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Moral Bioenhancement for Social Welfare: Are Civic Institutions Ready?

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Positive assessments of moral enhancement too often isolate intuitive notions about its benefits apart from the relevance of surrounding society or civic institutions. If moral bioenhancement should benefit both oneself and others, it cannot be conducted apart from the enhancement of local social conditions, or the preparedness of civic institutions. Neither of those considerations has been adequately incorporated into typical neuroethical assessments of ambitious plans for moral bioenhancement. Enhancing a person to be far less aggressive and violent than an average person, what we label as "civil enhancement," seems to be quite moral, yet its real-world social consequences are hardly predictable. A hypothetical case about how the criminal justice system would treat an offender who already received civil enhancement serves to illustrate how civic institutions are unprepared for moral enhancement.

Keywords: morality, enhancement, neuroscience, genetics, neuroethics, genethics

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Speculations about if and how modifications of genotype and/or phenotype could help someone be more moral have stimulated philosophical, scientific, sociological, and political discussion and debate. Studies of putative neurological structures and functions involved in moral cognition and behavior have become part of the field known as neuroethics (Glannon, 2017). Importantly, the discipline also addresses the questions and problematic issues arising from the broader implications to neuroscientific research and potential neurotechnological applications. But, if moral bioenhancement should benefit both oneself and others, then, we argue that it cannot be conducted apart from the enhancement of local social conditions, or the preparedness of civic institutions. Often, such considerations have not been adequately incorporated within typical neuroethical assessments of ambitious plans for moral bioenhancement.

People lacking in morality might look like a problem needing a technological solution. Some neuroethical assessments of moral enhancement hardly get beyond saying, "It's moral, so it has to be good for you and everyone too," as if adjusting a person's moral capacity always bears intrinsic worth. Other kinds of cognitive enhancement have been treated in a similarly simplistic manner [an overview of perspectives on cognitive enhancement is Jotterand and Dubljević (2016)]. Cognitive enhancement is unrealizable without due regard for the real-world contexts in which Cognitive abilities contribute to measurable performance improvements (Shook and Giordano, 2016a).

Three different ideas about moral improvement compete for attention in people's minds when they hear about "moral enhancement." The first idea is to instill some degree of moral capacity and responsibility in someone who has never had it, which is better labeled as "moral habilitation." (And restoring lost moral capacity would hence be "moral rehabilitation.") The second idea occurs if enhancement is taken to mean an improvement of already-existing moral capacity toward

society's standards of good moral conduct. This idea of enhancement as "moral normalization" is probably what first comes to mind and initially earns approval because that goal is already the aim of morality itself: each person behaves in accord with moral standards that everyone is expected to follow. Finally, the third idea of enhancement is improvement above regular requirements of common morality, which might be called "surpassing enhancement." This third idea has received the most attention in academic discussions, yet, it is more difficult to analyze and less straightforward to justify (Shook and Giordano, 2016b,c). Only surpassing enhancement is the topic of this discussion.

Another distinction is also crucial. The label of "moral bioenhancement" applies to technological interventions employed for directly controlling some aspect of human neurocognitive functioning that is viewed as instrumental to moral thought and/or behavior. Such technologies are new; controlling human behaviors is not. Although specialized social means, such as education and law, can be improved by technology, they are not essentially invasive or reconstructive (unless they resort to such things as bioenhancement). Only impactful events in the local environs of a person (e.g., hearing a narrative, suffering a punishment, receiving a reward, and so on) are involved with mundane means of socialization, correction, and so forth. Any lasting change to one's behaviors and habits is accompanied by some redistribution or reorganization of neurological activity. The distinction between "bioenhancement" and "enviroenhancement" is instead based on the nature of the method. Technology also permits a third category, "selection-enhancement," when an embryo or fetus is chosen for birth because it meets preset genetic or developmental criteria. We shall not consider selection-enhancement here.

We must disagree with those who insist on a sharp dichotomy to firmly separate efforts at moral bioenhancement apart from efforts at moral enviroenhancement [e.g., Sparrow (2017)]. There is a deep connection between utilizing bioenhancement and enviroenhancement to foster morality, not as regards their role as distinctive means, but rather with the realization of their common end. That connection is revealed through a pragmatic assessment of the conditions needed for their moral effectiveness. Allowing that dichotomy to stand unchallenged would permit assessments of bioenhancement to proceed in an unrealistic manner and potentially arrive at rashly optimistic judgments.

In order to justify labeling an adjustment to human abilities as a "moral enhancement," a framework of prior judgments must be premised. First, it will be important to define what is meant by "morality." Clearly, this opens broad and deep discourse, if not debate. What emerges from such discourse is that society establishes what is considered (at any given time) to be "moral." Thus, moral cognitions and actions are internal processes that occur in, and reflect external contexts (MacIntyre, 1998, 1999; Giordano et al., 2016; Jotterand, 2016). Second, criteria must be applied for empirically confirming when a physiological/neurological intervention shifts personal conduct in a desired moral direction (Shook, 2016). Third, distinguishing episodic from enduring adjustments is necessary. An episodic adjustment made as situations arise is moral in a limited sense (e.g., "he did a morally good deed"), while an enduring adjustment, such as an non-reversible alteration of the brain or a genetically engineered modification, would be moral in a broader sense (e.g., "she is a more moral person"). Additionally, expectations should be established about what may constitute good outcomes for morally enhanced people as they function in a society in which most people are not morally altered. A further layer of envisioned prospects for morally enhanced people as they interact with important civic institutions, especially law enforcement and governing agencies, should also be evaluated. The final section of this paper offers a hypothetical example illustrating why the civic practicality to a moral enhancement cannot be taken for granted.

In what follows we shall only consider surpassing and enduring moral enhancements, which includes genetically engineered modifications for above-average moral conduct. Anything called a "moral enhancement" should at least deliver something that anyone could verify and want for themselves. What do people realistically expect from so much more morality? For example, is it more moral to be less selfish? If an alteration is supposed to keep one's overall selfishness at a lower level, for example, what specific course of conduct during a salary negotiation, or a dispute between parents, would count to prove its effectiveness? Hence, what percentage wage increase shall the less-selfish female employee accept from her male supervisor? How many household duties should the less-selfish parent take over from the other parent? Such practical scenarios should make readers feel uncertain and perhaps a bit uncomfortable. In the real world, each person wants *other* people to act less selfishly toward them, while acting as self-interested as one already happens to be. If morality involves some sacrifice, who shall be among the first?

There won't be a realistic way to simultaneously enhance millions or billions of people or to control all social interactions to guarantee universally fair results (that is why fanciful moral utopias are barely distinguishable from totalitarianisms.) A realistic framework allows (and accepts) that moral enhancers will not be uniform in either distribution or manifestation, given that: (a) the large majority of social interactions would involve at most one morally enhanced individual and (b) morally enhanced people would probably not see similar consequences of their engagements within social groups.

Unrealistic frameworks, by contrast, isolate one "obvious" moral virtue—altruism or empathy are frequently selected, for example—and then presume that such a good thing must always be good no matter the circumstances. By that framework, there's no conceivable harm simply from living a more altruistic life, since human nature is meant to be, and deserves to be, more kind and generous. Only the technological means of achieving that end, and not the moral end itself, needs to be scrutinized (DeGrazia, 2016). Although objections raised against these assumptions are rarely heard [but see Marshall (2014); Carter (2015); and Casal (2016)], we agree with their concerns that large-scale and long-term social dynamics should be empirically investigated rather than reflectively intuited.

It should be first noted that morality is not necessarily contrary to self-interest.[1] Most moral deeds can be beneficial to all parties, as the practices of cooperativeness, trustworthiness, civility, etc., are conducive to everyone's welfare. The question is not whether conducting oneself in accord with common moral standards is beneficial. When enhancement asks for above-average moral

behavior, we question how uncommon morality would fare in the real world of ordinary moral expectations.

If this issue is to be treated as an empirical matter, any intuitive generalization about above-average moral people is probably unsound. What could be reliably predicted from dramatically enhancing the morality of any randomly chosen person somewhere in the world today? It seems quite dubious that being more moral than average could ensure that one's status, income, relationships, or life prospects are affected in some predictable way, much less re-directed in the same way as other morally enhanced individuals. None of these framing presumptions, common to positive assessments of moral enhancement, can be trusted:

> The overall welfare of a person can be predictably increased by morally enhancing that person.
> Social affairs within a group can be reliably improved with the moral enhancement of even a few individuals.
> The overall welfare of a group can be predictably increased by a moral enhancement to a portion of its members.
> The improvement of social relations within group can be reliably accomplished by selecting a moral rule that an individual can follow, and enhancing many individuals into conformity with that rule.

These tenets are unreliable because the intuitive calculations behind them take morality to be isolable and individualizable. That permits speculation to imagine that morality's goodness must aggregate to improve society no matter what else may be happening. Concepts about morality in their abstract purity are poor guides when compared with the collective experiences of an entire society.

That said, which behavioral modifications already regarded as moral would actually be conducive to widely welcomed social benefits? Taking morality to be as social as the general welfare it is supposed to yield, and evaluating changes to people's morality in terms of empirically confirmable results for society, opens the entry to the field of *social ethics*. Connecting public morals to social welfare and civic improvement is an approach to social theory inherited from Cicero, Seneca, and Plutarch, and pursued by Western political thinkers, both liberal and conservative, from medieval times to the twentieth century. Eastern philosophy is also replete with this kind of moral and social theorizing. Even modern libertarians, opposed to government encroachment upon private liberties, argue that freer citizens are the kind of virtuous citizens who are essential to a good society. However, this is not without contention; one needs only to recall Mandeville's *Fable of the Bees* for poetic illustration of problems that can arise when attempting to mitigate "private vices for public benefit."[2]

But given that humans are social animals, the capacity to behave morally enables engagement with productive social relationships and institutions. It is, as philosopher Owen Flanagan has noted, an essential part of human ecology (Flanagan, 2007). Just as public morals are evidently tied to social welfare, it is difficult to deny the social nature of individual well-being:

> … a person's well-being is shaped by a complex net of intersecting social determinants, and the weighing of outcomes is at the population level rather than at the individual one (Cabrera, 2017).

The overall connection is becoming clear: the relationship between one's individual well-being and one's moral conduct with others is mediated by environing social conditions. How one's morality affects oneself, as well as others, depends on the social contexts making behavior meaningful, effective, and productive. For social ethics, improving individuals morally is foremost about the social contexts in which conduct occurs. Morality is not simply about what a person prefers to do; how a person *can* behave is largely dependent on environing obstacles or opportunities. This is as true of morality as it already is for any desirable improvement of personal conduct. Enhancing what people can do has little to do with them individually; empowerment requires social opportunity. This approach has been defended by Laura Cabrera:

> Under such a perspective, human enhancement focus shifts from changing the biological reality of individuals, to addressing environmental factors that undermine the optimal performance of individuals or that can foster wellness. Such a human enhancement perspective would be consistent with a population health approach, as it pursues more equitable and accessible interventions, on the path to addressing social inequality. Human enhancement does not need to be only about high-technological interventions for a selected group of individuals; rather, it should be a continuous project aiming to include everyone and maximize the public benefit (Cabrera, 2017).

For example, if recycling cans and bottles is a good thing to do, few people could actually do this until a recycling industry is assembled and public infrastructure is in place to allow many people to easily recycle some of their household garbage. Asking, "Who is a good recycling person?" makes no sense until many people can recycle when they want to; motivating people to be good recyclers is pointless until society provides for recycling. In general, for social ethics, the right social context allows good deeds to happen, which in turn benefit society. Adjusting social conditions where people are expected to act morally is far more intelligent and productive for social welfare than just making some people decide to behave better. Philosophically stated, "ought" implies "can": when and where people are to do what they *ought*, conditions are to be arranged so they *can*.

Social conditions cannot be left out of account; they shape morality as much as morality guides society. Unless it is supposed that one's morality is uncorrelated with one's overall well being, or it is imagined that one's well being is achievable, no matter what society is like, how a society functions largely explains the moral capacities of its members.

What does this perspective from social ethics imply for any practical mode of moral enhancement? We offer two initial recommendations. First, to re-iterate, a sharp dichotomy between moral bioenhancement and moral enviroenhancement is unsound in both concept and practice. Effective and large-scale bioenhancement should include enviroenhancement in tandem as a unified strategy. Moral bioenhancement pursued without due regard for appropriate moral enviroenhancement may satisfy purely conceptual notions about individualized morality, but it will not satisfy real-world plans for human welfare. Second, moral enviroenhancement should only be pursued while

anticipating how established social institutions should adjust in order to appropriately deal with morally enhanced individuals. This recommendation is especially the case for enduring moral enhancements. The final portion of our essay enlarges upon this thesis.

Moral bioenhancements that afford enduring effect in order to produce above-average cooperativeness and congeniality (and below-average tendencies toward conflict and aggression) may be labeled as "civil enhancers (CEs)." By definition, a functional CE would yield a large and reliable reduction in a person's behaviors that could be threatening to other people, or would initiate and escalate violence. We are not talking about moral rehabilitation or normalization, which at most improves morality up to society-wide standards. Civil enhancement produces people who are morally abnormal, by being much less likely than the average person to ever engage in threatening or aggressive behavior.

What would happen if civil enhancement were enacted while leaving civic institutions unaltered? Let us consider a specific example: how might a civic institution, such as a society's legal system, handle issues of criminal intent and responsibility for persons modified by civil enhancement? Setting aside the ethical issues attached to the idea of mandatory neurotechnological treatment of offenders [consult Focquaert (2014)], we simply try to predict the fate of a hypothetical person already civilly enhanced for whatever reason.

Consider this imaginary legal case—a hypothetical person P was provided with a CE, which dramatically reduces the likelihood of choosing to indulge in aggressive or abusive conduct. P has been using CE as supervised by a competent clinician. On a certain day, P is arrested for getting into a violent fight and is accused of instigating the violence. The legal defense for P argues during the trial that, in light of conflicting witnesses and ambiguous evidence about who started the violence (e.g., no video surveillance), the additional fact that P was properly using the CE should be admitted as evidence tending to show that P was probably not the instigator. After all, as the legal defense would point out, surely the purpose of a reliable CE is to reduce criminal intent, and hence to reduce the chances of criminal responsibility.

Our questions about this hypothetical situation ensue. Should P's use of CE be admitted as evidence under such circumstances? If admitted, how should the evidence be presented/explained to the jury? Are any special jury instructions needed for their deliberations? And if P is convicted on some charge, should the same evidence be available for sentencing deliberations? How should P's use of CE affect sentencing, if at all? Three basic options seem available. Option (A): P is *less* blameworthy, since P is less responsible for bad behavior, which was not sufficiently moderated by the weak CE (and thus, P is entitled to, and perhaps also requires, a stronger CE). Option (B): P is *equally* blameworthy as anyone, for P is just as responsible for intentional conduct, regardless of enhancement (and P needs a stronger CE, too). Option (C): P is *more* blameworthy, since P is more responsible for bad behavior, which was caused by P's deeper viciousness despite the use of the CE (and, therefore, P is sentenced to use a stronger CE as well).

Additional questions arise. Could contemporary law and legal theory determine a ranking of A, B, and C? Is there any amount of possible neurological information to directly determine whether A, B, or C is the correct option? These questions, and the premises upon which they are based, are not esoteric, but rather are becoming ever more realistic as the law seeks to engage the brain sciences [The area of neurolaw has emerged at this intersection; see Morse and Roskies (2013)]. To be sure, some neurological determination would be convenient, but it turns out that neuroscience alone cannot yet provide such information, or accomplish such a normative task (Shats et al., 2016). Perhaps neuroethics can proactively develop answers by working in tandem with the other disciplines already mentioned. In the meantime, needless to say, the civic institutions for law, criminal justice, and corrections are at present unprepared for these kinds of issues.

One additional question can be asked to narrow the issue to genetic/developmental means to accomplish moral bioenhancement. If P had received this reliable CE treatment during conception or gestation, should this person be treated differently (option A or C) from other people who never had any form of CE? We leave the reader to their own thoughts about possible answers and their implications, for both this particular issue and the overall trajectory and consequences of bioenhancement in society.

NOTES

1. There often is an egoistic component to an altruistic action, since some aspect of that act (something about its results, or its meaning, or the evoked responses from others, and so on) must be reinforcing to the actor in some way (Avram et al., 2014; Giordano et al., 2016).
2. Physician-philosopher Bernard Mandeville's poem "The Grumbling Hive, or Knaves Turn'd Honest," included in his 1724 book *The Fable of the Bees: Private Vice; Publick Benefits*, explored the respective roles and proper balancing of personal moral conduct and public economic and social gain [consult Goldsmith (1985)].

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Both authors contributed equally to this article.

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