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WHEN BETTER IS WORSE. ON THE THERAPY/ENHANCEMENT DISTINCTION IN SPORTS

Alberto Carrio Sampedro* 

The standard therapy/enhancement distinction is usually related to health purposes and some sense of normality. In this paper, I will challenge the basis of the distinction arguing that only the first part of it is related to health and, consequently, the distinction should be better understood as differentiating between qualitative and quantitative consequences of interventions. As health and normality are broad concepts inside of which it is possible to make some ulterior distinctions, I will propose three different senses of normality in order to more easily grasp the therapy/enhancement distinction. As with the distinction between therapy and enhancement, the difference between sports- and non-sports-persons is usually stated in terms of health and normality. I will challenge this assumption, too. In my opinion, the main difference between people, sportspeople and athletes should be related to the practice itself. Once the practice of a sport is taken seriously, along with its tough and demanding lifestyle, it is possible to properly analyse the distinction between people who practice and do not practice sport; the different levels at which they participate—quite obviously—have little to do with health purposes. Finally, I will revisit the standard therapy/enhancement distinction in sport in order to provide a way to easily reformulate this distinction allowing embarrassing blunders to be avoided and athletes' health to be adequately cared for. I will conclude this paper with two open questions related to the use of the therapy/enhancement distinction for sport purposes and the challenge that it represents for some basic values of sport.

KEYWORDS: Sport; therapy; enhancement; fairness; equality

1. Introduction

The aim of this paper is to analyse the therapy/enhancement distinction in order to check its utility in sports. I believe this distinction is essential because is used as a basis for important rules of sport, as in the case of the substances and methods on the World Anti-Doping Agency's (WADA's) 'Prohibited list'. The paper will be organized in the following way.

In the first section, I will examine the standard therapy/enhancement distinction as well as its aim, attempting to distinguish between two important facets of the distinction, namely the quantitative and the qualitative features, which are usually dismissed. After that, I will move on to problematize some cases of normality, which therapy is aimed at restoring, and I will propose a distinction between three meanings

of normality, namely normal as a statistical criterion (NSC), normal as rated performance (NRP), and normal as particular performance (NPP) and the consequences these criteria have for the evaluation of different interventions.

In Section 2, I will analyse the rationale of the therapy/enhancement distinction and what its moral commitments are. As sport is probably the best example of fair and equal competition, at least as it is understood by most, I will conclude that the distinction could be useful in sport competitions, provided that it is somewhat reformulated.

In order to check the utility of the therapy/enhancement distinction in sport, in Section 3 I will revisit the differences between people, sportspeople and athletes. As I hope to show, the difference between them is not linked to health problems, a perception that arises due to beneficial health effects of sport. Rather sport is an activity and the difference between people who do or do not practice it should be minimally related to the activity. In order to further clarify this distinction, I will analyse the requirements for practicing sport at different levels. Finally, I will conclude this section by highlighting some of the key features of athletes; with what I will call 'the arithmetic of the elite', I hope to show that elite athletes are a rare combination of moral virtue and extraordinary physical and mental capabilities.

In Section 4, I will revisit the therapy/enhancement distinction in sport. I suggest that for the distinction to be useful, it must be clearly distinguished using the three senses of normality I mentioned in Section 2. In this way, it is easy to compare cases at the same level and at the same time to provide proper care for athletes' (and other people's) health.

Finally, in the conclusion I end with a pair of open questions. The first one is linked to the therapy/enhancement distinction in sport, and the way that this distinction should be used in the rules of sport competitions and by agencies and governing bodies of sport. The second will likely be somewhat more problematic since it is related to basic values of sport, such as equality. But, to properly comprehend my arguments, it is highly advisable to read this article in its entirety.

2. On the standard therapy/enhancement distinction

The therapy/enhancement distinction has gained visibility in last decade for a number of reasons related to the development of biological research as well as the pharmaceutical industry. The aim of the distinction is mainly to set a boundary that divides medical necessity from other unnecessary interventions (Daniels 1985; 2000, 5; 2008, 149). As Glover points out, even if the distinction entails some boundary problems, it continues to be useful for a variety of purposes (Glover 1988). According to the standard distinction, therapy is defined as medical treatment or intervention aimed at curing a disease (Daniels 1985; Pérez Triviño 2011) or restoring 'something that was wrong' (Bostrom-Roache 2008, 120) and the aim of such enhancement is to either to 'increase the potential of human capacities keeping it within the normal range' (Pérez Triviño 2011) or the aim is 'without any limit at all' (Bostrom-Roache 2008, 120). The former are what Tännsjö calls 'positive interventions', for instance, increasing human IQ from 100 to 110, while the later are cases of true enhancements, which would consist, for example, of increasing IQ from 100 to 200 (Tännsjö 2009, 316).

At first glance, the therapy/enhancement difference may seem to be linked to health problems, but in fact it is not. First of all, only therapy is linked to people's health. Positive interventions and enhancement are not. Certainly, the difference is only partially linked to health, but it is mainly related to the different consequences that any of the interventions have on individual lives. Note that the consequences of therapy are measured in qualitative terms, such restoring something that is wrong. Conversely, the consequences of enhancement are evaluated in quantitative terms. The aim of enhancement is to improve something that is already functioning well, not to cure or remedy something wrong. While it is true that these enhancements should probably never have the effect of damaging quality of life, neither should they ever increase it.

Thus, regarding health purposes one could say that only therapy is clearly related to individual health and well-being. Positive interventions and true enhancement could be, but not necessarily are, linked to these purposes. This is important since it can help in the decision about which interventions should be supported by public policies.

Since the aim of therapy is to cure or restore: to return to a normal or equal status something that has been lost or damaged, it seems that therapy is not a problematic case at all. Certainly, to return someone to an equal status, provided the decision is freely made, increases the individual's autonomy. Perhaps, it is because of this fact that most States invest in public health care services with this aim. As therapy is taken to be the correct criterion for public institutions, the problem arises with enhancements, both positive and 'true' ones. This is also the worry that underlies the document developed by the President's Council on Bioethics, titled, not coincidentally, 'Beyond Therapy'.¹

Note that I am not arguing that 'normal functioning' is a free value-laden concept. As critics of Boorse's Biostatistical Theory of Health (BST) (Boorse 1975, 1977) have plainly shown, the Boorsean distinction between health and disease relies on the selection of reference classes as appropriate. But since Boorse does not give any empirical justification for the choice of the references, the distinction itself becomes a weakness. Certainly, as Kingma has recently argued, 'different reference classes would result in different distinctions' between health and disease.² However, the point I would to retain here is that even if we agree on the selection of reference classes to distinguish between health and illness, therapy becomes a tricky problem when it is taken as a baseline for the action of public sport institutions. Let's examine why.

2.1. The aim of therapy

Therapy is normally related to medical reasons. Accidents and diseases as well as age are normally causes of harm to health that medical treatments could avoid or at least largely reduce. Most people do not like suffering or being impaired and will go to great lengths to avoid these conditions, including undergoing surgery or taking medication, which entail intrinsic risks themselves in order to avoid further suffering. One could say that the purpose of medical treatments is to help people to maintain a healthy lifestyle. This is the usual way of justifying treatments that end pain or provide restorative and preventive therapy and surgery, and so on. The aim of all these treatments is to keep people's health within a normal range. But what does a normal range of health mean?

Health is a broad concept that could be split in small pieces within which ‘the normal range’ should be the keystone. But within the ‘normal range’ we can refer to at least two possible meanings of normality. The first one is based on a statistical criterion. Given a relevant population, even humanity as a whole, it is possible to know what the normal range of something is related to the physical and mental health of humankind. In Boorse’s words:

Normal functioning in a member of the reference class is the performance by each internal part of all its statistically typical functions with at least statistically typical efficiency, i.e. at efficiency levels within or above some chosen central region of their population distribution. (Boorse 1977, 559)

This is what clinical psychologists usually do when they generally regard IQ tests as having sufficient statistical validity for their purposes (Anastasi and Urbina 1997). The statistical criterion is useful for public and private insurance because it allows effective medical resources to be allocated in order to treat or prevent a wide range of diseases and impairments (Daniels and Sabin 1991). But this only implies that the normal range is as variable as the scientific knowledge on which it rests. One could think, being optimistic, that since the global state of health is constantly increasing, the normal range is constantly growing, too. But even if it is rising, this statistical criterion does not clarify the concept of normal range, nor does it oppose positive and enhancement interventions.

Nonetheless, let us assume for a moment that the statistical criterion and the scientific knowledge on which it rests are a reliable measure of normality. To check their reliability in order to distinguish between interventions, consider, for instance, two people who are undergoing treatment to improve their abilities. The aim of the first is to restore some lost or damaged abilities; the second one has all abilities intact. Suppose also that the success of such intervention would result in an equal improvement for both of them. If we take the IQ referred to by Tännsjö, the result of the therapeutic intervention, the positive one, could increase the individual’s IQ from 100 to 110. But if the same result is achieved with the enhancement intervention, it could increase the IQ from 110 to 121. Taking scientific knowledge seriously, all that can be said is that the first intervention results in a normal IQ and the second in an IQ exceeding the human average. However, the statistical argument does not allow us to go so far. In other words, it is necessary to add further arguments in order to both clarify what the normal range means and justify the rejection of the enhancement intervention if the therapeutic intervention is right.

The second meaning of normality refers to the normal functioning of the human body and mind. As in the case of the statistical criterion, the normal range is likewise based on scientific knowledge, but it does not take into account the range of health of a given population. Rather, it points out the potential of the human organism. As scientific research progresses, we can learn more about the complex performance of the human organism. Take, for example, recent biological research linked to the field of sports that shows how some rare gene combinations are closely linked to sport performance in athletes (Ostrander, Huson, and Ostrander 2009).

Normality, in this sense, is useful for medical purposes. It allows, for example, checking heart performance by cardiopulmonary tests as well as muscle strength and so on. In short, it is useful to measure if a given part of the human body or mind is

operating below, within or beyond rated capacities. If it is below or within the normal parameter, there is no controversy in applying the therapy. Note that the final clause of the Borsean definition of 'normal functioning' says 'within or above'. Therapy is the appropriate means to restore it to normality in the first case. But even for cases 'within' the normal range, undergoing therapy could be justified. For example, cases of high risk of deterioration. But, what about when we are faced with cases such as the latter one? One could say that if a given human mind or body is performing beyond rated capacities, there is not any necessity of therapy. As Boorse states,

Superior functioning is consistent with health. The unusual cardiovascular ability of a long-distance runner is not a disease. (Boorse 1977, 559)

However, no one is safe from bodily harm, disease or accidents, especially athletes who have a hard and demanding lifestyle. But even in these cases, the structure of the problem is still the same, namely that a human body which does not fit within the parameters of normality and, consequently, therapy is the appropriate means to restore it to its normal parameter. But now the aim of therapy is to restore something that is already beyond normally rated capacities. What should we conclude about that? It seems that normality has now become a tricky issue. In other words, even if it is true that the normal range criterion is useful to check whether a person has normal capacities or not, this criterion is not helpful in all cases that are beyond the scope of normality, as is the case of the human elite.

Let us develop the argument step by step. We now know that the aim of therapy is to cure or restore something that is wrong. Thus, it seems to be admitted that wrongness and normal functioning are the two sides of the health coin. But some cases of extraordinary human capacities, such as absolute pitch, perfect vision, extraordinary muscle oxygenation and higher IQ,³ could be in need some kind of therapy as well. However, in these cases, therapy can only be done in order to restore something that even when it is wrong is beyond the normal range. Otherwise, we must conclude that when any of the people who possess extraordinary capabilities suffer from damage or loss to them, undergoing therapy only would be justified to return their capabilities to the normal range. It does not make sense.

In any case, let us continue to assume that since the purpose of therapy is restorative, it is the appropriate tool for all cases of wrongness, those below and in the normal range, as well as the human elite. The next step is to find out which of the previous meanings of normality therapy fits well with. Remember that the normal range could be understood as statistical criterion (NSC) or as a normal rated functioning (NRP). But, if we want to consider extraordinary cases (below or above); that is, cases that are not 'within' the normal functioning range, it is necessary to consider another account of normality that is related to the particular performance of a given human organism (NPP). As a result, the general aim of therapy has as four different consequences of restoring something wrong, namely:

- (i) put below within normal;
- (ii) keep normal in its range;
- (iii) turn normal to high;
- (iv) keep high within its range.

The first case is related to all cases of birth defects and disease. The second usually involves cases of treatment in order to maintain or restore an organ which is at risk of losing its normal performance to a normal range. These are cases of standard therapies. But note that the treatments could actually result in an improvement in organ performance. This is the third case, which depending on the account from it is evaluated could be classified as both, therapy and a positive intervention. The last one is linked to cases of high performance: an organ that suffered from some injuries or is at risk of losing its level of performance, just as in the second case.

3. The rationale of the distinction

As I said at the beginning of this paper, the basic aim of the therapy/enhancement distinction is to draw the line between obligatory and non-obligatory medical services. Certainly, providing people with medical services is important due to the impact of health on equal opportunity in a fair society (Daniels 1985). In Daniels's account of justice and health care, both disease and impairment are considered adverse departures and disadvantages in society. Certainly, the moral importance of health care service is to ensure what Rawls calls, equal opportunity, i.e. having the same prospects of success regardless an individual's initial place in the social system (Rawls 1971, 73).

According to Daniels's account, the rationale for the therapy/enhancement distinction rests on a 'Normal Functioning Model', which is in line with a Rawlsian society of fair equality of opportunity (Buchanan et al. 2000, 126). Other alternative accounts of the distinction are 'The Equal Capabilities Model' and 'The Equal Opportunity for Welfare Model'. Both of them rest on some egalitarian account of health care, either, linking it to individual freedom (Nussbaum 1993; Sen 1992), or even expanding the interpretation of equal opportunity to the boundary of bad luck.⁴ As it is clear, all of these models largely match the first and second sense of normality, which I previously called NSC and NRP and of course also match NPP, since all of them allow cases of extraordinary performance to be taken into account. In any case, the point I would like to take away from this discussion is the importance of ensuring equal opportunity in any fair society.

Since sports provide a great example of fair structure of competition, it is reasonable that the therapy/enhancement distinction has been gaining ground in the rules of sport and its government entities. It can be clearly seen that the distinction is on the basis of the 'Prohibited List' of substances and methods implemented by the WADA. Note that these substances and methods are not banned due to their therapeutic effects. They are prohibited both inside and out of competition because they can improve athletes' performance. Thus, since there is no reason to think that the WADA does not care about athletes' health, it is necessary to uncover the ultimate reason behind the list.

In sport literature, the therapy/enhancement distinction has raised an exciting debate among the so-called 'conservatives' or 'traditionalists' of sport and those who are pro-enhancement. The first is plainly espoused by Mike McNamee, who is firmly against transhumanism in sports:

I am neither in favour of the radical nor the apparently moderate versions. It seems clear to me at least, that the project is an undesirable utopianism. We have enough

problems with the human nature we struggle with let alone another nature that we neither control nor understand anywhere near as fully. (McNamee 2008, 201)

What McNamee is really supporting here is some sense of normality of human nature, which is already good enough regarding sport purposes and values. Consequently, there is no room for the transhumanism project in sports because it is undesirable and contrary to the moral basis of sports.

However Miah supports the opposite:

This ethical approach to performance modification in sport does not prohibit the use of enhancing technologies from the perspective of whether such alterations ought to be medically permissible. A conventional approach to medical ethics does not offer a sound basis for determining what should be permitted within sport. (...) In principle the conclusion does not prohibit the use of any kind of genetic modification in sport. (Miah 2004, 115)

Thus, according to Miah, the problem is precisely the lack of a clear basis for distinguishing what is normal in medical terms, and what kind of substances or methods should be permitted in order to modify human performance.

I am not interested in analysing here the problem of doping. My purpose is only to show how the therapy/enhancement distinction works in sports, and the ways in which it is used in sport law and literature. Thus, in order to finish this section, let me make some concluding remarks.

Assuming that it is possible to distinguish between therapy and enhancement, it seems that the best approach to the distinction is grounded in some egalitarian account of a given human practice. In other words, it is important to keep people in a range of normality in order to ensure fair opportunities.

The values of sports are probably the best example of a fair practice. Because of that, the therapy/enhancement distinction provides one foundation for WADA's rules and, consequently, it is plainly embraced by sport governing bodies. Thus, since the distinction is used as a strong argument to properly maintain the moral basis of sport (and society) rules, it is important to clarify this distinction as much as possible. Let us analyse in the next section if there are any particularities of sport and specifically of sports people and athletes that make the distinction more feasible.

4. On the difference between people, sportspeople and athletes

Taking part in some kind of sport is highly recommended by a variety of health institutions in order to maintain a healthy lifestyle. The people who regularly practice some kind of sport help themselves properly maintain their minds and bodies, as was rightly pointed out by the WHO's Global Recommendations on Physical Activity for Health (GRPAH) (http://whqlibdoc.who.int/publications/2010/9789241599979_eng.pdf). Broadly speaking, one could say that the difference between sport and non-sports-persons lies in the 'normal function' point of view, just as happens with the standard therapy/enhancement distinction. However, it should be taken into account that the normal range of health is yet again not so helpful, just as was the case with the standard therapy/enhancement distinction.

First of all, this is because GRPAH embraces some sense of normal range of health without specifying what it is. Sometimes, GRPAH clearly refers to the NSC criterion:

Physical inactivity has been identified as the fourth leading risk factor for global mortality (6% of deaths globally). This follows high blood pressure (13%), tobacco use (9%) and high blood glucose (6%). Overweight [sic] and obesity are responsible for 5% of global mortality.⁵

At other times, it adopts the NRP criterion, as clearly show the 'narrative summary of scientific evidence' for any of the age groups.⁶

In short, the difference between sport and non-sports-persons cannot be a matter of health. Sports is an activity. The difference between those who practice them and those who do not is linked with the activity, not with its consequences. Maintaining a healthy lifestyle, as GRPAH recommends, clearly helps individuals attain good health consequences, but it tells us nothing about the difference between sports- and non-sports-people. Both of them could be healthy people, and regularly perform some physical activity. However, while the latter perform some moderate physical activity, not necessarily a sport, the former are people who perform regularly vigorous physical activity, which is indeed normally called sport. In other words, sports-persons are those who follow some kind of scheduled training in order to achieve some goals in this field, professional or not.

Athletes are obviously the elite of sports-people since they are particularly engaged in the practice. They participate in sport activity not for its health consequences. They practice sport in a tough demanding way in order to achieve certain goals in sport competitions—even if those actions sometimes have unhealthy consequences. Perhaps because of their manner of practicing sport, the definition of athlete has been always surrounded by some magical account of extraordinary human achievements. As Mike McNamee states, 'sportspersonship is an ideal (...) exemplified by the athlete' (McNamee 2008, 37).

Not so far from here is the definition of Athlete identity (AI), namely the extent to which an individual identifies with the athlete role (Brewer, Van Raalte, and Linder 1993). According to that, individuals who value the athletic element of their self-concept are more likely to engage in physical activity than those who do not. Consequently, people with strong athletic identities seem to be more likely to participate in sport than those with weak athletic identities. For some authors, this strong sense of self as an athlete is a necessary requirement for success at higher levels of sport (Danish 1983). Recently, Druzhevskaya and his colleagues have shown that the commonality between high-level athletes is the desire more than anything else to be the best at their sport: to go beyond the records set by themselves or others (Druzhevskaya et al. 2008). Accordingly, AI marks an important difference with others, namely the strong sense of self as athlete.

Certainly the AI definition seems to be appealing, but honestly I find it a bit perplexing. First of all, these approaches to the term 'athlete' are pointing out the reasons and beliefs that a person has in training hard for sports, but they do not take into account the activity itself. It is not worthwhile to consider that there are many people who probably have this strong sense of self as athlete, but cannot practice sports for certain other reasons. Secondly, the strong sense of self as athlete could be easily replaced by a strong sense of self as musician or something else. In others words, the strong sense of self as

something, does not by itself differentiate athletes from the rest of the people who are proud enough of their achievements. But probably the most perplexing fact is that while this approach helps us to identify the spirit of athletes, it is not useful in determining what really distinguishes athletes from the rest of people and amongst themselves. According to this approach, they are rather distinguished by the activity they do.

4.1. *Athlete Identity does not work alone*

In addition to strong AI, athletes are usually identified by other capacities, such as strength, speed, concentration and so on. Certainly these are performance skills for sport that other people do not have, at least not to the same extent as athletes. Obviously, there are differences as well between athletes. Any athlete may possess some particular abilities, and precisely these different abilities are what make the difference among them. I feel more comfortable with this account of the difference among athletes and between athletes and the rest of people. Certainly, this account allows us to classify people by their capacities and/or performance, which is just what the rules of sport competitions do when they classify people by age, sex, weight and so on. This is also the purpose of the therapy/enhancement distinction, since it seeks to be used as a baseline for distinguishing what should or should not be restored or repaired.

4.2. *Distinguishing among athletes*

The 'Nomenclature for performance achievement levels' (Druzhevskaya et al. 2008) (NPAL), distinguishes four categories of athletes, namely: (i) high elite; (ii) elite; (iii) sub-elite and; (iv) average athletes. All of these categories are drawn from a comparison with healthy volunteers who may be, but not necessarily are, sports people. It should be assumed that all of them have average AI and consequently a strong sense of themselves as athletes. But, what the NPAL measures is performance, which is the goal of athletes, not the reasons they have to pursue them.

4.2.1. *AI as moral virtue*

Becoming an athlete is certainly not easy. It requires constant hard training and enduring many hardships in everyday life. It is almost certain that the normal life of athletes is more demanding than that of normal people and without any doubt their strongest AI plays an important role in this respect.

According to the NPAL classification, highly elite athletes are the winners of world championships, world cups and Olympic Games; elite athletes are the silver or bronze medallist of world championships, world cups and Olympic Games or prize winners in regional competitions, such as European championships; sub-elite athletes are the qualifiers and participants at world class international competitions. Finally, average athletes are regional competitors with not less than four years of experience in the relevant sport. In other words, they are people who perform sport beyond the scope of normality.

For anyone who is minimally familiar with the physical and mental demands of sport, it is not difficult to conclude that the normal life of all of these athletes is harshly demanding, not only due to the training requirements, but also to the continuous controls that they are subjected to in order to keep their Athlete Biological Passport clean.

In this sense, athletes in general, and especially elite ones are an example of moral virtue. They not only honour the internal values of sport such as effort, sacrifice and fair competition because they firmly believe in them, they have also chosen this plan of life pursuing the full realization of their strong sense of self as athletes.

This moral virtue and strong capacity of sacrifice is probably something that the human elite possess. But since the NPAL classification is about performance, it does take into account the spirit of sacrifice as much, nor is it about the moral virtue of athletes. It simply points out athletes' achievements.

4.2.2. *Strong AI plus extraordinary capacities. The arithmetic of the human elite*

Admitting that AI plays an important role in sport performance and that this allows differentiating people by their strong sense of self as athletes, or anything else, implies recognizing at the same time that the human elite possesses different capacities, whether they be moral or physical, that are somewhat different from the rest of people. But what about when they both come together?

Recent research in genetics has shown that some genetic variants called performance-enhancing polymorphisms (PEPs), when inherited, can lead to improved athletic performance (Ostrander, Huson, and Ostrander 2009). Certainly PEPs are not exclusive to athletes since they are common among the general population. However, subtle variants of these genes alter normal human physiology to enhance athletic performance. Particularly important are those variants that affect energy production, such as muscle structure, cardiac and respiratory function, blood flow and efficiency, or even some combination of genes and rare polygenomic profiles that may occur more commonly among elite athletes.

Thus, perhaps it is worthwhile to consider whether the extraordinary performance of elite athletes is the result of an uncommon genetic combination. Naturally, one should admit that all of them, as athletes possess strong AI. Thus, if the arithmetic works, we face a marvel of human nature: the human elite.

4.3. *The Achilles heel*

Having special mental and physical capacities does not imply being in a good overall state of health. Just as happened with Achilles, the human elite has certain weaknesses that can lead to its downfall as well. These are certainly human weakness and as such should be understood.

Elite athletes usually suffer from injuries and diseases caused by the physical and mental effort that they must make. These could be called professional course illnesses and injuries, but athletes are first of all human beings, and as such can suffer from other illness, injuries and diseases as normal people do. Thus, what happens when athletes need to undergo therapy? Should we treat them as the rest of people even when we certainly know that they are different to some significant extent?

Prior to making any assumptions about this, I would like to sum up the relevant points of this section:

- The difference between people, sports-people and athletes is not a matter of health. Each of these groups can enjoy a healthy life and can suffer from similar illnesses and diseases. All of them as well can suffer professional illness and injuries from carrying out their activities.

- The clearest difference between people, sports-people and athletes is linked to sport activity. The strength, intensity and regularity of sport activity make the difference between sports-people and athletes and among athletes.
- Highly elite athletes possess strong AI and extraordinary human capacities. This is due to the hard training they do and, at least in some significant cases, the gene combinations that they have.
- When athletes need to undergo therapy or surgery, it is pointless to appeal to the average criterion because they are simply above this range, just as occurred with the cases reviewed previously in Section 2.2.
- If the therapy/enhancement distinction is useful in sports, it should be revised in order to carry out the proper work that it has to do.

5. The scope of the therapy/enhancement distinction in sport

As we have seen, the usual therapy/enhancement distinction is based on some sense of a normal point of view. Even if some problems arise, when this approach is analysed more deeply, the distinction is useful to enforce some moral value such as equality and fairness, that is, to know what we owe each other in a well-ordered society.

In the Section 2, I have tried to accurately distinguish between some senses of normality namely, NSC, NRP and NPP. This can help to clarify the use of the distinction when individual features are taken into account. For instance, the NSC account is useless when we face cases of human elitism, such as high IQ, absolute pitch and so on. Even when in all of these cases nothing is wrong from a NSC and NRP approach, it might be necessary to repair something that does not work as usual, from a NPP account. This is, when the wrongness is already beyond the normal range.

Elite athletes enjoy extraordinary human features, such as a strong AI, apart from their physical abilities. When these individuals need therapy or surgery, it is worthwhile to carefully distinguish between the various senses of normality we use to evaluate their condition. On the contrary, it is easy to fall into embarrassing mistakes, such rating something as enhancement from the NSC account which is a usual task from the NPP perspective, as sport medicine clearly shows on a daily basis.

The best way to understand what elite athletes do with their mind and body, as well as what their trainers and practitioners do, is the NPP account. Consequently, it is this account that must be used in order to evaluate therapies, surgeries and so on, which athletes undergo to repair or restore something that is wrong.

On the other hand, elite athletes are first humans. They suffer from diseases, injuries and illness just as the rest of people do. Thus, when they need to undergo treatment or surgery, it does not make sense to deny the intervention appealing to the improvement effects it can have on sport performance—at least, when the consequences of the treatment/surgery are identical for athletes and the rest of people. In other words, if the possible effects of improving physical or mental capacities are general (from an NSC or NRP account), the improvement effects on sport performance should not be assigned only to the treatment/surgery. If we truly take the extraordinary abilities of athletes seriously, the evaluation of improvement can be only done from an NPP account. Note that I do not mean that athletes should be treated as elite in terms of what they are really not, as would happen for instance when a tennis player wants

to undergo surgery in order to have perfect vision or a musician wishes to have perfect pitch. These are clearly cases of enhancement whose justification I am not interested in discussing here. I only mean that the normal improvement on performance abilities, as most of the substances and methods prohibited by the WADA list have on the rest of people, should be understood as such, namely, as therapy to care for the illness of the athlete. In short, it is not plausible to put the (NSC or NRP) performances at same level as the normal effects with extraordinary capacities that athletes have (NPP). Conversely, carefully distinguishing between the different senses of normality allows us to compare cases that are at the same level, avoiding embarrassing mistakes.

6. Conclusion

I began this paper considering the usual therapy/enhancement distinction. The aims of the analysis were first, to clarify some tricky points in this distinction; and second, to check its utility as a conceptual tool for sports rule makers and governing bodies.

In Section 1 I have examined the two basic points of the distinction which I referred to as quantitative and qualitative characteristics. As I tried to show in Section 2, the rationale for the distinction only makes sense regarding liberal societies or fields of those societies, just as sports presumably is. However, even when the distinction is useful in order to reinforce moral values such as equality and fairness, it fails due to the lack of an accurate distinction between the different senses of normality on which it is based. Since this failure clearly affects the quantitative and the qualitative basis of the distinction, it keeps us from being engaged in an embarrassing debate about the concept of health and accounts for the real needs of people. Finally, I have distinguished between three senses of normality, namely NSC, NRP and NPP, whose use can aid in avoiding the usual mistakes in the evaluation of any intervention and are clearly linked to the needs of people and/or circumstances in which they are used.

In Section 3 I looked at the difference between people, sports-people and athletes, in order to examine the liabilities of the distinction, since this difference is taken as a baseline for sports governing bodies and rule makers. I tried to show that these differences are not related to health states, but to other mental and physical features of athletes. As it is peacefully admitted that athletes have extraordinary physical and mental abilities, apart from the moral virtue of doing their best in the tough demanding everyday life of athletes, I finally proposed seriously taking both of them together, which I called, the arithmetic of the elite. But when the unyielding conclusion of the arithmetic is accepted, what follows is the acceptance of an NPP account, which is hardly compatible with both the usual distinction between therapy and enhancement and any other broad sense of normality.

In Section 4 I have reviewed, by way of conclusion, the scope of the difference between therapy and enhancement that I have proposed, in order to clearly state it and its applications by sport governing bodies, taking into account individual capacities and circumstances of the people who undergo therapy and so on. In this way, it is possible to avoid some frustrating mistakes and biases, and probably most importantly, to take the health of athletes and other people seriously.

To conclude, I would like only to note a couple of points closely related to the scope of the therapy/enhancement distinction in sports that I cannot analyse within the scope of this paper.

The first, and less problematic one, is the importance of properly distinguishing between the three different accounts of normality. This distinction will avoid both mistaking cases that play at different levels and keep from misleading people by overstating the effects that some of the substances and methods prohibited by the WADA list have.

The second one is a bit more complex. As the sports field is aimed at being the best example of fairness and equal competition, perhaps it is worthwhile to consider the impact that the NPP account could have on the internal values of sport and, consequently, on its formal rules. It is not unreasonable to think that the time is coming to review the categories of sport we actually know, such as age, sex, strength and so on. If as it seems at first glance, these categorizations dismiss some decisive features of the biology of athletes for sport performance, the arithmetic of the elite works perversely beating equality.

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DISCLOSURE STATEMENT

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NOTES

1. Beyond Therapy: Biotechnology and the Pursuit of Happiness The President's Council on Bioethics. Washington, D.C., October 2003. <http://bioethics.georgetown.edu/pcbe/reports/beyondtherapy/index.html>.
2. Kingma (2007, 132). I would like to thank the anonymous reviewer of the SEP for giving me the opportunity to clarify this point.
3. For a further discussion of I have what called in another work 'the Funes objection', see Carrio 2013.
4. Cohen (1989). A deep analysis and criticism of these models can be found in Buchanan et al. (2000, 126–41).
5. See GRPAH. 2. 'Physical activity for health'.
6. See GRPAH. 4. 'Recommended populations levels of physical activity for health'.

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