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# Performance Enhancement and the Spirit of the Dance. Non Zero Sum

Blanca Rodríguez López 

Faculty of Philosophy, Universidad Complutense de Madrid, 28040 Madrid, Spain; bmerino@ucm.es

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**Abstract:** The current anti-doping policy in sports has enormous costs in economic, social, and human terms. As these costs are likely to become even bigger with the advent of bioenhancing technologies, in this paper I analyze the reasons for this policy. In order to clarify this issue, I compare sports with dance, an activity that has many similarities with sports but where there are no bans on performance enhancers. Considering the World Anti-Doping Agency (WADA) criteria for banning a substance, we argue that two of them, the potential to enhance performance and the risk for health, are similar in dance and sports, thus I claim that the difference had to be in the so-called “spirit” of sports and dance. After looking into this matter and analyzing the special case of dancesport, I conclude that the main difference can be found in the competitive character of sports and the subsequent concern about competitive justice.

**Keywords:** bioenhancement; performance enhancers; dance; dancesport; distributive justice; competitive justice; zero-sum games

## 1. Introduction

No one is surprised to hear the terms “sports” and “doping” in the same sentence. This happens particularly in elite sports. Every major sporting event, from the Olympic Games to cycling tours over the past decades, has been peppered with doping-related “scandals” reported extensively (and occasionally intensively) by the media.

The usage of certain substances by athletes to improve physical performance is nothing new. Doping, in this sense, is as old as sports activity and sports historians already place it in Classical Greece. Some authors have established different stages in the practice of doping [1], noting that since the middle of the last century we have been in the third, which they call second-generation chemical doping, and that we are now at the entrance doors of the fourth stage of biotechnological doping. Those doors may have already been broken through. Proof of that are the suspicions around the case of Ye Shiwen, the Chinese swimmer who participated in the 2012 Olympics, where she won two gold medals and set a new record. However, her appearance in the media was not only due to her Olympic feats but also because her performance was so impressive that rumors of doping arose almost immediately. In the words of the president of the association of swimming technicians, it was “disturbing and implausible.” When she passed the tests, some suspected the existence of gene doping. Athletes sometimes see their careers destroyed by extremely controversial cases. A good example is Zach Lund, an American athlete who was excluded from the 2006 winter Games. He had been using an anti-alopecia product for years that contained a component that was suspected of masking the use of doping and that in 2005 was included among the substances [2].

Though the theme of this volume is biotechnology, I will mainly focus on some general problems that affect all forms of doping and that, in the case of biotechnological doping, will foreseeably not only not disappear but also increase.

### *The War on Doping*

The fight against doping in elite sports, which many describe as a “war,” has, like all wars, numerous victims and disastrous effects on many fronts. With enormous media coverage, doping cases are scandals that reach the general public, beyond the practitioners and fans of the sport in which these cases have been found. Athletes accused of doping see their careers and sometimes their lives ruined, giving rise to real tragedies. The most popular ones go from being considered heroes to being seen as villains. These scandals and their direct consequences for the sportsmen go through the whole history of the modern fight against doping, from the well-known and still-remembered case of Ben Johnson who, after winning a gold medal at the Olympics in Seoul in 1988, lost it after testing positive in an anti-doping test, to the case of the Russian athletes, many of whom were excluded in 2016 from the Rio Games and whose entire delegation was officially excluded in 2018 from the winter Games. The impact on the spectators and fans is no less devastating. The public has gone from being shocked by these cases to guessing at them and taking them for granted, coming to distrust every sporting feat and suspecting that behind it lies doping, whether it is confirmed or not.

The fight against doping in elite sports has been criticized by numerous authors, who have pointed out different problematic aspects [3]. The “war” against doping involves serious invasions of the privacy of athletes, as well as a lenient standard of proof and inclusion of strict and vicarious liability that would be difficult to tolerate in other settings<sup>1</sup>. It is also tremendously expensive and it is debatable whether the money and the means are well spent [4], considering that elite sports practitioners are a very small percentage of the population and therefore is almost irrelevant from the point of view of public health. It is also an ineffective fight. On the one hand, we are far from discovering all cases of doping and there are cases of false positives [2]. The ineffectiveness of anti-doping policy is recognized by both its defenders and its detractors. Among the former, some believe that part of the solution is to criminalize the use of prohibited substances, thereby increasing the already extremely negative impact on athletes [5]. On the other, the fight against doping has all the characteristics of a cat and mouse game, with the continuous appearance of new substances that are increasingly difficult to detect.

The fight against the use of new biotechnologies in sports, either in the form of genetic doping or what is known as neuro-doping [6], will predictably show all these problems as being increased: It will be more invasive, more expensive, and more inefficient, as gene doping will be more difficult to detect. All the alarms have gone off.

If the fight against doping in elite sports presents so many problems and has such serious consequences, many have wondered what justifies this fight.

Although doping in sports is as old as sports themselves, the same cannot be said for the fight against doping. This struggle began in the 1960s, although it had some antecedents. The first controls were carried out at the Olympic Games in Mexico in 1968, but they did not reach the current status until the creation of the World Anti-Doping Agency (WADA) in 1999 [1].

The establishment of WADA also provided a precise definition of doping. “Doping is defined as the occurrence of one or more of the anti-doping rule violations set forth in Article 2.1 through Article 2.10 of the Code.” Although doping is popularly understood as the use of performance-enhancing substances (what in other areas is known as “performance enhancers”), the aforementioned articles of the WADA Code indicate much broader behaviors. Starting from the simple “Use or Attempted Use” (Article 2.2), they range from “Evading, Refusing or Failing to Submit to Sample Collection” (Article 2.3) to “Prohibited Association” (Article 2.10). This definition by itself is not operative, because for that it is necessary to first answer the question, use or attempted use of what? To this end, WADA provides a list of Banned Substances and Methods, which was first published in 2004 and has been updated annually since then. WADA has dealt with what is known as “gene doping” almost since its inception,

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<sup>1</sup> Some experts think that, though this is still a serious problem, the strict liability standard has been gradually softening over the years [4].

since in 2002 it organized a workshop on gene doping at the Banbury Center in New York with experts, scientists, ethicists, athletes, and representatives from the Olympic Movement. According to the list of prohibited substances published by WADA in 2008, gene doping has been defined as “nontherapeutic use of cells, genes, genetic elements or modulation of gene expression, having the capacity to enhance athletic performance.”

The inclusion of gene doping is not surprising. The genetic contribution to sports performance is well known and different candidate genes for improvement have already been identified [7–9]. By 2009 more than 200 gene variants had already been associated with athleticism. For many, the future of doping will be genetic.

The key to answering our question (that is, why do we fight against doping and are willing to incur into its enormous costs?) is not the WADA Code, nor the list of Banned Substances and Methods, but the inclusion criteria used for making this list. These criteria are that (1) the substance or method has the potential to enhance, or enhances, sports performance, (2) use of the substance or method represents an actual or potential health risk to the athlete, and (3) use of the substance or method violates the “spirit of sport.” To be included, a substance or method has to satisfy at least two of these three criteria.

These criteria have been subjected to exhaustive analysis and criticism, by both defenders and detractors. Some question the inclusion of certain substances (cannabis, for example, which can hardly be considered to meet any of these criteria). Many others have criticized the second criterion, the potential threat to the athlete’s health. It is not clear that the substances and methods on the list present more health risks than other ones, which makes the list appear arbitrary. The classic example is blood doping, the effects of which are similar to those obtained by a permitted method, altitude training. The emphasis on health within an activity, that of elite sports, which is not exactly good for health, is also questioned, so that the best thing for the health of athletes would be not to practice sports at that level. Last but not least, this second criterion has been accused of being paternalistic [10]. However, the one that has attracted most attention is the third criterion, which, on the other hand, seems to be the most important, the most criticized, and also the most defended. It therefore deserves a more careful analysis.

According to the WADA Code “the spirit of sport” is defined as “... the celebration of the human spirit, body and mind” and is linked to the values of ethics, fair play and honesty, health, and excellence in performance; character and education; fun and joy; team work; dedication and commitment; respect for rules and laws; respect for self and other participants; courage; and community and solidarity.

Nobody seems too satisfied with this characterization. Even the defenders of the anti-doping policy admit that both the definition and the associated values are ambiguous and do not help to decide in specific cases which substances or methods violate or not the spirit of sport or go against those values. Some of the advocates have tried to reinterpret the spirit of sport to make it more operational [11], while those who believe that the use of performance enhancers should be allowed in sports sometimes argue that while it can be argued that the use of these substances violate these values, as it is against the rules, allowing their use would not violate the spirit of sport [12]. Some have claimed that, in reality, the attempt to translate the spirit of sport in the enumeration of a series of values, which clearly need to be interpreted, is ideological, in the derogatory sense of the term [13].

I also believe that this spirit and these values need analysis, interpretation, and clarification, but in this paper I will adopt a different strategy, which can be described as indirect. This strategy consists of comparing sports with another activity with which it has many similarities and also undeniable differences, in order to shed some light on the controversial issue of spirit and values: dance. After looking at the similarities in the next two sections I will focus on the analysis of what we could call “the spirit of dance” and compare it with the spirit of sport. Not finding any significant difference, I will next focus on the question of justice, one of the main general objections to the use of enhancers.

## 2. Dance

My approach involves asking why the use of performance enhancers is not an issue in other activities. Music playing is a classic example. It is not uncommon for classical musicians to use beta blockers to enhance their performance, but nobody seems to complain. This is a good example as far as it shows the use of a substance banned in sports while it faces no apparent opposition in another activity. But it is not a good example if we consider that it is an activity that is too different to sports. For this reason I am going to look into an activity that is not so different: dance.

Dance, standardly defined as “the movement of the body in a rhythmic way, usually to music and within a given space, for the purpose of expressing an idea or emotion, releasing energy, or simply taking delight in the movement itself” (Encyclopedia Britannica), is too broad a term, as it includes many different activities. Usually it is classified in three broad classes: classical, modern/contemporary, and folk. This last category is controversial. According to the Encyclopedia Britannica, it is “a type of dance that is a vernacular, usually recreational, expression of a past or present culture.” To avoid controversies [14], I will consider in this category not only the usual Morris dance, Tarantella, barn dance, and the like, but also the kind that we use to dance in clubs and during popular festivities. I am going to set folk dance aside for the moment and concentrate instead on the two first categories: ballet and contemporary dance.

The similarities between dance and sports are striking. Both are extremely demanding activities. At the physical level, dance and sports, when compared at the same level of performance, for instance at the professional level, are similarly demanding and both are at the top of physically demanding activities. If anything, dance is more demanding. A recent study conducted by a leading insurance research firm (REF) listed professional activities according to their physical demandingness. They analyzed the level of strength, stamina, flexibility, and coordination required in the 20 most physically demanding professional activities. Dancers are ranked as first (with overall physical demand index: 97.0, strength index: 87.8, stamina index: 100.0, flexibility index: 100.0, and coordination index: 100.0), whereas athletes and sports competitors occupy the third position (with overall physical demand index: 90.4, strength index: 95.3, stamina index: 98.1, flexibility index: 71.9, and coordination index: 96.2) [15]<sup>2</sup>. There are no data relating to other types of demandingness, but surely dance is at least as demanding as sports at the technical and mental level, and more demanding aesthetically, at least for ballet dancers.

As a result, injuries are very common in ballet [16] and pain is also a common state. Considering that unlike athletes, dancers do not have predictable annual seasons and for this reason they cannot include regular resting periods following increased volumes of work, many dancers submit to problems such as overtraining, resulting in injuries [17], especially cumulative injuries.

Given the demands associated with dance it is not a surprise that many dancers consider the use of different substances that help them in their activity, for instance to prevent injuries and facilitate recovery when they occur or to improve performance. We can expect that the pattern of use of some substances is similar to that in sports. In a recent survey [18], the authors found that 91.9% of the sample reported use of at least one nutritional or dietary supplement, including vitamins, minerals, and macronutrients, at some point in their career, with a prevalence of multivitamins and energy drinks. It is also common to use painkillers (70.5%). The use of both nutritional supplements and painkillers is similar to the use reported in sports. These findings take into account both prescription and OTC (over the counter) substances.

Moreover, due to the aesthetic demands involved in dance, especially in ballet, dancers tend to use extreme methods to diet (e.g., smoking tobacco or using appetite suppressants, diuretics, or laxatives), sometimes resulting in eating disorders. In a study done with a professional ballet company, the ballet troop of the Croatian National Theatre [19], the authors found that one third of the male dancers reported binge drinking, and 20% of the females smoked more than 20 cigarettes per day. The use of

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<sup>2</sup> Data can be found in <https://www.insuranceproviders.com/most-physically-demanding-jobs/>

alcohol to deal with stress is well known in sports [20,21]), but cigarette smoking seems to be specific to dancers. If we look specifically into performance enhancers, dancers and athletes are also similar in their reported use (4%) [18] and in their willingness to use (25%) [19].

There are two other similarities worth mentioning. Both dance and sports are highly regulated activities. The rules range from those that govern each of the sports and dances, which we refer to as constitutive rules (e.g., if you are playing chess you can only move the pawns forward, or if you are dancing salsa the basic step has a rhythm of three steps followed by a pause) to more informal rules, for example, about what to wear when training or how to behave in the locker room. And both are, among other things, spectacles, though of course on a different scale. Many sports are in fact mass spectacles. To mention just one example, the Tour de France is seen each year by more than 3 billion people in 188 countries through 121 different channels. Dance is far from those figures, but to take another example, one of the greatest romantic ballets, *Giselle*, in a production staged by the English National Ballet, has been seen since 2016 by over 80,000 people in nine cities.

Now that we have looked into the similarities is time to consider the differences. To begin with the last thing mentioned, dance is far from being a mass spectacle, but many sports and sports competitions, including the Olympic Games, are. Related to this is the fact that dance is not so much a business: There is less money involved for the performers and other people around dance. Professional sports, especially at the elite level, is a business that moves millions of euros each year. This is reflected in the earnings of dancers and athletes. As this is a well-known fact, it is enough to say that the mean annual wage for an athlete is USD 87,030 whereas for a dancer it is USD 43,056<sup>3</sup>.

But for us the most important difference is that while doping in sports is extremely well studied, documented, and, as we saw in previous sections, regulated, nothing similar happens when it comes to dance. There are very few studies about substance use in dancers and to this day there is no regulation at all. What is more, no one seems to care.

It is time to wonder why.

### 3. Why Not in Dance?

Dancers could benefit from performance enhancers as much as athletes, as the physical demands are similar. Moreover, dancers could use cognitive and mood enhancers even more. In addition, as we have seen, they are similarly willing to use them. For dancers, the use of new biotechnologies is at least as promising as it is for athletes. Think about the use of genetic technologies, or gene doping for short. It could enhance flexibility and stamina, which is needed more in ballet than in any other activity, sports included. Strength is also as important for male ballet dancers as it is for athletes. Think just about body shape requirements, what I previously refer to as “aesthetical demands”<sup>4</sup>. Genetics play the biggest role in determining one’s physical shape. These requirements are fundamental to entering a prestigious ballet school. When you reach the professional level, you find that most companies have a standardized physique. *Corps de ballet* members need to be very similar in height and shape.

Therefore, there are many opportunities to use substances and methods that satisfy the first WADA criterion (the substance or method has the potential to enhance, or enhances, performance).

What about the risk for health? No doubt, the use of performance enhancers can be as dangerous for health as it is in the case of sports, with the same caveats and objections raised above about this second WADA criterion, with special mention to the fact that ballet is as bad for health as elite sports are.

So, why is there no WADA for dance? Do not look for an explanation in the health risks or the potential to enhance performance. It must be the spirit.

<sup>3</sup> <https://www.insuranceproviders.com/most-physically-demanding-jobs/>

<sup>4</sup> These requirements are not only imposed for aesthetic reasons, but for other ones linked to the specific ballet technique and the demands of the ballet repertoire, but I will refer to them as aesthetic for simplicity.

#### 4. The Spirit of Dance

If you search the Internet for “spirit of sport” you get many results (about 364,000,000 results in 0.67 s in Google). Most of them are related to WADA, academic discussion of the kind that I mentioned above, or mass media reports of these issues for the general public. If you look for “spirit of dance” you also get many results, but then you find that the expression refers to a famous Irish dancing group. If you try “spirit of ballet” you get a motley set of results that includes books for little girls, dance schools, and photographs on Pinterest.

In light of these results, one could conclude that not only does no one seem to care about the use of performance enhancers in dance, but also that dance has no spirit, or at least that no one cares about it enough to take the trouble to define it. This being so, and due to the abovementioned similarities between sports and dance, my proposal is to make a point-to-point comparison analysis of the spirit of sport and see what fits and what does not.

At a first glance, it does not look so different after all. “The spirit of dance” could easily be defined as “... the celebration of the human spirit, body and mind.” However, as I said above, these are almost empty words. Let us look into the values: ethics, health, excellence in performance, character and education, fun and joy, teamwork, dedication and commitment, respect for rules and laws, respect for self and other participants, courage, and community and solidarity. All of them apply to dance as well (e.g., dedication and commitment), as debatably (e.g., fun and joy: sometimes, tears and sorrow at other times), or as badly (e.g., health: As stated above, I am not talking about especially healthy activities when referring to the professional level) as they do to sports.

What about the item missed on the list? “Fair play” is a complex concept. Some understandings of it are very wide and include many of the other values on the list. For instance, the International Fair Play Committee explains fair play in terms of “respect, friendship, team spirit, equality, sport without doping, respect for written and unwritten rules such as integrity, solidarity, tolerance, care, excellence and joy” [22]<sup>5</sup>. In addition, it includes “sport without doping,” which creates a loop: Doping is banned because it goes against the spirit of sport and the spirit of sport includes not doping.

In narrower definitions of “fair play” it means to play by the rules. However, “respect for rules and laws” is also independently listed among the values that translate into the spirit of sport. This is not to say that “fair play and honesty” are simply redundant or circular. It adds to the notion of “informal rules.” Though it is very unusual to talk about fair play in dance, we could ask how the “spirit of dance” fares on this issue. No doubt, dance has rules. As I said before, dance is, like sports, a very regulated activity. Dancers are of course also expected to adhere to those rules. If we look at the “informal rules” mentioned (integrity, solidarity, tolerance, care, excellence, and joy), considering that all of them need interpretation, they could perfectly apply to dance. In short, if we interpret “fair play” as respect for the rules and for other players (or fellow dancers), we could say that fair play is expected in both activities.

Therefore, what is so different that allows for the “zero tolerance” policy in sports regarding doping and the almost nonexistent concern for, not to mention regulation of, the use of performance enhancers in dance? Despite all similarities with sports, dance is not a sport. To put it shortly, dance is an art. Unfortunately, this, though true, is not very helpful, considering that it is not easy to define either of these two terms. You can define “football” and “ballet,” but not “sports” or “art” for two good reasons: Items belonging, and almost universally recognized as belonging, to these categories are very different from each other, having at most what Wittgenstein famously called “family resemblance.” and also because the criteria to include an item in any of these categories are far from clear, hence the almost never-ending discussions and debates about this matter and whether it is really a sport, or whether we really should consider it art.

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<sup>5</sup> <http://www.fairplayinternational.org/what-is-fair-play->

There is a way to try to explain the difference. If we interpret the informal rules more widely, we could be referring to the “ethos.” In a narrow sense, the ethos of a game, e.g., basketball, can be defined as “an implicit set of conventions for interpreting the formal rules that govern this particular game” [23]. In a wider and more usual understanding, “ethos” is defined as the “distinguishing character, sentiment, moral nature, or guiding beliefs of a person, group, or institution” in Merriam-Webster and in very similar ways in other dictionaries. In addition, the “ethos” of sports and art are surely two very different things. The ethos of a group is something extremely elusive. The problem is even more acute when the group in question is dancers or athletes. It is even doubtful that such a heterogeneous and numerous collective can be said to constitute a group. However, at a very informal level, we can say something about people engaged in these two activities. At least in the popular mind, athletes are the paradigm of health of mind and body and artists are, after all, more outcasts, bohemians (according to Webster, “a person (such as a writer or an artist) living an unconventional life”) prone to the use of drugs and alcohol. All of this is a myth, of course, but myths matter, and they have an impact on how athletes and artists think about themselves.

Our attempt to find the reason for the strong opposition to doping in sports by looking at dance, an activity with many and important similarities with sports where nobody is worried about the use of performance enhancers, has not been successful. Looking into the WADA rationale for banning doping from sports, apparently all of them apply as well, or as badly, to dance. It seems that we could conclude that performance enhancers should be either banned or allowed in both kinds of activities. However, I think it is premature to throw in the towel. I do think there is a significant difference between dance and sports. It is only that we have not been looking in the right place.

## 5. Justice

The arguments against the use of performance enhancers in sports are very similar to those raised against human enhancement in general. Enhancement in and outside of sports is generally discussed together [24] and many consider the case of sports as a “testing ground” for human enhancement [25,26]. One of the most prominent objections to human enhancement revolves around justice. As stated above, both defenders [11] and critics [3] of the anti-doping policy think that the reference to fair play is better understood as concerning the value of justice.

Justice is not an easy concept, and not only because people tend to disagree about what can be considered just or unjust and what criteria to use for justice, a disagreement that reflects the different theories about justice defended by different philosophers ranging from strict egalitarians to Rawls and Nozick. It is also a difficult concept because there are different kinds of justice. For our purposes, we have to distinguish three of them. The first one refers to the injustice involved in someone acting against the rules. This is the one we refer to when we say that enhancement is cheating. This is the least interesting. As I said above, this problem can be addressed by the simple expedient of changing the rules. As an objection, it is not very impressive.

The second kind is more interesting, and is the one usually used as an objection in the enhancement debate: distributive justice. One of the main worries about human enhancement is that if we allow it, the already existing inequalities would deepen, as some people, the already privileged ones, could afford it, whereas others could not and would become, as a consequence, even more disadvantaged. This objection is not a fatal one.

One answer is that surely, as always happens with technologies, enhancement would become cheaper with time, so the increased inequalities would be only temporary. In sports, we should also consider two other facts [12]. In the first place, elite sports are already an expensive endeavor. As Savulescu says, “Money buys success. They [rich countries] have already embraced strategies and technologies that are inaccessible to the poor.” It can be easily argued that the distributive injustice already existing in elite sports is impressive enough and reducing it does not seem to be a pressing concern for sports authorities. In the second place, allowing the use of enhancing drugs in sports would in fact work towards more distributive justice, as some of the methods used according to the

rules, such as hypoxic air machines and tents or sending an athlete to a high-altitude place for training for months, is considerably more expensive than an eritropoyetina (EPO) injection (p. 668).

So far, similar arguments could apply to dance. Ballet training is not cheap<sup>6</sup>. Schools and gear are very expensive and parents who want their child to have a chance of success in ballet have to face a number of expenses that only the well-off can afford. If you live in a country with no top ballet schools, this means that you have to add the cost of sending your child to live abroad for years.

As the distributive justice objection is not a fatal one and cannot make the difference between sports and dance, I will look next into another kind of justice.

## 6. Zero Sum

The other important kind of justice is competitive justice. In sports, this is, in my view, the most important one. As we have seen, distributive justice, though very much discussed, is almost irrelevant, as there is already a great amount of this kind of injustice without doping and there is not a lot of fuss about it. Distributive justice in the enhancement debate is about the equal (or unequal) access to means of enhancement. Competitive justice is different. It is about whether the use of enhancers provides an unfair advantage. The advantage can be considered unfair if your competitors are not using enhancers, even if they are allowed and affordable.

Competitive justice is only important in competitions. Sports and competition are tightly connected. Dance is also very competitive. In fact, all activities can be competitive, and they occasionally are: exams, auditions, job interviews, etc.

Sports, however, are inherently competitive: This has been the spirit of sport since ancient Greece. Sports are zero-sum games. Someone wins only at the cost of others losing. Other activities are not. Take ballet. You are competing to enter a ballet company, or to play the major role in a production. If you win, you are Sleeping Beauty (and the others are not). However, once you have a certain role in a certain production, you do not compete with the other dancers in the company, you cooperate with them. Of course, if you play a team sport, you also cooperate (with your teammates), however, it is in order to win the game against another team.

The balance of cooperation and competition in sports and dance is very different. This translates into the amount of time you spend cooperating and competing in sports and dance, though this fact is as good an indicator as any other. But what best proves that the spirit of sports, the essence of it, if you will, is that competition can be found if we consider the spectacle. As I said above, both sports and dance are spectacles. In sports, the spectacle is the competition. In dance, the spectacle is something else. This is what the public wants (and pays) to watch. In Loland's words, "the demarcation criterion distinguishing sport competitions from other social practices, or what is sometimes referred to as their structural goal, is to measure, compare and rank participants according to athletic performance" [27].

In a recent paper [28] report 13 studies about why and when people oppose the use of enhancing drugs. They test 10 factors that can have an influence in this opposition. They conclude that, together with the risk to health and the existence of rules prohibiting their use, the other major consideration is that enhancing substances give a competitive advantage to the user. If you neutralize this last factor, the opposition drops because there is no competition.

If there is still any lingering doubt about competition being the spirit of sports, and as it is well said that exceptions confirm the rule, let us look into an interesting exception in dance: dancesport.

Dancesport comprises many styles. In the beginning it was classical ballroom styles, such as the waltz or foxtrot, and then incorporated other styles as diverse as breakdance or American mambo, among many others. Basically, dancesport includes many kinds of dance that belong to the third acknowledged category of dance called "folk." These styles turned into dancesport at the beginning of

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<sup>6</sup> Though by "dance" we refer not only to ballet but also to contemporary dance, I will refer usually to ballet, as contemporary dance also involves several years of ballet training.

the last century. What marks this beginning is the introduction of dance contests, the first one in 1907 in a tango contest that took place in Nice, France, and the first world championship in Germany in 1936. It is not difficult to see that what transformed folk dance into a sport was not anything intrinsic to these styles, but rather the addition of competition. As stated by the World DanceSport Federation, it all began when “a group of superb dancers added the competitive to the social, and when they converted ballrooms into the venues for their contests” [29]<sup>7</sup>. The dancers continued to dance tango, rock and roll, or tap dance, but now not just for fun or for different social purposes characteristic of folk dance but also to compete and win. There is only one champion in dancesport contests, as in football, and now they organize championships.

As a result, they are federated, unlike other dancers who have no such thing. They also have an International Dance Organization (IDO) started in 1982, beginning with the organization of a World Championship of Disco Dance in Venice. The IDO also come with rules.

These are not constitutive rules, the kind of rules that are specific to an activity and define it. There is almost no activity or social practice without constitutive rules, and both sports and dance are, as I already said, extremely regulated activities. IDO rules, like WADA rules, are regulative rules. However, what is most important for us is that IDA rules include anti-doping rules. They are basically WADA rules, and the rationale for these rules is WADA rationale. Dancesport is a zero-sum game. The spirit of dancesport is the spirit of sport.

## 7. Back to Sports

Competitive justice explains why there are rules against the use of bioenhancements in sports and dancesport but not in dance. In dance, being an art, what we value is the outcome [25], the artistic performance itself. But sports are a competition and we compare athletes to find the best. We consider that who is the best must be determined by effort and natural abilities. Douglas concludes that for this reason the case against the use of performance enhancing technologies is stronger in sports than in arts. However, we should remember that an explanation is not necessarily a justification. In order to find a justification, we have to look at the rationale for understanding sports in that way. According to some defenders of the anti doping policy, the idea is to evaluate and rank athletes by taking into account only or mainly elements that are under the athletes’ control [11]. This explains why in many cases we do not allow competition between people with natural abilities that are too different. This is why we have segregated competitions, usually between males and females, which has been very contested in the last few years, or by age, but some sports also take into account other considerations, such as weight in boxing. However, as a rationale, this is far from being a convincing one. It lacks coherence. If there is something out of the athlete’s control it is his or her natural abilities. Natural abilities are as genetically determined as your being male or female.

The biologically determined differences in natural abilities can be considered both distributive and competitively unfair. By definition, not everybody can have them (distributive injustice) and they give you a competitive advantage that you have done nothing to gain. Even more, natural abilities are just potential that develops not only through effort but also with means that are under no dispute, such as having access to training facilities and equipment, an adequate diet, and many other things.

For all these reasons, some authors have argued that this view of sports should be revised [12], precisely because it leaves the competition in the hands of the genetic lottery. If we really want to make fair competition that depends on the athlete’s choices, then we should allow the use of performance enhancers in sports. In this alternative view, the only remaining worry is competitive justice. If some of your competitors are using these enhancers and you are not, they have a competitive advantage. Of course, without doping some people, those with better natural abilities do have a competitive advantage. However, this can be reasonably argued to be a very different question. In the first place,

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<sup>7</sup> <https://www.worlddancesport.org/About>

the natural competitive advantage is not something that you have brought about. In the second place, there has to be some competitive advantage. Someone has to be better than others. If not, what is the point of competition? Reasonable as it may sound, this is a *petitio principii*. It already assumes that what we want to test are natural abilities that some people just happen to have. In the alternative view, as far as the different abilities are similar to those that we already admit, it does not matter if they are “natural” or enhanced. The fact that the use of performance enhancers was allowed would not by itself eliminate competitive injustice. Even if they were accessible, or more accessible than other already admitted means of enhancement, thus eliminating or at least softening the distributive injustice, competitive justice would still be an issue. We could say that the competitive injustice, once performance enhancers were allowed, would be less acute, or at least less worrisome, considering that all competitors could use them if they wanted to. The obvious advantage over the competitive injustice brought about by the genetic lottery is that at least the one caused by the use of legal, safe, and relatively affordable performance enhancers would be a chosen one. In fact, I doubt that in this case the use of the term “competitive injustice” would still be adequate. The ones who chose to use these performance enhancers would have a competitive advantage over those who chose not to, but as the latter could have avoided being disadvantaged and it was their choice to be in this position, the concept of justice seems to be of little use to describe this situation.

Of course, new biotechnologies have the potential to increase some traits beyond what we now consider normal in humans. Some people talk about the possibility, though not in the near future, of having transhuman athletes. The difference between human and transhuman athletes will be big enough to consider that the transhuman will have such a competitive advantage that we would consider it unfair, as we consider it unfair to have boxing competitions between athletes with very different weights. I am not sure about “unfair” being the right concept here, but sure enough competitions between such different people would be not very interesting and would miss the point. You would not need a competition to find the strongest or fastest or whatever other ability we want to test. We would already know this before the competition even began. But as some have argued [26], this problem can be solved with segregated competitions in a similar fashion to the ones we already have.

## 8. Conclusions

In this paper I aimed to clarify the reason why we are willing to incur the big social, individual, and economic costs associated with the anti-doping policy, costs that will probably increase with the advent of biotechnological enhancers. After looking into the “spirit of sport” as the most promising candidate for a reason, and comparing it with the “spirit of dance,” I found that the only relevant difference is the competitive aspect, which is essential in sports. This essential aspect involves questions of justice. Although these kinds of questions are regularly addressed in the performance enhancement debate, I argued that the best way to face this problem is to distinguish between distributive and competitive justice, being this second the one specific to sports.

In the last section I analyzed the competitive justice objection and argued that although it explains the opposition to the use of performance enhancers it does not justify it.

The main conclusion of this paper is that the use of performance enhancers would not pose a justice problem in sports if:

1. They were affordable—at least as affordable as other already accepted forms of enhancement (access to training facilities, specialized gear etc.)—and easy to access;
2. It were common knowledge that athletes could use them if they choose to do so; and
3. It were a common practice.

These three conditions would guarantee that no distributive injustice (condition 1) were introduced, nor any competitive injustice (conditions 2 and 3). If condition 3 is not held, the athletes who decide to use performance enhancers would gain a competitive advantage over the ones who decide not to use them. But I doubt whether this advantage could be considered unfair, as long as the other conditions

are met. After all, it is up to the athlete whether to use these enhancers or not, which at the very least makes the competitive advantage less unfair than that provided by the genetic lottery. If I am right, there is no good reason for the ban on performance enhancements.

Some might still worry about what the competitions would look like if we allow the use of performance enhancers. Some might wonder if under these conditions competitions would be as interesting and exciting as they are now. I do not share this worry.

During the celebration of the Triwizard Tournament, a contest held between the three largest wizarding schools of Europe, among them the Hogwarts School of Witchcraft and Wizardry, Harry Potter and three other members of these schools competed in three tasks. Of course, it is a magical competition, but a competition nonetheless. As a result of the tournament, one champion would be raised, and one cup would be awarded. It is a magical zero-sum game. We are especially interested in the second task.

The first and the third tasks involved basically the use of wands, a piece of technology similar to tennis racquets, fencing swords, and the like in the non-magical world. The second one was different. The second task took place underwater. To accomplish it, two of the contenders used spells to transform themselves. Viktor Krum used a Transfiguration spell that left him with the head of a shark and Harry Potter took Gillyweed, a magical plant that allows humans to breathe underwater. As a result, Harry got gills to breathe underwater and webbed hands and feet to help him to swim faster. No doubt these were performance enhancers involving biotechnology. No injustice can be found here. Of course, they were not cheating, as the rules allowed the use of biological or non-biological enhancers, nor was there any distributive injustice. More importantly, there was no competitive injustice. All the competitors were using enhancers.

Surely the competition was very interesting and emotions ran high. No clear winner could have been anticipated and the result was a near thing. Harry did not win this task because of his enhanced body. He won because he decided to use this particular enhancer and because of other values such as friendship and courage.

Maybe we should not be so opposed to the use of bioenhancers in sports after all.

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