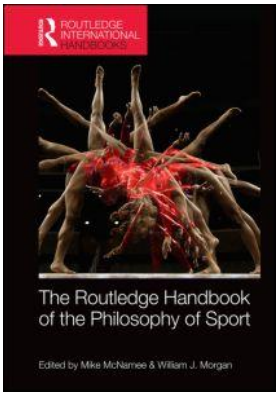

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TECHNOLOGY AND SPORT

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Introduction

The relationship between sport and technology is close and can be both fruitful and destructive. Technology has a constitutive function in sport, as it makes the activity possible. Moreover, it can enhance performance as well as the sporting experience. The use of football boots is clearly more comfortable and effective than playing football in bare feet. However, sport challenges its athletes by demanding the employment of less efficient means rather than more efficient means in pursuit of sport-specific goals (Suits, 2005). Technology can therefore potentially detract from the sporting experience. If, for instance, very efficient hail cartridges were allowed for use in double-trap shooting, it would reduce the skills required to excel at that discipline, reducing its value for participants and spectators alike. Similarly, the use of forbidden performance-enhancing substances has long been a much debated topic in sports philosophy and, with gene technology waiting around the corner, the relationship between sport and technology has become strained and is often viewed with concern and scepticism.

In this chapter, we analyse this trend and thereby expose what we consider a tendency towards an overly pessimistic outlook on technology in sport. The chapter opens with a brief survey of some major works that have been written about various aspects of the topic, followed by examples, from the 1960s onwards, of technophobia in relation to sport. After this, an alternative position with a more neutral view on technology based on a social constructivist epistemology is presented. Having exposed this position as self-defeating, the chapter moves on to the building of a coherent understanding of the relationship between sport and technology. This section begins with an examination of the concept of technology whereby it lays the foundation for a thorough analysis of normative assessments of the relationship between sport and technology. At the end of the analysis, we reach the conclusion that a sound normative assessment of technological development in sport must be based on theory of sport that respects sportive values in its own right irrespective of their moral worth.

Previous contributions to the understanding of sport and technology

Sport and technology is a vast topic that comprises a variety of disparate phenomena. It is manifest in basic things that make sport possible such as balls, boats, bikes, cars, clubs, rackets, skis, and the development of these things that enhance the experienced quality of athletes in

these respective sports. It is displayed in the gear that improves the athletes comfort and safety, and it is present in stadia facilities that standardise as well as improve the conditions for sport competitions by ground heating, artificial turf, polyurethane or latex tracks. Jenkins and Subic's edited works (2003, 2007) offer a thorough analysis of those issues. Infrastructure and transport that makes it possible to organise tournaments nationally and internationally and facilities which accommodate large crowds and standardise the competitive environment around the world are also part of the sport and technology complex. Sport geographer John Bale has provided recommendable analyses of these issues in *Sport, Space and the City* (1993), *Landscapes of Modern Sport* (1996) and *Sport Geography* (2003). Technology's influence on sport is furthermore pervasive through the media development. The invention of satellites has made it possible, on the one hand, to bring live broadcast sports events to global audiences, which has made sport one of the worlds most valuable marketing tools, as described in Amis and Cornwell (2005), and, on the other hand, influenced public attitudes toward race, gender and nationalism, as Boyle and Haynes (2009) argue.

Media technology has impacted the public perception of fair play because the replay of close-up and slow-motion images expose and (over-)emphasise misbehaviour such as diving, (or – to use the Federation of International Football Association's nomenclature – 'simulation') reckless tackles and hand-ball in soccer, for example. It has also become an aid to referees in many sports, the 'Hawk-Eye' in tennis being perhaps the most successful from a spectator's point of view. At the same time, these technologies have been used as a means of controlling crowds. In fact, the wish to eradicate hooliganism by the means of surveillance paved the way for Britain's now general policy of camera surveillance of public spaces, according to McGrath (2004). Finally there are the performance-enhancing technologies. While the above-mentioned subjects mostly have drawn attention from sociology and cultural studies, performance-enhancement technologies, both legal and illegal, have been subject to intense discussion and analysis in the philosophy of sport.

The love of the past and the fear of future technologies

Discussions about the relationship between sport and technology often revolve around ethical issues and reflect different understandings and valorisations of both phenomena. An old but interesting example is Umminger's (1962) compelling introduction to the cultural history of sport. Umminger is fascinated by human creativity and scientific breakthroughs and he praises past achievements, but concerns arise when he envisions the future. The problems he foresees relate to the record mania captured in Pierre de Coubertin's Olympic motto: *citius, altius, fortius*. According to Umminger, the quest for records is a potent driving force. During modern sport's first hundred years, he claims, even world records were the product of a single person's unassisted effort. This is no longer the case. Today, world records are usually the outcome of teamwork. Scientists, physicians, trainers and the athlete's entourage also play a big part in the achievement of victory.

Umminger predicted that horrific times were not far away. An American scientist, he noted, had seriously recommended that genuinely elite sportsmen and women should marry to have children and thus create future world-record breakers. Moreover, *in vitro* fertilisation (IVF) – he claimed – was a public obsession. Dystopian novels like Aldous Huxley's *Brave New World* (1932) and the Danish physician Knud Lundberg's *The Olympic Hope – A story from the Olympic Games 1966* (1958) may foretell where sport is heading, Umminger maintains, stressing that he fears the future of the real world will be even more horrendous than that depicted by these writers.

IVF was, in fact, still 16 years away from becoming a reality when Umminger published his

book. Today, it is commonplace. By the time that Robert G. Edwards, the father of this groundbreaking reproductive technology, won the Nobel Prize in 2010, four million children had been born using this technology (Russell 2010). In the USA alone, 58,000 babies resulted from IVF each year, to the joy of otherwise infertile couples. In light of this, Umminger's concern about a future where superhuman athletes would be created by IVF is striking and adds perspective to more recent concerns about scientific and technological progress. Apparently, the human capacity to reflect before new possibilities are put into practice is greater than he anticipated.

In 1992, following the Ben Johnson scandal at the 1988 Seoul Olympics and the fall of the Berlin wall in 1989, which symbolised the end of the Cold War and led to the exposition of the heinous regime behind East German sport's success, John Hoberman (1992) published a book with the telling title *Mortal Engines – The Science of Performance and the Dehumanization of Sport*. The book gives an eye-opening account of the historical development of the relationship between science and sport. Hoberman emphasises how sport was exploited during the Cold War, with detrimental effects on the health of the athletes involved. Hoberman meticulously documents the scientifically developed performance-enhancing drug regime and its political and financial underpinnings. However, in the final chapter of the book he, like Umminger, cannot resist the temptation to look into the crystal ball, and, like Umminger, he also foresees an emerging dystopia. Modern sports' inhuman demands on athletes' physiques pave the way for a new understanding of the concept 'necessity', according to which everything that can be done in the name of competitiveness must be done: 'Today the question is whether the sweat-stained athletes and the men in white coats will be able to persuade publics and parliaments that the future of sport requires a new medical realism' (Hoberman 1992: 286). Athletes may thus become pioneers in high-tech societies. If competition is constantly encouraged and increased competitiveness is made a prerequisite for success in all areas, leaders may 'want to apply genetic engineering to an entire range of performers' (ibid.). In such societies, athletes could serve:

> as the most promising experimental subjects because it will be easier to identify correlations between the actions of particular genes and performance-related traits if the test performances are physical and quantifiable in a way that [e.g.] musical and scientific talent are not.
>
> *(Hoberman 1992: 286)*

Hoberman makes a bold comparison between equine and human athletes and envisions a time where athletes will be genetically exploited as racehorses have been for centuries through breeding. Hoberman does not fear IVF. What he is concerned about is the Human Genome Project 'that will supposedly identify in sequence all three billions base pairs of DNA that constitutes the human genome by about year 2005' (Hoberman 1992: 287). This could lead to a situation where it would be possible to compare the genes of talented and less talented people of all kinds. If that happens it will:

> presumably lead to the identification of performance-linked genes and even, perhaps, their synthesis and *in utero* insertion into the genome of a gestating foetus. An even more futuristic scenario would be the 'cloning' of genetically identical individuals from the genome of a great athlete or some other kind of overachiever.
>
> *(Hoberman 1992: 287)*

Ten years later – one year before the Human Genome Project was in fact declared complete – similar concerns over future technologies' impact on sport and humanity appeared in the Research in Philosophy and Technology Handbook series volume 21, *Sport and Technology: History, Philosophy and Policy* (Miah and Eassom 2002). As usual in handbooks, we find contrasting views. Tamburrini's (2002) chapter 'After Doping What? The morality of the genetic engineering of athletes', for instance, offers an uncompromising defence of gene technology against the sensationalist fear-provoking portrayal of it. However, the undercurrent of the majority of articles is that we should be cautious about embracing human-enhancement technologies. Butryn's (2002) contribution 'Cyborg Horizons: Sport and the ethics of self-technologization' delves into the prospect of the dehumanization of sport of which Hoberman warns. As an echo of Umminger, Butryn warns that while 'genetic engineering for example, in elite sport may seem futuristic, scientists working on a muscle-building vaccine derived from engineered genes have already recognised the implications of their work for sport' (Butryn 2002: 113). According to Butryn, such future technologies threaten the integrity of sport.

History is full of examples of concerns over technological advances that have proven to be baseless or exaggerated long after the new technologies have been introduced. This does not prove, of course, that new technologies are harmless. Some old as well as new technologies are potentially harmful. The same can be said about an overly cautious approach to new technologies, which might prevent us from exploiting valuable opportunities. The point we want to make by drawing attention to the apparently ageless concern over emerging technology is that fear, worry and vigilance are features of human nature, which counterbalance human curiosity and innovation and make us act reasonably according to the circumstances in most cases. If there were no immediate concern about unknown effects of new and unfamiliar inventions, the risk they pose would be so much bigger. Unsurprisingly, therefore, we rarely find people who promote new technologies such as genetically modified organisms (GMO), radiation preservation of food, and so on, without implicitly or explicitly making cost–benefit analyses and risk assessments. Those who argue in favour of such technology usually do so on the basis of necessity (such as the need to feed a rapidly growing world population). The food industry's opposition to mandatory GMO labelling indicates that there is an understanding that visible labels which inform consumers that food products are modified by technology may harm sales (Strom 2013). Notwithstanding the fact that people enthusiastically yield to technologically advanced gadgets and so forth, the lay understanding is still that natural food is better than artificial food, and this further indicates that ordinary people recognise that the body is a natural biological organism which can be harmed by consuming artificial products. Tara Magdalinski's (2009) *Sport, Technology and the Body – The nature of performance* is interesting in this respect because it applies a constructivist perspective to the body. This view allows for a different more neutral perspective on sport and technology and therefore deserves separate treatment.

The social constructivist perspective

True to the constructivist epistemology, according to which knowledge is socially constructed and therefore without universal validity, Magdalinski opposes essentialism and dismisses the idea of a 'natural body'. The 'natural body' is nothing but a concept in the essentialist binary construction of 'natural' versus 'unnatural' – like 'nature' versus 'artifice' – she claims. In reality, there is no natural body. She admits, however, that: 'Although social theorists have written convincingly about the social constructedness of the body, the concept of the body as 'natural' retains primacy in the public consciousness' (Magdalinski 2009: 37).

It is an unsophisticated public's false consciousness that is responsible for the ambivalent and cautious approach to sports technology including the use of performance-enhancing drug. This public's consciousness is formed by popular media representations which evoke the illusion that it is natural bodies spurred by inner desire that exert themselves in sport competitions. And anti-doping programmes 'reinforce the authority of the natural body, utilising images that warn of the monstrous consequences of illicit enhancement' (Magdalinski 2009: 37). According to Magdalinski, '"natural" bodies are the stuff of sporting mythology, presented and represented to remind us of the horrors of technology and their potential to disrupt the otherwise uncontaminated' (Magdalinski 2009: 38). It goes without saying that Magdalinski understands this mythology as a narrative without foundation in any real nature, bodily or otherwise.

At the end of her introduction, she stresses that her book 'takes no particular stance in relation to performance enhancement, illicit or otherwise'. Instead, it 'interrogates those external and internal technologies that threaten to dismantle the carefully constructed athletic body' (Magdalinski 2009: 13).

Her reluctance to arrive at any normative conclusions concerning sport and technology is consistent with her view on health and the body as social constructs. This view leads her to the following statement on anti-doping strategies:

> Safeguarding the health of athletes may lie at the heart of anti-doping policies; however, it is clear that 'health' is an elusive concept, which is inextricably linked to broader moral and national discourses. In essence, these strategies are based on controlling and regulating athletes' bodies to conform to normative standards.
>
> *(Magdalinski 2009: 90)*

Magdalinski's understanding of health is common among social constructivist thinkers (Lupton 2003; Robertson 2001; Larson 1991; Crawford 1984). Although viewing the body as a social construct may seem baffling to common people, it is 'now accepted amongst cultural theorists', as Magdalinski (2009: 39) puts it. And it is truly in accordance with the thinking of Michael Foucault, one of the major inspirations for the social constructivist movement. One of Foucault's prominent protagonists, Chris Shilling, explains Foucault's position as follows:

> The biological, physical or material body can never be grasped by the Foucauldian approach as its existence is permanently deferred behind the grids of meaning imposed by discourse … To put it bluntly, the bodies that appear in Foucault's work do not enjoy a prolonged visibility as corporeal entities. Bodies are produced, but their own powers of production, where they have any, are limited to those invested in them by discourse. As such, the body is dissolved as a causal phenomenon into the determining power of discourse, and it becomes extremely difficult to conceive of the body as a material component of social action.
>
> *(Shilling 2005: 70–1)*

While some may find Shilling's interpretation exaggerated, few philosophers and social scientists who have read the oeuvre of Foucault will disagree that he indeed presents the embodied subject as a social construct.

Taking a constructivist approach to sport and technology is attractive to those who might argue in favour of technological advances and enhancement in sports. First, the idea that a new technology poses a threat to sport as a meaningful activity implies that sport has essential characteristics that need protection whereas from a constructivist point of view essentialism is seen

as an illusion. Second, from the constructivist perspective, both 'natural talent' and 'health' are concepts invented to discriminate between people and to achieve power. Those who accept that there is nothing essential about sport but oppose a new technology if it is thought to alter sport in a way that devalues the sporting test of athletes' natural capabilities or if they are thought to endanger athletes' health, are thus disarmed.

As attractive as the social constructivist perspective may be, it is ultimately an intellectual *cul-de-sac* or dead end. In philosophical terms, it goes nowhere. To realise why this is so, one just needs to consider the difficulty involved in explaining what a social construction actually is *without* making use of a world view that takes the existence of communicative human beings living in a shared physical world for granted. The existence of conscious human beings with cognitive skills that allow them to communicate about mental states and the physical world is a precondition for social constructions and therefore cannot be such constructions themselves. It seems that basic common-sense assumptions about the world and what is a human being are impossible to consistently contest. Consequently, if we want to say something consistent about human beings and the world we cannot avoid implicitly – if not explicitly – to build our argument on basic common-sense assumptions, and this immediately bring us back to the normative dimension involved in the relationship between sport and technology.

The concept of technology

As a precondition for dealing with philosophical questions pertaining to sports technology, we need an elaborated understanding of technology itself. We are familiar with technological devices such as bicycles, cars, cell phones, computers, and so on. But what is the essence of technology? In the sport literature, Sigmund Loland defines technology as '*human-made means* to reach *human interests and goals*' (Loland 2002: 158). This definition is consistent with common understandings of technology and is often implicitly at use when sport technological issues are being addressed. Nevertheless, this understanding had already been challenged by the German philosopher Martin Heidegger in his influential essay published in the middle of the twentieth century, *The Question Concerning Technology*. Thus, before we return to Loland's definition it will repay the effort to consider Heidegger's own view of the matter.

According to Heidegger, the claim that technology is a human contrivance designed to secure humanly chosen ends prevent us from really grasping the essence of technology. Heidegger is critical of the instrumental (means to an end) and anthropological (human-made) conceptions of technology, because they suggest that humans control technology and can thus freely choose its proper application (Heidegger 1993: 312).

Technology, Heidegger claims, is not primarily a set of tools we use to reach our ends more efficiently. Rather, it is a dangerous power that has changed the way we perceive and understand being as such. Technology has made us look on nature with an instrumental gaze. This instrumental outlook has become so all-encompassing in the modern age that it is easy to neglect and therefore hard to counteract. As counterintuitive as it may sound, technology is represented by the very perception of nature as a container of raw materials, as sources of energy that are available for our exploitation to met our needs and goals. Thus conceived, an apple or a pear is understood as an ingredient in a balanced diet or as a source of vitamins and minerals. Similarly, when a beautiful landscape in France is looked upon as a resource that could function well as a stage in the Tour de France, it shows we are in the grip of this technological world-picture.

Because of our technological stance towards our surroundings, the sun no longer fills our hearts with awe and wonder as it once did. Instead it is perceived as a source of energy that can

be stored by solar cells. Farmers in preindustrial times also used their animals but they felt more connected to them and nature. Therefore they did not view farm animals as mere production units or nature as standing-reserve. Technology interprets or 'uncovers' nature as essentially a collection of material objects that can be combined in various useful ways. Technology also shows in our will to reveal the underlying mechanics of everything that seems unintelligible to us. For example, when a sublime feint in soccer is interpreted as a logical consequence of hours of repetitive training instead of an instance of 'divine' inspiration on behalf of the player.

This change in our worldly outlook has resulted in what Heidegger calls the *oblivion of Being*, because we have abandoned an understanding of the world as sacred and awe-inspiring. This oblivion is present even in our understanding of our selves. Human beings are looked upon as purely interchangeable material parts, as, for example, bodily organs that can be mended or transplanted to prolong our life. Accordingly, the body of an athlete is likewise viewed in a machine-like fashion, as a storage site of energy reserves, as an instrument that needs to be modelled to satisfy sporting demands.

In his article *Sport and the Technological Image of Man*, Hoberman (1988: 203) draws inspiration from Heidegger when he claims that high-performance sport 'contains, and in some ways conceals, an agenda for human development'. As a logical consequence of sports pursuit of records and victory, elite-level athletes are engineered in various ways by sport scientists to make them more proficient. According to Hoberman, this instrumental view of athletes' bodies is not condemned by the public. On the contrary, it is viewed as an ideal way of reaching their full potential as successful and efficient human beings. The widespread use of physical and cognitive enhancement drugs outside the realm of sport speaks in favour of Hoberman's analysis. To Hoberman 'the pursuit of the record performance … is a celebration of the logic of technological civilization (Hoberman 1988: 206). He quotes approvingly the French philosopher Jacques Ellul in this regard, who has this to say about sport and technology:

> In every conceivable way sport is an extension of the technical spirit. Its mechanisms reach into the individual's innermost life, working a transformation of his body and its motions as a function of technique and not as a function of some traditional end foreign to technique, as, for example, harmony, joy, or the realization of spiritual good.
> *(Ellul 1964: 384)*

If this description is accurate, then sport leads directly to the oblivion of being that Heidegger identifies as a hallmark of modernity and its technological outlook. For ways to transcend this technological world view, Heidegger looks to art since great art has the capacity to reveal the sacredness of being and once again to inspire awe. However, he might as well have looked to sport, since it is probably the most accessible way of transcending the technological outlook on being. At first glance, this claim may appear self-contradictory in light of the quotes of Hoberman and Ellul just noted. How can athletes possibly transcend technology when sport itself seems to model its logic of efficiency in total accordance with an instrumental rationality? If we look upon sport from the outside, the answer inevitably comes up negative: from such a perspective sport simply seems to instantiate technology by chasing effective procedures in every conceivable way. But if, instead, we turn to the athletes' perspective we find tales of 'runner's high', 'heightened awareness in defining moments', 'experiences of "deep flow"' (Jackson and Csikszentmihalyi 1999) and even quasi-mystical experiences of being one with the situation and ones surroundings (Breivik 2013). Such moments often leave a lasting impression on the sportspersons who experience them. These experiences are not just experiences of

pleasure. They are life-defining moments with existential significance because they point to other modes of being and other ways of being in the world (Ogles *et al*. 1993–94).

Müller (2007) provides a compelling analysis of the existential dimension involved in high-risk sports' flirtatious relationship with death in his dissertation *Sterben, Tod und Unsterblichkeit im Sport – Eine existenzphilosophishe Deutung*. Müller's analysis focuses on high-risk sports but, according to the Norwegian philosopher Gunnar Breivik, the kind of heightened consciousness often associated with high-risk sports is also called for in elite sports in situations of great importance or difficulty (Breivik, 2013: 94).

Mindful of this decidedly non-technological side of sport, the relationship between sport and technology appears more complex than Hoberman, after Heidegger, would have us believe. Rather, sport offers an opportunity to turn technology, as it were, on its head; to transcend it. That is, even from a Heideggerian perspective there is no need to be excessively pessimistic about the role of technology in sport.

We now outline an approach to normative questions on sport and technology that differentiates between sportive and ethical norms. We do so based on Loland's straightforward, common-sense definition of technology, because it paves the way for a clearer understanding of the conflict between these two levels of normative enquiry and makes it possible to deal with them in a systematic manner.

Normative assessments of sport and technology

In his article *Sport Technologies – A moral view*, Loland (2002) puts forward his definition of technology in order to normatively evaluate various forms of sport technology and their desirability in relation to the purpose of sport. Loland differentiates between three ideal-typical interpretations of sport; what he calls the 'non-theory', the 'thin theory' and the 'thick theory'. Only the thin and thick theories are relevant to the present chapter, since they are the only ones that have normative implications and are built on a philosophical understanding of sport.[1] Loland defends the thick theory, which links 'sport to general moral ideals' (Loland 2002: 165).

Loland wants sport to accommodate disparate moral ideals. Ancient moral ideals are in play when he claims that sport 'ought to be an arena for human development and flourishing and one among many elements of the good life' (Loland 2002: 165). But modern moral ideals of beneficence and non-maleficence must also be incorporated in our theoretical understanding of sport. Accordingly, sport 'ought to take place within a framework of non-exposure to unnecessary harm' (Loland 2002: 167).

In an earlier article, *Fair Play: Historical anachronism or topical ideal?* Loland (1998) claimed that sportspersons should not try to win at sport for external reasons such as profit or prestige but rather for internal reasons, where winning means 'to end on top on the final ranking of competitors according to performance of the skills defined by the shared ethos of the game' (Loland 1998: 95). This claim is based on a utilitarian calculus that shows that if all players play to win for internal reasons, it will most likely contribute to positive experiences for all involved (Loland 1998). When sport is interpreted as an activity that ought to live up to these shared ideals, it provides normative reasons to dismiss certain technologies as relevant to genuine athletic excellence. For example, doping should be dismissed if it exposes athletes to unnecessary harm, by damaging their health.

At first glance this seems reasonable. One problem, however, is that neither does the 'thick' interpretation provide an accurate description of the relationship between sport and morality, nor does it provide a framework for systematic deliberations on sport technological issues. It fails to do so because, by insisting that sporting values must be in line with moral ideals, it masks

existing differences between sporting and moral norms making it impossible to understand and deal with cases in which sportive and moral norms conflict. Such cases are arguably the most complicated and therefore those that need systematic sport philosophical consideration. Before considering examples of such cases, we need to understand what non-moral sportive norms could be. In other words, what we need is an understanding of sport as an autotelic activity with its own inner logic and values. We need in Loland's terms a 'thin' theory of sport.

The thin theory of sport, according to Loland, is a theory of the value of sport in which value is related to performance in competition and not to general moral values. Loland relates this theory to the logic of quantitative growth and objective measurements that fits athletics well but, if it is supposed to be a general theory of sport, we need to include a qualitative or an aesthetic dimension as well. Thus, the thin theory is a normative theory of sport that derives its norms and values directly from the internal logic of sport without an attempt to integrate general moral principles such as the principle of utility or the golden rule.[2]

In the present context, we are concerned only with what we find to be the key element in sporting contests. As Scott Kretchmar (1998) has pointed out, it is the goal of a sport competition to test the abilities of athletes through a contest. The result of a sports contest can only be a valid measure of superior sporting abilities if victory signifies athletic superiority in relation to the specific abilities that a given sport is designed to measure. If victory in a certain contest is not the result of athletically superior abilities, then that particular contest has failed as a test of such abilities and therefore has lost its *raison d'être*. Therefore, victory in a sporting competition *ought* to signify true athletic superiority. This, we suggest, is the key sportive norm to be observed. In order for a competition to be meaningful as a test of those abilities, everyone participating ought to behave in a manner that ensures that the result is indeed a valid measure of athletic superiority. In other words, they ought to play fairly. But fair play in the sense of abiding by the rules is not a moral duty. It is a purely sporting norm, as Bernard Suits seems to recognize when he writes: 'In morals obedience to rules makes the action right, but in games it makes the action' (Suits 2005: 46). Needless to say, this norm may be breached; for example, if one attempts to bribe the judge to secure victory.

Bearing this in mind, let us take another look at Loland's thick theory. According to Loland, the norm of non-maleficence should be incorporated into our theoretical understanding of sportive values and norms. If a boxer shows up in a ring with iron-packed gloves he is violating a sport-ethical norm of non-maleficence, according to the thick theory, since the intention of the boxer is to hurt his opponent beyond what a boxer can be thought to have agreed to. Similarly, it is unsporting according to the thick theory to trip an opponent in a running race since it is an act of maleficence that, if practised widely, would prevent these athletic competitions from being an arena for human flourishing. According to the thin theory of sport, such behaviour is most certainly also unacceptable. But it is unacceptable for a very different reason. It is unacceptable for sport internal reasons since cheating by tripping an opponent or entering the ring with iron-packed gloves prevents running races and boxing from functioning properly, as a reliable test of abilities. In other words, they are unsportsmanlike because they are at odds with the very idea of the particular sport competitions. It is also immoral, since it goes against moral principles, such as those of beneficence or non-maleficence, but such reasons are based on a moral rationality, not a sporting one. The aforementioned reasons make tripping opponents in running races or knocking down opponents in boxing with iron-packed gloves *immoral*, but these are not the reasons why they are unsporting. What makes these actions unsporting is the simple fact that they prevent the particular instances of running and boxing from functioning properly, as a reliable test of abilities. In other words, they are unsportsmanlike because they are at odds with the very idea of the particular sport competitions.

If an athlete deliberately hurts an opponent in pursuit of victory, the person in question ignores sporting as well as moral norms and is both immoral and unsporting. But the fact that ethical and sportive norms sometimes correlate does not mean that they *always* correlate or that sportive norms are instances of general moral norms. This becomes apparent in cases where there is conflict between the two. Such conflicts may be out of sight in sports like cricket and golf, but they appear as soon as we turn our attention to boxing and mixed martial arts (MMA). As with any other sport, there are standards of excellence and therefore norms and values attached to boxing and MMA. But are they moral? Not in a modern sense of the word 'moral', in which altruism plays a crucial part.[3] The goal in boxing and MMA is to conquer one's opponent by way of physically harm, either by blows to the head or body. Doing so by way of a knock out is to be preferred and applauded. To participate with success takes virtues such as courage, endurance, resilience and discipline but that does not render the activity or the attitudes it fosters moral in nature.

In his article 'Violence in Sports', Robert L. Simon argues in favour of morally reforming boxing and points to fencing as a positive historic example (Simon 2007: 386). Rule changes and the use of technology transformed duelling with a deadly outcome into modern bloodless fencing. Perhaps something similar could be achieved with regard to boxing, Simon speculates. Rules against blows to the head and various forms of equipment protecting the body could be a recommendable way forward – from a moral perspective, that is. However, such inventions would be disastrous from a boxing perspective, because they would in effect bring an end to the 'noble art of self defence'. Instead, they would result in the birth of an entirely new sport, with emphasis on different skills and standards of excellence. The thin theory of sport would be able to understand and respect the rationality behind those who wish to defend boxing and MMA from 'game-changing' moral intervention. Proponents of the thin theory might still opt in favour of moral arguments and support certain changes but, because they also respects the pure sporting side of the matter, they might be looking for some sort of compromise. According to the thick theory of sport, boxing and MMA are essentially flawed, since they are not in accordance with general moral principles. The proposed changes will eradicate those flaws, elevating them into a more true form of sport. In this view, there is no real conflict between moral and sportive interests and values and therefore no need to be particular sensitive towards sports that seems immoral but are valued nevertheless by those engaged within them. Boxing and MMA could be first in line for revision at the hands of the thick theory, but many more could follow. And now, let us take a closer look at elite sport in general.

One of the key moral principles on which Loland has based his thick theory is the Aristotelian principle of human flourishing. From the perspective of the thick theory: 'sport ought to be arena for human development and flourishing and one among many elements of the good life' (Loland 2002: 165). Surely sport in moderate doses can be one element in a good life. Elite sport today, however, demands an extreme, time-consuming, one-minded focus on very specific physical abilities on athletes. Such demands are not easy to harmonise with Aristotle's idea of human flourishing, to say the least. For sport to be in line with Aristotle's vision of a good life – an ideal that entailed the development of a variety of human abilities – elite sport would have to be given up in favour of the kind of amateur sports found in twentieth-century England. A good man in Aristotle's mind looked more like an aristocratic rationally enlightened and physically skilled gentleman than a modern elite athlete. Consistently thought through, Loland's thick theory ought to be far more critical towards sport technology associated with elite sport, including the employment of doctors, trainers, advanced fitness machines, and so on. Loland admits that the thick theory is historically related to the amateur ideologies found in the early twentieth-century England. As it turns out, his version

of the thick theory is not as far removed from its historical roots as he would like to believe. A 2012 debate in the journal *Sport, Ethics and Philosophy* concerning sport and goal-line technology illustrates the clash between the thick and the thin theory of sport well.

In his article 'The Fallacies of the Assumptions Behind the Arguments for Goal-Line Technology in Soccer', Nlandu (2012) implicitly defends the thick theory by presenting an argument against goal-line technology that is based on a highly idealistic framework. The proponents of goal-line technology unintentionally reinforce the corruption of sport by putting too much importance on the final result and not enough on the play spirit, according to Nlandu. Instead of goal-line technology we should educate players to take personal responsibility in protecting the integrity of the game so that less involvement will be required from game officials (Nlandu 2012: 462). The proposed education should be ethical in nature and should 'construe sport as a *striving together* towards a common goal" (Nlandu 2012: 463). The goal of sport in Nlandu's understanding is not primarily personal or team victory but the common goal of achieving the best sport experience enjoyable by all. Again, the link to historical British amateur ideals is obvious.

In contrast to Nlandu's view, the British sport philosopher Ryall (2012: 448) implicitly uses a thin theory perspective to defends the use of goal-line technology in football by insisting that the essence of good sport is justice. Ryall does not define 'justice' but it is clear from her argument that she understands justice in sport to have been served when victory really does signify athletic superiority in relation to the rules of the game. Rule keeping and impartial officiating is crucial in attaining that end but if technology can also assist us in this regard it should be endorsed for that reason alone.

The thin theory is a theory about sport as realised in the present. It respects sport and morality as different normative realms and will listen to both in its attempt to deliberate on sport technological issues. The thick theory on the other hand builds its normative views on sport technology on an idealistic notion of sport that entails the same love of the past and fear of the future that we encountered at the beginning of this chapter.

Concluding remarks

Technology, whether medical, material or mechanical, does not pose any serious threat to sport as such unless it threatens the internal logic of sport. From a sporting perspective, it makes no difference whether the abilities being tested stem from nature's genetic lottery or gene technology. Still, there may be moral reasons to oppose the development of gene technology or other forms of technology for sporting purposes. We must acknowledge that there can be conflicts between sportive and moral norms and try to grasp the nature of those conflicts duly taking into account the importance of both sportive and moral values. Thus, the thin theory of sport – based only on autotelic sportive norms – provides a crucial contribution to an overall systematic approach to difficult sport technological issues in which morality must also play its proper role.

Notes

1 The non-theory of sport has no interest in sport *per se* but finds sport useful as a means to an external end. Such sport external goals could be everything from personal status over financial rewards to political and national prestige. If a certain technologies can increase the likelihood of attaining such ends via sport, they are accepted, otherwise not.

2 The competitive element found in sport and its constitutive relation to excellence is very closely linked to what was considered ethical in ancient Hellenic times. However, it is not upon this ancient

understanding of virtue that Loland's thick theory is based. His aim is to provide us with a theory of sport that is in accordance with a more modern understanding of ethics in which altruism plays a crucial part. It is the thick theory's attempt to interpret sportive norms in such a manner that we oppose.

3 In his book *The Ethics of Doping and Anti-Doping – Redeeming the Soul of Sport?* Møller (2010) argues that immoral characteristics can be found in many forms of sport. The goal of sport in general is victory, not a Christian form of altruism.

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