methods designed to assist the athlete in meeting these demands.

In the first instance there is training, which is seen as the legitimate and morally valued method of preparation.

Training as a means of improving performance is morally highly valued ...
Winning on the basis of planned preparation and self-developed body capital became the essence which made sport a symbol of an achievement- and advancement-oriented society. (Tolleneer and Schotsmans, 2013, p.22)

However, for many, indeed for most, training hard is - and never was - enough. Since the time of the Ancient Greeks, who tried various herbal concoctions to improve performance, and the Gladiatorial Romans’ method of ingesting hallucinogens to stave off fatigue, to the 19th Century cyclists who drank wine and chewed on coca leaves to prevent the depletion of energy

levels, history is littered with weird and wonderful methods designed to enhance sporting performance. In 1928 the International Association of Athletics Federation introduced rules banning the use of performance enhancing drugs, rules which some athletes have been trying to circumvent ever since. Parallel to improvements in PEDs has been the advancement in sport science and sports psychology and, of course, our technologies including: equipment, footwear, clothing, and nutrition. Consequently, contemporary athletes run faster, cyclists pedal faster, tennis players hit harder and, the very best sportspeople are simply fitter and stronger than ever before.

More recently however, as technology advances, talk has now turned towards alterations in the make-up of human physiology, described by Butryn (2002) as consisting of innovations which:

... alter the physical and/or psychological make-up of athletes who employ them, and which therefore ultimately confound traditional definitions of human performance. (p.112)

Until fairly recently, such biotechnological improvements involved doping and even more recently the use of prosthetic limbs or the undergoing of surgical operations designed to improve athletic performance. The discussion is now going even further as it moves towards the creation of "super-humans" by way of a range of transhumanist methods such as biotechnology and genetic manipulation. For some, such modifications are a step too far and several objections to the potential creation of these super beings have emerged; it is to these objections that I now turn.

2. Religion

The first objection, which might seem minor to some, is major to many others, and is that on religious grounds we must not tamper with the natural, that is, the way God intended us to be.

So God created man in his own image, in the image of God created he him; male and female created he them. (Genesis 1:27)

Biotechnological enhancements would seem to contravene divine law, or offend the sensibilities of the Almighty or, at least, the sensibilities of those who believe the Almighty would be offended. For a confirmed atheist, it is not always easy to lend credence to regulations

or prohibitions with religious foundations, but even if we grant the existence of an omnipotent and omniscient supernatural being and accept the veracity of religious doctrine, it is still not obvious that either of these provide strong opposition to transhuman enhancements.

The objection from religion is based on the premise that transhumanism defies the will of God and, consequently, would be carried out in direct contravention of divine will and wisdom. One main problem, as theists see it, is that synthetically improving the human condition to a post-human state would impair the sense of identity humans have as being made in God's image. As Hook (2004) asks:

How would the transformation from *homo sapiens* to *techno sapiens* affect our identity as bearers of the image of God? (p.3)

This is not a trivial matter in the life of a pious person from the Abrahamic tradition.

A related problem, as Hook sees it, is that when God created man and woman he asserted that his creation was "very good" and so it is both impudent and sinful of us to suggest that we can somehow improve upon God's work. It is also significant for Hook that Jesus, despite his divine powers, only ever healed, he never enhanced. In fairness however, Jesus never seemed shy at giving regular and ostentatious public displays of his own divine enhancements.

Another concern Hook raises is that the most important things in life – wisdom, love, patience and kindness - are impossible to manufacture and so any enhancements would be superficial, rather than an attempt to achieve the Christian aim of coming closer to God. It is important to note that Hook is not a technophobe or against the use of technology to assist us in our daily lives – his article can be found on the ChristianToday *website* – but is more concerned with the moral transgression of "playing God" by enhancing humans by way of synthetic processes.

An obvious first response to Hook is to raise the problem of establishing the existence of God, but any ontological discussion regarding an all-powerful deity or his/her/its expectations for humanity, is well beyond the scope of this thesis. There is a temptation to reach for the slightly insolent response which says that, if God created man, then He must have also have created transhumanists and so is now reaping what he has sown. Further, if there was ever an example of the benefits of transhuman modification, then Jesus, the very symbol of Christianity itself, must surely be a candidate. However, even if we resist these base replies and grant, albeit reluctantly, that there is a God who created humans in His image, this is not necessarily

ethically incompatible with those of us who do not possess the loftily sanctified appellation of “The Son of God” undergoing transhuman alterations.

Many religions, ostensibly at least, desire a better world, one which is free of pain or suffering and where peace reigns in every corner of the planet, but these goals are also shared by proponents of transhumanism. Further, it is not clear that transhumanism does in fact take people away from being image bearers for God. An interesting point concerning this is made by Mark Walker (2005):

... we are God’s children in exactly the same way that we are the parents of our children. To think about it in such literal terms is quite startling. For then it seems that we might one day grow up and become like our Father, just as we expect that our children will become like us in time ... transhumanism offers the possibility of improving our intellectual and moral natures. If we are to grow up and become like our Father then why shouldn’t we side with the transhumanist means of achieving this end, i.e., using technology to make ourselves more godlike? (*ibid.*)

The idea of human self-improvement is certainly something that religion can identify with and there appears to be nothing, at least in the Abrahamic religions, which suggest that using technology to assist us in this aim would constitute a moral transgression. Further, Hook would need to support his claim that things such as wisdom, patience, love and kindness cannot be manufactured, since it seems perfectly plausible to suggest that some form of neurological transhumanist enhancement could deepen our propensity for displaying these traits.

Walker’s point certainly seems to have merit; there is no evidence to suggest that transhumanist enhancements could not lead to improvements in our intellectual and moral nature, and this is certainly something that transhumanists are keen to explore and already there are discussions involving moral bioenhancements through the use of things such Deep Brain Stimulation and trans cranial direct current stimulation. However, as shown in the previous chapter, love and kindness are not things which are greatly desired in the sporting arena and certainly not in the boxing ring. So, although it is by no means a contradiction to suggest that transhumanist modifications might foster our proclivity for such altruistic traits, it is not clear that such a consequence would be welcomed by aspiring athletes.

In any case, throughout history there have been more than enough restrictions placed upon the human race; restrictions based on random and spurious evangelical claims about what God

wants, thinks and feels, which in turn determine what we can do, think and even eat. If there is a God, which I sincerely doubt, I feel quite confident in the assertion that His divine attention should be more concerned with the famine, war and genocide that blight His “image bearers”, along with the 9 million children that die every year on the planet that He created.⁵³ It is perhaps a task for the hundreds, if not thousands, of religious factions to arrive at some form of agreement on what God is and what He thinks before offering sanctimonious pontifications, based on unenlightened iron-age philosophies, to the rest of us on how we should behave. At the very least it would seem odd that a forgiving God, himself blessed with such boundless power and infinite wisdom, would begrudge His flawed and undeserving flock the opportunity to attain even a fraction of what He possesses.

However, despite the reliance on the somewhat unproven existence of an omnipotent deity, Hook does raise some interesting and important concerns on the subject of transhumanism. Firstly, he questions whether it is right for people to undergo such modification in a world ‘already deeply marked by inequities’ (*op. cit.* p.4). Secondly, although I don’t subscribe to his assertion that part of our identity is that of bearers of God’s image, there is certainly a case to be made for transhumanist modifications affecting our identity as humans, something which I will examine in more detail later in this chapter. Hook raises the point that the fabric of society could be irreversibly changed if the transhumanists are allowed to proceed with their agenda. Thirdly, there is the more Sartrean problem of technology creating as many problems as it solves - Hook gives nuclear power as an example - and there are certainly several other instances of technology succeeding in the solution of one problem, only to create several others. Finally, Hook recognises that, like all technological advancements, transhumanist technology will eventually succumb to corruption by the more objectionable members of the human race:

Transhumanist philosophy claims that technology can correct the fundamental problems of humankind. As Christians, we know that our elemental problems arise from the corruption of the human heart ... All technological innovations will not only fail to provide true happiness but also will be corrupted intrinsically by sin. Tools offered to produce liberation will also be used to further tyranny. It has always been so. (*loc. cit.*)

⁵³ World Health Organisation http://www.who.int/pmnch/media/press_materials/fs/fs_mdg4_childmortality/en/

Apart from the questionable and objectionable declaration that “as Christians” they know that technology is often exploited for malevolent (“sinful”) purposes, as though this knowledge was somehow beyond the reach of those of us counted among the other 5 billion of Earth’s inhabitants, Hook certainly has a legitimate concern. Transhumanism is a form of technological advancement and such advancements, history has taught us, are often exploited by those with wicked intentions.

Even in the absence of pious religious sermonising, Hook does raise some valid concerns about the modification of humans by way of transhumanist methods. The widening of the gap between social classes is certainly a concern, as is the question of how important it is to retain our identity as human, rather than becoming something other than human. Also, although impossible to predict, advances in technology have nearly always been accompanied by unforeseen problems, among them the numerous and creative ways they can be used by those with evil intent. Throughout the remainder of this chapter I will examine these concerns, among others, to show that, even if transhumanist improvements are not completely forbidden, we should be very careful about how we tread, particularly within the sport of boxing.

3. Transhumanism and nature

Michael Sandel, in *The Case Against Perfection* (2007), argues that the “gifted” character of our natural abilities is greatly devalued if we allow them to be subjected to any form of synthetic enhancement. Sandel uses the example of basketball players being allowed to use trampolines, a scenario which would lead to a sporting hero such as Michael Jordan losing his appeal; his athleticism would *no longer loom as large* (*ibid.* p.37). For Sandel, the value of sport lies in the demonstration of excellence, which in turn is a demonstration of natural giftedness; and if this giftedness is replaced by enhancements then we no longer have sport, we have a spectacle. This section examines the importance of the naturalness of sporting achievement and whether Sandel’s claim that we have a duty to respect the giftedness of our skills and talents is justified, it will focus broadly on three main areas.

Firstly, there is the argument surrounding biotechnological enhancements being a natural occurrence driven by the intrinsic human desire for continued improvement, or whether they subvert the laws of nature by creating something other than human. Further, there is the claim that only sporting feats achieved through natural means are praiseworthy, which also raises a

question about the importance of “the natural” in any definition of sport, particularly if enhancements are used as a means to achieve perfection. Finally, there is the claim that those who undergo transhumanist modifications ignore the importance of human limitations. According to opponents of transhumanism, those attempting to transcend the boundaries of human limitations are guilty of hubris which, in itself, is a potential threat both to the human species and more specifically sport.

One prevalent objection to transhuman enhancement comes from Nicholas Agar (2010) who suggests that biotechnological enhancements would not only create humans who were different from us, but they could in fact create something other than human:

Radically enhanced beings are not only significantly better than us in various ways, they are different from us—so different, in fact, that they do not deserve to be called human. (*ibid.* p.17)

Therefore, any enhanced human would not only be considered superhuman, it would likely be viewed as a different species entirely. This is problematic for Agar since a living system which is subjected to random alterations generally tends to function less efficiently, a problem which evolution has compensated for *by retaining the exceedingly few random mutations that make an organism biologically fitter and dispensing with the many that have the reverse effect* (*ibid.* p.138). From Agar’s perspective, sportsmen and women who undergo radical enhancements would not only be something other than human, but could also be subjecting themselves to things which have an adverse impact on their bodies’ ability to perform. Improved sporting performance could have harmful effects on other aspects of living, which leads to Agar accusing those pushing the transhumanist agenda of focalism. Annas et al (2002) go a step further with their claim that things such as cloning and genetic alterations could be viewed as crimes against humanity since: *they are techniques that can alter the essence of humanity itself* (*ibid.* p.153). For this reason, they see it as necessary to have a ban on redesigning humans written into law *nation by nation*.

From a sporting perspective then, the problems of biotechnological enhancements are obvious: the inherent risks to the athletes’ general health and the creation of athletic competitors who are something other than human. The sporting consequences of these post-human athletes on sport in general will be examined in the following section of this chapter, but for now it is

enough to note that, for Agar and Annas, any form of technological enhancement should be resisted since it runs contrary to nature and the essence of humanity.

A second, related, objection to the transhumanist position comes from Kass (2003) who is concerned by that fact that these enhancements are an attempt to lead us to perfection in our physical and mental performance, which will bestow us with powers and abilities that produce in us a desire to do things which we would never before have attempted. Ironically it is, according to Kass, the most gifted among us who are most resentful of the limitations nature has given and uses the example of Achilles who was:

... willing to destroy everything around him, so little could he stomach that he was but a heel short of immortality. (*ibid.* p.14)

As a result of these limitations humans, for as long as history can recount, have aspired to go beyond what is thought possible in terms of the body and the mind. This trait, according to Kass, is in the very fibre of human nature and he describes man as: *the animal constantly looking for ways to better his life through artful means and devices* (*ibid.* p.20). Much like Agar and Annas, Kass sees this unbridled human desire for perfection, along with unrestricted methods of enhancement, as driving us towards the emergence of a new species.

In addition to the possibility of a new species and the health risks involved with such endeavours, McNamee (2007) raises another concern with our quest for sporting excellence: hubris. He argues that humans, as part of nature, are beings with certain physiological and psychological limitations and any attempt to go beyond these limits is not only hubris, but shows a complete ignorance with respect to the necessity of these limits. There are certain aspects of human nature which, for McNamee, should be protected; things such as vulnerability, imperfection and mortality are valuable to us as a species and are not things which we should be trying to overcome. In a later article, he also goes on to explain that it is somewhat odd that an athlete, in their attempt to achieve perfection, would be prepared to transcend humanity:

There is certainly something very odd about this idea that to become the greatest ever athlete - footballer, golfer, or whatever - we must leave behind the very nature-bound species that we wish to be seen as the apex of. (McNamee, 2013, p.195)

McNamee certainly seems to have a point here; if professional athletes desire to reach the pinnacle of human sporting excellence then it would certainly seem strange for them to rely on anything beyond that which makes them human to achieve this goal. Indeed, McNamee sees the desire to transcend human nature as pathological and describes the attempted transcendence of our nature to be: *tantamount to removing the framework that gives it sense and meaning* (*ibid.* p.196). With respect to sport it is true that an element of vulnerability adds to the excitement – both for the participant and the spectator - particularly in boxing where the vulnerability of the fighters offers the possibility of a knock down or a knock-out, two of the staples for the average boxing fan.

Essentially, opponents of transhuman enhancements cite their unnaturalness and the threat they pose to the essence of what it is to be human as the reasons for their being prohibited or at least restricted. Much of the concern centres on maintaining the essential qualities that constitute the human species, qualities bestowed on us by nature and the evolutionary process, although there are also worries that any enhancements which are too alien to the human body could prove harmful to its overall performance and well-being. For those such as Sandel, there are more quasi-religious reasons for respecting the “giftedness” of the abilities given to us by nature. However, it is important to look at these claims more critically and to look more closely at the objections raised by those who oppose the transhumanist agenda.

In the first instance, opponents of transhumanism who base their objections on a transgression of the essential qualities of a human being run into the fundamental problem of providing an account of what these essential qualities might be. In both biology and philosophy, the term ‘species’ is a rather vexed one and there is some dispute as to what this term refers to, or indeed if it refers to anything. Even Darwin (1872) himself doubted the usefulness of such a term:

... I look at the term species as one arbitrarily given, for the sake of convenience, to a set of individuals closely resembling each other and it does not essentially differ from the term variety, which is given to less distinct and fluctuating forms
... (Loc. 978)

Most relevant to our present discussion is that opponents of transhumanism who ground their objections in an appeal to the essences, or essential qualities, of the human species at least owes us some attempt to define them.⁵⁴ Similarly, perhaps even more vexing for the opponents of

⁵⁴ For a fuller discussion of species categorisation see Ereshefsky (2016)

transhumanism, a definition of ‘the natural’ must be forthcoming before it is used to attach proponents of transhuman modifications; a definition that is somewhat lacking in the naturalist position, something which is examined in more detail below.

With respect to Agar and Anna’s claim that transhuman augmentations could lead to the emergence of a new, post-human species, there are two things to consider: firstly, to what extent would an individual need to be enhanced before he or she was described as anything other than human and, secondly, why the emergence of a new species would be such an unpalatable occurrence. In terms of the first point, Agar (2010) talks of “radical enhancements”, which are essentially enhancements that would endow an individual with powers and abilities far beyond those of present day humans. Agar offers no real definition of “far beyond”, but one could assume such powers might include: vastly enhanced physiology, superhuman strength, increased reflexes and agility, and dramatically heightened powers of sense perception. For Agar then, Spider-Man would be considered a different species even though he too seems to possess what Annas described as the *the essence of humanity*. Although he might accurately be described as superhuman, it does not seem quite right to say that Spider-Man is of another species; he appears to have retained enough of these so-called essential qualities to be considered human. Indeed, his vastly enhanced physiology seems to have brought with it an increased altruism and desire to help those in distress. The point here is that we have an individual, albeit a fictional one, with abilities far beyond those of present day humans – even the quickest and strongest current members of our species do not possess even one tenth of Spider-Man’s abilities – and yet we have not, I contend, reached the point where a new species has been created. Further, since no clear definition of “humanness” is postulated, it becomes extremely difficult to ascertain at which point we become “not human” (Culbertson, 2007). It is simply not clear that, regardless of how super a superhuman becomes, enhancements which bring about vast improvements in human performance will inevitably lead to the creation of another species.

Another point of contention with respect to the naturalist position is with the explanation they offer as to why the creation of a new species - or post-human - would be such an entirely negative consequence. Agar (2010) offers the following possibility:

Posthumans may see humans as morally required to defer to them ... If posthumans are much more capable than we are, then they may see less value than we do in a contract that limits what the powerful can do to the weak. (p.162)

And then...

... it's certainly not impossible that there will be posthuman purposes that both require the sacrifice of human lives and lead to consequences sufficiently good to justify it ... (*ibid.* p.169).

This potential posthuman speciesism, argues Agar, should be enough to convince us to put the shackles on biotechnological augmentations. Apocalyptic scaremongering aside, Agar may well have a point here. In Chapter 4 I discussed the psychology of a boxer and the psychopathic tendencies he displays at the point of observing an opponent's weakness, and human history is marred with instances of our species' violent intolerance towards one another - not to mention inter species violence and domination, which might be the more relevant phenomenon in this context - for the most trivial of reasons. So tyrannical posthumans could well be a genuine concern. However, as well as this being highly speculative, there is nothing to say that transhuman enhancements would not be accompanied by a heightened sense of altruism and morality, like Spider-Man described above. Biotechnological augmentations could well make imbue us with a greater sense of morality and altruism. Indeed, Nick Bostrom (2005) reminds us that, over time:

The set of individuals accorded full moral status by Western societies has actually increased, to include men without property or noble descent, women, and non-white peoples. It would seem feasible to extend this set further to include future posthumans ... Our own role in this process need not be that of passive bystanders. We can work to create more inclusive social structures that accord appropriate moral recognition and legal rights to all who need them, be they male or female, black or white, flesh or silicon. (nickbostrom.com)

In the case of including posthumans in our moral sphere, Bostrom sees this as going in both directions; that is, protecting posthumans from attacks by non-enhanced humans and vice versa. Bostrom's claim is not without merit. It is very difficult to deny that we have seen great progress with respect to the freedom, rights and dignity of a variety of people. However, history has also taught us that, despite our best efforts, there are still those among us who will attempt to exploit technology for the most evil of deeds. Perhaps this concern is best put by comedian Jim Jeffries (2014) who explains:

We have to play to the one-percent that are such f**k-wits, they ruin it for the rest of us. We have to walk as slow as our slowest person to keep society moving. (*ibid.* Bare, 2014)

Jeffries is making this point in relation to gun control in the USA, but it can equally be applied to any major technological enhancement and we don't have to look to far for examples, including the invention of the gun itself. Transhumanist modifications may well propel the human race into a future we can hardly imagine; a future where we enter realms of knowledge that are currently inaccessible or perform physical actions about which we can only presently dream. But we must tread carefully. There are those among us, even if they do number only one-percent, who will seek to exploit these advancements in technology in order to satiate their own desire for increased power and dominance over the rest of the species.

With respect to the objection raised by Kass however, there appears to be little cause for concern. Kass, as noted earlier, is concerned that the transhumanist agenda will lead to a quest for perfection, citing mythical Greek warrior Achilles and his frangible heel as an example. Achilles, despite being only one imperfect heel away from flawlessness, from immortality, was prepared to destroy everything around him in order rid himself of this "affliction". Kass worries that leading us towards a quest for human perfection will lead us to have desires for things that we never desired before, which in turn will alter the nature of humanity altogether. However, Kass need not worry since perfection, at least from the perspective of the sporting world, would appear to be a logical impossibility, the realisation of which would, one presume, bring about an end to such a quest.

Although it would prove highly problematic provide an exhaustive list of the criteria that might constitute the "perfect boxer", it seems safe to assume that such a boxer is one who (a) never gets hit and (b) who delivers every punch with perfect accuracy and with maximum effect. The perfect boxer will possess the agility, reflexes and anticipatory mechanisms to allow him to evade every punch thrown at him by his hapless opponent, as well as the power and precision to consistently deliver the perfect punch at the perfect time to render his opponent helpless. A fighter like this would certainly be unstoppable - indeed "unstoppable" would seem necessary for the attainment of perfection - at least that is, until he entered the ring with an opponent in possession of the same perfection-creating enhancements. Now we are in a position where we have two fighters, each with enhancements for the perfect offence meaning neither of them will ever miss, and both with enhancements for the perfect defence which means neither of

them will ever be hit. The problem here should be obvious. In fact, this problem applies to any sport in which there is an offensive/defensive aspect. For example, in football we would have the perfect striker who never misses against the perfect goalkeeper who never concedes, in tennis the perfect server against the perfect returner and in cricket the perfect pitcher against the perfect batsman. In all likelihood, the competitors would be reduced to inaction and we would reach a complete standstill. Each of these cases would suggest that, apart from the improbability of ever reaching the point of having the perfect athlete, perfection is something that we, contrary to Kass, absolutely do not desire. Even if we avoid the logical problem of two perfect competitors, the idea of having only one is equally undesirable.

Returning to the “perfect boxer” who never misses and never gets hit, the idea of him competing against an opponent with any vulnerabilities whatsoever would render the sport inane and purposeless. Even if we matched the mighty Achilles against an opponent - Achilles, someone of the same ilk but without the hindrance of a problematic heel - the result would be pre-determined: an Achilles victory. In boxing, pitting a fighter who consistently punches with perfect accuracy and power against an opponent who lacks the perfect defensive manoeuvres to avoid the attacks, will always yield the same, pre-determined result. In fact, since we have a fighter who always throws the perfect punch, we will have a one-punch fight every time the fighter enters the ring, a repetition of which would certainly drive audiences away in their droves. The impact this would almost certainly have on the boxer himself is examined in the next section of this chapter. However, a similar story can be told for any sport in which there is an offence competing against a defence and it is therefore safe to assert that perfection is in no way a desirable trait in any sport and certainly not in boxing.

Even outwith the field of competitive sport, there is a similar contradiction if we consider the idea of perfection with respect to other aspects of our lives. Suppose that we do reach a point where we think of ourselves as perfect in every sense, again keeping in mind that it is difficult to lay out the criteria by which we could establish such perfection, a problem never really addressed by Kass. At best, the only desire which would remain would be that which would drive us to maintain perfection, there would be no need to desire anything else, and even that may become tedious to the point of boredom. In the absence of goals, objectives, ambitions and drive for self-improvement, there would be little or no motivation to do anything since any action would likely lead us away from perfection and towards imperfection, something which Kass claims transhumanism drives us to avoid. If Achilles had somehow found a magical

podiatrist to cure his ailment, what would be left for him to do after he'd conquered all before him? At best, he'd have become the perfect warrior without a battle, essentially a warrior who doesn't fight, which intuitively renders his perfection imperfect or at best useless. Whether or not we can reconcile the idea of perfection with uselessness is a discussion for another day.

Another criticism that can be made of opponents of transhumanist enhancements is that they often appeal to the idea that anything which is natural is automatically superior to that which is unnatural or artificial (Annas 2002, Kass 2002, Sandel 2007, McNamee, 2007). However, there are two main problems with this. In the first instance the natural/unnatural distinction is very hard to sustain in anything like a rigorous way. Take for example aspirin, which derives its efficacy from the chemical acetylsalicylic acid, a chemical that is now synthesised 'artificially' in a laboratory or factory. However, this chemical is present in willow leaves, which have been used medicinally for millennia; so does this make aspirin natural or unnatural? Perhaps more importantly, does it really matter? Next, it must also be explained *why* we must automatically assume that that which comes from nature is always superior to that which does not. Finally, there are a plethora of examples where leaving things to nature seems like a fundamentally bad idea (Bostrom 2005, Buchanan, 2011). Nick Bostrom, in his criticism of Leon Kass' (2002) position, provides us with some of these examples:

Transhumanists counter that nature's gifts are sometimes poisoned and should not always be accepted. Cancer, malaria, dementia, ageing, starvation, unnecessary suffering and cognitive shortcomings are all among the presents that we wisely refuse. Our own species-specified natures are a rich source of much of the thoroughly unrespectable and unacceptable – susceptibility for disease, murder, rape, genocide, cheating, torture, racism ... it is astonishing that somebody as distinguished as Leon Kass should still in this day and age be tempted to rely on the natural as a guide to what is desirable or normatively right. (*op. cit.* nickbostrom.com)

Buchanan (2011) echoes these sentiments by explaining that nature is not a Master Engineer, but rather: *more like a morally insensitive, blind, tightly shackled tinkerer (ibid. p.2)* and there are too many humans who live in dreadfully unsatisfactory situations, a fact which prompts Buchanan to question the morality of allowing nature to continue to decide our fate.

There is also a line of thought which suggests that, rather than science and technology creating enhancements which run contrary to nature, these enhancements are in fact a consequence of the human species' *natural* propensity for continued improvement. Stock (2003) believes that it is:

... our special character, as human beings, to be forever driven to create, co-op, annex and exploit nonbiological props and scaffolding. We have been designed, by Mother Nature, to exploit deep neural plasticity in order to become one with our best and most reliable tools. (*ibid.* p.7)

Here Stock is discussing the use of PEDs in sport, but believes that the idea of enhancements in sports is not only inevitable, but turning away from anything which provides an enhancement in performance is against our very nature. He readily concedes that problems will arise and mistakes will be made, but that our focus should be set on improving methods of enhancement in order to make them safer for the athlete. Simon Young (2006) shares Stock's sentiment that humans are not supposed to remain fixed, but instead have a duty to *be all that we can be* (*ibid.* p.39). For Young, there is an innate desire within us for continual evolution and improvement and it is this that allows us to act *in harmony with the essential nature of the evolutionary process* (*loc. cit.*). Effectively for those such as Stock and Young, to enhance and improve is human nature and there is little we can do to stop it, nor should we try.

With respect to sports, most of us are not blessed with the natural gifts that would allow us to compete at an elite level; our genetics have left us lacking in the necessary physiology or psychology to perform to the standard required at the top end of professional competition. In other words, Mother Nature just hasn't nurtured us with the same love and attention given to those with real athletic prowess. For some, however, we need not remain oppressed by this "genetic lottery" (Savulescu et.al. 2004), which discriminates against those of us who are genetically disadvantaged. In arguing for the use of PEDs, Savulescu et.al. claim that Olympic champions should not be determined by those with the best genetic potential, but instead should be: *the result of human creativity and choice, not a very expensive horse race* (*ibid.* BJSM, 2004). In other words, sport should be about more than simply finding those blessed with the best genetics. Savulescu concedes that using performance enhancement drugs may well be unfair, but points out that nature is equally unfair and so there is no reason to show a moral preference for the talents, or lack thereof, given to us by nature. Consequently, the only limits that should be placed on enhancements are those with regard to the athletes' safety. This idea

runs in accordance with Young and Stock (*op. cit.*) who argue that failure to undergo performance-enhancing modifications runs contrary to human nature, since there is within us an innate desire for continual improvement.

One final point with regards to sport and the appeal to the natural comes from Andy Miah (2011) who provides several examples of enhancement being used in sport today, enhancements which are generally accepted. These include hypoxic chambers, improvements to swimming costumes and tennis racquets, as well as nutrigenomics and elective surgeries such as laser eye surgery for golfers. It is, Miah argues, perhaps slightly naïve of those who oppose enhancements in sport to believe that technology is totally absent from the field of sport at present.

Evidently then, those who oppose the use of technological enhancements in sports, or in society generally, still have some way to go before establishing a decisive reason for placing limits on the advancements that can be undergone by those who wish to transcend the boundaries of human performance. However, as compelling as the ideas postulated by those who support transhumanism may seem at first glance, there still seems to be something within us that makes the origin of a performance significant, both for the sports audience and for the athletes themselves. I will address the possible reasons as to why such importance is placed on the origins of a performance in the following section.

4. Biotechnological enhancements: the nature of sport, the athletes, & their audiences

In this section I intend to examine how the nature of sport, and more specifically boxing, might be impacted by the introduction of unrestricted, unregulated biotechnological enhancements. Broadly, I will examine the effects on the athlete, the sporting audience and sport in general and will conclude that, if transhumanist modifications are to be permitted, we should proceed with great caution.

The Oxford dictionary describes sports as:

... activity involving physical exertion and skill in which an individual or team competes against one another or others for entertainment.

An interesting discussion arises when we consider whether or not transhuman modifications alter the nature of sport in any way, and if there is any significant impact on sport either as an activity for the athlete or as a spectacle for the spectator.

One possible objection to transhuman enhancement is that it could threaten the very nature of sport by removing too much of the human element from sporting achievements. This is problematic for two main reasons. Firstly, it creates an existential problem for the athletes, who may begin to question their own abilities and start asking whether science is the main factor in their success, rather than their own talents or hard work. Further, an over reliance on technology may render sport meaningless for the athlete if it becomes either too easy or too far removed from the human struggle which helps create the sense of achievement. Secondly, as science begins to create more powerful and efficient athletes, there is a possibility that the athletes become further and further removed from their spectators and so elite sport loses much of its social appeal, which is to say that it loses much of its appeal altogether. Let us first look at the first concern, which is the impact of enhancements on the athletes' relationship to their chosen sport.

Nicholas Agar (2010), in his rejection of "radical enhancement" – enhancements which bestow humans with abilities or attributes far beyond the current level of human performance – uses the analogy of moving from childhood to adulthood to highlight a concern he has regarding human enhancement. As adults we become far more adept at constructing towers from wooden blocks, or identifying animals from pictures of a farm, and in fact adults are far better at these things than young children. However, as we get older the enhancement in our intellects removes our desire to participate in these activities, even though they are now things at which we would excel. Indeed, there are innumerable tasks that we find fascinating as children, only for this fascination to wane, and eventually vanish, as our intellectual powers develop and mature. A similar story can also be told if we consider our attitude towards things we try for the first time compared to our attitude towards these things as we become more adept. One example might be driving, where the thrill and exhilaration of passing one's driving test is gradually replaced by the boredom of long journeys or the irritation of constantly being asked to shuttle friends and family from one place to another. In sport the mastering of basic moves leads to a desire to develop more complex manoeuvres and to increase the level of competition in which we participate. Crucially for Agar, the more powerful we become the more difficult it becomes to find stimulation in the tasks that we perform, which is perhaps because the pride

we take in completing certain tasks is in part derived from the struggle and effort required. Magdalinski (2013) explains this with respect to sport, which:

... remains, at least in the popular mind, an ideal means to impart a sense of commitment, discipline, dedication and sacrifice, and to strengthen character and fortitude in the face of adversity ... Athletic performance is typically only considered of merit if it is the culmination of a body's natural capacity coupled with visible hard work, discipline and sacrifice ... for in the presence of technologies it is feared that one can never be sure whether an individual's performance is a genuine reflection of their own physicality or unduly enhanced by the internal or external aid ... (pp.238-241)

For the athletes themselves there are two things worth consideration here. Firstly, if the athlete's capacities extend too far beyond those required by the demands of his sport, the athlete's stimulation and desire to participate will quickly diminish in the same way our desire to build towers from wooden blocks begins to wane as we get older. There is a whole range of things which contribute towards an athlete's sense of self-achievement in the sporting arena, including: the overcoming of adversity, effective decision-making, an ability to push through the pain barrier, mental toughness, sacrifice, dedication, discipline and the demonstration of a highly-developed skill set. In short, an elite athlete is driven by his or her desire to show that he or she, more than anyone else, can conquer these things in order to dominate the other competitors in the field. An absence of these will almost certainly lead to a total dearth of stimulation or motivation. Enhancement could create a scenario where the sport would no longer provide a suitable test of the athlete's skills, leading to a general apathy towards sport itself. (Holowchak, 2013).

The second point to consider here is that, even if a solution to this diminishing stimulation can be found, there will always remain a doubt in the athlete's mind regarding the legitimacy of his or her achievement. The question: *was that me or the technology?* will start to permeate every thought the athlete has about their athletic ability and achievements. Leon Kass (2003) puts it thus:

... biomedical interventions act directly on the human body and mind to bring about their effects on a subject who is not merely passive but who plays no role at all. The relations between the knowing subject and his activities, and between his

activities and their fulfillments and pleasures, are disrupted ... With biotechnical interventions that skip the realm of intelligible meaning, we cannot really own the transformations nor experience them as genuinely ours “Personal achievements” impersonally achieved are not truly the achievements of persons. (pp.22-4)

Bill McKibben (2003) raises a similar concern about motivations and believes that enhancements will lead to the stunting of human flourishing, with a person who undergoes radical enhancement being *crippled by existential uncertainty* (*ibid.* p.49). Such a person will not only be troubled by the thought of whether it was they or the programming that is responsible for their motivations, but will be forever left to wonder why they chose the actions that they did. Further, McKibben worries that flow – *a remarkable experience of being completely immersed in a challenging activity* (*ibid.* p.50) – will be extremely difficult as a result of this self-doubt. Essentially for McKibben, it will prove highly problematic for the athlete to become fully immersed in an activity if they are not entirely responsible for the thoughts, actions and motivations which constitute that activity. This is certainly an interesting idea and would mean that the enhanced boxer would be unable to fully immerse himself in the fight because many of the things required for such immersion would no longer be present. Taken to a hypothetical extreme, the boxer would be a mere spectator as the technology regulated his movements and decisions in order to produce the optimum performance. That is not to say that no motivation or stimulation would exist at all, many people derive immense satisfaction from the completion of video games, which often demand intense focus, determination and a highly-developed skill set, but an over reliance on enhancement technologies could change the nature of an athlete’s relationship to the sport considerably.

There is therefore an argument that can be made about enhancement with regard to the impact it has on the athletes and the relationship they have with their chosen sport. There is certainly a gap that opens up between the athlete and his or her achievements as the role of technology increases; a gap which, if allowed to widen, could lead to a lack of stimulation as the sport becomes too easy and a reduced sense of achievement ensues as the technology does too much of the work. There may be a case for saying that the sport could be made more challenging to compensate for these technological advances, but as the level of the challenges increase so too does the gap between human and “enhanced human”, which forms the basis of the second part of this section.

Before going on to look at the problems of the widening gap between enhanced and non-enhanced humans, it is important to look at the reasons why people watch sport. At an elite level, sport is about much more than athletic performances, with ticket revenue, television money and sponsors' contributions having ever more influence both on athletes and the sports in which they participate. In essence, sport is *sold* to us. For example, the 2015 fight between Floyd Mayweather and Manny Pacquiao – a fight described as “fight of the century”, a moniker to which it failed to live up to - was estimated to have generated a total revenue of over \$600 million, which included over 4 million pay-per-view buys, bar and restaurant licensing fees, hotel closed circuit television fees and fight tickets, which cost an average of \$4,500. In terms of the highest attendance at a boxing match, the fight between Julio Cesar Chavez and Greg Haugen attracted a crowd of 132,274 to the Estadio Azteca in Mexico City. The audience then, whether it be a live or television audience, is a crucial part of any elite-level sport, but why are people so fixated by other people's sporting achievements?

A first suggestion is that there is a social aspect to sport and a pleasure one derives from the atmosphere generated by thousands of like-minded people congregating in the same place. In fact, in many cases, *congregation* may be an apt term given the devotion many people have for the football team or athlete that they follow. However, there is undoubtedly a powerfully uplifting - perhaps spiritual - experience that one has when attending a live sporting event. Indeed, in many sporting arenas, most notably football stadia, fans even sing collectively in a quasi-religious expression of togetherness.

A second explanation of people's fascination with sport is the aesthetic pleasure in watching people, people like ourselves, perform feats which are far beyond the limits of our own capabilities. For example, the performances of Roy Jones Jr., Roberto Duran, Marvin Hagler or Erik Morales, among many, many others, hold a strong captivation for me because these fighters do/did things in a boxing ring against live, dangerous opponents that I would struggle to execute on a static punchbag. This, I contend holds true for all sports, from the snooker player who achieves a maximum break of 147, to the marathon runner who completes twenty-six miles in a little over two hours, or the Olympic gymnast who performs incredible, gravity-defying feats of acrobatics. It is this aspect of sport which could come under threat as athletes become ever more enhanced: the marvel we experience at observing other humans perform incredible feats of athleticism, skill and endurance could seriously diminish and could perhaps

vanish altogether. The term “just like us” is vitally important in our fascination with sports, a point summed up by Agar (2010):

Garry Kasparov is just more interesting to us than the chess computer Deep Blue... He'd be more interesting to us than any posthuman ten-dimensional chess players slumming it by playing two-dimensional chess ... We would rather watch Usain Bolt run 100 meters in 9.58 seconds than see athletically superior posthumans or aliens run that distance much more quickly. (pp.193-194)

According to Agar, the inferior performances of human athletes hold more appeal for us because of our natural *interest in identifying* (*ibid.* p.194). There are two important things to note here. Firstly, we recognise the performances of elite athletes as pushing the boundaries for what is possible for our species, the reason we watch elite sports is to vicariously experience exceptional performances as we learn about the limits of human capabilities. Secondly, given that we share many of the limitations and vulnerabilities of the athletes, we have what Agar calls a “unique access” to these incredible sporting achievements. Consequently, we are able to speculate – even if rather wildly – about what we ourselves might have achieved had we been in the possession of greater dedication and/or talent. Agar suggests that we use some form of the simulation theory to attain this unique access, but the important point is that our enjoyment and enthrallment with watching elite level sports is largely due to our ability to identify with the athletes we observe.⁵⁵

Later, Agar (2014), in his discussion of PEDs, goes on to term this ability to identify with the athlete as *veridical engagement*: being able to imagine ourselves doing what the athlete does. The use of PEDs stunts this ability for imagining, he argues, and a gap opens up between the athlete and the spectator since PEDs makes the athlete physiologically less like the spectator. In other words, too much enhancement *weakens our connection with the exploits it enables* (*ibid.* p.40) and, as a result, reduces the value we place on these exploits.

Another, linked, concern that the idea of enhanced athletes raises is that of origins and how these can impact on the aesthetic pleasure we derive from things. Darian Meacham (2013) gives the example of Han van Meegeren's forgeries of the paintings by Johannes Vermeer to

⁵⁵ Agar also argues that this should also go in the opposite direction and that: “elite athletes should want to produce performances that are relevant to their human audience”. (2014, p.195)

explain our contempt for athletes who have enhanced by way of PEDs. Regardless of the standard of these forgeries, they will never hold the same value as the Vermeer original, essentially because the aesthetic pleasure is derived from more than the final product, but also from the historical context. Irrespective of how much we admire the painting when we first see it, upon later learning that it was in fact a forgery will produce in us a retroactive disappointment, even if the forgery demonstrates greater artistic talent than the original. For Meacham, a similar story can be told about sport and discovering that an athletic performance has been enhanced:

... the spectator's aesthetic experience can be retroactively corrupted and made ugly in a similar fashion to learning that a painting is a counterfeit. (*ibid.* p.129)

The discovery of a sporting performance being in some way enhanced has a similar effect to learning that a painting does not possess the history that we originally thought. In effect, we instinctively place less value on something if its origins turn out to be something other than we had originally believed. It should be noted that Meacham is discussing contravening the rules of sport, rather than simply enhancements which have been agreed upon by the athletes and the governing bodies, but there is little doubt that origins not only matter to us, but can have a massive impact on the value we place on our aesthetic experiences. Therefore, the discovery that an awe-inspiring athletic performance was based on some technological enhancement could, as Agar might say, impede our ability to veridically engage.

De Block (2013) makes a similar point, claiming that enhancement creates an alteration in our attitude towards any aesthetic activity:

... the observable characteristics of an athletic performance are not the only things that matter to our aesthetic appreciation of this performance ... Information regarding the origin of an athletic performance influences our appreciation of the observable characteristics of that performance ... it almost goes without saying that knowing that some kind of enhancement was involved, shapes our aesthetic appreciation to a large extent. (*ibid.* p.154)

This is exemplified by De Block, who invites us to consider the aesthetic difference between watching authentic footage of an athletic performance and footage which is manipulated to look genuine. So long as we are unaware of the fact that one of the performances is fake there is no aesthetic difference, but as soon as we become aware that only one of the performances

is genuine, our attitude towards the manipulated footage instantly changes. For De Block, an athletic performance must be human in origin in order to *deserve our fullest aesthetic appreciation* (*ibid.* p.155) and the discovery that it is not entirely human in origin will detract from the pleasure we experience at observing the performance. Again, De Block's discussion centres around PEDs, but there is no reason to think that the same argument cannot be made with reference to other forms of enhancement.

In addition to the impact on the athletes and the wider audience in sports, it is also worth considering the impact transhuman enhancements might have on the nature of sport itself. One major concern is expressed by Lenk (2007), who worries that enhancements will *transfer the competition into the research laboratories* (*ibid.* p.225). The point here is that sports which have traditionally seen the most gifted and dedicated athletes rise to the top will have their outcomes decided by those with access to the most gifted scientists, engineers and financial resources. In short, sporting achievements will be reduced to feats of engineering.

An obvious response to Lenk is that there are already teams of people involved in an athlete's preparation. For example, a GB Olympic boxer, in addition to his boxing coaches, will have access to a nutritionist, a dietician, a physiotherapist, a fitness coach, a strength and conditioning coach, a sports psychologist as well as private medical care. They will also train in the most technologically advanced gyms and will receive an annual salary of at least twenty-five thousand pounds. These boxers are still classed as "amateur", but for world class professional boxers, thousands of pounds can be spent in preparation for each fight. It is therefore naïve to think that money and science currently have no part to play in an athlete's development, irrespective of the sport in which they compete. Savulescu et.al (2004), in British Journal of Sports Medicine article, make a similar point about the Australian Olympic team:

Forget the romantic ancient Greek ideal. The Olympics is a business. In the four years before the Athens Olympics, Australia spent \$547 million on sport funding, with \$13.8 million just to send the Olympic team to Athens. With its highest ever funding, the Australian team brought home 17 gold medals, also its highest. On these figures, a gold medal costs about \$32 million ...They won because they spent more. Money buys success. They have already embraced strategies and technologies that are inaccessible to the poor. (*ibid.* bmj.com)

However, this does not tell the whole story. In order to reach a position where they have access to these facilities a boxer, or any high-level athlete, must first demonstrate that they have the potential to compete at the pinnacle of their sport. As it stands, elite athletes have access to these facilities because they are *already* highly-gifted, the science and technology only facilitate the maximising of these pre-existing natural abilities. A problem would only arise if an athlete is plucked from mediocrity and bestowed with enhancements which turn him into a world-class performer, in a manner similar to Ben Johnson in the 1988 Olympics in Seoul, which is presumably Lenk's concern. As discussed above, high level sport does not only consist of athletes, but depends largely on an audience for its continuation. It is not clear how the public would react to the altering of the nature of all sports to something similar to Formula 1, where success largely depends on a team of engineers and the financial resources they have available.

A related concern that Lenk raises is the pressure that would be placed on athletes to undergo enhancement, even if they were reluctant to do so, in order to remain competitive, something which Lenk worries could create safety issues:

... we would likely in the future have a competition in terms of technology, thus dumping safety standards. In a way, this would be very characteristic of our culture, which is technique prone and accepts a lot of individual risks for the sake of perfect functioning. But it also may produce new risks for the athletes, who will get into a new kind of competition to accept more and more invasive enhancements to their bodies. (*ibid.* p.225)

The mindset of an elite athlete is such that winning and increasing performance levels are everything, and already they subject their bodies to extreme, sometimes dangerous, limits during training. We only need to look at the discrepancy in weight for a boxer at a weigh-in and the same boxer in the ring twenty-four hours later, where the difference can be as much as fifteen or twenty pounds. In his May 2016 fight against Amir Khan for the WBC middleweight title, which was fought at 154 pounds, Saul Alvarez was thought to be around 180 pounds by the time he entered the ring only twenty-four hours after the weigh-in; a gain of over twenty-five pounds in a single day. In fact, the difference was so dramatic in some cases that it prompted another of the sanctioning bodies, the IBF, to enforce a morning weigh-in for their title fights, where fighters are permitted to gain no more than ten pounds from the previous evening's weigh-in, although this still leaves the rest of the day for further weight gain. The important point to note is that athletes competing at an elite level are already willing to take

risks with their bodies and their health in general in order to gain even the most slender of advantages, or even just to remain competitive with other enhanced athletes. The worry is that these same athletes will submit, either willingly or through coercion, to invasive enhancements that could have seriously detrimental effects on their long-term health.

So, does all of this provide good enough reason to resist transhuman enhancement in sports? With respect to the first objection, that an increase in enhancement is accompanied by a loss of the human elements necessary for fulfilling sporting achievement, there could be a case for suggesting that there is some overreaching. Van Hilvoorde (2005), in his discussion on genetic enhancement, puts it thus:

Some arguments against the use of genetic modification are based on the false assumption that efforts and dedication will no longer be of importance. Biotechnology in sport cannot replace training effort. Instead of genetic enhancement replacing dedication, “artificial” enhancement at the same time enhances “human” dedication. (p.99)

Although Van Hilvoorde talks specifically about genetic enhancement, the point can be made with respect to any enhancement: that it can be used to improve all aspects of an athlete’s make-up, including his or her dedication, determination and willingness to push him or herself to the limit. So rather than removing the human elements of sporting endeavour, transhuman enhancements will bring about an increase in these things and the athlete will remain as dedicated, determined and prepared to make sacrifices as ever, possibly even more so. There are even precedents for this with anabolic steroids in athletics and EPO in cycling, both of which allow the athletes to train with greater intensity and with greater frequency.

However, it is not clear that Van Hilvoorde can offer a solution to the second objection: that enhancement creates such a gap between athlete and spectator that there is no “veridical engagement” with athletic performances and the audiences become apathetic towards elite sports. It is one thing to create a more dedicated, determined and skilful athlete, it is quite another maintaining the appeal of such an athlete to a wider, non-enhanced sporting audience. Van Hilvoorde may well be right in his assertion that the human elements of determination, dedication, commitment and sacrifice may well be maintained, or even enhanced, but the origins of these elements are still likely to be a major factor in retaining the interest of spectators.

Another controversial issue that comes from the discussion above is that of preventing athletes from agreeing to undergo invasive enhancements which may have negative effects on their long-term health. Roger Brownsword (2013), however, has an alternative view on this:

... competitors in some sports (paradigmatically, boxing) act in ways that they know are likely to harm one another, we treat this as permissible (subject to some limiting rules) because the parties have consented to such risks of participation. Accordingly, following this line of reasoning, if there are enhancements that increase these risks, they should be permitted so long as the participants have given their free and informed consent. (p.294)

Elite sport, especially combat sports, come with inherent risks. With respect to professional boxing, the fighters are acutely aware of these risks, they are even required to attend an annual brain scan in order to be granted a licence to box. A boxer enters the ring with the intention of delivering powerful punches to his opponent's head and body and, consequently, gives his "free and informed consent" to his opponent to attempt to do the same. No boxer ever hopes to seriously injure, far less kill, an opponent, but every fighter knows that these are very real possibilities. To suggest otherwise is patronising to boxers and attempting to prevent them from participating in their chosen sport based on a premise of them not knowing any better, or that they need to be saved from themselves, is grossly insulting. However, the problem with Brownsword's line of thinking is the definition of "free" with respect to the consent given by a fighter.

At the very top-level of professional boxing, where each fighter's purse is in the millions, postponements and cancellations are fairly common, with fighters calling off the contest in the knowledge that another opportunity will eventually arise. At lower levels of the sport however, this is not always the case. When a lower level boxer considers withdrawing from a contest, it has several consequences, including: loss of wages, returning ticket money to family and friends, wasting eight weeks of training and sparring, leaving the TV company with no main event and losing his ranking for future title fights. For these reasons a fighter, unless he is physically unable to make it to the ring, will rarely, if ever, voluntarily withdraw from a contest. Add to this that many boxers are young, strong, ambitious individuals who have yet to be disabused of the feeling of invincibility and we have a host of factors driving the boxer to fight, irrespective of the circumstances. In cases such as these one can only hope that the fighter has a coaching team or manager looking after his interests who will make the correct and safe

decision for him, even to the point of withdrawing him from the contest. So now we have a positive instance of paternalism, one which is certainly necessary in the sport of boxing, despite the fighter appearing to give his “free and informed consent”.

Just as there are instances where it seems right to protect boxers from themselves, so it might be the case with athletes who seek to improve their performance by way of biotechnological enhancements. For many people, it is difficult to fully appreciate the mindset of an elite athlete, or an athlete who aspires to reach an elite level of performance. The drive, focus and determination required to reach the higher echelons of sports can border on obsession, with the desire for success becoming all-consuming, often to the detriment of other areas of the athlete’s life. It is not unreasonable to assume that many athletes, particularly those of a younger age, would be more than willing to place themselves at greater risk in order to achieve their goals. This is before we consider the added pressures of letting down fans, keeping sponsors happy and meeting contractual commitments with promoters and television companies. Essentially, an athlete may not always be in the correct psychological state to freely give their consent.

Biotechnological enhancements then could very well threaten the nature of boxing and sport in general. Such modifications are likely to have an impact on the athlete’s relationship with their sport as these enhancements create an ever-widening gap between themselves and their performances. Further, a similar gap may open up between the audience and the athletes as the spectators find it increasingly difficult to identify with sportsmen and women who perform superhuman athletic feats; a breakdown which could lead to a total apathy towards elite sport. Finally, steps must be taken to ensure that young, ambitious and impressionable athletes do not make decisions regarding adaptations which could have seriously deleterious effects on their long-term health. This last point is particularly prevalent to boxers, who knowingly and intentionally place themselves in an environment which could bring about fatal consequences.

In the preceding chapters of this thesis, the dangers of boxing have been acknowledged. Boxing, by its very nature, can be a fiercely violent, merciless and brutal sport, a fact brought all too close to home by the recent death of Dundee boxer Mike Towell, who suffered serious bleeding to the brain after being knocked out by opponent Dale Evans. Although Evans is now completely crestfallen at the tragic outcome of the fight, during the course of the contest he did exactly what he’d been training to do: he landed a punch with sufficient force to render his opponent temporarily unconscious; he killed another man and did nothing wrong. Permitting fighters to undergo biotechnological enhancements means that they will become more

powerful, more accurate and more efficient at delivering the type of shots that brought about the sad demise of Mike Towell and several others before him. Of course, there could be enhancements which increase a fighter's ability to absorb or even avoid such punches, but then this negates the point of enhancement in the first place since, as already discussed above, it is the fighters' vulnerability, the possibility of seeing knockouts, which plays a large part in moving boxing from a sport to a spectacle. For this reason, and the others detailed above, transhuman enhancements in boxing should serve only to improve the safety and well-being of the fighters, and not to open up the possibility of creating athletically-gifted psychopaths.

Chapter 6

Conclusions

1. Discussion Summary

The research for this thesis has been carried out against a background of phenomenological and transhumanist theories and consisted of three distinct parts: (1) to describe the phenomenology of being in a boxing contest, (2) to examine how transhumanist adaptations might impact on these phenomena, and (3) to look at the limitations that should be placed on these adaptations in order to preserve boxing both as a sport and as a spectacle. As much as possible I have refrained from entering the realms of moral propriety with respect to the sport of boxing itself, although there have been instances where certain moral implications have had to be considered, particularly with regard to the issues discussed in Chapters 4 and 5.

The brutality of professional boxing brings into question whether or not it can even be defined, in any meaningful way, as a sport. Indeed, there have been calls for a ban on boxing and it was banned in Norway in 1982 under the “knockout law”, a ban which was only repealed in May of last year. Even the Romans banned the sport in the 5th century due to the brutal disfigurements of its contestants. Even today there are occasions where fighters have suffered severe brain injuries which, on occasion, have led to their death. However, even for those who leave the professional boxing ring relatively unscathed – although probably not entirely unchanged⁵⁶ – a ten or twelve-round boxing match is likely to be a gruelling, punishing and often painful ordeal from which the fighter will often require days or even weeks of convalescence.

Further, in addition to the test of endurance found in many sports, the boxer must also deal with the added complication of an opponent attempting to inflict physical damage upon him. Consequently, during the course of a hard-fought encounter, the fighter’s perception of his world, and himself, will alter as the rounds go by. These alterations will be in relation to the notion of temporality, the feeling of acting as opposed to that of being acted upon, the ability

⁵⁶ A thorough inquiry into the long-term brain damage has been conducted on former NFL players: https://www.washingtonpost.com/news/morning-mix/wp/2016/04/12/40-percent-of-former-nfl-players-suffer-from-brain-damage-new-study-shows/?utm_term=.3e69ea6ed28f

to recognise and exploit horizontal shifts in possibilities of action, as well as the emotions experienced throughout the duration of a fight. There is also often a fluctuation in a fighter's perception of his opponent in terms of their being an object which can be acted upon or a subject with its own agency. Throughout this work, I have examined a number of theories which can be used to illustrate how and why these experiential shifts take place. Further, I have looked at the consequences of these alterations and how transhumanist modifications might impact on a fighter's experience as he navigates his way through a contest. However, I have not made the assumption that professional sports is, in itself, an inherent and unquestionable good. I have simply assumed that, since so many millions of people have some form of interest in sport, if it is to retain its value for these people, then we must tread carefully in any quest for improvement.

The transhumanist agenda has become driven ever more forcefully in recent years by rapid advances in technology and what these advances might facilitate in terms of altering the human condition. The transhumanist considers the human condition to be a work in progress. Proponents of the transhumanist agenda see these alterations merely as an accelerated continuation of the human evolutionary process. From the perspective of professional sports, the methods of enhancing performance have been present for millennia, particularly in the use of PEDs and so, it is argued, the quest to go beyond what is currently "humanly possible" is already well under way. However, this pursuit of attaining capacities which allow sportsmen and women to go beyond the limitations placed on them by nature may have a major impact not only on the athlete, but on the very nature of sport itself, both as an individual endeavour and as a spectacle for the millions of spectators around the world who provide the economic sustenance for the very survival of professional sport

As well as the alterations in a fighter's experience during a contest, and the impact those alterations may have on sport in general, there are other factors which must be considered. In the first instance, the physical and mental well-being of the fighters must remain paramount. Professional boxing, I have already conceded, can be extremely brutal and highly dangerous, two things of which every fighter is acutely aware. For this reason, although the use of PEDs in any sport is certainly frowned upon, in boxing the goal is to physically hurt an opponent, albeit temporarily, and so any attempt by a fighter to enhance himself artificially has been met

with strong moral condemnation.⁵⁷ In short, artificial enhancement produces an asymmetrical increase in the potential brutality of the sport.

A further consideration of immense importance in this thesis has been Sartre's "anti-praxis", the unintended and unforeseen negative consequences of a project. By their very nature, the negative consequences of any major project are unforeseeable – for example it is unlikely that Karl Benz or Henry Ford could ever have predicted wars being carried out over the substance that fuelled their creations – but just as the last century or two have given us incredible scientific progress, so too have they given us a plethora of cautionary tales of what can go catastrophically wrong. The exploitation and misuse of technology, often for malicious ends, may not rein in the transhumanists' quest for unremitting improvement, but it should serve as a warning against unbridled, unregulated "enhancement" – with "enhancement" now placed in inverted commas because of the serious possibility of anti-praxis which, of course, implies that "enhancement" may be to the detriment of the "enhanced" and non-enhanced alike.

I have proposed that transhumanist modifications will cause more than enhancements to an athlete's physical and mental prowess, and are likely to bring about fundamental changes to how the athlete experiences his or her world, whether for good or ill. In Chapter 2 I examined three main phenomenological structures: temporality, emotions and empathy in the absence of sympathy. Using anecdotal evidence, I have drawn out a correlation between the slowing of subjective time and the depletion of energy reserves. Indeed, the fact of pleasant (positive) experiences seeming to pass more quickly, and unpleasant (negative) experiences passing more slowly, has been established by a number of experiments conducted by several researchers including: Watts and Sharrock (1984), Gupta & Cummings (1989), and Tse et al. (2004). Although the mechanics of this phenomenon of time distortion is perhaps a question for the neurosciences rather than the philosopher, I have contended that there is some promise in the theories of Husserl and Heidegger in disclosing an underlying explanation for these distortions.

Husserl presents a theory of a 'living present' in which our time-consciousness consists not only in a succession of 'nows' or 'primal impressions', but must also be constituted by retentions of the past and protentions of the future. I have argued that negativity or unpleasantness forces us to attend to durational events, which in turn creates an elongation of

⁵⁷ Few instances exemplify this better than the tragic case of Billy Collins, who committed suicide shortly after his 1983 fight with Venezuelan Luis Resto: <http://www.boxingnewsline.net/the-nightmare-of-what-luis-resto-did-to-billy-collins-has-stayed-with-everyone-it-has-touched/>

these retained impressions and a feeling of ‘sameness’ in our impressions, along with a delay in the arrival of our protentions, thus causing a slowing of the passing of subjective time. Conversely, by turning our attention towards passing moments we become immersed in the activity in which we are involved and our retentions become shorter, causing time to seem to pass more quickly, although I do concede that this pushes Husserl’s theory beyond his original aims. With respect to boxing, exhaustion and fatigue conspire to divert the fighter’s attention away from the task in hand and towards the passing seconds of the round and the ringing of the bell which cause the tired fighter to feel as though the rounds are lasting longer and longer.

In terms of a Heideggerian explanation for this distortion in experiential time, the exhausted boxer has limitations placed upon him whereby he becomes ‘fallen’ and unable to make his own choices, or at least the horizon of action possibilities open to him become severely narrowed. Consequently, he is unable to ‘project’ himself towards the future; he becomes immersed in the present, ‘awaiting’ the future rather than anticipating it, playing little part in shaping the world to his own desires. In other words, he is living *inauthentically*, he is not properly the author of his actions, which makes any thought beyond his present extremely difficult and so his ‘present’ becomes elongated.

Whether a Husserlian idea of being pulled back into the past by seemingly unchanging impressions, or a Heideggerian notion of being stuck in an inauthentic existence, provides us with a more plausible explanation for the distortion of subjective time is a matter for further inquiry. However, in either case, attention directed towards past events, an occurrence brought about by negative experiences, will almost certainly result in experiential time passing more slowly.

Clearly, positive emotions are generated by way of experiences which we consider ‘pleasant’ or ‘enjoyable’, with negative emotions diverting an athlete’s focus from his or her intended goal. Emotions such as fear or anger, or even the feeling of self-pity can have a severely negative impact on an athlete’s performance. For this reason, it is paramount that the athlete becomes adept at disguising these negative emotions and, where possible and if necessary, feign non-existent emotions so that the opponent is unable to derive confidence from the observation of weakness or struggle. The more adept one becomes at identifying these weaknesses in an opponent, the greater the boost to one’s own confidence.

With this in mind, the ability to gain access to another person's thoughts is nowhere more advantageous than in the boxing ring. I have argued for the inadequacies of the Simulation Theory and Theory-Theory in gaining access to another's inner mental states, particularly in an environment where such information is required instantly, without the cumbersome process of attempting to simulate the other or to make reference to a theory. Both of these theories contend that other people's mental states are hidden from us and so each attempts to circumvent this problem through the formulation of processes which allow us access to these inner mental states, processes which I have rejected.

Rather, following Gallagher (2008) and Stuart (2006), I contend that our perceptions are rich enough and 'smart' enough to provide the fighter with this information without the delay implied by simulation theory. Through years of training, sparring and fighting, every fighter develops at least some capacity for identifying distress signals in an opponent, signals which he is trained to exploit for his own advantage. During the course of a fight, the need for attempting to ascertain an opponent's state of mind by way of propositional thought is removed in virtue of the immediate and intentionally transgressive perceptions (Stuart, 2017) providing this information in 'real-time'.

It is not only theory or anecdotal evidence which supports this idea of having a direct access to another's mental states; neuroscience also provides us with compelling evidence for such access. The discovery of mirror neurons, which fire upon the observation of seeing another perform an action (and when one is carrying out that actions oneself), suggests that we are that we are able, to some extent at least, able to live through others' experience in the absence of any kind of simulation or theory, or indeed any appeal to propositional thought.⁵⁸ If transhumanist adaptations can be used to provide an even richer sense of the other's mental states and being, this would be highly advantageous in the sport of boxing; a point coldly and vividly conveyed by Mike Tyson in his descriptions of identifying fear and trepidation in his bewildered opponents.

In light of any changes to a fighter's experience of the passing of time, his emotions and the empathy he is able to experience with respect to his opponent, I have claimed that any such alterations create a change in how the fighter perceives himself. This shift in perception involves the losing fighter moving from perceiving himself as a subject capable of action to a

⁵⁸ *Viz.* Gallese, V. *et al.* (1996)

passive object on which actions can be performed. This shift in perception has a substantial impact on the fighter in terms of perceived horizons of possibilities along with a disruption in the fluidity of his movement to a point where his actions are performed with a diminished level of confidence and commitment. The winning fighter, on the other hand, experiences a shift in the other direction where he begins to lose the inhibiting feeling of being an object. However, this shift in the experience of self can never go 100% in either direction; the boxer can never perceive himself purely as acting subject, nor can he perceive himself entirely as an object which can be acted upon. With respect to the former, such a perception will likely lead to a sense of recklessness, which in turn might produce costly errors in the fighter's actions.

I have claimed that as the boxer becomes more distressed, his opponent grows in appearance as as a subject capable of inflicting damage, while the boxer begins to perceive himself as an object which can be acted upon and which must be protected and this in turn results in what Young (1980) describes as *inhibited intentionality*. In any case, seeing the opponent purely as an object which can be acted upon would potentially create two problematic events. Firstly, a gross and costly underestimation of the opponent's abilities would occur and, secondly, there would be a failure to recognise the human responses which signify weakness and distress, two things from which a fighter derives greater confidence.

I have looked at this feeling of being an object against the background of Iris Marion Young's work on *inhibited intentionality*, with the understanding that her use of intentionality should be defined more accurately as inhibited *intention*, rather than intentionality in any truly Husserlian sense. For Young, hesitancy and uncertainty in actions is caused mainly by a lack of confidence in being able to perform the action and a fear of getting hurt; she describes girls experiencing their bodies as a *fragile encumbrance*. I have argued that, although Young had the commitment to action shown by women in a patriarchal society in mind, much of what she describes can be applied to the boxing environment where the wilting and dejected fighter becomes '*rooted in immanence*', unable to commit fully to punches as he becomes more and more aware of himself as a 'thing' or 'object'. Consequently, he begins to look inward towards his own stress and vulnerabilities and, worse still, his opponent looms even larger as a subject capable of inflicting great hurt.

Following this, I have examined the idea of a boxer's depleting energy levels bringing about a diminishing horizon of action possibilities, commonly known as *affordances*, which are offered by the environment to a subject in order that the subject may perform certain actions. Crucially,

I have argued that in the environs of a boxing ring, the richness and variety of affordances offered by an opponent to the fighter begins to diminish as the fighter becomes fatigued and disheartened, a point which remains salient irrespective of whether we take a selectionist (Reed, 1996), dispositional (Turvey, 1992) or relational (Chemero, 2003) view of affordances. In summary, I have argued that there is an interrelation between fatigue, the subjective experience of the passing of time and inhibited intentionality, from which a diminished horizon of possibilities ensues.

Conversely, if things are going well during the course of a fight, the boxer will enter into a fluidity of action, whereby the higher order processes will be moved to the background and the focus will be turned to the success, the following through, or otherwise, of the performed action. This idea follows the Merleau-Pontyan concept of the *lived body*, where acquired habit, or ‘bodily knowledge’ (knowledge which is *in* the body, rather than *of* the body) allows us to perform actions without reference to these higher order processes. Similarly, the Heideggerian theory of ‘phenomenological transparency’ gives us an illustration of what it feels like to carry out an intended action smoothly. To this end, I have also shown that Montero’s objection that the idea of being in a *flow* is counter to effective performance is flawed and that her appeal to the performance of ballet, where imperfection of action execution detracts from the aesthetic experience, is not necessarily applicable to the execution of actions in sports and certainly not in boxing.

However, I have also argued, following Shusterman (2008) that there remains a critical need for some form of *somatic introspection* which, although not constantly being attended to during the performance of action, must constitute part of the *kinaesthetic awareness* identified by David Woodruff Smith. This is necessitated by the fact that there can be unexpected occurrences during actions which interrupt the flow of movement, causing our attention to be directed towards something other than the activity. I have argued that in order for the boxer to perform at his optimum level, there is a requirement for a pre-reflective, non-propositional somatic introspection so that errors can be corrected quickly. I have exemplified the problems arising from inadequate introspection using the memorable encounter between American, Joe Louis, and his German opponent, Max Schmelling, in which Louis’ failure to identify – and correct – his own errors caused him to be roundly defeated. It may be a case for further neurological and phenomenological research, but the capacity for quick and effective somatic

introspection, along with an ability to make the necessary changes in realtime, is perhaps one of the factors which separates the great athletes from the elite, or truly legendary ones.

Having considered carefully the phenomenology of boxing, I examined how transhumanist enhancements might impact upon these experiences. It is my contention that any improvements in physical performance will be accompanied by modifications in a fighter's temporal, emotional and empathic experience which could be utilised to bestow the fighter with the means to improve his overall performance.

I have argued that temporality plays a key role in bringing about a shift from negative experiences that could be described as painful, to anything which might be described as suffering. Indeed, we have a desire to prolong the pleasant occurrences in life and curtail those that have the opposite effect; a desire which is rarely, if ever, realised. It is our capacity for temporal experience which facilitates the shift from pain to anything that might be defined as suffering, and that this requires both a retention of the past and an expectation of the future. Further, I have contended that some form of transhuman adjustment designed to expel the negative experiences during a boxing contest, while at the same time retaining the subconscious attention required for error correction, would cause the passage of time to quicken, freeing the fighter from the hindrance of unchanging retentions of past experiences, discussed earlier. How this alteration in time perception might be achieved is, again a question for science and neuroscience, but there certainly seems to be some merit to the claim that starting every new round of a fight with only positive experiences from previous rounds will instil in the boxer a renewed confidence, energy and vigour. This claim has also been supported in this thesis with accounts from participants in boxing, along with scientific experiments carried out in various institutions, all of which attest to the fact that time passes more quickly during periods of positive, pleasant experiences.

As well as alterations in temporal experience being a consequence of transhuman modifications and the benefits these might have on a boxer's performance, I have also argued such modifications could have a significant impact on the emotions. I argued, with respect to Gross' model (1998), that the regulation of emotions would have significant advantages to a fighter, whether in the hiding of negative emotions or the pretence of displaying emotions which are not actually present. Further, by its very nature, physical enhancement will endow the fighter with a far greater range of abilities, which in turn will help yield positive results from as early as the *cognitive appraisal* he conducts as he enters the ring. In the case of Mike Tyson, we saw

that this appraisal yielded results of such ultra-positivity that he was able to act with the kind of complete uninhibited savagery, that floored his opponents, sometimes literally. In consideration of this I asked whether we would want to enhance a fighter to the point where they became so aggressive and savage, even if one main aim of boxing is to inflict physical, albeit non-permanent, damage to an opponent. Transhumanists should give serious consideration to the problem of imbuing sports competitors, a group of people who are already driven by an incredible desire to win, with the physical abilities and mental attitude of a young Mike Tyson who, at the peak of his powers, possessed arguably the perfect mindset for competitive sport.

One thing most certainly lacking in Mike Tyson was sympathy or compassion, and yet he described an acute understanding of his hapless opponents' emotions. In other words, he possessed a highly-attuned *empathic accuracy* (Hickes, 1993), whereby he was able to accurately identify negative emotions in his opponents –for example, fear, anxiety and trepidation – but without the accompanying 'fellow feeling' or compassion that one might ordinarily have for people experiencing these emotions. In fact, the opposite was true; he exploited these weaknesses to his full advantage. In boxing, and perhaps in other sports, calmly identifying and ruthlessly exploiting signs of emotional distress is considered to be among the most desirable of traits, a trait which, I have argued, enters the realms of psychopathy. This *cold empathy* (Dutton, 2012) in psychopaths can, as Bonn (2014) argues, bring about a complete disassociation from their actions and can cause them to view others merely as objects to be acted upon. Transhumanist modifications then, could have major implications with respect to an enhanced ability for observing vulnerabilities in others, leading to a cognitive appraisal which yields incredibly positive feedback, but which also reduces others to nothing more than mere objects upon which the subject can act with impunity. This final point could, it has been argued, lead to a class of superhumans with little or no regard for the non-enhanced, a social problem which must be given deep and thoughtful consideration.

I have suggested that alterations in time perception, emotions and the empathy, or lack thereof, felt at others' distress, have a collective impact on the breadth of a fighter's perceived horizons for action. In terms of temporality, two main points are brought into focus. In the first instance the shortening of negative retentions could, I have argued, allow the fighter's perceived horizon of action possibilities to retain their breadth throughout the duration of the fight, given that the retentions would be more varied in nature. This in turn, in Heideggerian terms, would allow

the fighter to project himself into the future with greater optimism and enthusiasm, without the negativity dragging him back towards the past and causing him to experience time as passing much more slowly. Secondly, any physical enhancement will allow the fighter to sustain high levels of energy, time will pass more quickly for the boxer, meaning that the anticipation of future suffering will be removed and a more confident performance will ensue. In short, not only can an enhancement in athletic performance result in the experience of time passing more quickly, but any transhumanist enhancement which seeks to quicken the passing of time may well result in an overall improvement in performance.

With regards to emotions, the vanquished victims of Mike Tyson, or indeed Ricky Hatton, would certainly have benefitted from an upgrade in emotion regulation. Tyson and Hatton's descriptions of their time in the boxing ring would have one glaring thing in common: they both possessed a keen awareness of the tiniest hint of distress in their opponents, which opened up the affordances available to them, allowing them to shift more towards being highly aggressive and capable of acting ruthlessly and without fear or hesitation. For the opponents, however, the impact of transhuman enhancements on *situation modification* will lead to a shift in their *attentional deployment* as they focus only on their own strengths and abilities and on the weaknesses of Tyson and Hatton. This in turn is likely to bring about a shift in the subject-object spectrum which will serve to broaden their horizon of action possibilities and allow them to act with greater freedom and confidence. Finally, a *cognitive change* will occur as the cognitive appraisal now yields more and more positive results and the fear and trepidation will leave them, allowing far greater commitment to action. This is not to say that the opponents are now in a position to reverse the results of the fights, they may still be well-beaten; but there is certainly an advantage to having more confidence in one's own abilities, irrespective of how limited these may be.

After examining the impact transhumanist modifications could have on a boxer's experience during a fight, the final chapter of this thesis looked at whether or not such modifications could be justified with respect to boxing as a sport, a spectacle and as an individual pursuit. I examined the arguments put forward by both proponents and opponents of the transhumanist agenda, while always being mindful of the motto which embodies the Olympic spirit – *Citius, Altius, Fortius* – a tenet adopted by any athlete who wishes to reach the pinnacle of his or her chosen sport.

A singular objection to the implementation of transhumanist modifications comes from a naturalist standpoint, where it is argued that synthetic enhancements would undermine the value of natural ability or “giftedness” (Sandel, 2007). From this perspective the replacement of our natural, gifted abilities with biotechnological enhancements would result in the loss of sport itself, which would give way to something more resembling a mere spectacle. Perhaps even more worrying for those who oppose the use of biotechnological enhancements is the possibility of bring about the creation of a species which might be considered as something other than human (Agar, 2010 & Kass, 2003).

In the first instance I considered the objections put forward by those who adopted a religious standpoint to argue that transhumanism is a direct contravention of the will of God. Further, any attempt to *play* God by synthetically altering the human condition will be an affront to our *Creator*. Another objection raised by the writers I have considered is that the things we value most dearly – wisdom, love, patience and kindness – are impossible to create synthetically and so would be superficial.

However, I have argued that there is nothing in the doctrines of the Abrahamic religions to contradict the aims of those who champion transhumanist objectives. There is nothing in these doctrines, with the exception of the Jehovah’s Witnesses, which denies the virtue of human self-improvement and certainly nothing which debars the use of technology to realise this goal. Also, the claim that virtues such as love, wisdom and kindness are impossible to manufacture would need further elucidation and, in any case, these are not necessarily things which an aspiring athlete would desire.

A further problem for transhumanism, identified by McNamee (2007), sees a contradiction in any athlete using transhumanist methods to achieve sporting excellence in that it would seem strange for a competitor to wish to achieve perfection while at the same time wishing to transcend humanity. McNamee views this desire to transcend humanity as pathological and argues that it is our human nature which gives *sense and meaning* to our achievements any attempt to reach perfection as a human, by going beyond human means, is to fail to achieve our goal.

A first response to these objections is that there has been no adequate or satisfactory criteria given for the term ‘human nature’ or, for that matter ‘natural’. If objections are to be made based on an appeal to these terms, then surely some form of definition must be provided and

the onus is on the person wanting to defend these terms. An additional concern with an appeal to ‘the natural’ is that it seems to make the assumption that ‘natural’ is a synonym for ‘best’, an assumption which opponents of transhumanism rarely, if ever, ground in any real philosophical or scientific discourse. Indeed, the gifts which nature provides are not always to our advantage (Bostrom, 2005 & Buchanan, 2011).

I have argued that, although arguments from religion and assumed superiority of ‘the natural’ fail to provide adequate objections to the transhumanist agenda, synthetic augmentation of professional athletes should not go unregulated.

With respect to the objection that unbridled transhumanist adaptations could lead to the creation of a species consisting of post-humans, there seems to be no workable criteria which determine when, or at which point, an individual would leave the human species and belong to a species that was something other than human. Also, the opponents of transhumanism owe us an explanation as to *why* the creation of a post-human species would necessarily come laden with negative and terrifying consequences. Indeed, there are already several instances where technology is being used to enhance human performance, including hypoxic chambers, nutrigenomics and elective surgeries. So far, there has been no indication of the genesis of a new species. However, the failure of religious doctrine and an appeal to the essential qualities of human nature in providing objections of any strength does not suggest that transhumanists should be allowed to proceed freely and without caution.

Firstly, there is the existential problem for any athlete whose achievements become based more and more on technological enhancements, which may lead to the question of whether these performances are a result of individual athletic prowess or simply an excellence of technology. In short, the question becomes “Was that me or the technology?”, and this could undermine profoundly the athlete’s own sense of achievement. A related problem which must be considered is that if the technology is such that the sporting activity begins to lose the aspect of human struggle, then the athlete may become further removed from the activity itself, which again could devalue the sense of achievement felt by the competitor.

A second point to consider is that the audience is an integral part of any professional sport. In point of fact, there is a strong case to be made for the claim that the audience is the *essence* of professional sports, although this claim is not examined as part of this thesis. In any case, as Agar (2014) points out, it is the spectator’s ability to engage *veridically* with the athlete, to

vicariously experience these performances through the observation of the athlete. If this ability is lost, then sport will lose its appeal to spectators, and the diminished revenue will entail that ‘professional’ sport will cease to exist.

Thirdly, an idea linked to enhancement reducing the audience’s ability to engage veridically, is the concern that the *origin* of things seems to matter to us; this demand we have for the “correct” origin includes, but is not limited to, sporting achievement. Whether it be works of art, clothes, watches or handbags, we seem to have an interest in the history of things and from where they originated, even if the forgeries are of an equal or higher standard. I contend that provenance matters to us and that discovering a technological enhancement to be largely responsible for an athletic performance is likely to result in less value being placed on the achievement since, as Agar has argued, it will diminish our ability to engage veridically with the athlete.

A final concern with transhumanist enhancements is that the potential long-term health risks, both physical and psychological, dictate that, at the very least, progress must be slow and considered. An obvious starting point is that boxing is a sport in which both competitors intend to throw punches designed to hit, and to hurt, the opponent; any enhancements to performance must be made with this one thing in mind. Boxing is already a sport in which there is an accepted element of danger and biotechnological enhancements must not be allowed to exacerbate the threat to fighters’ health. Further, the passion, commitment and desire to reach the top in sports often means that athletes will push themselves to the limit, often with the possibility of causing an adverse effect on their long-term health. In addition to their own desire for sporting excellence, boxers have additional pressures placed upon them from a variety of areas including: fans, promoters and TV companies, not to mention the painful weight loss with which every boxer must contend. These pressures may belie the claim that the boxer has given his “free and informed consent” when agreeing to any biotechnological enhancements, which may or may not have a harmful effect on his future well-being.

It would be naïve to deny that humans have long since held a desire to surpass the achievements of their contemporaries and of the generations of athletes who came before them. Indeed, the very ethos of Olympic competition is founded upon this idea. It would be similarly naïve to think that boxers, or any top-level athletes, perform purely on “natural”, non-enhanced attributes, a fact brought into focus by the accumulated cost of winning one gold medal at an Olympic Games. The transhumanist agenda, it has been argued by its proponents, is merely

an accelerated continuation of this desire for self-improvement. What cannot happen however, is for these enhancements to remove the struggles and vulnerabilities which imbue the athlete with a sense of achievement, or to go beyond the point at which the audience is unable to identify with these struggles and vulnerabilities. To do so will transform sporting competition and achievement into mere side-shows and spectacles and leave the athlete with a profoundly diminished feeling of self-worth.

2. Further Research

(i) Socio-political issues

One issue which looms large in any discussion on transhumanism is that of Eugenics, a practice which seeks to improve and enhance the genetic quality within particular groups. We are presently at a stage where mutations which causes certain diseases have been identified, and the hope of those involved in this research is that the manipulation of these problem genes will eventually lead to their eradication.⁵⁹ With respect to sport, one area of contention concerns the manipulation of genes in order to create individuals with the potential and pre-disposition to become “super athletes”, and work in this area has already begun (see Tamburrini & Tannsjo 2005, van Hilvoorde, 2005 and Miah, 2007). However, it is not only the question of creating genetically superior athletes which must be considered; there is also a concern regarding the implications of multi-national corporations creating “breeding labs” for this very purpose. As with most things today, financial gain can turn even the most innocent of ventures into commodities to be bought, marketed and sold to the highest bidder. There should be a conscious effort to ensure that every individual, irrespective of the methods used to bring about their creation, comes into being with dignity, liberty and the freedom to choose their own path in life, regardless of any genetic advantage they may have in the sporting arena.

Another issue which must be addressed more closely is that of the social divide which could ensue as a result of following the transhumanist agenda. In the first instance, the idea that a breed of super humans may show a dangerous disregard for the rights and welfare of the non-enhanced does not seem to have been given adequate consideration by proponents of

⁵⁹ Serious work has already begun in the area of correction of genetic mutations by way of *Clustered Regularly Interspaced Short Palindromic Repeats* (CRISPR)
<https://www.newscientist.com/article/2146061-we-still-dont-really-know-what-crispr-does-to-human-embryos/>

transhumanism; they insist that there is no good reason to suppose physical and mental augmentations cannot be accompanied by enhancements of an ethical nature. This may well be true, but mental and physical augmentation have a particular clarity which ethical engagement does not. That is to say, mental and physical augmentations are more easily defined, and it's not clear that that improvements of an ethical nature would occur or that any agreement could even be reached as to the definition of "ethical augmentation". In addition much more work must be done to examine how these moral improvements might be made and what form they would take in order that the rights, safety and welfare of the non-enhanced are maintained. This, in my view, becomes a particularly vexing problem for the transhumanist given the present difficulty in arriving at a satisfactory moral theory and with the plethora of historical atrocities committed by those who have seen others as "less than" or "different to" themselves.

(ii) Sporting Considerations

This thesis has concluded that there is a strong possibility of transhumanist enhancements having such an effect that a point may be reached where sport loses, or at least drastically changes, its meaning and its value to both the athletes and their audiences. To this end, further investigation is required to locate the "tipping point": the point at which the athlete is unable to identify the actions, and therefore the achievement, as his and also the point where the audience is unable to engage veridically with the athletes. With respect to the former point, the athlete is likely to lose interest in the sport and, with the latter, the audience is likely to lose interest and professional sport will cease to exist in any meaningful form. In terms of boxing, my instinct is to say that this point will be reached if and when the fighters lose their appearance of vulnerability and where it seems as though their struggle and determination to hear the sound of the final bell is removed. This may after all require some agreed upon definition of 'human nature' and 'the natural', and so there is more work to be done by those who appeal to these concepts in order that they can arrive at this definition.

Of course, with any new technologies, safety must always be at the forefront of any attempted progress and boxing is no different. Boxing, is physically demanding, psychologically taxing and emotionally draining, while at the same time being potentially neurologically damaging. It is therefore imperative that any improvements in performance do not come laden with an increased risk to the health of the boxer, who is already putting his health and well-being at serious risk. There is also the risk of creating synthetically enhanced psychopaths, discussed in Chapter 4 of this work, whereby the boxer begins to show a disregard to those who are not

enhanced. Care must therefore be taken to ensure that any enhancements which make the boxer more efficient in the boxing ring, remain within the confines of the ring. Any enhancements which make him more ruthless or aggressive in the ring must have the capacity for “shutting off” when he is interacting with people in a non-boxing capacity, both for his own mental health and for the sake of others. In short, there must be a long and detailed discussion regarding the long-term mental and physical health of the athlete before any biotechnologies are implemented.

(iii) Phenomenology, science & neuroscience

Of course, much, if not all, of the phenomena one experiences will have an underlying physiological or neurological substrate; if this were not the case then it seems unlikely that our experiences of the world could be in any way impacted by way of transhumanist alterations. Although this thesis has refrained from entering into the realms of science, there are some interesting phenomena which could provide intriguing further scientific enquiry.

One area of interest is the distortion of subjective time. A significant part of this work has been dedicated to the idea that fatigue, exhaustion and dejection can, individually or collectively, have a considerable impact on how a boxer experiences the passing of time. So far, much of the research has been directed towards showing that negative or unpleasant experiences do indeed cause a subject to overestimate the length of time that has passed; a phenomenon which, it is speculated, occurs when our attention is directed towards the passing of time itself. It is now up to science to uncover a more exact explanation as to why this happens, or perhaps it is up to the psychologist to find ways of refraining from focusing one’s attention so that time may appear to pass more quickly which, I have argued, could lead to an improvement in performance. Also, further research may enlighten us on whether the Husserlian or Heideggerian theory of time is most helpful in describing the slowing and quickening of subjective time, and it may be that some amalgam of the two is most effective.

Another interesting area of inquiry involves the case of Katy Toombs who, after contracting muscular sclerosis, was unable to bring back the felt experience of walking upstairs, or indeed walking at all. I suggested that this failure to bring back the felt bodily sensation of walking was because the action was performed at a structure of the Merleau-Pontyan lived body, where she was only required to deploy habitual embodied intelligence, rather than any of the higher order structures. From a phenomenological perspective, this is interesting since it seems as

though Ms. Toombs' experience runs contrary to the research carried out on Phantom Limb Syndrome, in which sufferers continue to feel sensations in amputated limbs. Further scientific research may bring an answer to the question of why Katy Toombs has lost this habitual body schema when sufferers of Phantom Limb Syndrome seem to retain theirs. It may be interesting to examine what impact, if any, this example has on Merleau-Ponty's concept of the body schema, the processes by which the lived body acquires and retains the embodied habits used to navigate our way through the world.

In closing, it should be noted however, that regardless of which direction science may take with respect to the modification of humans, it should proceed hand-in-hand with every other relevant discipline and considered philosophical thought. Progress should always be made with the caveat that could does not necessarily imply should and that progress itself is not always, as history has surely taught us, synonymous with improvement.

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