

The Role of Biomedical Enhancements in the Kantian Duty to Self-Perfect

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ACKNOWLEDGEMENTS

I would like to thank my thesis advisor, Professor Janum Sethi, for her thoughtful and insightful feedback on my work, and Professor David Baker for serving as the Second Reader for my Thesis Defense.

I would also like to thank the friends I made through the Kantian discussion group I joined as a first-year student, having just entered the world of philosophy. You all gave me a place to grow and find support in pursuing my philosophical interests, and I'm so grateful. Thank you for helping me develop my critical thinking skills and curiosity without fear of failure.

And of course, I would like to thank my parents and sister, for listening to my philosophical ramblings and supporting me on the long journey of creating this work and pursuing my degree.

ABSTRACT

The rising use of pharmacological enhancements in academic and work contexts¹ makes discussion on the ethical use of such resources and their effects on the criteria of award-granting institutions increasingly important.

Moral considerations for using biomedical enhancements are often approached from a utilitarian perspective—one that values maximizing collective productivity or happiness.^{2,3,4} Thus, this investigation would be enriched through the adoption of a Kantian lens, especially since the Kantian framework asks that we strive to improve and perfect our powers of body and mind. Conclusions from this work have the potential to inform future policies about the use of biomedical enhancements in cases of workplace negligence and in criteria of award-granting institutions.

In this work, I argue that: adopting the Kantian framework permits the use of biomedical enhancements as a way to pursue self-perfection if it does not violate perfect duties, the use of such enhancements can be morally valuable and praiseworthy once we account for indirect duties, and enhancements' effects on an agent's expended effort should affect how institutions reward achievements that involved the use of enhancements. To achieve this, I interpret Kant's primary texts and build upon the arguments of a variety of philosophers.

¹ Sarah Marsh, "Universities Must Do More to Tackle Use of Smart Drugs, Say Experts," *The Guardian*, May 10, 2017, <https://www.theguardian.com/education/2017/may/10/universities-do-more-tackle-smart-drugs-say-experts-uk-exams>.

² Ingmar Persson and Julian Savulescu, "The Duty to Be Morally Enhanced," *Topoi* 38, no. 1 (March 1, 2019): 7–14.

³ Nicholas Agar, "Moral Bioenhancement and the Utilitarian Catastrophe," *Cambridge Quarterly of Healthcare Ethics* 24, no. 1 (January 2015): 37–47.

⁴ Chris Gyngell and Simon Easteal, "Cognitive Diversity and Moral Enhancement," *Cambridge Quarterly of Healthcare Ethics* 24, no. 1 (January 2015): 66–74.

INTRODUCTION

Strategy

Through this project, I hope to achieve just a few things: report and defend the best interpretations of Kant's duty to strive for self-perfection, apply these to the case of biomedical enhancements, and explore how such conclusions could be practiced in the criteria of award-granting institutions. The scope of my work is quite limited, however.

Importantly, I will not be defending the duty to self-perfect in itself, nor Kantian ethics, more generally. Since most policy decisions at institutional levels do not adhere to a single moral framework, I will simply convey what I think the application of Kantian ethics yields, and briefly assess whether such an application is intuitively appealing or already reflective of practices of award-granting institutions and policies in certain workplaces.

Terms and Distinctions

Since striving for self-perfection is the central topic of this work, it is essential to define what this *perfection* entails. Kant himself recognizes *perfection* as a concept that can be easily misunderstood. He draws a distinction between two kinds of perfection: *quantitative* and *qualitative*, and he identifies *qualitative perfection* as the proper end of the duty to self-perfect.⁵ He defines qualitative perfection as “the harmony of a thing’s properties with an end.”⁶ In the case of

⁵ AK 6: 386. Throughout this work, I use the standard method of citing Kant's work: referring to the Academy edition (AK) of his texts. The page number (386, here) follows the volume number (6, here) in this format.

⁶ AK 6: 386.

the rational agent at the center of Kant’s ethical theory, the “properties” he has in mind include the agent’s humanity, “by which [she] alone is capable of setting [herself] ends.”⁷ The end Kant has in mind here is the possession of a will and capacities that allow the agent to fulfill the ends she sets herself. This involves “diminish[ing] ignorance by instruction,” “correct[ing] errors,” and cultivating a “moral feeling”—the “disposition” to be motivated to act by the moral law alone.⁸

An *end* is, in Kant’s words “an *object* of free choice, the representation of which determines it to an action (by which the object is brought about) [original emphasis],”⁹ which can be likened to something (usually a goal) which motivates an agent to act.

I will understand an *enhancement* as the intentional use of an intervention that aims to improve a person’s existing capacity or create a new capacity.¹⁰ I will understand *biomedical* enhancements as those that *directly* affect the body’s cognitive or physical capacities, such as pharmaceutical substances or passive medical procedures. These are the types of enhancements I will be investigating in this work. The direct nature of biomedical enhancements can be understood in contrast to indirect means; direct enhancements do not, after administration, require effort on the part of the individual in order for there to be the intended effects, while indirect methods require active participation from the recipient of the enhancement in order for there to be effects.¹¹ So, for example, when a person

⁷ AK 6: 387.

⁸ Ibid.

⁹ AK 6: 384.

¹⁰ Allen E. Buchanan, *Beyond Humanity?: The Ethics of Biomedical Enhancement*. (Oxford: Oxford University Press), 36.

¹¹ Farah Focquaert and Maartje Schermer further discuss the nature of direct and indirect means of enhancement, from the perspective of passive and active interventions in “Moral Enhancement: Do Mean Matter Morally?,” *Neuroethics* 8 (2015): 139–151.

ingests a pill aimed at increasing focus, the pill itself acts on her brain directly, bringing about a more focused cognitive state. This pill would thus be considered a direct, biomedical enhancement. In contrast, indirect means to improve focus could involve therapy that requires the recipient's attention and effort, which also affects brain function, but only through the recipient's active participation in the therapeutic process.

An interesting distinction in the literature about biomedical enhancements is the difference between *cognitive* and *physical* enhancement; I posit a distinction based on the intended effects of each type of enhancement.

Physical enhancements are those that affect the body's ability to carry out physical actions (in contrast to cognitive actions, such as thinking). These may facilitate the building of muscle and improve strength, stamina, and control of one's body, and do not directly influence any of the cognitive faculties mentioned earlier. Anabolic steroids, which increase muscle mass are an obvious example in facilitating the building of muscle mass. Beta-blockers, which can reduce tremors, can also be considered a physical enhancement as they enhance control of one's body through decreasing tremors.

Cognitive enhancements differ from physical enhancements in that they improve focus, alertness, memory, and motivation, and can reduce anxiety and stress. The relatively low risks of chemical cognitive enhancements, also called "smart drugs," contribute to their popularity in academic contexts, and have seen

increased use in the United States and Europe over recent years.^{12,13} Some examples of these include: Ritalin and Adderall, which are prescribed to treat attention deficit hyperactivity disorder (ADHD) by improving concentration, Modafinil, which is meant to treat sleeping disorders through increasing alertness and motivation, and, although they are also considered physical enhancements, beta-blockers can also be considered cognitive enhancers as anxiety-reducers, especially among musicians.¹⁴

The risks of cognitive enhancements are usually low, or at least near those of commonly accepted methods of improving alertness, such as caffeine. These could include sleep disturbances and psychological addiction (as opposed to physical addiction). Furthermore, Ritalin has been prescribed to children with ADHD for over two decades—this indicates that it is considered safe enough for some of the most vulnerable members of the population, and no significant dangers have been reported thus far.¹⁵ Even so, the long-term effects of using such enhancements have not been studied extensively, which may pose a risk. Overall, however, it appears that the risks of using cognitive enhancements are relatively low.

¹² Arran Froot, “Use of ‘Smart Drugs’ on the Rise,” *Scientific American*, July 6, 2018, <https://www.scientificamerican.com/article/use-of-ldquo-smart-drugs-rdquo-on-the-rise/>.

¹³ Simon Cotton, “Growing Use of Smart Drugs by Students Could Be a Recipe for Disaster,” *The Conversation*, <http://theconversation.com/growing-use-of-smart-drugs-by-students-could-be-a-recipe-for-disaster-77587>.

¹⁴ Vabren L. Watts, “Beta-Blockers Used by Musicians, Athletes, Students to Enhance Performance,” *The Philadelphia Inquirer*, August 16, 2010, https://www.inquirer.com/philly/health/20100816_Beta-blockers_used_by_musicians_athletes_students_to_enhance_performance.html.

¹⁵ Filippo Santoni de Sio, Nadira Faulmüller, and Nicole A Vincent, “How Cognitive Enhancement Can Change Our Duties,” *Frontiers in Systems Neuroscience* 8 (July 17, 2014), 1-4, <https://doi.org/10.3389/fnsys.2014.00131>.

On the other hand, the risks associated with physical enhancements vary, depending on the enhancement. The use of anabolic steroids and steroid precursors, for example, is associated with risk of blood-clotting problems, high blood pressure and cholesterol, irregular heartbeats, and liver problems, among others.¹⁶ Blood doping, which improves oxygen transport to muscle, aerobic capacity and endurance, increases the risks of blood clotting and stroke. Beta blockers which reduce tremors and anxiety can lower blood pressure, slow the heart rate, cause sleep disorders and induce spasm of the airways. Peptide hormones and growth factors—meant to stimulate the production of hormones in the body—are associated with a variety of negative effects: hypertension, blood cancers, anemia, strokes, heart attacks, pulmonary embolism, and thyroid problems, among others.¹⁷ Compared to the cognitive enhancements I described, physical performance-enhancing drugs seem to carry more health risks. These health risks may influence whether they would be permissible to use, on the Kantian view.

¹⁶ Mayo Clinic Staff, “Performance-Enhancing Drugs and Teen Athletes,” Mayo Clinic, <https://www.mayoclinic.org/healthy-lifestyle/tween-and-teen-health/in-depth/performance-enhancing-drugs/art-20046620>.

¹⁷ “Effects of Performance-Enhancing Drugs | USADA,” U.S. Anti-Doping Agency (USADA), <https://www.usada.org/athletes/substances/effects-of-performance-enhancing-drugs/>.

PART I

Understanding the Kantian Duty to Self-Perfect

I.A. Introduction to Part I

In this section, I review interpretations of the Kantian duty to self-perfect, and show that the duty to strive for self-perfection is an imperfect duty to oneself. This understanding of the duty to self-perfect protects the Kantian from requiring the adoption of any and all means available to pursue self-perfection, leaving open a menu of choices for the agent. This understanding also permits the use of biomedical enhancements under certain conditions: that the biomedical enhancement does not pose any significant risks that would inhibit the user's capacities to fulfill their moral duties.

I.B Self-Perfection as an Imperfect Kantian Duty

Kantian moral duties can be divided into two types: perfect and imperfect duties.¹⁸ A perfect duty requires only that the agent refrain from performing a moral transgression, or violation of the categorical imperative. A perfect duty is also narrow, meaning that it is specific to a maxim. To illustrate, if stealing another's property violates the categorical imperative, then it is one's perfect duty to refrain from stealing another's property. Notably, a perfect duty is also a negative duty—it specifically requires that the agent to *refrain* from an action, rather than actively strive to achieve some end.

¹⁸ AK 6: 240.

In contrast, an imperfect duty requires that the agent strive to achieve some end. Since an end can be achieved through a variety of different means, an imperfect duty “leaves a latitude for free choice,” so that it “cannot specify precisely in what way one is to act and how much one is to do by the action for an end that is also a duty.”¹⁹ Since an imperfect duty allows for a latitude of choice, it is considered a wide duty, which stands in contrast to a perfect, narrow duty. An imperfect duty is also a positive duty which does not specify how, exactly, to achieve that goal. By positive duty, I mean a duty to actively do something to achieve some end, unlike negative duties which tell us which actions we are to avoid.

Kant argues that the duty to strive for self-perfection is an imperfect duty.²⁰ This understanding of the duty to strive for self-perfection means that there is not a prescribed way to achieve self-perfection, and that the agent has a latitude of choice on how “to advance one’s own nature, personality, and moral perfection on the basis of critical self-reflection.”²¹ Kant importantly clarifies that the fulfillment of imperfect duties is also constrained by perfect duties; we cannot violate a perfect duty in pursuit of self-perfection, for example.²²

¹⁹ AK 6: 390.

²⁰ AK 6: 240.

²¹ Katharina Bauer, “Cognitive Self-Enhancement as a Duty to Oneself: A Kantian Perspective,” *Southern Journal of Philosophy* 56 (2018): 36-58, DOI: 10.1111/sjp.12267.

²² AK 6: 390.

I.C. Self-Perfection as a Duty to Oneself

Kant's duty to self-perfect is also a duty to oneself, a kind of duty which has raised numerous objections.²³ One such objection²⁴ plays out in the following way:

P1. A duty cannot be released by the person who owes a duty to someone.

P2. A 'duty to yourself' would allow you to release the duty.

C. You cannot have a 'duty to yourself,' because you can release it.

At the surface, such an objection makes sense: P1 defines a necessary feature of a duty more generally and P2 takes advantage of the notion that having a duty towards someone confers on the duty 'recipient'—the person to whom the duty is owed—the unique capacity to release the duty from the person who has the duty. In other words, on the objector's view, if you are owed a 'duty to yourself,' you would be able to release it. The objector concludes that it is incoherent to owe and to be able to release a duty at the same time, by virtue of a duty requiring the person who owes to be unable to release the duty. When a single person is both the person who owes and is being owed the duty, this is impossible. In other words, being able to release a duty then disqualifies us from owing the duty—we cannot be allowed to release a duty we owe to someone, on the objector's view.

Although this objection describes well what duties are like intuitively, I argue that it does not successfully object to Kant, because P2 does not apply in the case of the Kantian duty to oneself: we *cannot* release ourselves from this

²³ Lara Denis, "Kant's Ethics and Duties to Oneself," *Pacific Philosophical Quarterly* 78, no. 4 (1997): 321–48, <https://doi.org/10.1111/1468-0114.00042>.

²⁴ Marcus G. Singer, "On Duties to Oneself," *Ethics*, 69 (1959): 202–5.

duty, because of our nature as moral agents. Kant claims that we have this duty to oneself out of respect for being the kind of moral agents who have humanity, in the Kantian sense of the term.²⁵ Lara Denis summarizes this idea neatly: “[s]ince obligation works by our recognizing the worth of our own and others’ humanity as a constraint on our choice of action, we cannot release ourselves from duties to ourselves.”²⁶ In other words, since we cannot escape or release this fact about ourselves—that we are moral agents who use reasons to set and pursue our goals, we cannot just release this obligation, which defeats P2.

However, a new problem arises with such a response: if a duty confers a right to release that duty onto the person who is owed the duty, and we cannot release it, that would also conflict with the concept of a duty. So, we cannot have a duty to oneself on this understanding either, according to the objector. Even so, I think we can quell this concern by looking to features of the moral duties and the rights they confer toward agents other than yourself in the Kantian framework. The other moral duties in Kant’s framework—those directed toward other moral agents—cannot be released by those agents either, by virtue of respecting their own humanity, too. They cannot simply opt-out of being moral agents worthy of being treated as ends in themselves. So, on the Kantian view, the fact that there are rights that cannot be released does not seem to be a problem, when considering who we are as moral agents. Even more generally, some argue that there are rights that cannot be given up.²⁷

²⁵ Denis, “Kant’s Ethics and Duties to Oneself,” 335.

²⁶ *Ibid.*

²⁷ See Diana T. Meyers, *Inalienable Rights: A Defense* (Columbia University Press, 1986) for a deeper discussion on inalienable rights—rights that cannot be released under most, or even any, circumstance.

Why is it not possible to release these rights, on the Kantian view? Kant claims we have duties to ourselves and to others that we cannot opt-out of by virtue of our rational nature, which is composed of our humanity and personality: “the capacity to set, organize, and pursue ends” and “the capacity to make the moral law a sufficient incentive for choice,” respectively.²⁸ To illustrate why this is compelling, we can think about how Kant derives his moral law (in the form of the categorical imperative) in the first place: when pursuing any kind of goal, rational agents use reasons to decide how to pursue their ends. For example, when someone is thirsty, the reason they prepare a glass of water is to relieve their thirst. It would not be in accordance with their goal to eat salty foods (if they know this increases thirst). We are rational agents, because we use reasons to achieve our goals. It would thus be logically incoherent to intentionally perform some action that frustrates pursuit of a goal (knowing that the action is counterproductive), and then claim that the reason we chose to do such an action is to pursue our goal. In the same way, if a rational agent is to pursue a goal, it would be incoherent to try frustrating this pursuit by inhibiting her humanity, or her capacity to set goals and pursue them. Thus, the duty to oneself and to others cannot simply be released—but these are both coherent on Kant’s view. Thus, the objector’s understanding of a duty as requiring the duty ‘recipient’ to have the right to release the duty does not apply to the Kantian account, so it does not object adequately to a duty to oneself.

Now moving on from this objection, another objector could posit that moral duties have to relate to others because we already care about ourselves

²⁸ Denis, “Kant’s Ethics and Duties to Oneself,” 325.

naturally. In other words, moral duties are supposed to make us care about others. Along a similar line of thought, some also object by claiming that duties to oneself are just claims of self-interest. To respond to these objections, I would like to point out that a moral obligation involving our striving for self-perfection actually does have impact on those around us. This is clear when we consider how pursuing the development of capacities that make it easier for ourselves to fulfill our moral duties later on impacts how we interact with others: whether we have the relevant skills to assist others and the proper strength of will in order to do the right thing surely influences the wellbeing of those around us.

In this section, I identified the most important features of the Kantian duty to strive for self-perfection. It is a duty to oneself, which does not define the specific way we are to pursue self-perfection and is constrained by our perfect duties. I will be operating with this understanding of the Kantian imperfect duty to self-perfect for the rest of this work.

I.D Permissibility of Biomedical Enhancements

Biomedical enhancements—mood enhancers, cognitive enhancers, and physical enhancers all aim to improve on an agent's existing capacities or create new ones. They are thus a way to strive for self-perfection—one option among the latitude available to the Kantian. The only way the use of biomedical enhancements would be impermissible is if the agent's maxim involving their use violates the categorical imperative. One way that enhancements would violate a perfect duty would involve decreasing the agent's capacity to set goals and pursue them. Trying to frustrate the pursuit of one's goals by inhibiting her

capacity to set goals and pursue them contradicts an agent's pursuit of such an action in the first place.

Thus, taking biomedical enhancements that pose a risk to one's health in such a way that would actively inhibit their capacities would be prohibited. If an enhancement poses minimal risks to the user in terms of inhibiting the agent's capacity to pursue their goals, and their use does not violate the categorical imperative, then they are permissible²⁹. In this way, the enhancements that have lower risks of adverse effects are more aligned with the Kantian duty to strive for self-perfection, than enhancements that have many high-risk effects on the agent's well-being.

Some Concerns

A concern that arises in response to the imperfect duty to self-perfect is that encouraging people to take biomedical enhancements might treat people as a *mere* means to the end of better performance in work.³⁰ Such a concern can be resolved by protecting against such an outcome; we can ensure that we are receiving a person's consent to give them such enhancements and that this person is not coerced or pressured into making this choice for themselves.

Furthermore, given that only the agent herself can set her own ends,³¹ Kantian ethics does not lead to a duty to enhance others (and subsequent

²⁹ Another important feature to achieve permissibility has to do with egalitarian concerns, to ensure that there are not unfair advantages created with unequal access to enhancements. In order to ensure maxims are universalizable, biomedical enhancements would also have to be accessible to all people using them in a given context, or community. For a discussion on the importance of accessibility for permissibility on the Kantian view, see Clewis, "Does Kantian Ethics condone Mood and Cognitive Enhancement?," *Neuroethics* 10 (2017): 349-361.

³⁰ Bauer, "Cognitive Self-Enhancement as a Duty to Oneself: A Kantian Perspective," 44.

³¹ AK 6: 386.

paternalism), unlike consequentialist views.³² While consequentialist views might stress that we owe it to others and to society to self-enhance (that it is a duty to others), the Kantian duty to self-perfect is a duty to oneself. Kant makes this idea very clear when he claims:

“[I]t is a contradiction for me to make another’s *perfection* my end and consider myself under obligation to promote this. For the *perfection* of another man, as a person, consists just in this: that he *himself* is able to set his end in accordance with his own concepts of duty; and it is self-contradictory to require that I do (make it my duty to do) something that only the other himself can do. [original emphasis]”³³

In other words, we cannot force another person’s self-perfection, because only that person can set her own ends to fulfill this moral duty to herself. While we may suggest goals for the person, only that person can adopt her own goals.³⁴

Another concern that arises with the permissibility of biomedical enhancements and the duty to strive for self-perfection is that it may indirectly support social norms of high performance and high output, without attending to social determinants of certain environments (e.g. underfinanced institutions, bad working conditions, lack of accommodations, etc.). In other words, such a duty seems to place the burden of improvement on the individual, rather than

³² Bauer, “Cognitive Self-Enhancement as a Duty to Oneself: A Kantian Perspective,” 28.

³³ AK 6: 386.

³⁴ Martin Gunderson agrees with my view in “Seeking Perfection: A Kantian Look at Human Genetic Engineering,” *Theoretical Medicine and Bioethics* 28, no. 2 (April 1, 2007): 87–102, <https://doi.org/10.1007/s11017-007-9030-4>.

institutions that can implement changes to the work environment. Looking only at the Kantian view on duty to self-perfect, it is not clear how to ensure that people are not pressured into setting ends that align with potentially toxic societal expectations and values.

In response to this concern, I argue that although Kantian ethics may not be able to solve this problem altogether,³⁵ the Kantian duty to self-perfect might be less demanding than its utilitarian counterpart. Utilitarianism would likely *require* high performance and high output to maximize productivity and accommodate societal standards, at the individual's expense. Kantian ethics may not have an inherent bias-correcting mechanism, but it allows the agent a kind of flexibility that utilitarianism cannot, by virtue of the fact that the duty to self-perfect is an imperfect duty to oneself, meaning that our pursuit of self-perfection is not aimed at pleasing others, but rather an expression of respect for one's own capacity to set goals for oneself and pursue them. Furthermore, Kant draws attention to the importance of introspection and self-reflection in the process of fulfilling this indirect duty to self-perfect. He claims that the areas of perfection a person chooses to pursue are "left for [her] to choose in accordance with [her] own rational reflection about what sort of life [she] would like to lead and whether [she] has the powers necessary for it."³⁶ Kant thus takes on a surprisingly empathetic and flexible approach to the development and cultivation of one's capacities.

³⁵ Perhaps referring to Kant's duty to further the happiness of others would be a valuable avenue for resolving this concern, since it seems that pressuring people with disabilities to take on the burdens of conforming to societal expectations does not further their happiness. See AK 6: 388 for an introduction on this duty.

³⁶ AK 6: 445.

Thus, the use of biomedical enhancements is permitted on the Kantian view, if their use carries minimal risks and does not violate any perfect duties. The concerns that arise with this duty to strive for self-perfection, including the potential to treat people as mere means and to unjustly burden the individual with improvement in workplaces, can be resolved.

I.E. Potential for Requiring Enhancements as Part of a Profession

Although Kantian ethics does not require us to self-perfect in a specific way, I argue that it could be used to assess the potential for new duties to use biomedical enhancements in high-stakes professions, such as medicine and transportation. Namely, I think the adoption of Kantian values would prevent the requirement of such a duty in professional contexts. To make my argument, I will respond to the reasons brought forward by Filippo Santoni de Sio, Nadira Faulmuller and Nicole Vincent, who think there is good reason to suspect that professionals may be required to take cognitive enhancers for their work in the future, since the use of such enhancements would improve the safety and outcomes of those served by these professions.

Assessing Precedent

Santoni de Sio et al. argue that we can expect certain professions—those with high stakes and little room for error such as airplane pilots and surgeons—will eventually require the use of cognitive enhancements that could improve focus and energy. They begin by pointing out that there are already precedents for such requirements: scientific and technological advancements have already

brought with them the creations of new duties in the medical context, such as the use of antiseptics and carbolic acid for cleansing prior to surgeries and continued education programs. Burdening professionals with such practices at the expense of these individual freedoms expresses the idea that the well-being and safety of the public is more important than respecting professionals' individual freedoms in the workplace.

In response to this example, they rightfully point out that the extent of invasiveness is different between enhancers and cleansers, so this argument by analogy is not effective. The use of enhancements entails consuming a pill of some kind that alters one's cognitive function for an extended amount of time, while the use of cleaning products does not involve ingestion or the alteration of a person's cognitive capacities. Thus, such an analogy is not productive.

The invasiveness of requiring the ingestion of enhancements may be better represented by recognizing the precedent that certain people are already legally required to take medical substances to perform certain activities: people with epilepsy or diabetes cannot operate motor vehicles without medical substances that help prevent adverse events, like seizures and hypoglycemic crises, respectively. Such mandates are usually justified because this practice protects others who may be harmed by the adverse events as a result of not taking drugs. Similarly, the use of ingestible enhancements would likely improve the outcomes of surgeons and pilots, at the expense of these professionals' individual freedoms. Furthermore, in the specific case of surgeons and pilots, there is

already a precedent about fatigue management with caffeine.³⁷ Santoni de Sio et al. thus conclude that, based on precedent, we should expect certain professions to require the use of cognitive enhancements in the future.

In addressing safety concerns associated with the use of cognitive enhancements, the authors point out that the cognitive enhancement methylphenidate has already been prescribed to children for hyperactivity and attention deficit disorders for over two decades, without identifying any negative long-term effects. The fact that they are being prescribed to such a vulnerable population indicates that they are deemed safe enough for use.

Some counterindications could include the fact that the efficacy of pharmacological enhancers has not been established yet, and that laypeople are suspicious of enhancers in general.³⁸ However, I would say that these counterindications seem capable of being resolved with more public exposure and time, and they would likely already be resolved by the time questions about requiring the use of enhancements arise in policy decisions.

Kantian Considerations Would Not Require Enhancements

Although courts may argue the way Santoni de Sio et al. describe, it is clear that the adoption of a Kantian perspective would prevent professionals from being required to take such enhancements, if we treat this as a case of forcing another person to self-perfect. Kant immediately disqualifies such behavior as a moral duty, since it does not respect the agent's capacity to set goals

³⁷ Santoni de Sio, Faulmüller and Vincent, "How Cognitive Enhancement Can Change Our Duties," 2.

³⁸ Ibid, 3.

for herself.³⁹ However, a related question can be posed here: should the surgeon herself feel compelled to self-perfect through the use of biomedical enhancements?

I argue that surgeons should not feel required to take biomedical enhancements as a means to self-perfect. This is the case for the same reasons that Kantians are not required to use biomedical enhancements specifically in pursuing the end of self-perfection: when adopting an end, there are many ways to reach that end. Unless a practice violates a perfect duty or actively works against achieving the end of self-perfection, people have the choice in selecting the specific ways they choose to pursue it. Although this may seem trivial on the surface, it is important to point out that another person's health and life is very closely connected to the surgeon's skills and striving for self-perfection, unlike in cases where someone might want to, say, learn a language, which is not as clearly connected to another's life and wellbeing. A person's life depends on the surgeon's expertise—is it really permissible to not maximize one's skills wherever possible, with such high stakes?

We can begin by identifying the surgeon's ends. In the surgeon's case, her ends include improving the safety of her patients and the rate of success of her operations, at a minimum. Indeed, the use of cognitive enhancements aimed at improving the surgeon's focus and energy during an operation aligns with these ends. It is also the case that if a surgeon were to get enough sleep, practice simulated surgeries often enough to build up stamina, or successfully convince their place of work to set limits on the number of work hours per week, there

³⁹ AK 4: 388.

may be similar effects on focus and energy.⁴⁰ Thus, there is a variety of methods that can achieve the surgeon's ends; the surgeon need not take cognitive enhancements in order to pursue this end.

Would refusing to take cognitive enhancements work *against* achieving the surgeon's ends of improving patient safety and rate of operation success? I argue that this is not the case. Although the outcome of not taking cognitive enhancements may be worse compared to the outcome associated with taking enhancements in terms of pursuing the surgeon's ends, in itself, refusing to take enhancements does not *decrease* patient safety or the success of the operation compared to the surgeon's state prior to the choice of refusing enhancements. This distinction can be illustrated by a surgeon who intentionally chooses not to rest from work in a way that decreases her energy going into an operation; this choice makes the surgeon worse off *compared to the surgeon's prior state*. In short, in the case of using enhancements, the later state is the same as the prior state of the surgeon who refused enhancements; in the case of refusing to rest, the later state is worse than the prior state.

One may object by pointing out that such reasoning may fail when considering the use of sterilizing equipment and hand washing prior to surgery. Perhaps the surgeon could just wear personal protective equipment and skip out on sterilizing equipment and hand washing; compared to the "prior state" of not having on any equipment at all, this is surely a better way to try improving the

⁴⁰ A study about the effects of modafinil on sleep-deprived surgeons when completing a simulated surgery reports that there are no clear improvements with the use of modafinil, surprisingly. See Colin Sugden et al., "Effect of Pharmacological Enhancement on the Cognitive and Clinical Psychomotor Performance of Sleep-Deprived Doctors: A Randomized Controlled Trial," *Annals of Surgery* 255, no. 2 (February 2012): 222–27, <https://doi.org/10.1097/SLA.0b013e3182306c99>.

state of the patient's safety. This objection speaks to concerns about the features relevant to the "prior state" in question, which I will now address.

In response, I propose that the relevant features of the "prior state" can be described by identifying the reasons for certain actions aimed at changing the "state" in question. In the case of this objection, the reasons for using personal protective equipment, sterilizing equipment, and hand washing is to minimize the patient's *infection risk*, which is tied to patient safety. Thus, when talking about "prior state" in this example, we are talking specifically about the "prior state" of the *patient's infection risk*. While a surgeon's focus and energy upon starting an operation do not clearly change, a patient's infection risk clearly increases from her prior (pre-surgical) state to her state during the surgery. Furthermore, a surgeon's focus and energy are not clearly tied to infection risk. All of the aforementioned methods—using personal protective equipment, sterilizing equipment, hand washing prior, and others—make up for this worsened circumstance in terms of infection risk. When the surgeon has the goal of patient safety, and the patient undergoes a procedure in which they are at increased risk to frustrate this goal, it makes sense to make up for the risk, so that there is a net likelihood of achieving the goal. Otherwise, if there is a net risk of frustrating the goal through a given action, it would be contradictory to adopt such an action.

Recognizing the subject of the prior state is crucial. The patient's infection risk changes for the worse compared to the prior state of infection risk just by undergoing the surgery, and action must be taken to make up for this if the surgeon is to coherently pursue her end of patient safety. On the other hand,

in the case of refusing cognitive enhancements, the “prior state” is that of the surgeon’s focus and energy—which is also tied to patient safety—but it is not clear that a surgeon’s focus and energy changes for the worse by starting an operation. Surgeons are already very good at what they do, which requires having developed an appropriate level of focus and energy to perform operations; otherwise, they would not be licensed to perform them. The same goes for airplane pilots and bus drivers.

In short, refusing cognitive enhancements does not result in a worsened state, compared to the prior state of a surgeon’s focus and energy. An objection to this principle, involving decreased use of procedures that minimize infection risk does not work, because the state of the infection risk already increases due to surgery, so actions must be adopted to make up for this worsened state, in order to coherently pursue the end of patient safety. Surgeons, airplane pilots, and bus drivers all have alternative methods of improving focus and energy in their professions: insisting their places of work limit the number of working hours each week and practicing their skills to improve stamina are other methods available to them. Thus, according to Kantian considerations, it is not necessary that professionals feel obligated to use cognitive enhancements on their own. If these enhancements pose minimal risks, workplaces may make them accessible and encourage their use, but requiring them should not be necessary, if institutions were to adopt Kantian considerations. Most importantly, there are already licensing criteria in place to ensure that surgeons and pilots perform at a level high enough, so that any improvements in patient

safety would be almost negligible, compared to the training and resources in place to get them to such a high level of performance.

PART II

Effort and Praiseworthiness

II.A Introduction to Part II

In the previous section, I described how the Kantian duty to self-perfect is an imperfect duty, meaning that it is a positive duty that leaves the specific goals of self-perfection up to the agent to reflect on and adopt, as long as the maxim upon which she is acting are morally permissible—meaning that it does not violate the categorical imperative.

In this section, I hope to show how the Kantian duty to self-perfect may lead to the capacity for evaluating the moral worth of actions that we may not traditionally consider to be morally relevant. To illustrate, if a person adopts learning a foreign language in order to fulfill the duty to self-perfect and are sufficiently motivated by this motive of duty, then their foreign-language acquisition can merit moral praise. Next, I will develop the ideas of Robert Clewis, who argues that the use of biomedical enhancements is valuable, because it allows us to overcome counterproductive dispositions.⁴¹ I aim to demonstrate how his argument somewhat misses the point that Kant makes about the value of overcoming counterproductive dispositions: overcoming these dispositions is valuable, because it trains the person—helps prepare them—to fulfill their moral duties later on, making the overcoming of dispositions something like an indirect moral duty. It is a way of training one's cognitive capacities to better perform self-rule—to make morally permissible decisions

⁴¹ Robert Clewis, "Does Kantian Ethics Condone Mood and Cognitive Enhancement?," *Neuroethics* 10 (2017): 357, <https://doi.org/10.1007/s12152-017-9302-2>.

based on moral duty and reason. I will substantiate this argument by referring to the case studies Kant presents in the *Groundwork of the Metaphysics of Morals*, regarding actions that have moral worth.

I will then discuss how biomedical enhancements affect the praise we assign to projects completed with their use. I will outline how Hans von Kriegerstein's argument that the level of effort used by a person should correlate to the level of achievement and praise granted to the agent. When biomedical enhancements increase the energy, time, and other effort-associated resources available to an individual, they reduce the 'percentage-effort' a person expends in pursuing a goal. Since biomedical enhancements increase the mental resources available to an agent, thus decreasing the percentage-effort a person expends, an agent's action merits less praise as an achievement with the use of biomedical enhancements. I will conclude Part II with a discussion of the practical applications of the conclusions I reached thus far in my project. Namely, I will discuss how award-granting institutions may be affected by the use of biomedical enhancements, if they were to adopt the Kantian view.

II.B Establishing Skill-Building Projects as Morally Valuable

In focusing only on the categorical imperative and the perfect duties it prescribes, Kantian ethics takes on a fairly conservative character; it seems only to define negative duties—maxims we should *not* act on towards others—rather than positive duties—or maxims we should actively pursue, as opposed to what we are simply permitted to do. However, once we take into account Kant's claims

about imperfect duties to oneself and indirect moral duties, this ethical framework seems to demand more of the agent.

In this section, I argue that skill-building projects motivated by the duty to self-perfect can be considered morally valuable, meaning they have moral worth. This is a vital step in this project, because once we recognize skill-building projects as morally valuable in the Kantian framework, we can assign them moral praise. Once this is established, we can apply moral reasoning to the assignment of praise for certain projects that do not necessarily involve moral obligations towards other people. This allows for the moral assessment of projects such as creative endeavors, learning, sports, and the like, which are traditionally considered only morally-permissible, not morally-valuable. My argument can be structured in the following way:

P1. Moral praise can be assigned to an action if and only if that action has moral worth.⁴²

P2. Moral worth can be assigned to an action if and only if the action was done, because the agent was sufficiently motivated by their moral duty.⁴³

C1. Moral praise can be assigned to an action if and only if the agent was sufficiently motivated by their moral duty.

P3. The striving for self-perfection is a moral duty.⁴⁴

P4. Skill-building is an instance of striving for self-perfection.

⁴² AK 4: 398.

⁴³ AK 4: 398.

⁴⁴ AK 6: 445-447.

C2. If skill-building is motivated by moral duty, then it merits moral praise.

This argument is fairly straightforward. Premises 1-3 were derived from Kant's primary texts. Premises 1 and 2 make sense, given Kant's assessment of moral worth in the *Groundwork*: an action "has no true moral worth" unless it is done "not from inclination but *from duty*," and it makes sense to praise actions that carry this special "esteem" conferred by moral worth on Kant's view.⁴⁵

Regarding premise 3, Kant clarifies that "[i]t is man's duty to strive for this perfection, but not to reach it... and his compliance with this duty can, accordingly, consist only in continual progress."⁴⁶ In other words, Kant does not expect a person to reach perfection, but a person can set *striving for* perfection as her end. In this way, Kant evades the objection that a person cannot be expected to do something they cannot actually accomplish, in other words, the idea that "ought-implies-can" is satisfied here. One ought to strive for perfection, because they can strive for perfection—not achieve it.

Premise 4 is an illustration of premise 3; skill-building is a general term that can be applied to any one of the three categories of capacities Kant describes: powers of spirit, mind, and body. Powers of spirit are "of the sort to be found in mathematics, logic, and the metaphysics of nature," and "whose exercise is possible only through reason."⁴⁷ Powers of mind are those which "include memory, imagination, and the like, on which can be built learning... which

⁴⁵ AK 4: 398.

⁴⁶ AK 6: 447.

⁴⁷ AK 6: 445.

furnish instruments for a variety of purposes.”⁴⁸ Finally, powers of the body are those which are “looking after the *basic stuff* (the matter) in man, without which he could not realize his ends [original emphasis].”⁴⁹ Indeed, a person can train and perfect skills within any of these categories, to better equip herself to set any kinds of ends for herself and pursue them. Since Kant categorizes the striving for perfection as an imperfect moral duty to the agent herself,⁵⁰ when a person is sufficiently motivated by duty, then the action merits moral praise.

II.C Value in Overcoming Counterproductive Dispositions

Now that we have established how skill-building can be morally valuable, we can investigate how biomedical enhancements influence the praise we assign actions, if they are motivated by moral duty. In this section, I will respond to the ideas of Robert Clewis, who argues that the use of biomedical enhancements is valuable because it helps us overcome our negative dispositions and concludes that the use of enhancements is permissible on the Kantian account.⁵¹ However, I would like to develop his discussion on the *value* of enhancements, rather than simply their permissibility, which can be determined by the categorical imperative alone. Of note, although Clewis uses the term *neuroenhancements* in his work, this term and the one I use in this project, *biomedical enhancements*, are interchangeable, since both enhancements function to improve a person’s capacities directly.

⁴⁸ AK 6: 445

⁴⁹ AK 6: 445

⁵⁰ AK 6: 446-447

⁵¹ Clewis, “Does Kantian Ethics Condone Mood and Cognitive Enhancement?,” 360.

The argument Clewis presents can be outlined in the following way.⁵²

P1. It is valuable (on the Kantian account) to overcome our dispositions that stand in the way of achieving our goals.

P2. Certain neuroenhancements help us overcome our dispositions that stand in the way of achieving our goals.

C. Using certain neuroenhancements is valuable.

This argument is quite straightforward; Premise 1 is supported by Kant's account of what kinds of actions are valuable (or worthy of praise): those that are motivated by moral duty, especially if they require overcoming negative dispositions to do the right thing.^{53,54} Since I will not be investigating the persuasiveness of Kantian ethics fundamentally, we can grant this. Premise 2 does not require a deep investigation either; we can consider mood enhancements that make it easier for people to be kind towards others to help them or cognitive enhancements that improve focus to help complete work. Both examples illustrate how certain enhancements can overcome dispositions—rudeness or tendency to distraction, respectively— that stand in the way of projects such as helping others and getting work done, respectively.

One objection to this argument is that *self-rule* is the valuable feature of overcoming counterproductive dispositions; Kant asks us to control our emotions and dispositions, rather than “attempt to get rid of” them.⁵⁵ Self-rule can be understood as “*governing* one's passions, [original emphasis]” according

⁵² Clewis, “Does Kantian Ethics Condone Mood and Cognitive Enhancement?,” 357.

⁵³ AK 4: 398.

⁵⁴ AK 6: 228.

⁵⁵ Clewis, “Does Kantian Ethics Condone Mood and Cognitive Enhancement?,” 359.

to Kant,⁵⁶ who goes on to say that we have a moral obligation “to bring all [our] capacities and inclinations under [our] (reason's) control and so to rule over [ourselves], which goes beyond forbidding [us] to let [ourselves] be governed by [our] feelings and inclinations (the duty of *apathy*); for unless reason holds the reins of government in its own hands, [our] feelings and inclinations play the master over [us]. [original emphasis]”⁵⁷ In other words, self-rule is the ability to be motivated by reasons alone to act a certain way, and it involves using reason to overcome our emotions and dispositions; responding to reason is the force behind an action in the case of self-rule. The objector points out that in introducing some enhancement to more easily perform a certain action, reason plays a smaller role in the agent’s motivation to act, which reduces the self-rule required to perform an action. In this way, self-rule is not enhanced.

A response to such an objection can proceed like this: enhancements actually provide “*more* self-rule, to enable better or more efficient handling of negative moods and cognitive obstacles,” as put forward by Robert Clewis.⁵⁸ In this way, enhancements do not stand in the way of our self-rule, but actually promote this valuable capacity. We may know the reasons and feel compelled by the reasons for which we should pursue a course of action, but we cannot get ourselves to perform the action dictated by reason alone, so we employ an enhancement to help fulfill our goal.

This response puts forward an interesting perspective on what it means to have reason “govern” our passions: it seems to claim that when recognizing

⁵⁶ AK 4: 407.

⁵⁷ AK 4: 408.

⁵⁸ Clewis, “Does Kantian Ethics Condone Mood and Cognitive Enhancement?,” 359.

that reasons alone may not have enough motivational force, it is an instance of self-rule to use other methods to fulfill what is dictated by reason. It moves the question of what self-rule involves back a step, but is it still considered an instance self-rule if the force of reason *alone* is not enough to perform an action? To better illustrate this distinction, we can imagine an individual who observes someone drowning in a lake. This individual reasons that she has the skills to save the drowning person and wants to help, but she finds herself frozen in fear. She turns to another person nearby and asks to give her a push into the water, because she knows she will not be able to overcome this fear on her own. The individual is pushed into the lake and successfully saves the drowning person, as she was motivated by reason to do. This is the type of self-rule Clewis speaks to; the objector would deny that the individual exercised self-rule successfully, because they could not overcome their fear by reason alone.

Unfortunately for Clewis, Kant seems to take on the more conservative lens of this objector. He encourages us to develop our self-rule in a way where “reason holds the reins of government in its own hands,”⁵⁹ which seems to indicate a direct influence of reason on the adoption of a course of action, and truly overcoming passions through reason alone, not just reducing them. By introducing enhancements as an intervention, we are not strengthening reason’s force, but reducing passions that stand in reason’s way.

Given Kant’s conservative view of self-rule, it thus seems misplaced to claim that biomedical enhancements promote self-rule, when they do not

⁵⁹ AK 6: 408.

influence the force of reason directly. Instead, they target the passions.⁶⁰ So then, how can enhancements be valuable? I argue that we can save the value of enhancements, by recognizing that it is valuable to reduce negative passions that inhibit the fulfillment of our moral duties in Kant's view, because there is an *indirect* moral duty to develop one's passions in a way that make it easier to fulfill direct moral duties. Since biomedical enhancements can improve our passions, if motivated correctly, their use would be valuable because they fulfill an indirect duty.

I think Kant would be sympathetic to this idea; he even claims that it is an "indirect duty to cultivate the compassionate natural (aesthetic [*ästhetische*]) feelings in us, and to make use of them. [original italics]"⁶¹ We can also look to the *Groundwork of the Metaphysics of Morals* for an account of indirect duties: Kant describes a case in which "a sufferer from gout" is no longer inclined to preserve his happiness due to his "groundless expectations" of having perfect health, but continues to attempt to achieve happiness by "choos[ing] to enjoy what tastes good and to suffer what he must."⁶² Kant claims that this sufferer from gout is fulfilling his moral duty by remaining in an acceptable state of happiness, because this would deter him from transgressing moral duty in searching for morally-impermissible means of achieving happiness. This preservation of "an acceptable state of happiness" can be understood as an indirect moral duty, since the person would be preserving and improving his ability to intentionally choose

⁶⁰ I would like to thank Professor Janum Sethi for her especially valuable insight here—helping me bridge my account of indirect duties with the duty to strive for self-perfection.

⁶¹ AK 6: 457.

⁶² AK 4: 399.

to make the morally permissible decision, even if it is through nurturing dispositions, rather than self-rule. Kant supports and praises the nurturing of such positive dispositions, when he states that a behavior which “serves the common good and is in conformity with duty... is thus worthy of honor” and “deserves praise and encouragement.”⁶³

This indirect duty to facilitate the fulfilment of direct duties through the cultivation of favorable passions is clearly associated with the imperfect duty to strive for self-perfection. In fulfilling such an indirect duty, an agent also fulfills the duty to strive for self-perfection, since she is developing her powers of mind—those capacities that are neither related to reason itself nor the body’s physical ability.⁶⁴

The inclusion of such indirect moral duties in Kant’s theory also resolves an objection that is frequently raised when assessing praiseworthiness of an action on Kant’s view: if a right action merits more praise when it is more challenging to do the right thing, then we should try to hate others, so that it is harder to do the right thing, granting our actions more praiseworthiness, in this way. Once we account for the idea of an indirect duty on Kant’s view, this objection is resolved, since it seems right to hold the agent blameworthy for making it easier for herself to do things that are morally impermissible—violating her indirect duty.

⁶³ AK 4: 398.

⁶⁴ See AK 6: 445 for a detailed description of the powers of mind, spirit, and body Kant has in mind. He describes the powers of mind as those which include “imagination” and which “furnish instruments for a variety of purposes;” which seem most closely connected to cultivating passions that align with reason’s ends.

This idea of an indirect duty raises another important point about Clewis's account: it seems like the understanding of enhancements Clewis employs does not account for the nuance that arises when we recognize that some enhancements can help an agent realize her immediate goals, but do not require improving any passions or capacities for future situations, which is a requirement of the duty to strive for self-perfection.

Without the intention of fulfilling an indirect duty or the duty to self-perfect, the use of biomedical enhancements is only 'valuable' in the practical sense of reaching one's goals—meaning it is valuable in fulfilling hypothetical imperatives only. Hypothetical imperatives, according to Kant, "represent the practical necessity of a possible action as a means to attain something else which one wills,"⁶⁵ meaning that the action being willed is good as a means to achieve something else other than fulfilling moral duty and does not have moral character like actions motivated by moral duties do.

Indeed, the use of biomedical enhancements, as described by Clewis, may enable easier fulfillment of one's goals at the time it is used, but it does not guarantee that the agent wants to improve herself—specifically her capacities (powers of spirit, mind, and body, to use Kant's terms). So then, how can we make an assessment about moral worth and grant the praise that comes along with it, if we cannot identify an agent's true motivations?

Kant himself recognizes this difficulty; he agrees that the intentions in "the depths of the human heart are unfathomable."⁶⁶ I posit that perhaps

⁶⁵ AK 4: 414.

⁶⁶ AK 6: 447.

identifying how the agent is working to improve the likelihood of choosing and successfully achieving the right action for the future, rather than simply facilitating its fulfillment each time they are faced with a choice is an appropriate indicator for whether we can assign moral value, or worth, to an action, and to grant the agent the praise that comes along with it. I think this is the case, because the former expresses the intent of improving the agent's powers of spirit, mind, and body; it fulfills the agent's indirect duty to nurture inclinations that align with reason's ends. The latter seems to focus on fulfilling hypothetical maxims, without a stronger regard for improving the agent's own capacities or passions out of respect for her humanity. A practical illustration of the former could include focused self-reflection and skill-building, even if it is facilitated by the use of biomedical enhancements that improve focus. In this case, the agent is still putting in work: she is the one who needs to come up with the content of her reflection and utilize her powers of mind and spirit to perform the skill-building exercises, respectively. A biomedical enhancement such as a mood enhancer or energy-booster could enable her to stay motivated in these activities, or simply allow her to access the capacity to use the relevant mental work. Thus, when faced with a moral dilemma, she will have some of her own capacities better prepared to make the right decision and fulfill the tasks required of her to resolve the situation. She might even be better able to employ self-rule in such a case, if she nurtures her responsiveness to reason.

If we grant that the use of biomedical enhancements in the agent's self-improvement process is morally-valuable, it appears that Clewis is right to conclude that certain biomedical enhancements are valuable, but not because

they enhance self-rule, but because they influence the passions in a way that fulfills an indirect duty. Valuable enhancements deserving of moral praise would include those which allow for or enable self-improvement in the agent, in a way that makes it so that the agent is more prepared to exercise self-rule in the future.⁶⁷

Even if concerns about the moral value and praiseworthiness of using biomedical enhancements are resolved, how can we know how much of a person's self-improvement can be attributed to the agent herself, if she used biomedical enhancements along the way? It seems like an agent has less ownership of her achievements using biomedical enhancements, compared to the case where she does not use them. If the agent herself is not the only 'actor' responsible for the fulfillment of the goal, how can we assign her moral praise? I will continue to develop the connection between effort and enhancement in Section II.D.

II.D Biomedical Enhancements and Effort

Now that we have established that the use of certain biomedical enhancements could still allow for an agent's actions to have moral value (and thus moral praise), we can further investigate whether effort should play a role in our assessments of praise as well. In this section, I will outline and develop an argument presented by Hasko Von Kriegstein, who describes and defends the

⁶⁷ As a last note to respond to objections about self-rule, Clewis claims that even if enhancements alter dispositions, rather than promote self-rule, we cannot expect to "completely get rid of emotions such as fear, dread, or anxiety." Thus, there will always be some challenge to overcome and exercise some extent of our own self-rule over. For someone who might hold a more conservative view of self-rule, this might be a way to lessen concerns about reducing dispositions, rather than overcoming them with the use of reason, or self-rule.

vital connection between exerted effort and the degree of an achievement, which can inform how much praise we should assign to some achievement, more generally.⁶⁸ I then hope to bridge this argument to the Kantian framework.

How Effort Affects Achievement

I will adopt the understanding put forward by Hasko Von Kriegstein, about the relationship between effort and achievement. Namely, that the level of effort employed by a person should correlate to the level of achievement and subsequent praise granted to that achievement. He defines “[o]ne’s effort-level” as “the percentage of one’s internal resources (physical and mental) that one employs in a given task.”⁶⁹ To make this argument, Von Kriegstein describes two notions of effort: “percentage-effort” and “absolute-effort,” and that “percentage-effort” is more important in assessing a person’s effort-level.⁷⁰ Percentage-effort can be understood as “a measure of how close the particular agent in question had to go to their limits in order to reach their goal.”⁷¹ Absolute-effort, on the other hand, is the total amount of resources (mostly time, physical/mental energy, and skills) used by a person in pursuing their goal.

In assessing achievements, I argue that percentage-effort should be the preferred notion of effort, because this accounts for the “agent-relative” aspect when assessing achievement. “Agent-relative” achievements are those in which we consider the skills and resources available to an individual. To illustrate why

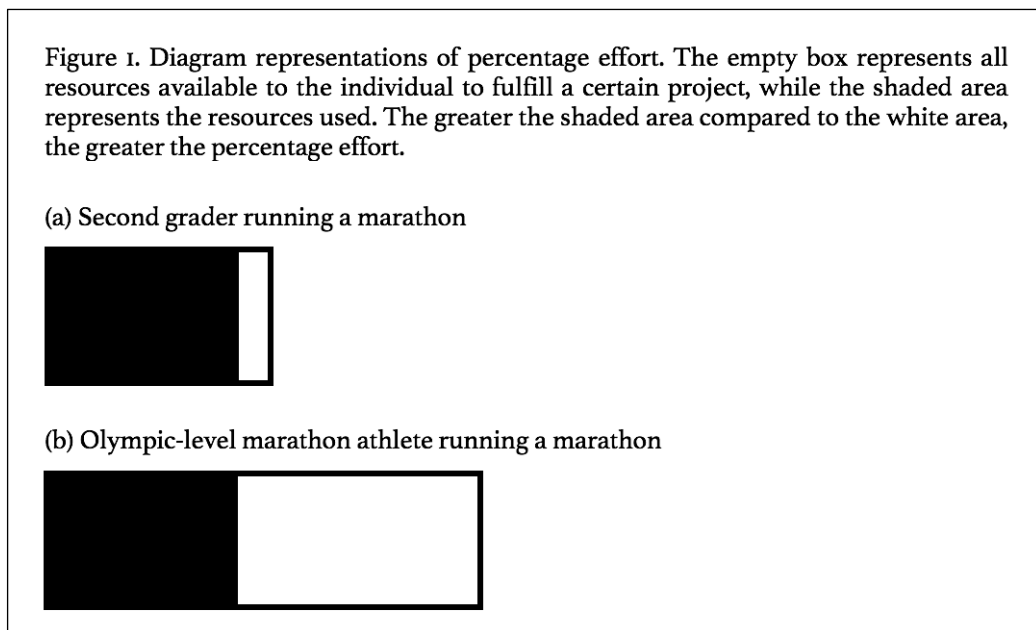
⁶⁸ Hasko Von Kriegstein, “Effort and Achievement,” *Utilitas* 29, no. 1 (March 2017): 27–51, <https://doi.org/10.1017/S0953820816000170>.

⁶⁹ *Ibid.*, 42.

⁷⁰ *Ibid.*, 43.

⁷¹ *Ibid.*, 44.

this notion of effort is compelling, we can consider the case of a second-grade student running a marathon. Certainly, such an achievement is considered more impressive than the same feat being accomplished by an Olympic marathon runner, since the second grader had much fewer resources (physical and temporal) to have prepared for the marathon. Since the percentage effort expended by the second grader is much greater than that of the Olympic runner, this achievement is a much more impressive one (see Figure 1 for a visual representation). Von Kriegstein neatly summarizes the strength of using the notion of percentage-effort: “[i]t is very intuitive to think that it is admirable if someone operates near the limits of their physical and mental abilities.”⁷²



Von Kriegstein introduces more nuance into this account by pointing out that absolute-effort still plays a role in the determining the level of an

⁷² Von Kriegstein, “Effort and Achievement,” 44.

achievement. He points out that “[w]hen one of two equally skilled agents dedicates more physical or mental resources to a task she will generally be more likely to be successful; and that is so independently of how much such resources she *could* have employed [original emphasis],” because unused resources do not influence the outcome.⁷³ In other words, absolute-effort is a more helpful tool for assessing level of achievement between two individuals with similar amounts of resources at their disposal. Taking this information into account, Von Kriegstein concludes that “it is absolute-effort that enhances achievement in this indirect way.”⁷⁴ Even so, it is percentage-effort that is at the core of his system of assessing achievement, which I will use for my argument.

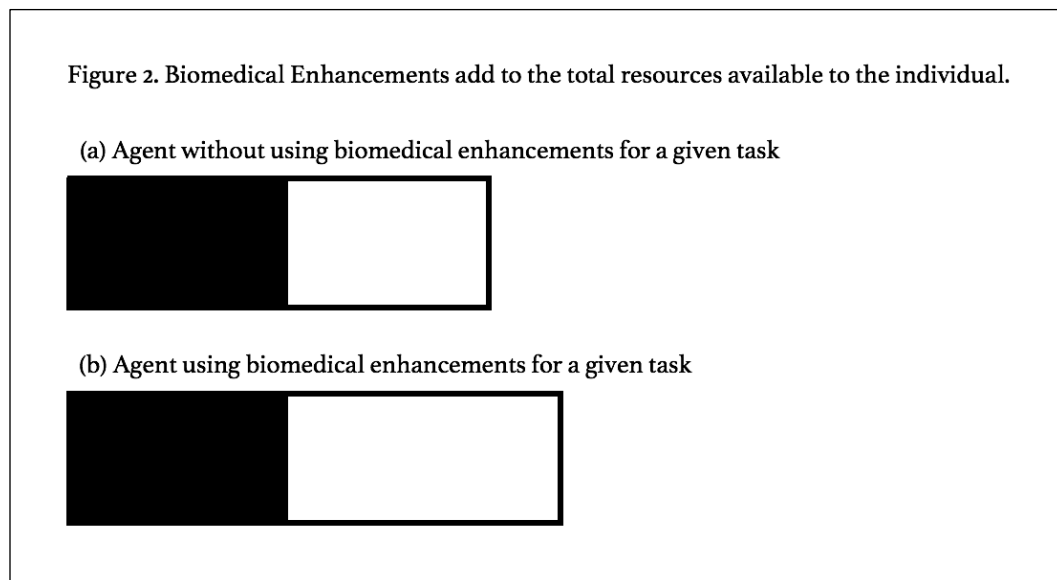
Given this information, I argue that since biomedical enhancements decrease the effort required to build a skill or complete a project (by improving the efficiency with which they learn such a skill, or increasing the agent’s focus or energy), the projects completed using them should also be considered a lesser achievement and, accordingly, less worthy of praise. This is not to say that the use of biomedical enhancements in the development and self-improvement of an agent’s capacities disqualifies the use of biomedical enhancements from deserving moral value and praise at all. In section II.C, I argued that certain biomedical enhancements which enable the agent to use her relevant capacities to improve upon herself, out of the motive of duty allows her actions to deserve praise. However, it seems like when a person not only fulfills her direct, perfect duties, but also fulfills the imperfect duty of improving her capacities and even

⁷³ Von Kriegstein, “Effort and Achievement,” 44.

⁷⁴ Ibid.

inclinations via an indirect duty, there is more effort going into a person's actions overall.

Using Von Kriegstein's argument and conception of 'percentage-effort' and 'absolute-effort,' it appears that biomedical enhancements add additional resources for the agent to take advantage of, thus increasing the resources a person has at their disposal and decreasing the percentage effort a person expends (see Figure 2).



Even in questions regarding self-rule, Von Kriegstein presents a compelling explanation for the difficulty in assessing effort applied to an activity and effort in deciding to engage in an activity or forcing oneself to perform an action. He explains "forcing oneself is not the hallmark of a second kind of effort... having to force oneself is the mental task of fighting off tempting distractions. Performing this mental task requires resources and is thus

effortful.”⁷⁵ This idea—that effort goes into performing the mental task of decision making, and that the exertion of our effort is what should correlate with achievement—aligns well with my idea that the effort involved in developing capacities and fulfilling both our perfect and imperfect duties should correlate with the praise we assign these actions.

Kant on Effort and Praise

How can we apply Von Kriegstein’s account of percentage effort and achievement to Kantian ethics, especially regarding the duty to self-perfect? I argue that Kantian ethics would permit such a view and accordingly alter the praise we assign to actions and projects according to the effort an agent put into those pursuits.

It is first important to note that Kant does, in fact, distinguish between moral and regular praise in the *Groundwork of the Metaphysics of Morals*. In discussing regular praise, Kant claims that when some inclination “serves the common good and is in conformity with duty,” it is “worthy of honor,” and “deserves praise and encouragement.”⁷⁶ However, such an inclination does not deserve “esteem,” when “the maxim [on which the agent acted] lacks moral content, namely of doing such actions not from inclination but from duty.”⁷⁷ Thus, it appears that we can grant praise to actions, even if they are not done from the motive of duty, if they are morally-permissible and aid in making the morally-permissible decision. Promoting the adoption of inclinations which

⁷⁵ Von Kriegstein, “Effort and Achievement,” 39.

⁷⁶ Ak 4: 398.

⁷⁷ Ak 4: 398.

“serv[e] the common good and [are] in conformity with duty”—can be understood as an indirect duty, which I described and defended earlier in Section II.C. Moral praise, on the other hand, can come from the moral worth of an action— which is conferred when an agent acts on a maxim from the motive of moral duty.⁷⁸ This is closely related to the idea of self-rule: that an agent is motivated by moral reasons, rather than inclination or disposition. Either way, Kant seems to agree that actions from both kinds of motivations, as long as the action is morally-permissible, deserve some kind of praise and recognition.

This might seem like a somewhat controversial interpretation of praise on the Kantian view: that we can praise both moral and nonmoral actions (like those Von Kriegstein seems to discuss) in the same fashion, if moral praise is deserved due to the action’s special “esteem,” which is not shared with actions that are done from inclination.⁷⁹ Here, I think it’s important to recognize again that Kant himself does not think we can identify with certainty what motivates each of us to act in certain ways. Furthermore, when we praise people outwardly—give them rewards and recognitions for their actions and choices, there do not seem to be any special differences, except the content we are praising them for.

Another concern that might catch the Kantian’s attention is that Von Kriegstein seems to describe effort and the corresponding level of achievement for nonmoral endeavors—those that are not motivated by moral duty. The popular Kantian view is that moral worth is not influenced by effort, and it does

⁷⁸ AK 4: 398.

⁷⁹ AK 4: 398.

not vary in magnitude—the action either has it or does not, depending on whether the agent was sufficiently motivated by duty. If moral worth is the same across the board, how can we grant different levels of praise for it? I am not interested in arguing against this interpretation here, but I think that Kant would be sympathetic to the idea that even if moral worth is the same, the quantity of praise could still correspond to an agent’s percentage-effort, which takes into account the agent’s resources or lack thereof. Kant himself hints at the importance of considering obstacles (such as a lack of resources) in determining the quantity of merit:

“The greater the natural obstacles (of sensibility) and the less the moral obstacle (of duty), so much the more merit is to be accounted for a *good deed*, as when, for example, at considerable self-sacrifice I rescue a complete stranger from great distress [original emphasis].”⁸⁰

Here, Kant posits a positive correlation between the merit of a good deed and the magnitude of “natural obstacles” that had to be overcome to achieve it. These “natural obstacles” could include dispositions, but could also signify a lack of resources, potentially. Interestingly, this statement also accounts for the indirect duty to facilitate the fulfillment of direct duties, when he claims that the smaller the magnitude of “moral obstacles,” the more merit the good deed deserves.

⁸⁰ AK 6: 228.

Thus, Von Kriegstein's account of effort and praiseworthiness can be reasonably applied to Kantian ethics in the assessment of moral action, specifically in the use of biomedical enhancements in striving for self-perfection.

II.E Practical Application

In this section, I will apply the Kantian view I argued for above to current practices, namely, how award-granting institutions should assess work completed using biomedical enhancements. By award-granting institution, I refer to any organization that rewards the people who achieved any kind of creative, research, academic, or athletic project, based on their achievements. These rewards serve to express which achievements are most worthy of praise, or which deserve the largest quantity of praise. These institutions importantly express that the recipient of the award is responsible for their accomplishment.

The inclusion of responsibility in criteria for meriting reward raises the question: do biomedical enhancements do the work for the researcher, artist, academic, athlete, or author? This question was partly answered during the discussion in Section II.C, regarding the role the biomedical enhancements play in the project fulfillment process: the agent must have employed her own capacities to some extent to claim credit for the project fulfillment. The relevant question that should be asked by reward-granting institutions should thus be: are the biomedical enhancements putting in the work or effort relevant to the reward, or are they being used by the agent to allow them to put in the reward-relevant work?

Again, I think we can introduce nuance into this picture: what do people praise about the achievement? Oftentimes, it is the product itself that is considered valuable, rather than the effort put into the work. Thus, just the impact of the work can be assessed, without regard to the resources that the agent had at her disposal. At the same time, it appears especially impressive when a person at a much lower level of resources produces a work that is deemed to have higher quality than or is of equal quality to those with significantly more resources. Could an award-granting institution simply operate to assess only absolute-effort achievements, rather than percentage-effort achievements?

Surely, award-granting institutions can set up their criteria in any way they see fit, but a Kantian assessment might yield interesting results. Given the conclusions we have reached so far, it appears an award-granting institution operating on a Kantian framework should take into account the effort required on the part of the agent in making their selections, so that the different uses of biomedical enhancements at different stages in a person's pursuit of her achievement should inform the praise assigned to them. Importantly, the award-granting institution first needs to define the object of the award: is the institution rewarding an isolated achievement, or a person's performance in their work overall, taking into account their many achievements and growth over time?

In the former case, since the achievement in question is only focused on the product of one's work, it would seem that the enhancements which facilitated the pursuit of the project are the most salient: the use of enhancements that increased the person's focus on the project, energy, and mood related to its pursuit should result in a greater deflation of an agent's achievement, compared

to enhancements used in building the candidate's skills related to the project's pursuits, since these are related less directly to the achievement in question.

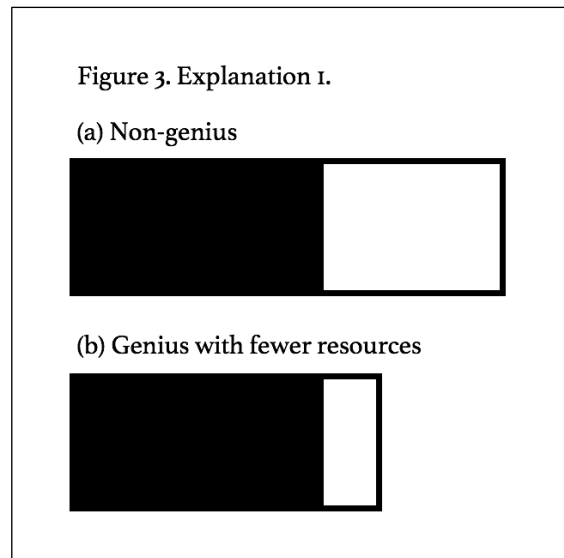
What About Geniuses?

It isn't surprising to see geniuses—individuals who seem to be naturally-endowed with skills way beyond that of an average person—being granted prestigious awards in their disciplines. We seem to be in awe of geniuses, and recognize their accomplishments as impressive feats—is this intuitive praise of their achievements misplaced, if we accept Von Kriegstein's view? Indeed, they do not need to expend as much percentage-effort as others to discover or accomplish something extremely impressive, since their naturally heightened capacities provide them with the additional resources that others do not have. Should their level of achievement thus be deflated if the institution deems that they did not expend as much percentage effort as others?

I argue that there may be two different ways to argue for praising geniuses: (1) if the percentage-effort notion is compelling, perhaps the additional resources conferred by their naturally heightened capacities are outweighed by the lack of resources in other areas, like temporal or physical resources (in the sense that geniuses do not as much time or physical/mental resources as others at their disposal), and (2) geniuses use the temporal and physical resources they have, but more efficiently.

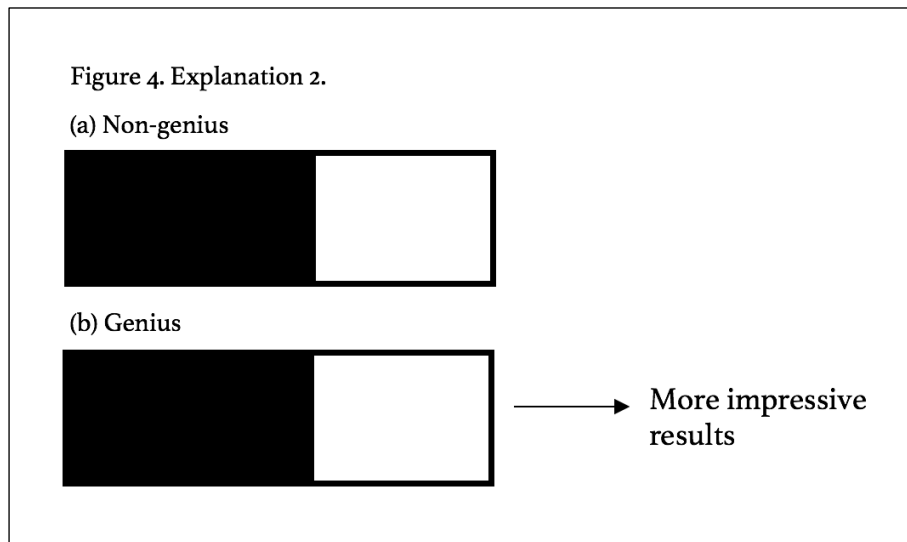
Explanation (1) works only if the temporal and physical resources of the genius are very limited, so that the use of their natural capacities make up the majority of the resources available to the genius (see Figure 3). If the genius has

all the same temporal and physical resources compared to other candidates for an award, then their additional natural capacities add to the resources available to the genius, and thus decrease the percentage effort they used in pursuit of their goal. However, this is quite a specific and unlikely scenario, so it is not widely applicable.



Explanation (2) might be the better option between the two, but it is also weak. The genius may indeed have the same temporal and physical resources (also accounting for the resources from her natural capacities) compared to her competitors for an award and may use them to achieve the same percentage-effort as others, but this effort simply produces more productive results (see Figure 4). Although this makes intuitive sense, this solution seems to take on a consequentialist lens by rewarding the better outcome—even if both agents expended the same amount of percentage effort. Since we are only focused on the effects of effort on praiseworthiness, and not on the outcome, this is a pretty weak solution.

Thus, unfortunately, we might have to bite the bullet on the case of the genius, if we accept the view of percentage-effort. However, this may not be that bad—perhaps geniuses may be motivated to use more of the resources at their disposal and expend more percentage-effort if they find this framework compelling, and for the majority of people who are not geniuses, this may also be an optimistic view on effort and the praise that should be assigned to it.



In Part II, I addressed four important topics: how skill-building can be morally valuable on the Kantian view, what grants the overcoming of counterproductive dispositions value, how biomedical enhancements influence the effort an agent puts into completing projects, and how these conclusions could be applied in the criteria of award-granting institutions.

CONCLUSION

In this work, I argued that the Kantian duty to strive for self-perfection permits—but does not require—the use of biomedical enhancements, and that the use of biomedical enhancements can be morally valuable and worthy of moral praise, once we account for the existence of indirect duties in the Kantian framework. I then build upon the argument put forward by Hasko Von Kriegstein, namely, that percentage-effort expended in a project should correspond to the level of achievement assigned to that project. I then connect this account to Kantian ethics and argue that the percentage-effort an agent expends should be correlated with the praise assigned to them, in the context of award-granting institutions. Since all enhancements grant the agent additional resources, regardless of whether those enable the agent to do more work or make work easier, the percentage-effort expended is reduced. This reduction in percentage-effort should then lead to decreased praise for the agent.

Overall, this project aimed to develop the positive duties in Kant's moral framework and to contribute a Kantian perspective on the increasingly important issue of navigating the use of biomedical enhancements. The connection between indirect duties and the imperfect duty to strive for self-perfection is significant not only in the realm of Kantian ethics more broadly, but also demonstrates that Kantian ethics can serve as a valuable lens in discussions on biomedical enhancements.

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