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GENES, SPORTS, AND ETHICS: A RESPONSE TO MUNTHE (2000)¹

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INTRODUCTION

This paper provides a response to the article written by Christian Munthe (2000a) titled 'Selected Champions: Making winners in an age of genetic technology.' Munthe's scholarly paper about the implications and uses of genetic technology in a sporting context, raises the question as to what ends sports aspire since his thesis concludes genetic enhancement to be concurrent with sporting ideals. The article is important to sports ethics in a number of respects. Initially, it is notable that the author has a background in bioethics and thus, brings a unique perspective to understanding the role of genetic technologies in sport that an ethicist from a sporting background might not have.

The level of technical knowledge demonstrated within the manuscript is an indication of the value of such an in-depth awareness about the real possibilities suggested from the developing research into genetic alteration. As well, the paper is one of the first to take very seriously the applications of genetic technology to sports beyond the sensational ambitions of lay press, which tend overly to represent the realities. Finally, and related to the previous comment, is that the author is, again, one of the first to devote an entire manuscript to the ethical implications of genetic enhancement for sport specifically. In the past, authors have noted its likelihood in the context of other kinds of performance enhancer, giving only a passing reference to technologized futures where athletes are superhuman in their performances (Blake, 1996; Hoberman, 1992;

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1 Johnson, 1976; Rintala, 1995). In such instances, the relevance of genetics tends
2 to have been secondary to an interest to prophesize, alarm, and generate an
3 aversion to the technology. On the contrary, *Selected Champions* is a credible,
4 and sincere endeavour to comprehend the ethical implications for sport raised
5 by genetic technologies.

6 The inspiration for this response derives from recognizing the need for
7 providing dialogue between sports ethicists and bioethicists more generally as
8 a means to establishing the ethical status of genetic technologies in sports. The
9 paper's main interest is to develop ideas about genetic intervention and under-
10 stand what questions precede discourse about whether genetic forms of
11 performance enhancement are valuable for sport. Munthe's paper thus, will be
12 used to isolate these kind of questions and to assess what kind of assumptions
13 might be made about the way in which genetic technology could be used for
14 sport. Finally, the paper wishes to assert the integration of bioethics and sports
15 ethics as a means for a more informed understanding about how genetic inter-
16 ventions will influence human beings and their practices.

17 18 **OUTLINE OF MUNTHE'S ARGUMENT** 19

20
21 Munthe begins his paper by outlining three areas of interest that will discuss
22 the approaching reality of biotechnological methods of performance enhance-
23 ment in sport. Initially, he outlines various forms of gene technology that might
24 be used to make sports champions. Next, he considers the various opportuni-
25 ties to use gene technology in sports and their various implications. Finally,
26 Munthe discusses to what extent ideals and values in sports that are used to
27 support reasons for prohibiting doping, might also be a basis for rejecting genetic
28 interventions.

29 In Munthe's analysis of the various forms of gene technology that might be
30 used to engineer sports champions, he considers four main categories. First, he
31 discusses the possibility of how information about genetic predispositions and
32 how they influence the body might be used to fine-tune already established
33 methods of training. Such information is comparable to how other scientific
34 discoveries within sports medicine have yielded greater ways of making training
35 more efficient. Second, Munthe outlines the possibility of engineering the
36 somatic cells of the body – the non-hereditary cells. Quite rightly, Munthe iden-
37 tifies such techniques as being most comparable to the ways in which athletes
38 currently use other methods of doping. A useful example of this is the
39 possibility that somatic cell engineering could be used to develop genetically
40 modified red blood cells to enhance endurance in a way that is comparable to

1 the effects of erythropoietin (EPO) and blood doping. One stage further from
2 this possibility is the engineering of germ-line cells, Munthe's third category.
3 Such engineering would most likely take place very early in life (within some
4 days of conception), due to the complexity of engineering such genes. As such,
5 the effects are hereditary and have the added implication of affecting subse-
6 quent generations. Munthe's final category of genetic technology is its use for
7 the pre-selection of athletes. This seemingly eugenic possibility, where prospec-
8 tive athletes could be chosen on the basis of their genetic predisposition for
9 athletic capabilities is, Munthe suggests, not very different from coaches going
10 to watch young athletes and assessing which are most deserving of investment.

11 From here, Munthe sets about outlining how arguments traditionally used
12 against doping in sport fare in respect of genetic enhancements. Choosing argu-
13 ments about safety, moral purity, pragmatic reasons, and athletic tradition,
14 Munthe states that "when a sufficient degree of reliability and unharfulness
15 has been proven, it is hard to see any convincing way of arguing *generally*
16 against the use of such interventions, no matter if the basis be reasons of safety,
17 'moral purity', or pragmatic concerns" (p. 220). It seems that the reason of
18 safety is quite straightforward and does not require much explanation except to
19 say that the concern is whether genetic interventions would be *sufficiently* safe
20 to use. In response to this, Munthe suggests that a precautionary principle should
21 be applied and "when the risks are clarified and the methods are reliable and
22 safe, the introductory phase is over and the reasons for precaution disappear"
23 (p. 223). To counter Munthe's position here seems uninteresting as it depends
24 largely upon empirical truths about the safety of the technology, which cannot
25 yet be known.

26 However, moral purity is somewhat more complicated and it is a little unclear
27 why Munthe isolates this concept. For Munthe, the notion of moral purity as
28 a potential reason against genetic intervention refers to the idea that athletes
29 should not do things that detract from their commitment to competition. In this
30 capacity, Munthe refers directly (though, not necessarily exclusively) to recre-
31 ational drugs such as marijuana or alcohol that do not promote a greater athletic
32 ability. Munthe argues that such substances are not objectionable because of
33 their enhancing effects, but due to their representing a lack of commitment to
34 the competition on the part of the athlete. In the context of genetic interven-
35 tions, however, such arguments could not be made as there would seem no
36 obvious reason why the enhancements would reduce an athlete's commitment
37 to the competition. Moreover, Munthe acknowledges that neither does this
38 objection reject other performance enhancing drugs within sport. Here, Munthe
39 concludes that "reasons of 'moral purity' cannot be used against genetic inter-
40 ventions in sports" (p. 224).

1 Pragmatic reasons are defined by Munthe as being those objections that might
2 require the rejection of an intervention because it is not practical. Using the
3 example of changes to the javelin in the mid 1980s, Munthe describes how com-
4 mercial factors can influence such decision making; the entertainment value of
5 a sport being a crucial factor in its development. As regards genetic intervention,
6 Munthe sees no reason why such enhancements would detract from this except
7 for the unlikely possibility that we might see the sports field awash with cloned
8 athletes all of whom perform uninterestingly similarly. Nevertheless, Munthe re-
9 cognizes that this is unlikely and that there are too many environmental factors
10 determining the capabilities of athletes and competition conditions.

11 Finally, Munthe gives possible reasons of athletic tradition for rejecting genetic
12 enhancement, again, concluding their insufficiency. Munthe's articulation of
13 these traditions begins in the context of 'fair play', proposing that it is claimed
14 sports "should be a fair competition between athletes" (p. 225). He then proceeds
15 with the relevant question of asking what determines whether some procedures or
16 substances are acceptable, contemplating the possibility that the starting point
17 might be to examine what is currently accepted or rejected. It is then identified that
18 there is also a need to question these initial rules. However, Munthe does not pro-
19 ceed with this line of questioning. Rather, he recognizes the potential of norma-
20 tive ethical approaches for making such choices. Again, however, he does not
21 develop this inquiry and, instead, observes the procedure of deliberation about
22 new technologies within sporting bodies. From here, Munthe identifies that the
23 approach tends to be one of conservatism, where precaution is applied and where
24 small steps are taken through established patterns of reasoning. Thus, in sports we
25 do not see significant changes take place, but small intricate ones (at least in the
26 context of legitimizing new and performance altering innovations). It is, then, in
27 the context of this approach that Munthe makes his case for contemplating the
28 ethical implications of genetic enhancements.

29 In the case of banned substances, Munthe isolates the importance of such
30 substances as affecting the "biochemistry of the body in a way *very different*
31 from the influence of this kind one would have been exposed to *had one lived*
32 *an average life rather than ventured into the elite athlete*" (p. 227) as a pattern
33 of reasoning that has been developed to oppose such substances. Munthe is
34 very aware of the inadequacy of this position, but nevertheless frames genetic
35 intervention in a similar way to identify how they would stand. In some cases,
36 Munthe argues that genetic intervention could be objected to on similar grounds
37 (notably, somatic cell engineering). However, for other kinds of intervention,
38 this is not the case as they do not seem different from other, accepted modes
39 of practice (a genomics of sport and genetic selection). Moreover, where a child
40 is born from two genetically modified parents, and who is thus, modified in a

1 similar way, it is not possible to argue that this child has been altered in some
2 way as it could never have been any other way.

3 In conclusion, Munthe provides the tentative suggestion that some, but not
4 all, forms of genetic intervention might be plausible. That is, there are some
5 kinds of genetic intervention that are congruent with sporting ideals and thus,
6 that they would be deemed legal and used within sports. Specifically, Munthe
7 concludes that, “with the possible exception of certain types of somatic genetic
8 modifications, there are within sports no good reasons for objecting against the
9 use of genetic technologies for increasing athletic excellence” (p. 229). In
10 addition, Munthe suggests that “the sports community will eventually have to
11 accept *all* genetic interventions for the purposes of selecting champions and
12 making winners.” (p. 229) and that this will be entirely in keeping with athletic
13 virtues, perhaps even promoting them.

14 **RESPONSE TO MUNTHE**

15
16
17 My response to Munthe’s paper is leveled upon three main points (categorized
18 below and in brief here as ‘defining virtue in sport’, ‘pseudo-doping’, and ‘only
19 a sporting perspective’). The initial section (defining virtue in sport) is directed
20 explicitly to the argument made within his thesis, whilst the latter two tend
21 from being directed towards the approach of the paper, and finally to Munthe’s
22 approach of the problem in general. I will address each of these separately as
23 their difference demands it, though will add some initial summative comment
24 to my general reflections upon Munthe’s chapter. However, whilst the argu-
25 ments are suggested as being disparate, it is important to note that the discourse
26 within all three is not unrelated. Similar kinds of arguments and related argu-
27 ments are employed for each of the main claims.

28 I would like to respond to Munthe’s paper initially upon the basis of my
29 second criticism of the paper, which is motivated by an interest to see any
30 policy making about genetic modifications for sport approached from a perspec-
31 tive that would seem most useful. Moreover, I am concerned to ensure that the
32 way in which genetics is approached by sports authorities is not presumptuous
33 in placing it into the context of anti-doping policies as this would really misun-
34 derstand the kind of performance enhancement that such technology describes.
35 Specifically, I argue that there is a need for sports ethicists and particularly
36 policy makers to recognize the significantly ambiguous and changing ethical
37 character of the technology (and sport). Applications of genetic technology are
38 not fixed entities with static implications for sport or society more broadly.
39 Thus, the usefulness of an ethical or bioethical committee (again, in sport or
40 beyond), is not something that is temporary. Rather, a bioethical committee

1 must be an ongoing entity, as the technology will continue to evolve and
2 continue to present different kinds of ethical problem for sports and society. It
3 is not the case that an ethical committee can be useful for defining the values
4 of, for example, sport, and observing whether these fit with the values implied
5 by genetic modification.

6 Biotechnologies are constantly changing and an understanding of their impli-
7 cations requires an approach that recognizes that the ethical issues presented
8 by them are many, various, and even unknowable at present. Thus, if policy
9 making is to be useful in regard to biotechnologies in a way that is reflective
10 of philosophical and ethical methods of inquiry, then it is important to recog-
11 nize that the discussions need to be context specific, factually informed, and
12 open to reevaluation. This does not prevent a sports authority from establishing
13 core values that can guide their decision making. However, it is important that
14 within any such discourse, there is a recognition that values can and do change
15 and that a tentative approach to these innovations is perhaps more useful.

16 Hopefully, it can be clearer how I wish to pitch my final response, which,
17 again, is made less towards the arguments made by Munthe, than the approach
18 of the paper. Admittedly, it is recognized that Munthe endeavours to speak
19 explicitly to a sporting community, endeavouring to conclude whether there are
20 any reasons – from a sporting perspective – against genetic innovation. Thus,
21 it would be unfair of me to evaluate the paper in any other regard. Of this I
22 am particularly aware, given the author's sensitivity to and awareness of bioethi-
23 cal issues. Nevertheless, the argument is raised in order to make clear my
24 position about this impending future and to enable a further discourse to develop
25 into examining how the application of genetic knowledge to sport should be
26 made. For me, it does not seem sensible to isolate the sporting implications
27 from the social implications of the technology and in this regard, I am very
28 interested in observing how further research proceeds. However, presently, I
29 will focus upon my response to Munthe's argument in the context of sport.

31 **DEFINING VIRTUE IN SPORT**

32
33 My primary difficulty with Munthe is that the sporting values upon which he
34 concludes that there are nearly no reasons for rejecting genetic enhancement
35 from sport do not appear to be clearly articulated. Munthe states that,

36
37 With the possible exception of certain ways of performing genetic interventions and certain
38 types of somatic genetic modifications, there are within sports no good reasons for objecting
39 against the use of genetic technologies for increasing athletic excellence. Indeed, athletic
40 virtues and pragmatic reasons even seem to support the *desirability* of such a development
(p. 229).

1 Here, Munthe uses the phrases athletic excellence and virtues in a very cavalier manner that requires greater scrutiny. This terminology is perhaps most
2 simply observed by examining Munthe's approach to understanding the possible
3 reasons for rejecting genetic enhancements, which is structured by outlining
4 whether arguments against doping can be used to reject genetic intervention.¹

5
6 The arguments given by Munthe purport to reflect the possible reasons that
7 could be made against genetic enhancement. Yet, it is one thing to claim that
8 the specified arguments reflect the arguments usually given against drug use or
9 substance use in sport. It is a quite different task to argue that these arguments
10 suitably reflect and exhaust all possible arguments within sports ethics that can
11 be made against new methods of performance enhancement. It is an even further
12 different claim to suggest that, by dismissing these possible reasons for rejecting
13 genetic enhancement in sport, ideals and virtues in sport do not say anything
14 that can warrant a skepticism about the ethical status of genetic enhancements
15 for sport. Towards the end of his paper, Munthe suggests that the arguments
16 he considers suitably allow the conclusion that there are no values or virtues
17 *within* sport that can reject genetic enhancement. I would like to argue that this
18 most certainly is not the case or, at least, the possible development of articulating
19 virtues in sports, warrants an approach of caution in regard to genetic
20 enhancements for sport.

21 Nevertheless, at this stage, my response can begin by utilizing Munthe's own
22 arguments. Leaving aside the reasons of safety and pragmatic reasons for
23 rejecting new technologies from sport, a justification for my initial wariness of
24 Munthe's arguments is found in his final reason for rejection, namely "athletic
25 tradition" (p. 224). Whilst Munthe mentions athletic virtues in his "reasons of
26 moral purity" (p. 223), the relevance of this claim is towards drugs or performance
27 enhancers that detract from the athlete's commitment to competition,
28 which, as Munthe argues, does not seem a persuasive case against genetic
29 enhancement.

30 In the case of "athletic tradition", Munthe identifies the need to establish a
31 basis for understanding why some kinds of performance enhancement are legitimate
32 whilst others are not, the criterion of fair play seemingly a decisive factor.
33 The significant point then, for Munthe is to establish how the preservation of
34 fair play takes place in sport. For Munthe, this entails understanding the patterns
35 of reasoning within sports organizations that govern decisions and thus, his
36 responses are directed towards this approach (an approach that he admits as
37 being problematic).

38 However, the proposed patterns of reasoning do not really do justice to sports
39 ethics. Moreover, the very fact that policy has failed to respond to new technologies
40 in a discriminate and coherent manner is more a reflection of their

1 inadequacy than a claim to sport lacking the kind of values that might preclude
2 the use of genetic enhancement. Munthe appears to be sensitive to this recog-
3 nizing that, when trying to establish which things are to be included within
4 competition “these considerations are hard to spell out in the form of some
5 traditional basic ethical view – indeed, they are hard to spell out *at all*, since
6 they have never been explicitly formulated.” However, rather than seek to
7 further this discourse, Munthe retreats to using the inadequate “patterns of
8 reasoning” as a means to justify that applications of genetics in sport are mostly
9 acceptable. This very approach does not seem sensitive to the discourse of
10 sports ethics which is critical of patterns of reasoning as a credible method
11 of deliberation over change in sport (Morgan, 1994).

12 In response to Munthe’s treatment of the problem, I suggest that it is more
13 worthwhile to question what would constitute a desirable enhancement in perfor-
14 mance and ask whether genetic enhancements provide such an enhancement.
15 Thus, to establish what is acceptable, it must be understood to what ends
16 sporting practices aspire. Moreover, it must be discussed what kind of perfor-
17 mance is an ideal one, desirable one, or, at least, one worth striving towards.
18 This is where a serious evaluation of sporting virtues must ensue.

19 For Munthe, following the way in which sports authorities guide their
20 decisions, it would appear that commercial interests (pragmatic reasons) and
21 the enjoyment of spectators is a persuasive basis (or at least justifiable one)
22 upon which to determine the acceptability of an innovation. I contest this most
23 strongly, though realise the financial necessity of having a sufficient level of
24 paying spectators for the flourishing of sports. Nevertheless, throughout
25 Munthe’s paper, the question is begging as to what is meant by an enhance-
26 ment in performance. What would actually constitute an *enhanced* performance?
27 It is most definitely not the case that a more competent athlete renders compe-
28 tition more valuable, regardless of whether it reflects the current trends within
29 sport to value the quantifiable achievements of athletes and thus, attract wide
30 followings for that reason. That it might be entertaining to watch a super-human
31 athlete (if such a term is appropriate), is not, in itself, reason to accept such
32 technologies as it must be questioned to what degree sport is most valuable for
33 entertainment purposes. Surely more can be said about sport than simply its
34 commercial value and ability to attract spectators.

35 What kinds of values or virtues then, are sufficiently well articulated or clear
36 so as to suggest that genetic enhancements might be unacceptable. I return again
37 to the previous concepts, and the concepts used by Munthe, namely, “athletic
38 excellence” and “athletic virtues”. The meaning of athletic excellence, or less
39 narrowly, excellence in sport is a concept that has been given substantial
40 deliberation within the philosophy of sport literature. However, its relation to

1 performance enhancement is often unstated and, particularly in the context of
2 new technologies, the argument is sometimes left hanging. Not surprisingly, the
3 subject of doping has been a key technology that has prompted a breadth of
4 discourse studying the values of sport, specifically in relation to distinguishing
5 legitimate from illegitimate performance enhancers. In this regard, the philos-
6 ophy of sport has taken a number of approaches. Authors have sought to
7 establish characteristics of sport that make it valuable, distancing themselves
8 from essentialist or naturalistic argument to identifying what kinds of charac-
9 teristics describe the virtuous athlete. To summarise this body of literature as
10 an appeal to Munthe's analysis of virtue in sport, would be insufficiently
11 shallow. Instead, I will provide what, to me seems a particularly well respected
12 approach to dealing with the problem of performance enhancers in sport which
13 provides sufficient reason for a skeptical approach to Munthe's conclusion.

14 It is important first to recognize that discussions about virtues within sport
15 as a basis for establishing values, are a relatively recent trend within sport
16 philosophy. Following the works of Alisdair MacIntyre, and citing arguments
17 within Kant's Categorical Imperative and the derived concept of 'respect for
18 persons', it has been argued that conventional consequentialist or deontological
19 approaches to addressing ethical questions in sport do not suitably capture a
20 pluralist moral community or present answers in a way that is persuasive and,
21 indeed, accurate (Loland, 1998). To make claims about what kinds of perfor-
22 mance enhancements should be acceptable, or to argue that specific values
23 should be upheld, implies a somewhat dogmatic approach to ethics that is neither
24 useful or enriching of our understanding of values. This is particularly relevant
25 for sport as its context implies many different communities and various interest
26 groups. Thus, the commensurability of these various interests must take place
27 within a framework that allows the articulation of values from all perspectives,
28 where the power relations of each interest group are equally influential. Indeed,
29 Morgan (1994) argues that, if any interest group should be entitled to be
30 more persuasive, than it is the practice community – in this case, the athletes
31 particularly.

32 Most certainly, it is of interest to understand how governing bodies might
33 address the problem of genetics and, indeed, to identify potential flaws in their
34 patterns of reasoning that do not suitably attend to the specificities of genetic
35 enhancement. However, this does not seem to be Munthe's intention. Moreover,
36 there seems to be no interest to further the methods of decision making within
37 governing bodies or to reinforce the need for governing bodies to take seriously
38 the use of ethical inquiry and question what are the limits of fair play in a way
39 that is not simply paying lip service to ethics. Governing bodies must thus,
40 consider whether it would be fair to place the genetically enhanced athlete in

1 competition with the non-enhanced? If not, then it might be reasonable to expect
2 there to be separate competitions for the enhanced and non-enhanced. This
3 concern might be a basis for rejecting genetic technologies from sport on account
4 of Munthe's category of 'pragmatic reasons', where it might be deemed impos-
5 sible to have such separation on grounds of practical limitation. Yet, this impli-
6 cation is not recognized by Munthe. Indeed, it is a concern that re-emphasizes
7 the need for sports to establish what constitutes the virtuous and valued
8 performance since the prospect of this technology suggests the need either for
9 separation of athletes or the prejudicing of athletes with less capable genotypes.²

10 Neither of the two options seems a particularly desirable choice and would
11 lend strength to supporting the rejection of any kind of genetic enhancement
12 within sports. Though, of course, even this has its disadvantages. Suppose – as
13 Munthe does – that an individual is born from two parents whom had been
14 genetically modified, but that the offspring had not been. Would such an indi-
15 vidual be allowed to compete if the genetically engineered were banned from
16 competitive sport? What principle of justice could be applied here to determine
17 a suitable resolution of the matter? It is not clear that the conservative pattern
18 of reasoning described by Munthe would be sufficient here. More effective
19 would be to employ the Rawlsian notions that are presented within the chapter,
20 though only partially due to their apparent irrelevance to the author.

21 Drawing upon a MacIntyrean approach, a distinction can be made between
22 the internal and external goods within sports.³ The former relates to those aspects
23 of performance that can be achieved only by participating in that activity, whilst
24 the latter are more generic. For example, an internal good of tennis, might be
25 the feeling of hitting a backhand topspin that successfully travels along the
26 court in a perfect line away from the opponent. In contrast, an external good
27 might include the financial reward that the same backhand topspin might provide
28 by winning a competition. In this case it seems clear that, financial reward is
29 not something that is unique to the practice of tennis, and thus, is to be construed
30 as an external good.

31 The relevance of this distinction is to recognize that, in understanding virtues,
32 an initial starting point is to examine whether the proposed innovation
33 contributes to the derivation of internal or external goods in sport. Admittedly,
34 the notion of internal and external goods is complex, but it will not do to throw
35 the metaphorical baby out with its metaphorical bath water. Rather, there seems
36 due reason to attempt an articulation of these internal goods.⁴

37 It might be argued that genetic enhancements do not prevent one from
38 obtaining the internal goods of hitting a backhand topspin in tennis. Equally,
39 neither does drug use. However, in this capacity, it is important to recognize
40 that there are two aspects to the condition. Clearly, the technology does not

1 prevent the experience of internal goods, but also, their rationale for use is not
2 to promote the experiencing of internal goods. Thus, quite reasonably, it could
3 be argued that a motivation for using genetic enhancement would be to have
4 the kind of physique that makes possible, for example, the lifting of extraor-
5 dinarily heavy weights. A similar case might be made in the context of, for
6 example, the FastSkin swimming suit that was recently controversial in the
7 approach to Sydney 2000. This swimming suit, which alleged to enhancing
8 performance by 3%, might be argued as allowing the athlete the opportunity
9 to experience the internal good of swimming faster. However, upon this basis,
10 and in the case of genetic modification, it seems extremely problematic to claim
11 such goods as being internal to the sport and of value for that reason. Indeed,
12 to do so, requires an articulation of why performing faster, higher, or stronger,
13 are internal goods to specific sports. If they do not appear to be, then genetic
14 modifications do not seem justifiable upon this basis. A clarification of this,
15 then, requires an argument to specify whether quantifiable achievements are
16 internal goods in sport and thus, whether their attainment is reflective of sporting
17 virtue.

18 Consequently, I will direct my attention now to the second aspect of this
19 initial section, and inquire into the ends of performance-based sport as a basis
20 for value. If one is to begin with arguing what kinds of aspects of the sport
21 are worthwhile to preserve, then it might be useful to propose what kinds of
22 thing would constitute an enhancement in performance in the broader sense –
23 what would entail sport being better (enhanced)?
24

25 **WHAT CONSTITUTES AN ENHANCEMENT IN** 26 **PERFORMANCE?** 27

28 Within Munthe's article there is an assumption that genetics would be used to
29 make athletes faster, higher, and stronger. Thus, it is performance enhancement
30 in the quantitative sense, that is most interesting in relation to genetic tech-
31 nologies. Why is it that Munthe has this approach and does not say anything
32 about how genetic information might be used to make athletes play more fairly
33 or to be interested less in winning and more interested in acquiring altruistic
34 tendencies and learning the value of, for example, team spirit? Is it because
35 such abilities are beyond the real scope of genetic interventions? Of the many
36 ways in which future genetics might be used, it does not seem inconceivable
37 that genes will be identified as determining various kinds of physical and
38 psychological traits. Indeed, accepting that genetic predispositions are no more
39 of a guarantee for becoming an elite athlete than they are for becoming an alco-
40 holic, it would be unfair to suggest that emerging research that outlines possible

1 genetic determinants for supposed socially learned traits is not significant. It
2 does seem possible that social characteristics might have a genetic origin at
3 least in some cases. As such, it is, surprising and revealing that Munthe speaks
4 only of enhancing physical characteristics for sport. Arguably, it reflects a partic-
5 ular ideal about how genetics might be used within sport, which is also reflective
6 of taken-for-granted values in sport: those of performance and physical, quan-
7 tifiable, achievement. Yet, it is the very content of this sporting ideal that is in
8 need of question.

9 For Munthe, genetics can provide more physically competent athletes and
10 this appears to be his benchmark for excellence in sport or, at least, his justi-
11 fications for rejecting possible arguments against genetic enhancement depart
12 from this basis. However, such characteristics are surely too narrow and do not
13 question what kind of enhancement is reflective of sporting ideals at all. It is
14 certainly not the case that sporting ideals are reflected from a naive reading of
15 the Olympic Motto, as 'higher, faster, stronger'. Indeed, Munthe seems aware
16 of this when he outlines his thoughts about athletic tradition and notions of fair
17 play. Yet, this dialogue is not at all evident in his consideration about how
18 genetics might serve to enhance such concepts. Why is it that physical char-
19 acteristics are all that is of interest to Munthe and his representation of how
20 genetic information might be used? There seem genuine reasons for accepting
21 that Munthe's ideas are reflective of likely possibilities in biotechnology. The
22 prospect of engineering people to be more humane might seem more eugenic
23 in practice than simply altering their physical characteristics (even if it was
24 possible). Yet, underpinning the language of enhancement is a comparably
25 alarming ideology: that physical characteristics determine value in sport.
26 Munthe's thesis does not mention the prospect of physically-challenged athletes
27 within sport and it could be argued that these very arguments undermine the
28 value of such athletes. To engineer physical characteristics is to prioritise partic-
29 ular ways of being over others. In this sense, it is misleading to assume that
30 physical characteristics do not have any social connotation.

31 In conclusion, it must be recognized that performance enhancement is not nec-
32 essarily an ideal to strive towards. Rather, it is the way in which the enhance-
33 ment is achieved and, more importantly, what kind of enhancement is provided
34 that is necessary to understand in order to conclude its value. Such an inquiry
35 requires understanding what are the characteristics of sports that give it value,
36 even if the task is, as Munthe suggests, difficult. As a start, it would seem a
37 relevant point to make that sports are interesting because they constitute the
38 performance of human beings, individuals engaged in a practice that is not easily
39 obtainable and is reflective of years of training and commitment. As well, sports
40 performances are enterprises which comprise an extraordinary integration of skill

1 and talent, that is devalued if athletes can be given such abilities (which seems
2 possible at least, in the case of talent) by performance enhancing technologies.
3 Indeed, *reductio ad absurdum*, the situation is presented where the athlete as a
4 human being is removed from determining the performance in any significant
5 way.

6 This seems problematic as it can be argued that the athlete ought to be respon-
7 sible for the performance in a very significant manner. If it were to get to a
8 stage where the athlete was not at all responsible for the performance, but that
9 the technology was entirely determining results, then this would not be an inter-
10 esting state of affairs. It is not possible to find the performance of a machine
11 as admirable or virtuous. Thus, as difficult as it might be, it is necessary to
12 articulate the characteristics of the human performance that give it value and
13 to place these in the context of new technologies to observe whether the inno-
14 vation detracts from this performance. If the genetic enhancements are breaking
15 the world records, then the value of the performance is diminished.
16 Consequently, due to their inability to foster the development of athletic virtues,
17 genetic enhancements do not seem to produce or contribute to the experiencing
18 of internal goods in sport. As such, it does not seem justifiable to claim that
19 genetic enhancements are concurrent with sporting values and are objection-
20 able for this reason.

21 The other approach suggested in the initial comments of this section and
22 which, again, reflects an interest in the virtuous athlete, also speak on behalf
23 of literature that has sought to respond to drug taking in sport.

24

25 RESPECT FOR THE SPORT

26

27 Following a social contract approach, it has been argued that athletes using drugs
28 in competition engage in a form of deception that breaks the tacit agreement
29 made with other competitors.⁵ As Butcher and Schneider (1998) articulate the
30 argument, “When athletes enter a contest, they agree, and form a tacit contract,
31 to test their skills in the ways permitted by the game concerned. On this account,
32 unfairness or cheating is wrong, because it breaks the agreement” (p. 7). The
33 thesis is not without complication as it is not clear whether it is really analogous
34 to sporting circumstance. As Butcher and Schneider (*ibid*) note, “Fair play as
35 contract is open on the content of the agreement. On some versions of this view,
36 the content of the contract is created solely by the rules. In other versions, it is
37 the rules as practiced and understood by the athletes” (p. 7). This cautionary note
38 on the application of contract theory to the drug situation in sport, derives from
39 a contested version of how morality is formed in sports and whether it comprises
40 only the rules or the added complication of an ethos.⁶

1 Subsequently, such arguments have been phrased in such a way as to suggest
2 that the use of drugs, again, deceives the opponent, which has the subsequent
3 implication of negating the value of the 'other' within competition. In this
4 regard, and bearing in mind the teachings of Kant, the act of deception fails to
5 acknowledge the other as an individual with her own interests, and thus treats
6 her as a means to our ends, rather than an end in herself. Thus, the athlete who
7 engages in genetic enhancement (for now, presuming that it is deceptive) is
8 reducing the value of the other in competition. Admittedly, this is not a case
9 for rejecting genetic technologies from sport as its relevance depends upon the
10 illegality of genetic technologies and its employment by some athletes – if
11 genetic enhancements were legal then there would be no implication of decep-
12 tion. However, a further claim can be made, which derives from this point and
13 which again implies the need for an articulation about what aspects of sport
14 give it value. The argument considers that the use of genetic technologies would
15 fail to have respect for the *sports* themselves.

16 This position is comparable to those made about having an unfair advantage
17 over sports (as opposed to other athletes), an argument made initially by Gardner
18 (1989) when discussing the concept of unfair advantage in sport. It is suggested
19 by Gardner that, to utilise specific kinds of performance enhancer is to adopt
20 means that are, not necessarily immoral, but inappropriate as their employment
21 negates the purpose of the activity. However, it is necessary to give some
22 substance to this argument as its direction is not without complication. What
23 would it mean, thus, to have an unfair advantage over the sport, or to fail to
24 respect a sport (if, indeed, sports are a kind of entity that can be respected or
25 not). Leaving aside the epistemological dilemma of arguing whether a sport can
26 be disrespected⁷ and retreating to the less problematic notion of unfair advan-
27 tage. It could be argued, as is suggested by Gardner, that to have an unfair
28 advantage over a sport would be to effect a kind of action that would be in
29 contradiction to the very aspects of that sport that make it interesting, worth
30 perusing, and unique. Within the context of the literature, such actions might
31 be comparable to circumventing the prelusory goal of the activity (as reflected
32 in Suits' (1973) conceptualization of sport).

33 Thus, rather than seek some essential qualities of sports, it is being argued
34 that, if the technology is employed, then it makes nonsense out of the object
35 of the sport. If swimmers could perform with outboard motors strapped to their
36 body then, (providing the motor is functional and switched on) the athlete could
37 break world records at will. However, this would be unfair inasmuch as it
38 circumvents the very obstacles placed by sport that make the activity possible.

39 We would not identify such an enhancement in physical performance as being
40 justifiable or, indeed, valuable if what we are interested in is learning about

1 how fast a human being can move in a horizontal direction in water. Of course,
2 the difficulty arises of how to identify the swimmer in this pursuit. It would
3 be misleading to suggest that the swimmer (*qua* human being) is at all distin-
4 guishable from the technology that constitutes her training background. It seems
5 beyond question that athletes are technological in varying capacities.
6 Nevertheless, it can also be argued that to witness robots swimming is not
7 something that will inspire a sense of admiration for anything other than the
8 engineers of the robot. With sport, the contrary is true and it is the performer
9 specifically (and almost exclusively except in such sports as motor racing where
10 the manufacturing team are also evaluated) that we admire. Thus, as difficult
11 as it might be to articulate, there is something about the human performance
12 in sport that we wish to retain. A starting point for any such inquiry might not
13 begin with examining the essential characteristics of humanness, but might
14 rather begin by recognizing that the athlete's performance is representative of
15 the human struggle to achieve and overcome. Advantages gained by genetic
16 technologies do not require any struggle on behalf of the athlete. At most, the
17 athlete takes a health risk in using the technology, though we would not wish
18 to congratulate someone for knowingly risking harm to the long-term health of
19 their body in the pursuit of athletic excellence.

20 I would like now to address my second response to Munthe that reflects a
21 broader concern with the way in which the technology of genetic enhancement
22 is being presented. The concern is not directed only to the chapter but also to
23 an emerging discourse within sport that is already taking on assumptions about
24 the kind of performance enhancement that is genetic.

25

26 THE PSEUDO-DOPING CHARACTER OF GENETIC 27 ENHANCEMENTS

28

29 Whilst Munthe does give some overview of how genetic intervention might be
30 used in other contexts, his thesis seems to overstate the utility of fitting such
31 technologies into a framework of analogies to doping and other substance use
32 in elite sport. It seems to have been assumed by Munthe that, if the arguments
33 against doping do not preclude the acceptance of genetic interventions, then it
34 can be concluded that genetic interventions are congruent with sporting ideals.
35 This is most certainly not the case. Indeed, this is problematic as it unwittingly
36 places genetic technologies into the guise of doping without first establishing
37 whether these different kinds of enhancement are similar. Why is it that genetics
38 is being compared to doping rather than to, for example, new innovations in
39 equipment? What are the relevant characteristics that make genetic interven-
40 tions more like one form of performance enhancement than another? It would

1 be unreasonable of me to suggest that Munthe should have derived such conclu-
2 sions or even that such conclusions must necessarily precede the kind of analysis
3 that Munthe articulates. Yet, because such conclusions have yet to be clarified,
4 it is important that they are acknowledged and that some response takes place
5 to assess whether genetic interventions can be considered as raising only issues
6 that are reflective of doping. Most certainly, one can pose other concerns about
7 genetics for sport, such as the technology making the activity unacceptably
8 easier for the athlete.

9 As was indicated in my initial summation of this critique, my broader concern
10 about the way in which genetic technologies are being approached by ethicists
11 and the popular press more significantly, is that they are being seen as similar
12 to drug taking. The implication of this, perhaps, is that the disapproval that is,
13 to some degree, warranted in the case of doping will be, inappropriately, applied
14 to genetic enhancements for sport. It simply will not do to include a sub-article
15 within anti-doping policy to include a rejection of any genetic modification, as
16 might be the temptation (particularly given Munthe's identification of conserva-
17 tive approaches to change). Thus, I find it problematic that Munthe seeks to
18 frame arguments against genetic enhancement within only those arguments that
19 are made against drug use in sport.

20 A subsequent criticism of this approach is that it prevents Munthe from
21 considering other possible sporting responses to the technology, thus making
22 the analysis too narrow. Perhaps most indicative of the broader implications of
23 genetic intervention for sporting success in Munthe's paper can be found in the
24 section addressing 'pragmatic concerns'. Munthe argues that genetic interven-
25 tions would lend a much more exciting spectacle of performance and would
26 thus be quite desirable for sports. His only exception would be if athletes were
27 to be genetically cloned and where their performances would be indistinguish-
28 able. Munthe promptly dismisses this possibility, properly asserting that sport
29 is too complex an activity, governed by many environmental factors that would
30 make this concern negligible.

31 However, this position does not take into account what kind of contest consti-
32 tutes one that is won by technology, which, again, relates back to the earlier
33 point of respecting the sport. To reiterate, it could be argued that, if genetic
34 enhancements are used and that there is a subsequent normalizing effect upon
35 competitors such that their differences in performance are due to chance or
36 environmental factors, then this is not particularly valuable or interesting. If the
37 technology wins, then the role of the human is marginalized which is prob-
38 lematic because, as argued earlier, it is the human we are interested in seeing
39 perform. Thus, it could be considered that genetic enhancements might be
40 objectionable on account of them normalizing competition to such a degree that

1 it becomes uninteresting as it would reduce sports to competition between
2 technology.⁸

3

4 **THE ACCEPTABILITY OF GENETIC INTERVENTION** 5 **FROM *ONLY* A SPORTING PERSPECTIVE**

6

7 The final points to make in my response to Munthe are in regard to his explicit
8 interest to analyse the tenability of genetic interventions from only a sporting
9 perspective. I do not wish to suggest that Munthe could have given a compre-
10 hensive overview of the broader bioethical issues that derive from such
11 technologies applied to sport. Yet, Munthe's conclusions beg the question as
12 to whether these questions are, in fact, a matter for sports ethicists to resolve.
13 For technology that is so closely allied to medical practices, issues of health
14 and disease, and of great public interest, I doubt very much that sport will have
15 much authority in directing the application of these technologies. Rather, athletes
16 will be able only to utilise those technologies that have been deemed ethically
17 acceptable from a general bioethical perspective.

18 However, I do not believe that sport can have no part to play in influencing
19 the establishment of broader ethical guidelines outlining the suitability of the
20 use of this technology. Perhaps one of the most interesting and controversial
21 aspects of bioethical debate in the context of what might be revealed from the
22 findings of the human genome project is how such information would be used
23 by insurance companies or employers. There is widespread concern that such
24 information might be used to disadvantage individuals with particular kinds of
25 genetic predisposition. Thus, the question is raised as to whether such infor-
26 mation should be made available to prospective insurers (Häyry & Lehto, 1998;
27 Henderson, 2000; Knoppers, 1999; Rothstein & Knoppers, 1996; Sandberg,
28 1995). The example serves to identify the complexity of what kinds of problem
29 the new genetics might provoke and is thus relevant detail to be considered in
30 the context of legitimizing such technology, about which a similar point can
31 be made for sport. In a personal communication, Munthe outlines the possi-
32 bility that the use of genetic technology for sports might drive individuals to
33 be more willing to accept and use such technology in other aspects of life
34 (Munthe, 2000b). The significance of this is overwhelming as it places sport at
35 the forefront of determining notions of normalcy within society. As such, it
36 would be foolish to assume that sport has nothing to add to broader bioethical
37 debates about genetic interventions.

38 Alternatively, it is possible to identify a broader bioethical concern when
39 Munthe discusses the possibility of selecting human lives on the basis of their
40 capability for sporting performance. Such a practice could seem abhorrent for

1 a number of reasons. Additionally, broader implications of the use of genetics
2 to enhance performance include the danger that genetic essentialism will govern
3 significant decisions in sport. Indeed, where Munthe describes the pre-selection
4 process of individuals whom are deemed worthy of investing time and money,
5 presupposes a genetic map that can be applied to determine who will be most
6 successful. Placing so much importance upon the genetic characteristics of an
7 individual, however, seems in complete contradiction with the recognition that
8 genetics do not determine a great deal on their own.

9 As well, genetic pre-selection seems immoral because it renders the value of
10 an individual's life (or potential individual) determinable on account of their
11 possibility to become excessively successful in a way that places preconceived
12 notions of success upon a future generation (which is without such values).
13 Munthe outlines a scenario whereby prospective parents might be very inter-
14 ested in having children well suited for athletic achievement, and does a very
15 good job of making it sound as though this is quite legitimate. Indeed, he is
16 careful not to suggest that we need even have a life to tamper with in order to
17 achieve this selected champion. Rather, we might simply analyse various test-
18 tube embryos and pick the one most likely to be physically capable. This seems
19 quite rational I suppose, yet it embodies a eugenic guise somewhat reminiscent
20 of the justifications made for aborting fetuses that are not of the desired sex.
21 As well, it reeks of objectifying human life and treating it as something to be
22 manipulated.⁹ Of course, one might concede to the autonomy of parents to
23 decide what is best for their potential children. Indeed, the strength of this value
24 cannot be underemphasized.

25 However, even if this is the case, it is fundamental that ethical considera-
26 tions provide insight for prospective parents whom might make such choices
27 and that ethicists do not remain silent in endeavouring to assist in clarifying
28 the implications and meaning of such significant decisions. In conclusion, it is
29 suggested that a *broader comprehension of how gene technology might be used*
30 *for sporting activities will render a more holistic understanding of its ethical*
31 *tenability in sport and beyond.* To construe the ethical issues relating to genetic
32 enhancement for sport as solely a problem for sports ethics is to misunderstand
33 it with potentially disastrous consequences.

34 Yet, Munthe does not make any recognition of the need for sports ethics to
35 consider broader bioethical issues that confront the acceptability of genetic tech-
36 nologies as a means to making athletes. Whilst this might not have been the
37 intention of the author – indeed, the author seems to want to deal with the
38 possibilities of such technology from only a sporting perspective – this
39 disinterest to acknowledge the broader ethical issues somewhat trivializes the
40 issue, I believe. As such, I believe that the author neglects important ethical

1 questions that leave much of his thesis under question. Indeed, the stronger
2 claim is made that *sports ethical considerations of gene technology must*
3 *consider the broader bioethical issues raised by such applications of genetics*
4 *to be coherent and to be a viable concern for sports ethicists.*
5

6 **CONCLUSIONS AND FURTHER RESEARCH:** 7 **DEVELOPING GENETIC POLICY IN SPORT** 8

9 Upon reading Munthe's chapter, I wanted immediately to write a response. The
10 chapter is well informed and Munthe's commentary has a lot to say to governing
11 bodies wanting to understand the ethical implications and dilemmas raised by
12 genetic technology. To this extent, his thesis is very useful and it is with some
13 relief that Munthe concludes the technology as acceptable. To claim otherwise
14 would fit uncomfortably neatly with current and popular trends about genetic
15 technology more broadly. It is with the utmost regard for Munthe's chapter that
16 I have provided this response in order to develop this emerging interest in
17 genetic technologies and their imminent applications to elite sport. Munthe's
18 chapter is an essential and fundamental piece of work within the field of sport
19 philosophy and an emerging field of gene-enhancement policy, which is enriched
20 by the author's background and expertise in bioethics. It is beyond dispute that
21 new technology is becoming increasingly important and it is paramount that
22 scholars recognize the implications of it for sport and sport particularly, as it
23 holds unique possibilities for genetic interventions to be deemed useful in a
24 broader social context. Yet, sports are not insular practices and I wish to
25 conclude by advocating the need for governing bodies of sport to work closely,
26 not only with bioethicists and sports ethicists, but also governmental advisory
27 committees that are composed to establish the ethical limits of new genetic
28 technologies.

29 What seems most apparent from examining the development of anti-doping
30 policy is that its derivation has been done back to front – the problem of doping
31 in sport preceded the policy making and theorizing about its ethical status.
32 Governing bodies have only recently begun to embrace broader expertise in
33 establishing successful policy making and the harmonization of anti-doping
34 policy is gradually becoming more successful. Supposing that there are particu-
35 lar kinds of genetic intervention that might not be desirable within sports, it will
36 not be sufficient for sports authorities to derive these limits alone. Neither would
37 such prospects be desirable as it would neglect the inextricable ties between sport
38 and society more broadly. Presently, governing bodies have an opportunity to
39 initiate debate at a time when there still seems time to make a decision, before
40 such innovations become widespread. This opportunity should be taken.

1 In sum, I suggest that Munthe (2000) does not give sufficient consideration
 2 to sporting virtues, which can be derived (at least in part) by a consideration
 3 of internal and external goods of sports. Additionally, the placing of genetic
 4 enhancements for sport into a framework of doping and drug taking, neglects
 5 relevant characteristics of this technology that must be considered in order to
 6 have a clear understanding of the technology. Finally, it is suggested that, in
 7 part due to this initial framework, Munthe is too narrow in his analysis of
 8 genetics for sport and omits to consider relevant bioethical ideas that could
 9 inform sports ethics. This final claim is particularly concerning as it would seem
 10 fundamental that the social technology of genetic engineering remains under-
 11 stood in all its relevant contexts.

12 NOTES

13
 14
 15 1. From Munthe's arguments, it seems reasonably clear that they cannot and a response
 16 to this conclusion is given later in the paper, where I argue that genetic enhancements
 17 of any kind ought not be conceived as similar to doping or drug taking, at least not at
 18 this stage.

19 2. Admittedly, this is the case within competitive sport presently, though this is not nec-
 20 essarily a reason for implementing genetic technologies to level the playing field. Rather,
 21 it might simply be a rationale for introducing further differentiations between events, divid-
 22 ing athletes into height, weight, and so on, to eliminate unfair and irrelevant differences.

23 3. For an initial problematizing of the internal and external goods within MacIntyre's
 24 thesis and in relation to sport, see McNamee (1995).

25 4. Again, to utilise Morgan (1994), this is most effectively achieved within a practice-
 26 community that allows each interest party to present its version of events and have some
 27 influence – see comments in 'Respecting the Game' below for further detail.

28 5. For details of how a social contract application to sports, see Eassom (1998).

29 6. For references concerning the ethos of games and sport, see D'Agostino (1981),
 30 Morgan, (1981), and Rosenberg (1995).

31 7. A challenge more readily adopted by Butcher and Schneider (1998).

32 8. This seems somewhat ironic as it suggests a future where the human is infallibly
 33 perfect, and where the only possibility for error is within the machine or the supporting
 34 technology. This possibility thus, seems to reverse the traditional roles of technology
 35 and humans.

36 9. It is not necessarily the case that parents will select children on the basis of possible
 remuneration for their choice and thus, that the choice might be seen as a financial one
 on behalf of the parents. Equally, it might be naive to suppose that such choices would
 not be made if the technology was available.

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Author:
 should this
 read "where
 he allowed"?

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