

## The confused ethics of cognitive enhancers

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Nonprescription use of cognitive enhancing drugs is becoming increasingly common in both academic and workplace settings. The two main arguments that ethicists use to oppose cognitive enhancement are that it contradicts the value of authenticity and secondly, that it constitutes

a form of cheating. However, both of these arguments incompletely account for individual and social factors that motivate people to use or oppose the use of these drugs. Nevertheless, the intuition that use of cognitive enhancement by healthy people is unfair can be explained both philosophically and psychologically.

**Key Words:** Cognitive enhancement; Ritalin; Amphetamine; Mental illness

### INTRODUCTION

Nonprescription use of cognitive enhancing drugs such as Methylphenidate (Ritalin), Amphetamine and Dextroamphetamine (Adderall) and Modafinil (Provigil) is becoming increasingly common in both academic and workplace settings. Many academic institutions and businesses have not yet explicitly condoned or condemned their use, leaving the issue of cognitive enhancement in an ambiguous state. It is socially frowned upon when discussed in the open, yet the culture of academia and business – and the competition that it promotes – supports the use of these drugs in private. The two main arguments that ethicists use to oppose cognitive enhancement are that it contradicts the value of authenticity and, secondly, that it constitutes a form of cheating. However, both of these arguments incompletely account for individual and social factors that motivate people to use or oppose the use of these drugs. Nevertheless, the intuition that use of cognitive enhancement by healthy people is unfair can be explained both philosophically and psychologically.

The use of cognitive enhancing drugs by American college students is on the rise, and the prevalence of their use is higher among college students than same-age peers that do not attend college [1]. These drugs are not primarily used out of intrinsic motivation to learn; rather, their use is extrinsically motivated. In other words, students don't typically use cognitive enhancers regularly to be more productive in their learning for the sake of learning; they use it to cram before exams and to achieve higher grades. While there is a general perception that these drugs improve academic performance [2], currently, there is little empirical evidence that these drugs provide substantial enhancement to healthy people [3]. For example, one study of 898 undergraduates who did not have an ADHD diagnosis showed that the use of cognitive enhancers did not result in an increase in GPA or a detectable advantage over those who did not [4].

However, for the sake of discussing the ethical and social ramifications of the use of cognitive enhancement more generally, and given the fact that people are using these drugs with increasing demand, we can assume that pharmaceutical companies are working to develop efficacious cognitive enhancers. I want to say at the outset that I do not conceive of cognitive enhancers as being qualitatively different from other cognitive or performance tools, such as reading glasses, computers, sneakers, or caffeine. Just like these other examples, the use of cognitive enhancers might make it easier to perform certain functions, either by increasing the speed or efficiency of performance, but they do not force a person to choose to perform those functions. A person can choose to use reading glasses to read Dante as much as *The National Enquirer*, or use the internet for research purposes as much as to stalk old friends on Facebook.

Similarly, people can use cognitive enhancers to work productively as much as for recreation [5]. Also, just as internet addiction does not detract from the potential benefits of the internet when used appropriately, neither should the use of cognitive enhancement by healthy people be seen as morally corrupt in and of itself. Rather, these are all tools whose ethical evaluation should be considered in light of how they are used. In other words, cognitive enhancement should be seen as morally neutral in the same way as other technologies that can both expedite achievement of a given goal or be abused to the detriment of its user and society. As such, the ethics of cognitive enhancement is intimately bound with ethical judgment of the goals that society and individuals establish and the risks their use might entail.

### The ethics of authenticity

Opposition to the use of cognitive enhancers because it degrades one's character has been proposed by Leon Kass and the President's Council on Bioethics in their 2003 white paper, *Beyond Therapy: Biotechnology and the Pursuit of Happiness* [6]. They argue that only work done through one's own capabilities should be considered one's own, and taking credit for any accomplishments produced with external assistance is undignified. Yet, this attempt to ground opposition to cognitive enhancement in personal virtue does not cohere with society's views on the nature of ownership of one's accomplishments for those who use these drugs for therapeutic reasons. Despite the tremendous amount of literature on the social construction of mental illness (and personal identity more generally), when psychiatrists prescribe medication to their mentally ill patients, they do not see themselves as trading patients' authenticity for social conformity. Rather, they understand their role as providing a means for patients to remove the cognitive impairments that hinder their patients becoming who they can be. Patients also see medication in a similar light. For example, one study of over 150 children in the US and UK found that the majority of the children interviewed who were being treated for ADHD did not see medication as a threat to their authenticity. While these children recognized the influence that medication has over their behavior, they perceived the treatment as a way to improve their agency by allowing them to choose the version of themselves (medicated or non-medicated) that best meets the demands of the situation. They considered both versions to be authentic to who they are [7]. It is incoherent to say that when medication is given to remove cognitive handicaps in patients it is a facilitator of authenticity, yet when taken by those without those same handicaps it is a hindrance to authenticity.

The argument for authenticity also does not account for the way in which society conceives of the culture and economics of ownership in academia

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or in the workplace. For example, when a professor pays an assistant to perform some of the research or editing for a scholarly project, the professor may still claim ownership over the theory or findings which she discovered without a loss to her dignity. She may even outsource some (or much) of the work to externalities, whether they be scientific instruments or statistical computer programs, but the product is still hers. Her ownership is grounded in her choice to pursue the topic and her management of all internal and external factors to bring the product to fruition. Similarly, employers pay employees to perform much of the labor to create a successful product without losing ownership or pride over it for the same reasons. Thus, while there may be other reasons against the use of cognitive enhancers, the claim that they take away a person's dignity when he or she pursues a socially-acceptable goal is not one of them.

### Cognitive enhancement is like doping in sports

Those who oppose the use of cognitive enhancers by equating it with cheating draw on the ethical literature that opposes doping in sports. This is not an apt analogy, since what is valued in sports and in academic or work performance is not the same. The appeal of competitive sports is in the performance itself and in the relatability of players to their fans. More important than the final score of a game is the experience that fans have in watching their favorite players and appreciating athletic excellence in action. The more that fans can see themselves in the players, the more they appreciate the game. For example, watching all-star basketball players shoot incredible three-pointers or dunk a basketball garners much more excitement than watching machines or people with springs attached to their sneakers do the same thing. In sports, doping is seen as a form of cheating because the evaluation of excellence includes not only the ability to perform such amazing feats of athleticism but also the dedication and practice that goes into achieving it. Academic and work performances, on the other hand, are valued for their results and not for the process. In the academic setting, achieving an A on an exam, whether one studies for one hour or ten hours, is still an A. Similarly, employers in those industries where demand for cognitive enhancers is greatest want a project to get done on time and do not care if an employee must work on weekends or not to complete it. This is not to defend academic and work culture; I am only stating the way it is. The disanalogy between sports and academic performance is in line with the results of a survey taken by approximately 1,200 males in their freshman year of college, which found that participants of the survey believed the athlete who used anabolic steroids to help him succeed was more of a cheater than the student who used Adderall to help him succeed on his midterm exams [8]. Given this reality, the imposition of an ethical norm opposing cognitive enhancement will not succeed since the culture is not conducive to identifying with those norms. Therefore, even if academic institutions prohibit the use of cognitive enhancers as a form of cheating, the ethos of academic performance does not support the policy.

### Fairness and social comparison

Despite the confused ethical positions above, many people do consider nonprescription use of cognitive enhancing drugs to be morally unacceptable based on their ideas of fairness. For example, in one study, researchers asked 94 American participants whether their disapproval of cognitive enhancers were because,

- (1) they produce unfair outcomes,
- (2) they produce hollow (inauthentic) achievements, or
- (3) they produce undeserved achievements.

They found that judgments of unfairness were the only significant factor to predict unacceptability of cognitive enhancing drugs. Neither undeservedness nor hollowness had explanatory power over unfairness, though many who perceived the use of cognitive enhancers as unfair also answered that achievements through their use were either undeserved or hollow, with undeservedness a greater correlate than hollowness [9]. From these findings, one could conclude that hollowness and undeservedness can be seen as ways to justify why people think the consequences of using

cognitive enhancers are unfair, rather than seeing the consequences as unfair because they are undeserved or hollow. In other words, because people saw the outcomes as unfair, they sought to defend their intuition by claiming that they were either undeserved or hollow.

However, one need not rely on hollowness and undeservedness (i.e., the confused ethical arguments explained above) to explain people's perceptions that the use of cognitive enhancers by healthy people is unfair. Moreover, we can explain why people accept as fair providing pharmaceutical cognitive therapies to people with ADHD and other cognitive illness but are opposed to their use by healthy people philosophically and psychologically. The philosophical notion of justice as fairness has been a major theme in political theory since John Rawls wrote his *Theory of Justice*. According to this notion, conceptions of justice seek to balance the priorities of liberty and equality. By liberty, I mean the right to pursue one's desired life, given a person's abilities, without interference or restrictions from others in that pursuit. By equality, I mean the notion that all members of society have the same moral value, despite differences in ability, whether those limitations are internal or external. Complete reliance on liberty risks treating those with different capabilities as unequal; complete reliance on equality risks restricting the freedom of those who can rely on their own natural capabilities to pursue their own lives. The concept of justice as fairness tries to balance the two priorities by providing a means to create equal opportunities for everyone, given the differences that people have. Inequalities will inevitably exist, but they should only be justified when they provide a scheme that gives the greatest benefit to everyone, especially the least advantaged. This arrangement is akin to the Pareto optimality, which is an optimal distribution such that any other would make another individual or preference criterion worse off. In a justice as fairness system, those who are able to pursue their lives as they desire given their capabilities are free to do so up to the point where it systemically leaves other people worse off, and those whose capabilities do not reach an accepted norm are provided with the means to bring them to the societal baseline, which in turn benefits everyone in society. The social agreement that conceives of treatment for cognitive impairments as good yet cognitive enhancement by healthy people as unfair is based on the idea that these therapies provide a means for equal opportunity without restricting the liberty of people without those impairments. Therefore, even if the use of cognitive enhancers by healthy people can be justified on the utilitarian grounds that it will increase the level of well-being for society as a whole, the increase in inequality that may result would go against our normative intuition of the priority of justice as fairness.

Psychologically, this can be seen through the studies on social comparison theory. Perceived fairness comes as a result of people comparing the outcomes of their efforts to those of others in the same cohort [10]. When people judge others who they consider relatively similar, yet who receive greater outcomes by virtue of something other than personal effort, the outcome is seen as unfair. The intuition that the outcomes awarded to healthy users of cognitive enhancers are unfair is therefore based on people continuing to compare themselves to those who use them, rather than seeing cognitive enhancers as creating a disanalogy for the purpose of comparison. The normative choices available to remove the seeming unfairness would be either to stop healthy people from using cognitive enhancers, to make those who are not using them start, or to reframe the perception so that the unenhanced no longer compare themselves to the enhanced. The choice one deems as appropriate is based on ethical premises, not psychological ones.

On the other hand, when people compare themselves to those who they consider disadvantaged, the downward social comparison correlates with an increase in life satisfaction [11]. The increase in life satisfaction stems from simply appreciating what they have vis-à-vis the disadvantaged, rather than in comparing how their outcomes/effort ratio measures against the outcomes/effort ratio of the worse off. Moreover, offering assistance to those who are disadvantaged is seen as morally good and also correlates with an increase in life satisfaction [12], possibly through allowing for downward comparison [11]. Therefore, when offering therapies to treat those who are cognitively impaired, people do not see their improved outcomes as unfair, they appreciate it as good.

### CONCLUSION

If, as a society, we want to maintain singular focus on academic and economic results, we will have a hard time justifying why cognitive enhancement is wrong. If, however, we really think that cognitive enhancement is unfair, in that their use promotes injustice, then we need to reevaluate our goals and culture, which currently make cognitive enhancement so appealing. The tacit acceptance by academic institutions and companies of nonprescription use of cognitive enhancing drugs, despite legal prohibitions and institutional policies against it (at least at some academic institutions), creates a conflict of motivations regarding their use. When universities and companies create ineffective policies or maintain a culture of product over process, they benefit from the work done by those who use cognitive enhancers, while leaving all the risk of their use on their users. Moreover, relying on confused ethical stances which are not in line with the perceptions that students and employees have about cognitive enhancers nor explain why people think that their use by healthy people is unfair creates dissonance between the tacit norms of academic and workplace environments and the inchoate reasons for opposition to their use. The tension between social influence promoting their use and people's intuitions that their use is unfair will give way to deferring to either one side or another, depending on which influence is stronger. In today's environment, with the social pressure of academic and workplace competition and the priority of product over process, one can easily guess which side will win.

### REFERENCES

1. Ford JA, Pomykacz C. Non-medical use of prescription stimulants: A comparison of college students and their same-age peers who do not attend college. *Journal of Psychoactive Drugs*. 2016;48(4): 253-60.
2. Arria AM. Perceived academic benefit is associated with nonmedical prescription stimulant use among college students. *Addictive Behaviors*. 2018;76:27-33.
3. Dubljević V, Ryan CJ. Cognitive enhancement with methylphenidate and modafinil: conceptual advances and societal implications. *Neurol Neurosci*. 2015;4:25-33.
4. Arria AM. Do college students improve their grades by using prescription stimulants nonmedically? *Addictive Behaviors*. 2017;65:245-9.
5. Bennett T, Holloway K. Motives for illicit prescription drug use among university students: A systematic review and meta-analysis. *International Journal of Drug Policy*. 2017;44:12-22.
6. President's Council on Bioethics. 2003. *Beyond Therapy: Biotechnology and the Pursuit of Happiness*. Washington, DC: Government Printing Office.
7. Singh I. Not robots: children's perspectives on authenticity, moral agency and stimulant drug treatments. *Journal of Medical Ethics*. 2013;39(6):359-66.
8. Dodge T, Williams KJ, Marzell M, et al. Judging cheaters: is substance misuse viewed similarly in the athletic and academic domains? *Psychology of Addictive Behaviors*. 2012;26(3):678.
9. Faber NS, Savulescu J, Douglas T. Why is cognitive enhancement deemed unacceptable? The role of fairness, deservingness, and hollow achievements. *Frontiers in Psychology*. 2016;7:232.
10. Adams JS. Inequity in social exchange. In *Advances in experimental social psychology*. Academic Press. 1965;2:267-99.
11. Huang Y. Downward social comparison increases life-satisfaction in the giving and volunteering context. *Social Indicators Research*. 2016;125(2):665-76.
12. Harbaugh WT, Mayr U, Burghart DR. Neural responses to taxation and voluntary giving reveal motives for charitable donations. *Science*. 2007;316(5831):1622-5.