

What Do I Do Now?

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The Case

I Have to Ace these Exams, or I'll Crater Law School

Ms. P. is a 3rd year law student who is having trouble in classes. Her performance has slipped a bit throughout the year, and she is concerned that she is not “up to par” or keeping pace with her classmates. She is about to sit for final examinations, which would qualify her to take the bar examination soon thereafter. She has read about “cognitive enhancers” on the Internet, and how certain drugs, such as modafinil and/or methylphenidate have been used with some success by students to improve vigilance, augment learning and memory, and increase academic performance. She goes to her physician, Dr. Cefalo, and describes signs and symptoms of fatigue, “trouble concentrating,” and “easy distraction,” suggesting that she “might have ADD.” After some routine questioning, Dr. Cefalo deduces that Ms. P. does not have attention-deficit disorder (ADD), but rather is seeking pharmacological intervention to assist her studies. Dr. Cefalo asks Ms. P. directly if this is the case. Ms. P. somewhat hesitatingly answers that this is so, but then adds that she is “really desperate. I have to ace these exams, or I’ll crater law school, won’t be able to take the bar exam, and I have a job waiting for me. Besides, I know that I can get this kinda stuff—like even that drug piracetam—either off of the Internet or through friends, but I wanted to come to you to do it the right way.” Ms. P. is well-known to Dr. Cefalo (who has been her treating physician for a number of years), and Dr. Cefalo recognizes Ms. P. to be a dedicated, highly motivated young woman, who is characteristically very prudent in her decisions and actions.

Question: *Should Dr. Cefalo prescribe modafinil or methylphenidate for Ms.P.? Why or why not?*

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Commentary: Cognitive Enhancement: Are the Claims of Critics “Good Enough”?

Vojin Rakić

The motif of performance enhancement has played a long and important role in humanity’s cultural heritage. Aspiring to transcend what nature has endowed

has been a prime motivator for many scientific achievements. At the same time, warnings about the dangers of hubris have inspired themes for artists, philosophers, and poets. As the public becomes more aware of how advancing technologies are expanding the repertoire of what is possible, issues surrounding performance enhancement will play an increasingly significant role in the clinical setting.

As Dr. Cefalo faces the dilemma of whether or not to grant his patient's request for pharmaceutical cognitive enhancers (PCEs), he must do so against the background of the physician's duty to balance the benefits for his patient against possible harms. With that standard in mind, I suggest that Dr. Cefalo frame his deliberation by examining the main objections proffered against enhancing pharmaceuticals: (1) The drugs are unnatural, (2) use of the drugs is a form of cheating, (3) although it is not necessarily cheating, use of the drugs still place users at an unfair advantage over those who do not use them, and (4) the safety of the drugs is in question.

In what follows, I argue against objections 1 and 2, and offer qualifications for 3 and 4.

Argument Against Objection 1

The use of PCEs is indeed "unnatural" in the sense that they can extend mental functions beyond natural limitations; however, the question is whether they should be considered *prima facie* morally controversial?

One need only look at the treatment of diseases by "unnatural" means, as well as at noncognitive enhancements, to discount that objection as a reason to prohibit PCEs. Examples abound of pharmaceuticals and technologies that are developed to go beyond what is called "species typical functioning," including those that address conditions for possible disorders (e.g. traditional vaccines, cell engineering to resist cancer, and the possible breakthrough that CRISPR-Cas 9 appears to offer in preventing diseases) and those that represent the patient's own desire for improvement (e.g., liposuction, minoxidil, and hair transplants). As has been pointed out by various scholars who have dealt with this issue, the lives of

almost all human beings are deeply unnatural, and bear little relation to our species' "natural" state.¹ The reader is told in the case description that Ms. P. has been Dr. Cefalo's long-standing patient, and it can be assumed that it is likely that during that time providing inoculations and prescribing medications has been part of routine healthcare. Few people would claim that such treatments by Dr. Cefalo on behalf of his patient were not appropriate.

Can a convincing case be made that there is a relevant moral difference between these enhancing ministrations on the one hand and novel PCEs to improve memory and concentration on the other? I think not; both are enhancements and both are unnatural. It is, therefore, warranted to conclude that the "unnaturalness" of cognitive enhancement technologies does not make them *prima facie* morally inappropriate *vis-a-vis* other "unnatural" enhancement technologies that might preserve our health and lives.² For these reasons, the argument that Dr. Cefalo should not prescribe PCEs because they are "unnatural" is not a sufficiently strong one.

Argument Against Objection 2

The use of methylphenidate, modafinil, and other PCEs would *not* fall into the cheating category, because cheating is relative to a certain rule. In situations in which there are no generally accepted rules, such as in the use of PCEs, the concept of cheating has no meaning. Only where rules exist can they be broken. In the case of Ms. P., there is no mention of rules prohibiting people taking cognitive enhancers by her law school; therefore, there is no rule that Ms. P. can be culpable of breaking. If there were to be an established rule, and Ms. P. wilfully disregarded it, she would rightfully be disqualified for cheating. If, however, rather than a law student, Ms. P. was a

sports competitor, any involvement in banned substances to improve performance would be a flagrant violation of clearly defined rules and regulations, earning her severe censure.

I would add, however, that there is an element of cheating of another sort. In her attempt to manipulate Dr. Cefalo into prescribing a drug, Ms. P. adopted the pretext that she needed the drug to counteract her attention-deficit/hyperactivity disorder (ADHD). In proffering a false reason, she broke the rule to be truthful. When confronted with her deception, Ms. P. says that she had hoped “do it the right way,” by coming to her physician, but acknowledges that in order to achieve her objective, she was willing to lie, bypass administrative norms, and obtain the drugs by subversive means. Although Dr. Cefalo has a valid reason not to trust her, in the end, there does not appear to be a greater harm or smaller benefit in prescribing PCEs to Ms. P. than it would be to a less manipulative individual.

Qualification with Regard to Objection 3

Does the utilization of methylphenidate, modafinil, and other PCEs provide its users with an unfair advantage compared with those who do not use them? In prescribing PCEs, will Dr. Cefalo be giving Ms. P. an unjust lead over other students sitting the same examinations? To answer requires considering several types of fairness. First, is it “fair” that a natural advantage in cognitive ability is likely to place one person in a better position vis-a-vis others who lack that edge; while, at the same time, creating the same cognitive advantage through artificial means is deemed unfair? It is also true that physically attractive people often have an advantage, socially and professionally, over the less attractive; however, choosing

cosmetic surgery to improve their odds is not seen as a moral offense. Would the same ethical questions have been raised if Ms. P.’s request had been for rhinoplasty rather than “cosmetic neuropharmacology”?

In sports the situation is different: if athletes, through their natural advantage, lead their competition, it is deemed to be a fair advantage; but, as pointed out, if they have created their advantage artificially—in particular by using performance enhancing substances—they are judged to have breached a rule in order to acquire an unfair advantage (although this rule can be called into question based on the arbitrary distinction between “natural” and “unnatural” discussed earlier).

Moreover, in the case of cognitive enhancement, there is no widely accepted informal agreement according to which the exploitation of “natural” inequalities is morally justified, while the exploitation of artificially created inequalities is morally impermissible. There is also no mention in the case description of any law school rule that ought to be upheld. One is brought back, as in the discussion of the first two main objections against enhancers, to the moral issue of the “natural,” and the censure against rule breaking where it was demonstrated that the argument based on the moral appropriateness of “naturalness” is weak and that there is no rule to be broken in the case of the use of PCEs in general and in the vignette of Ms. P. and Dr. Cefalo in particular.

Second, another, more general, question of “fairness” can be raised regarding the use of cognitive enhancers. Can it be morally justified that those who are socially and financially better off can enjoy an advantage in having greater access to PCEs? Most likely it is not. It could be argued that acquiring the financial means to obtain PCEs might be the result of hard work and self-

sacrifice,³ but we know that the acquisition of wealth is not always the result of those attributes, and history is not short of examples of discrepancies in wealth considered morally dubious. This is, however, not a phenomenon that affects only the use of PCEs. Unequal distribution of wealth makes it possible for those who are better off to acquire all kinds of advantages for themselves and their offspring. There is no reason to single out PCEs, ban their use, and say that they should be prohibited because they put those who can afford them at an advantage. If we wish to address the issue of unequal distribution of wealth we should do that at a different, more general level than the level of access to PCEs.

It is also possible to minimize real or perceived injustices of that type by developing health insurance plans that cover the use of PCEs. Such plans frequently do cover the use of Viagra. In the majority of cases, Viagra is being used as a performance enhancer.⁴ There is no reason to exclude the possibility of having similar policies in the case of PCEs.

Third, the advantage Ms. P. could obtain vis-a-vis her competitors by using PCEs might mislead the authorities in her law school. If methylphenidate and modafinil would enhance Ms. P.'s performance only during the examination, and afterwards her functioning would return to "normal" (i.e., functioning without pharmaceutical enhancement), the authorities in her law school might expect more from Ms. P. than she would be capable of delivering. However, there does not seem to be any significant harm that would follow from authorities in the law school being misled about Ms. P.'s unenhanced abilities. With the drug she would increase her chances of "acing" the bar examination, and possibly getting the job she desires (which she alleges is "waiting for her"), but that would not be obviously harmful to

anyone. In other competitive contexts, such as job interviews, misled employers can make wrong choices to their own detriment as well as to that of others competing for the job. There is, however, no indication of any type of harmful outcomes in the case of Ms. P. Hence, even if I approach the issue from this perspective, Dr. C. still does not have a convincing reason to deny providing Ms. P. with a prescription for methylphenidate or modafinil.

I will note that in all competitive contexts, the issue of "misled authorities" can be addressed by the requirement that competitors disclose information about the use of PCEs.⁵ The demand to disclose information about their use might infringe to a certain extent on our privacy, but the transparency stipulation would avoid possible unfair advantages. The values of privacy and fairness ought to be balanced out in this context. The disclosure requirement might also not be easily enforceable (competitors might lie about it); however, if it were discovered that the person had been untruthful, this transgression would amount to rule breaking and cheating, and, therefore, would be sufficient reason for the competitor to be banned from the competition, to be fired, or to suffer other severe consequences.

Qualification with Regard to Objection 4

Regarding the stipulation to "do no harm," the safety of the drugs should be seriously considered. So far, there is no evidence to suggest that, with proper guidance, Dr. Cefalo would be harming Ms. P.; and, moreover, if he refuses there are possible consequences to be considered. Ms. P. has clearly stated that with or without his help she is determined to obtain the drugs. Would there be more likelihood of harm if she moved in that direction without his oversight?

What if after obtaining the drugs on her own, she has an adverse reaction? Would she be reluctant to return to Dr. Cefalo for help?

For some individuals, the use of PCEs can put their health in special jeopardy. Not only do people react differently to substances according to their individual biology, but there can also be psychological dangers. Aware of the advantage a PCE provides (and suspecting that other competitors may also be taking a cognitive enhancer), a user might decide to increase the doses over the amount prescribed by the physician. As with other prescribed medications, patients using PCEs require ongoing monitoring.

The fact that Dr. Cefalo has known Ms. P. over time makes him well placed to take these issues into account. He observes that: Ms. P. is so determined not to “crater” law school and to take the bar examination that to achieve her goal she is willing to put truthfulness aside and consider purchasing other drugs online, including those not approved by the Federal Drug Administration.⁶ But taking into account their long doctor–patient relationship, are there contraindications in Ms. P.’s medical history to suggest to Dr. Cefalo that PCEs might prove a heightened safety risk or pose increased susceptibility toward side effects? Remembering that Dr. Cefalo’s role as a physician is to be the purveyor of correct information, and if in his considered opinion there are no red flags to signal special risks, and Ms. P. demonstrates that she is an adult with the decisional capacity to make medical choices of her own—even if he judges them to be bad ones—Dr. Cefalo has no solid basis on which to deny prescribing Ms. P. methylphenidate, modafinil, or another substance he believes is more suitable.

All in all, I conclude that the four main objections levelled against the use

of PCEs are not *prima facie* sufficient to prohibit interested individuals from using them; nor are they *prima facie* sufficient to prohibit physicians from prescribing them in circumstances that they believe appropriate. Although I argued that certain reservations are warranted in specific instances, I also showed why in the case of Dr. Cefalo and Ms. P., those qualifications did not apply. For these reasons, I hold that the objections offered are *not* sufficiently convincing, with certain qualifications, to preclude Dr. Cefalo from granting Ms. P.’s request for cognition-enhancing drugs such as methylphenidate or modafinil.

Returning to my opening comments, if there is no sustainable basis to consider performance enhancement to be *prima facie* morally controversial, why has history been replete with warnings about the dangers of human enhancement? Are these cautions merely conservative prejudices, or is there more to them? I think that they are more substantive, but that they should be redirected, not to focus on enhancement itself, but to our human foibles in using enhancement wisely. Icarus solved his wish to fly, but paid with his life for his recklessness in doing so. Faustus made a pact with the Devil, bargaining away his soul for unlimited knowledge, but ended by surrendering his moral integrity. Both serve as cautionary tales of the promise of enhancement and dangers of the human folly in their misuse. The lesson is not to discard performance enhancement in principle, but to be ever-cautious as to what is reasonable and morally right in its application.

Notes

1. Greely H, Sahakian B, Harris J, Kessler RC, Gazzaniga M, Campbell P, Farah MJ. Towards responsible use of cognitive-enhancing drugs by the healthy. *Nature* 2008;456(7223):702–5, at 703.

2. Some supporters of enhancement technologies even argue that it is not only morally permissible to use enhancement technologies to make people more healthy, longer-lived and smarter, but that we are morally obliged to do so (e.g., Harris J. *Enhancing Evolution: The Ethical Case for Making Better People*. Princeton: Oxford University Press; 2010; or Savulescu J. Genetic interventions and the ethics of enhancement of human. In: Steinbock B, ed. *The Oxford Handbook of Bioethics*. Oxford: Oxford University Press; 2007:516–35.). It is beyond the scope of this commentary to discuss this issue and take a position on it.
3. Mehlman MJ. Cognition-enhancing drugs. *The Milbank Quarterly* 2004;82(3):483–506, at 492.
4. See note 3, Mehlman 2011, at 127.
5. Garasic MD, Lavazza A. Moral and social reasons to acknowledge the use of cognitive enhancers in competitive-selective contexts. *BMC Medical Ethics*, 2016; available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4812634/#> (last accessed 19 Jan 2017).
6. Ms. P. mentions piracetam. If we imagine that the authors of the vignette have the United States context in mind, this is additionally troublesome.

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Commentary: Care, Choice, and the Ethical Imagination

Fred B. Ketchum

From the perspective of her physician, Ms. P. would seem to be the optimal candidate for “cognitive enhancement,” as she seeks, respectively, stimulant or antinarcotic medications like Ritalin or Modafinil to sharpen her mental focus rather than to treat a disease. She is a well-educated professional, who has come very close to her goals without the aid of pharmacology. She differentially seeks expert guidance and presumably her physician’s blessing. She acts responsibly and sensibly, avoiding the specter of the drug-seeking patient.¹ And finally, she is “well known” to the provider, from which one can infer a relationship of trust and openness,

the precondition for the ideal of “shared decision making” between physicians and patients.^{2,3} By painting the picture of a perfect patient, this case removes some of the obvious concerns around cognitive enhancement, cutting a path that outflanks well-trodden concerns about safety or coercion to arrive at a tension deep in the thicket of ethical questions around pharmacological improvement: is there something fundamental about physicians’ art that prevents them from aiding a patient who does not require relief from disease? The patient does not seem to think so. Indeed, she says “I wanted to come to you to do it [get medications] the right way”.

If enhancements are by definition ethical because they end up making people’s lives better, the answer is surely yes.⁴ If there is a morally salient distinction between treating disease and improving function beyond whatever is considered “normal” for that individual or for a group of individuals, as the question has frequently been posed, the answer is less clear.^{5,6,7} Rather than looking at this from the vantage point of how medicine and enhancement are defined, and which normative judgments this entails, I want to leave the ethics of that question aside, focusing instead on how enhancements are imagined, and what this might imply for how physicians care for their patients.

Research shows that cognitive enhancements are widely believed to allow individuals to avoid sleep while remaining productive and efficient, boosting performance far beyond normal bounds as part of a general ethos of performance and self-optimization, ensuring that personal and professional goals will be realized.^{8,9} These medications supposedly allow individuals to “tailor” their bodies using medications, a claim indebted both to historical visions of biological engineering