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ABSTRACT
One frequently used argument in the discussion on human enhancement is that enhancement is a form of cheating. This argument is well-known in relation to doping in sports, but recently it has also been used with regard to cognitive enhancement in the context of education and exams. This paper analyses the enhancement-is-cheating argument by comparing sports and education, and by evaluating how the argument can be interpreted in both contexts. If cheating is understood as breaking the rules in order to gain an unfair advantage over others, it can be argued that some enhancements are a form of cheating. This problem of cheating is, however, relatively easy to remedy by either changing the rules, or by instituting controls and sanctions. This does not, therefore, constitute a categorical objection to enhancement. A further analysis of the intuitions behind the enhancement-is-cheating argument, however, shows that if sports and education are understood as “practices”, with their own internal goods and standards of excellence, some potential problems of enhancement can be articulated. These concern the internal goods and standards of excellence that are characteristic of specific practices. Seen from this perspective, the important question is how enhancement technologies might be embedded in specific practices—or how they might corrode them.

A frequently invoked argument against the enhancement of human capacities through biotechnological innovations is that this would amount to cheating. The paradigmatic example is doping in sports, but recently the argument has also been raised against cognitive enhancement. Neuroscientist Stephen Rose expresses the common intuition as follows: “[…] with the cognition enhancing drugs—as with the use of steroids by athletes, their use, at least in a competitive context, is seen as a form of cheating, of bypassing the use for hard work and study.” And Michael Gazzaniga asks: “Why do we resist changes in our cognitive skills through drugs? It seems to me that it is because we think cognitive enhancement is cheating. If, somehow, someone gets better through hard work, that’s okay. […] But popping a pill and mastering the information after having read it only once seems like cheating.”

In this paper, I will compare sports and education, two practices in which medical means are increasingly being used for enhancement purposes, and analyse how the enhancement-is-cheating argument can be interpreted in both contexts. I will argue that although using enhancements can be a form of cheating, this is relatively easy to remedy by either changing the rules, or by instituting controls and sanctions. This does not, therefore, constitute a categorical objection to enhancement. However, there are some remaining worries that concern the specific goals and goods that are internal to both sports and education understood as “practices.” These worries are less easy to articulate, but also less easy to dismiss.

CHEATING
Given the prima facie moral wrongness of cheating, it is remarkable that so little has been written on the subject in ethics. Perhaps this is partly caused by the lack of conceptual clarity. The term cheating is used, in common language, as indicating many different forms of deception and fraud that are intended to gain some benefit for oneself. Following one of the most thorough analyses available, cheating can be described as “the intentional violation of a rule, in order to gain an unfair advantage over others.” Cheating usually involves deception in order to hide that one is getting an unfair advantage, but I agree with Green that deception is not the moral core of cheating. Cheating is primarily a matter of fairness. The rules that are violated by the cheater can be explicit, as in games and sports, but they can also be implicit, as in codes of social conduct. In many cases, one does not explicitly subscribe to the set of rules that determines what is fair and what is not, but one accepts them tacitly by joining a certain practice or by entering in a game. Actions that involve the breaking of implicit or unwritten rules and offer an unfair advantage, can also be considered cheating, according to this definition.

ENHANCEMENT AND CHEATING IN SPORTS
The paradigmatic example of cheating as gaining an unfair advantage over others by breaking the rules comes from competitive sports. Unsurprisingly, most discussion regarding the unfairness of enhancement technologies has also taken place in this field, since performance enhancement is a natural part—if not the goal—of sports. Some forms of biotechnological enhancement are against established sports rules: the International Olympic Committee issues lists of forbidden substances (doping), and doping checks are in place in all major games and contests to keep these rules and expel trespassers. Global governance is established by the World Anti-Doping Agency. The question of whether existing enhancement technologies constitute cheating can be answered simply by referring to the rules of the sport in question: do they forbid a specific technology or not? If so, using the technology to gain an—by definition unfair—advantage is a form of cheating; if not, there is no moral problem.

When new enhancement technologies are introduced, however, the question of cheating cannot be answered with a simple appeal to existing rules. The question is whether the old rules still suffice to...
deal with the new technological possibilities. If the new technology offers some unfair advantage, it may have to be banned by new rules. With each new opportunity for enhancement, this question must be considered again—for example, see a recent discussion on the use of hypoxic air machines in training of Australian footballers.6–10

Obviously, it is unfair if some competitors can use an effective performance enhancer while others cannot. But this is no reason to ban the technology altogether, because this unfairness can be solved relatively easily by allowing the technology and by ensuring equal access for all. Another important set of reasons for banning enhancement technologies has to do with health and safety. Enhancements that are dangerous to the athletes’ health may be banned on those—paternalistic—grounds.1 But apart from these, what other reasons might there be to issue rules against particular new enhancement technologies, thereby making their use a form of cheating? In many cases intuitions about the unfairness of enhancement are strong. Even if there are no rules against it—yet—we may have the intuition that enhancement is a form of cheating because it violates some unwritten or inarticulate rule. We should look further to explain and assess this intuition. Are there good arguments to support it, and claim that enhancement should be forbidden because it is cheating?

One frequently invoked argument rests on the distinction between constitutive and regulative rules. Some rules are constitutive for a specific sport—for example, in running the marathon it is essential that there is running involved. Someone who covers the 42 195 metres on roller-skates is not cheating on his fellow marathon-men but is simply joining another game.11 This notion of constitutive rules implies that some enhancements cannot or should not be allowed because they would change the sport in question in such a way that it would not be the same sport anymore. This is not a matter of fairness or cheating—it is the defining characteristics of a sport that are at stake here. However, many enhancement technologies do not touch upon the constitutive elements of specific sports. Using special shoes, EPO, isotonic drinks, or steroids during a marathon is not disruptive in the same sense that using roller-skates is. Still, it can be asked whether the advantage they give is unfair, a violation of some implicit rule of justice, and whether this should prompt a change in the explicit regulative rules.

Another line of argument thus appeals to the unwritten rules, the “ethos” or the “local justice”, of sports.8 In Walzer’s terms, justice in sports is a matter of desert.12 Victory, praise and prizes in sports are distributed fairly if they are distributed according to desert, which means one should get these goods because they are deserved due to a certain merit. But there is no consensus on what exactly constitutes merit in the case of sports. Victory in a sports contest depends on natural abilities, training efforts, equipment, sheer luck, and probably a number of other factors. Opinions vary on what exactly should, ideally, determine victory. With regard to the hypoxic air machines one commentator is of the opinion that the essence of sport is that the person with the best natural abilities (the winner of the ‘genetic lottery’) should win the competition.9 Another commentator, however, claims that this idea is becoming obsolete and that there is no reason to let the genetic lottery decide the outcome of the sport competition.10 Technologically enhanced performance could also be seen as merit, the combination of natural luck and smart use of technology.11 In order to determine what is fair or just we need to think about the merit that we value in sports. What exactly do we want to praise or celebrate?

According to the President’s Council on Bioethics, what matters most is not even the competitive results but the specific type of human excellence displayed in a sport. “Keeping scores is meant to honour and promote a given type of human excellence, whose meaning is in the doing, not simply in the scored results.”12 This view refers not so much to a notion of fairness or justice in the distribution of victory, but to something like the ‘internal goods’ and internal standards of excellence of sport.13 It is telling and instructive that MacIntyre introduces his notion of internal goods in contrast to the rationale of cheating. He asks us to imagine a child who wants to learn how to play chess (chess being the paradigmatic example of a practice). Since the child has no particular desire to learn, he motivates the child by promising her candy for playing chess once-a-week, and some extra candy if the child wins the game. As long as it is only the candy that motivates the child to play chess, the child has no reason not to cheat and every reason to cheat, according to MacIntyre. However, once the child has learned to appreciate the internal goods of chess, like “the achievement of a highly particular kind of analytic skill, strategic imagination and competitive intensity,”14 she will have discovered a new kind of motivation, not just for winning on a particular occasion, but for trying to excel in whatever way the game of chess demands. “Now if the child cheats” says MacIntyre, “he or she will not be defeating me, but himself or herself.”15

So, as long as one plays for the sake of winning external goods—money, prizes, status—cheating in sport may be rational. However, cheating makes no sense if what one wants to achieve are the internal goods of sport.16 Every sport, being a practice, has its own internal standards of excellence to which each sportsperson should aim to live up to. Moreover, doing so is intimately connected with virtues such as courage, honesty and justice. Enhancement technologies might disrupt these forms of excellence and thus bar the achievement of internal goods, while still allowing the attainment of external goods like prizes. This would constitute a different form of “cheating”, namely on the practice itself. As the President’s Council expresses it: “sportsmen who would use biotechnological enhancements would be bad sportsmen—“not simply because they cheated their opponents, but because they also cheated, undermined or corrupted themselves and the very athletic activity in which they seem to excel.”17

Whether biotechnological enhancements would really pervert specific sports practices depends on the understanding of the specific internal goods and standards of excellence of those practices. This is something only participants in a practice can judge, according to MacIntyre. One example of such a discussion is the one on hypoxic air machines mentioned above. Likewise, the prospect of genetically enhanced athletes has prompted discussion on the view that effort and natural giftedness are

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1Issues of health and safety are of course very important with regard to the regulation of doping in sports. While top sport itself is a rather unhealthy activity, the use of various kinds of doping has side-effects and health risks of its own. Due to the competitive setting in which it is used, the voluntary nature of its use can also be called into question. For the sake of the present argument, however, I will set aside those concerns and focus on the issues of cheating and fairness.

2As Brown and McNamee have argued, the distinction between external and internal goods may not be as clear as MacIntyre suggests. However, I believe this is an analytic distinction, which holds heuristic power and enables us to express a certain type of value that is specific for practices.
prerequisites for excellence in sport, versus the view that performance enhancement is in the spirit of sport.\textsuperscript{\text吵架} I believe discussions like these should primarily be conducted among sportsmen themselves, but, like Brown,\textsuperscript{\text吵架} I see no reason why at least some biomedical enhancement technologies should not be accepted as contributing to excellence, and as innovations of the practice in question.

**ENHANCEMENT AND CHEATING IN EDUCATION**

I turn now from sports to a practice in which cognitive enhancers play or might play a role. In the discussion about cognitive enhancement the cheating-argument is used especially with regard to education, and the parallel with sports offers useful insights to discuss the argument in this context.

Recently, Turner and Sahakian considered what effects the widespread use of smart drugs would have on our educational system: “Could children in the future face blood or urine tests when sitting their A-levels or GCSE exams?” they ask.\textsuperscript{\text吵架} The image of students cramming for exams on Ritalin is frequently invoked in the enhancement debate; more powerful future enhancers—of memory, concentration and other learning abilities—could indeed prompt the question of whether students using them would be cheating.\textsuperscript{\text吵架} The case is similar to the doping-in-sports case, but not the same. Unlike in sports, the rules of the “game” are not as clear and explicit in education. With regard to exams the rules are put down in the exam-regulations. These forbid cribbing or fraud, but they usually do not forbid drinking coffee beforehand, or taking a beta-blocker or other substance to calm one’s nerves. More specifically, exam-regulations are silent with regard to the way a student is supposed to study. So, as long as schools or universities, or other supervising authorities do not issue rules against the use of modafinil, Ritalin or any other cognitive enhancer, students can use whatever they want without it being cheating.

This does not end the discussion, however, because rules can be changed and the availability (or prospect) of cognitive enhancers may prompt us to do so, just like the availability of new enhancement drugs in sports prompts new anti-doping rules. Perhaps using a memory enhancer should be considered cheating, just like using a crib is! As empirical research shows many have the intuition that there is something unfair or wrong with such enhancers that requires adjustment of the official rules.\textsuperscript{\text吵架}

Suppose that cognitive enhancers would make it much easier to learn the stuff needed for an exam—for example by boosting memory so that reading a text once would be enough to remember it.\textsuperscript{\text吵架} As empirical research shows improved performance to an enhancing drug. The use of enhancement drugs in education should be considered cheating, just like using a crib is! As empirical research shows many have the intuition that there is something unfair or wrong with such enhancers that requires adjustment of the official rules.\textsuperscript{\text吵架} The case is similar to the doping-in-sports case, but not the same. Unlike in sports, the rules of the “game” are not as clear and explicit in education. With regard to exams the rules are put down in the exam-regulations. These forbid cribbing or fraud, but they usually do not forbid drinking coffee beforehand, or taking a beta-blocker or other substance to calm one’s nerves. More specifically, exam-regulations are silent with regard to the way a student is supposed to study. So, as long as schools or universities, or other supervising authorities do not issue rules against the use of modafinil, Ritalin or any other cognitive enhancer, students can use whatever they want without it being cheating.

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The issue of cognitive enhancement and cheating is mostly discussed with reference to competitive exam situations, but the previous considerations indicate it should also be viewed in a broader context, that of education as a whole. Just like sports matches are not all there is to sports, exams are not all there is.

\textsuperscript{\text吵架} Another example, which I owe to an anonymous reviewer, is the discussion about Casey Martin, a professional golfer who, because of a leg-disorder, claimed the right to use a golf cart. This prompted debate on whether walking is part of the excellence of playing golf.

\textsuperscript{\text吵架} See Farah et al. 2004.\textsuperscript{\text吵架} Another example of a situation where the issue of “cheating” might come up would be that of an employee who gets a job promotion because the use of modafinil has enabled him to make much longer hours than his competitors. Would he be cheating or playing unfair?

\textsuperscript{\text吵架} Disregarding here, again, for the sake of the argument, other concerns such as health risks or social pressure.

\textsuperscript{\text吵架} A point shared between educational tests and sports is that the most efficient means to a certain goal are often ruled out—I owe this point to an anonymous reviewer.

\textsuperscript{\text吵架} These issue were also at stake in a recent discussion in The Netherlands about entrance-exams, for instance for medical school. While traditionally there were no such exams in The Netherlands, there have been some universities experimenting with selection of the best students. As it turned out, exam results did not predict success in the study. Moreover, it is another question altogether whether grades, test results or success in cognitive performance predict very much about the ability to become a good doctor.
to education. Like sport, education can be understood as a practice, or as part of the specific practices one is educated into. Education and studying have internal goods next to their more instrumental goals. Such internal goods may be the attained appreciation of the internal goods of the practices one is educated in, knowledge and truth, the activity of studying with its character-building side effects, or the general (moral) self-development it effectuates. According to MacIntyre, these are the ends of education, but these are increasingly substituted by a rat-race in which only exams and test-results count. The use of cognitive enhancers might make studying easier, but it is not clear how much it would add to the ends of education, conceived in this broader way. According to Juengst, for example, the use of Ritalin would undermine the disciplined study and active learning that the practice of being a student is supposed to involve. Moreover, the use of cognitive enhancers might improve memory or attention, but it does not necessarily engender more insight and understanding, or a better attitude. Generalised use of cognitive enhancers may well lead to an over-emphasising of cognitive performance and test-results, at the cost of a broader idea of development. Or, in MacIntryan terms, it may promote concentration on external goods and thus threaten the achievement of internal goods.

On the other hand, there seem to be no prima facie reasons why cognitive enhancers could not be fitted into the practice of education and learning. They could well help increase the general level of development by helping students to read and study more and remember better. If used in the right context and with the right intentions it might contribute to attaining internal goods and living up to standards of excellence in education and the various practices that students are educated into.

CONCLUSIONS

The argument that a certain new enhancement technique is wrong because it constitutes cheating can be interpreted in a simple and straightforward way by making reference to existing rules: only if rules are broken and there is an unfair advantage does the use of enhancers constitutes cheating. This does not account for the intuitive idea—often expressed in terms of “cheating”—that there is something unfair about the use of certain enhancement techniques, perhaps because they break some unwritten rules. For new enhancement techniques, new formal rules may have to be established. With regard to sports, one reason to do so, next to safety and health-related concerns, is that a specific enhancement may violate the constitutive rules of the sport in question—and such rules cannot be changed randomly. Another reason is that even though regulative rules might be changed without changing the defining characteristics of the sport in question, such changes might still somehow violate the ethos or local justice of sport, or might disrupt a specific sports practice with its associated internal goods. This line of argument thus leads to a discussion about what sport is, and why we value it. In other words, it leads us away from the straightforward notion of cheating-as-rulebreaking, towards the complex meaning and value of sports as a practice, and towards an appraisal of its own standards of excellence and internal goods.

Along these same lines, the argument that the use of cognitive enhancers in the context of education constitutes cheating can be assessed. The argument that using cognitive enhancers in examinations would constitute cheating is, in general, not very convincing: making enhancers available for everyone would solve this issue. However, depending on the goal or purpose of specific exams and the specific capacities that would be enhanced, some enhancers might justifiably be banned as forms of cheating. If we consider the issue from a broader perspective and understand education in terms of practices, the use of cognitive enhancers may raise more puzzling questions with less straightforward answers. This perspective leads us away from the question of cheating and examination-rules, into discussions on the values, ends and internal goods of education. Seen from this perspective, the important question is how cognitive enhancers might be embedded in education (understood broadly)—or how they might pervert it. I will not try to conduct that discussion here, but it seems clear that it should be conducted by those involved in the practice of education—teachers, educators, students, philosophers of education—to help answer moral questions about the desirability of allowing cognition enhancing drugs in our schools. Since the drugs involved come from the medical domain, and may also involve health effects, medical professionals in school—and youth-healthcare—like those in sports medicine—also ought to think about these issues.

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REFERENCES:


*For extensive discussion on the question of whether teaching and education are practices in themselves, or part of other practices, see vol 37, no 2, of the Journal of the Philosophy of Education. I will not try to resolve this debate here; for my present purpose what matters is that there are internal goods involved in educational practices that ought to be distinguished from external goods.

*Like, for example, perseverance, critical and independent thinking, and curiosity.