

Imagining moral bioenhancement practices. Drawing inspiration from moral education, public health ethics, and forensic psychiatry

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Abstract

In this article, we consider contexts or domains in which (future) moral bioenhancement interventions possibly or most likely will be implemented. By looking closely at similar or related existing practices and their relevant ethical frameworks, we hope to identify ethical considerations that are relevant for evaluating potential moral bioenhancement interventions. We examine, first, debates on the proper scope of moral education; second, proposals for identifying early risk factors for antisocial behaviour; and third, the difficult balancing of individual freedom and third party concerns in (forensic) psychiatry. In imagining moral bioenhancement in practice, we observe that unlike other forms of enhancement, moral enhancement fundamentally asks how the interests and preferences of the individual and the interests of others should be weighed (in view of public safety and managing public risk). Highly diverse domains such as education, mental health, and the judicial domain might be involved, and moral bioenhancement might challenge existing institutional settings. Given these highly varied contexts and domains, it appears unlikely that there will be a distinct set of practices that will be referred to as “moral bioenhancement.”

Introduction

In the literature on the ethical desirability of moral bioenhancement, a range of different potential interventions and applications has been proposed. For example, following the growing understanding of biological (neurological, genetic) underpinnings of aggression, some argue for morally enhancing (potential) violent offenders. Others have speculated about enhancing our capacities for fairness, cooperation, and empathy, and for countering (supposedly innate, evolutionary hard-wired) xenophobic and racist biases (Douglas, 2008).

Recurring themes in the debate on the ethical desirability of moral bioenhancement are questions about the need for moral bioenhancement; the possibility of reaching consensus on what moral bioenhancement should realize; its scientific and practical feasibility; questions whether the difference between traditional and biomedical means of arriving at moral enhancement matters ethically; arguments related to the freedom, identity, and autonomy of the individual; and arguments related to social/group effects and dynamics (Specker et al., 2014). More recent discussions have focused, among other concerns, on the ethical relevance of the distinction between direct and indirect moral bioenhancement (Focquaert & Schermer, 2015; Schaefer, 2015), the effect that prescription drugs could already be having on moral agency (Levy et al., 2014a, 2014b), the question of whether mandatory moral bioenhancement would be permissible or even required, and how people could be encouraged to participate in moral bioenhancement voluntarily (Ingmar Persson & Julian Savulescu, 2014b; Rakić, 2014b; S. Carter, 2015).

In an earlier article, we argued that although discussions on moral enhancement so far raise important philosophical questions about the nature of human morality, moral behavior, and moral thought, these debates often appear to be too remote from real (and realistic) contexts and applications to do justice to the specific ethical questions raised by such practices (Specker et al., 2014). We therefore advocated a more focused debate on realistic options of biomedical treatment of moral pathologies and the concrete moral questions these treatments raise.

As the science on moral bioenhancement is “in its infancy” (Crockett, 2014c), it is not known which ethical issues will play out once potential moral bioenhancement technologies are more fully developed. In what Alfred Nordmann has termed the “if and then syndrome,” a possible technological development is presented as inevitable and as something that demands immediate attention (Nordmann, 2007, p. 31). We agree that speculating about potential applications of technologies currently under

development—such as moral bioenhancement—without specifying intended users, target groups, and contexts of implementation runs the risk of “exploring a misguided or irrelevant set of ethical issues” (Brey, 2012, p. 2), while at the same time overlooking issues that would be important to consider once these technologies are implemented. This is why we think that the rather speculative and abstract debate on moral bioenhancement so far can benefit from closely examining either a number of contexts in which interventions under the heading of moral bioenhancement might first be implemented, or domains that are in one or more aspects importantly similar to potential moral bioenhancement practices, and therefore can inform our ethical thinking.

In this article, we start from the assumption that it is helpful to consider in which contexts or domains (future) moral bioenhancement interventions possibly or most likely will be implemented. By looking closely at similar or related existing practices and their relevant ethical frameworks, we hope to identify ethical considerations that are relevant for evaluating potential moral bioenhancement interventions. Focusing on how we deliberate ethically within these domains now will help identify ethical considerations specific to those domains. We think the moral bioenhancement literature can and should build on the ethical literature about these related practices. We also believe that it might point to ways in which moral bioenhancement differs from other types of enhancements such as sports, beauty, and cognitive enhancement. And finally, we think that because of these differences, ethical evaluation of moral bioenhancement asks for partially different evaluative frameworks. With this article we hope to contribute to the development of such frameworks.

Given these considerations, in this article, we have chosen to examine, first, debates on the proper scope of moral education; second, proposals for identifying early risk factors for antisocial behavior, and third, the difficult balancing of individual freedom and third party concerns in (forensic) psychiatry.¹³ If and when moral bioenhancement technologies would become available, we expect that they would first be implemented within these domains. Moreover, we think that a number of central themes that are currently discussed within the debate on moral bioenhancement are the subject of debate within these three domains as well. For example, what moral enhancement should purport in contexts of moral pluralism is already being discussed extensively within the literature on moral education. Likewise, whether and under what conditions treatment should be made mandatory is a topic of debate in the literature on (forensic) psychiatry. In the following paragraphs, we intend to show that ethical considerations

13 This list is not exhaustive, and closer examination of other domains might be of interest as well; for example, the domain of artificial intelligence (Savulescu & Maslen, 2015).

that are central within these existing practices can inform and add to current debates on moral bioenhancement.

Moral Bioenhancement in Context

Moral Education and the Right to an Open Future

One often-cited reason why the possibilities of moral bioenhancement should be explored is the supposed lack of effectiveness of so-called traditional methods of moral enhancement, such as upbringing, socialization, and education. Another recurring argument is that there are little principled differences between employing traditional and potential biomedical methods of moral betterment in terms of their ethical acceptability. David DeGrazia, for example, argues that (many of the) arguments against biomedical means also apply to traditional, non-biomedical means: “one should not inculcate moral values that are wrong, so how can a parent be sure that she or he is justified in providing a particular type of moral instruction? Also facing this challenge are public school teachers who attempt to inculcate in students certain moral virtues such as civility, respect for differences and concern for the poor” (DeGrazia, 2014, p. 363).

An example of a domain in which these same questions are explicitly discussed is the field of so-called “moral education.” What is the proper aim of (moral) education and what is the appropriate role of parents and educators in guiding the moral development of children? What particular moral codes and values do we want to nurture or even instil in our children, and how much pluralism are we willing to tolerate? What aspects of the family, social, and schooling environment impact on the development of prosocial and moral competencies of children?

The theoretical and empirical study of moral functioning—of moral cognition, moral emotions, moral behavior, moral motivation, moral character, and moral development—has attracted a lot of interest from a wide range of scientific disciplines in recent years (Young & Dungan, 2012; Darragh et al., 2015; Decety & Wheatley, 2015). At what Daniel Lapsley and Gustavo Carlo have termed ‘the new crossroad’ of moral development research, questions arise about the relevance of these different lines of research for “addressing the pressing social issues of our times” (Lapsley & Carlo, 2014, p. 3).¹⁴ They argue that in order to adequately address these issues, broad, integrative

14 The diverse social issues they mention are frequently discussed in the debate on moral bioenhancement as well: violence, genocide, and war; concerns about environmental degradation; poverty and famine;

and multidisciplinary theoretical and methodological approaches are needed. One important similarity between discussions on moral education and those on moral bioenhancement is a search not only for a scientifically adequate model of human moral psychology, for linking “substantive philosophical issues with relevant (neuro) psychological data and in providing the empirical paradigm with which to do so” (Frimer & Walker, 2008, p. 334), but also an explicit focus on the practical implications of this growing body of knowledge.

Traditionally, within the literature on moral education, two main dominant educational approaches to the moral formation of children can be distinguished: traditional character education—focusing on the inculcation of virtuous traits of character—and rational moral education—seeking to facilitate the development of autonomous moral judgment and the ability to resolve disputes and reach consensus (Narvaez, 2006, p. 703). The latter approach focuses on nurturing skills such as perspective taking and deliberation more than on direct instruction on what to value and how to act (Narvaez, 2006, p. 708), and has, therefore, been characterized as a more progressive approach to moral education. Traditional character education on the other hand focuses on internalizing values inherent in the tradition and culture of society (Schuitema et al., 2008). Darcia Narvaez formulates a number of familiar strengths and weaknesses of both approaches:

Whereas rational moral education adopts constructivism and adult coaching, fosters reasoning for civic engagement, and avoids relativism, it can be criticized for a narrow emphasis on moral reasoning, whether in dilemma discussion or a just community, which is insufficient for moral action and misses the centrality of moral identity in moral behaviour. Traditional character education rightly emphasizes the importance of content and demonstrated some insight into the impact of environments. However, it can be faulted for a changing set of core virtues open to the charge of relativism, for downplaying the importance of autonomy, and for a problematic pedagogy (Narvaez, 2006, p. 712).

More integrative and comprehensive perspectives on moral functioning and the implication for moral development and education are explicitly being sought, for example in a special issue of the *Journal of Moral Education* in 2008 (Turiel, 2008). Dissatisfaction with “the near exclusive focus on verbal reasoning about justice in a large portion of the research in the field” (Reed & Stoermer, 2008, p. 418) has inspired attempts to formulate unifying, integrative models that encompass “not only personality but,

and the persistence of racism and discrimination.

also, on the one hand, the brain and central nervous system, and on the other hand, interaction and culture” (Reed & Stoermer, 2008, p. 419; Kim & Sankey, 2009), and that acknowledge the importance of both reflective reasoning (in the Kantian or utilitarian traditions), moral emotions (based in the Humean tradition), and virtues and good practical judgement (following the Aristotelian tradition) (Narvaez, 2006, p. 703; Reed & Stoermer, 2008, p. 419; Wren, 2014). This literature could inform the moral enhancement debate.

Both in the debate on moral bioenhancement and within moral education, a central and much discussed topic of debate concerns the question what moral bioenhancement should focus on given the fact that ethical systems and theories differ considerably (Schaefer, 2011; Shook, 2012; DeGrazia, 2014; Hauskeller, 2014; Sparrow, 2014a; Ingmar Persson & Savulescu, 2015a). Given a plurality of moral values and outlooks, a question that has been asked in the philosophy of education is whether parents and educators are justified in raising and shaping children according to their own preferences: “Should our goal be to raise our children so that they will have, as adults, as many options as possible, to give them, insofar as we can, a maximally ‘open’ future? Or should our goal be more directive, to lead our children toward a more specifically shaped future that we ourselves endorse?” (Mills, 2003, p. 499)

The “right to an open future” argument concerns the balancing of the liberty of parents to raise their children according to their own lights, and the “anticipatory autonomy rights” of children to leave important life choices open. Joel Feinberg who introduced the right in 1980, discusses adults’ rights to exercise their religious beliefs, a right that a child is not yet capable of exercising, but that still holds “prematurely” as a so-called “right-in-trust” (Feinberg, 1998, p. 251). The argument has become commonplace in applied ethics in debates on genetic reproductive technologies, through which disclosure of certain types of genetic information could infringe on children’s right to have future’s options kept open until they are capable of making their own decisions (Lotz, 2006, p. 537).

In the context of education, a child’s right to have important life choices kept open includes “restrictions on what parents (and others) are allowed to do to children, and, on some interpretations,...what parents (and others) ought to provide children” (Millum, 2014, p. 522). Besides an argument for refraining from imposing important life choices, the right to an open future might also be interpreted as a “positive claim right” with a corresponding obligation for parents and educators to ensure that a child has a good starting position (Lotz, 2006). This right to an open future argument could therefore also be used within the context of moral enhancement: on the one hand, to argue for

limitations on what parents or others may do to “morally enhance” children, and on the other to argue in favor of instilling capacities that would help them to become full moral subjects with their own moral autonomy.

Early Identification of “Risky Children” and the Moral Pitfalls of Screening

It has been argued that “early childhood is probably the optimal starting point for moral enhancement” (Christen & Narvaez, 2012, p. 26), and that neuroscientific knowledge may inform traditional forms of moral education as well as enable early identification and prevention of antisocial behavior. Research is underway to determine which biomarkers—genetic, neurobiological, and physiological—give the most accurate risk predictions (van Goozen & Fairchild, 2008; Singh & Rose, 2009; Ferguson, 2010; Liu, 2011), and to determine which preventive interventions would be effective (Rocque et al., 2012; Cornet et al., 2013; Glenn & Raine, 2014; Glenn et al., 2015). “Biological information may provide useful information about which individuals may be at somewhat greater risk for antisocial behaviour, and thus may provide for the opportunity to intervene with programs designed to reduce this risk” (Glenn et al., 2015, p. 1690).

Early detection of children “at risk” for developing antisocial personality disorder or for becoming violent criminal offenders is ultimately aimed at prevention of antisocial behavior and violent crime.¹⁵ Envisaged biomedical interventions aimed at prevention of such behavior can be understood as moral enhancements, in the sense of improving the moral capacities and/or behavior of these children. It aims to make them “morally better” persons than they would otherwise be. An (as yet largely hypothetical) comprehensive program for screening and early intervention to prevent antisocial behavior can, therefore, be understood as a program for moral enhancement. Some may oppose this framing, as consensus on the definition of moral enhancement is lacking (Raus et al., 2014). However, even if such screening and prevention practices do not meet the criteria of one’s preferred definition of moral bioenhancement, the similarities are obvious. The emerging ethical discussion around early detection and prevention of antisocial behavior may therefore inform the moral enhancement debate and introduce new and important considerations and arguments.

15 As Nikolas Rose (2010) rightly observes about the aims of such programs: “The first, is the desire to identify risky individuals—that is to say, those who will present a future risk to others—before the actual harm is committed. The second is the hope that one might be able to identify individuals at risk—those whose particular combination of biology and life history makes them themselves susceptible to some future condition” (Rose, 2010, p. 80). Hence two notions of risk—risk to self and risk to others—tend to become conflated.

First, in the moral enhancement debate so far, the idea that a suitable target population will need to be determined for any moral enhancement intervention that may be developed has not yet been considered. Targeting interventions at specific groups; for example, those who already exhibit immoral behavior, or those who are at risk of doing so, requires a way to distinguish those people from others. Some form of screening will be necessary to determine who is in need of moral enhancement, who will benefit most from a specific intervention, or who need to be targeted to optimize societal benefit. A first—moral—question is who the target population should be; a second, more practical, question is how these subjects can be identified.

When such a hypothetical screening program for children “at risk” for antisocial behavior is considered, a number of ethical issues come up that have so far hardly been addressed in the moral enhancement debate (Schermer, 2006; Pieri & Levitt, 2008; Horstkötter & de Wert, 2013; Glenn & Raine, 2014; Horstkötter, Berghmans, & de Wert, 2014; Munthe & Radovic, 2015). First of all, screening tests may give false negative or false positive outcomes, resulting in unjustified reassurance and failure to intervene, or in unjustified labeling and unnecessary interventions. Limitations to the predictive value of screening tests are, therefore, morally problematic. Of many identified risk predictors, it is unclear whether they are causally relevant factors or mere correlates, making their exact meaning doubtful (Wikström, 2010). Moreover, screening tests themselves or the follow-up interventions could have side effects or carry risks; therefore, issues of safety should be considered. Next, it has been argued that such a screening program may have unwanted social effects. It may lead to individualization of problem behavior and lead to neglect of social and environmental factors contributing to this behavior. It may also lead to stigmatization and discrimination of children who are labeled (correctly or falsely) as “at risk.” This may also have negative effects on their self-identity or even become a self-fulfilling prophecy: if one is looked on and treated as a potential violent offender, this may cause one to start behaving as such. One could even say that this threatens the child’s “open future.” At the same time, too strong a focus on antisocial behavior “might disadvantage those in greatest need of good youth care who are not also, for example, genetically at risk to translate early personal into later social problems” (Horstkötter & de Wert, 2013, p. 20). Finally, it has been brought forward that such screening programs could easily lead to oppression and exclusion of the identified individuals, especially in the absence of effective preventive or therapeutic interventions (Munthe & Radovic, 2015).

All these considerations are highly relevant for understanding what it would mean to single out certain individuals or groups as suitable candidates for moral improvement,

but they have so far been neglected in the debate on moral enhancement, because this debate has hardly concerned itself with potential “real world” practices.

A third lesson to be drawn from the discussion about early detection and prevention of criminal or antisocial behavior concerns the tension between the interests of the individual and those of society. This is mentioned as a very important issue by almost all commentators in the screening debate. Briefly stated: is the intended purpose helping the detected children, or is it protecting society? What if both aims cannot be served at the same time? Which one should take precedence? “At the core, perhaps, is the challenge of ethically balancing public protection and individual autonomy, privacy, and liberties” (Giordano et al., 2014, pp. 81-82). This issue will be taken up further in the next section.

Mandatory Treatment in (Forensic) Psychiatry and the Dual Role Dilemma

We can imagine examples of people who freely choose to morally enhance themselves using biomedical technologies, in which case an individual choice frame that emphasizes the freedom of the individual and related concepts such as autonomy and self-determination appears the most suitable ethical framework. Nonetheless, in the debate on moral bioenhancement so far, the theme of “mandatory moral bioenhancement” has been a central one. Examples that are frequently discussed range from preventing individuals from initiating “ultimate harm,” to preventing violence or violent crime in the population at large (Ingmar Persson & Savulescu, 2008; Ingmar Persson & Julian Savulescu, 2014b). The argument is made that those who are most in need of moral enhancement are least likely to be inclined to use it, and that mandatory use is therefore required. Subsequently, there has been explicit and quite extensive discussion on whether or not (safe and effective) moral bioenhancement technologies should be mandated either for the general population or for specific target groups (Curtis, 2012; Rakić, 2014b, 2014a; S. Carter, 2015; Rakić & Hughes, 2015).

This raises a number of questions with respect to who decides, implements, and monitors the mandatory intervention in terms of expected and appropriate contexts, patient rights, and professional roles and responsibilities. These questions are reminiscent of a number of central ethical dilemmas in psychiatry, and in forensic psychiatry in particular, surrounding involuntary or coercive treatment, domains that are arguably a likely setting for implementing potential moral bioenhancement interventions.

In general, the conditions under which coercive treatment is warranted in mental health now involve direct prevention of suicide or other forms of self-inflicted harm, or situations when an individual poses a direct risk to others. Generally speaking, within

mental health settings “protection of the community is typically a side constraint, something that moderates the treatment of the client or patient” (Ward, 2013, p. 95), whereas “a fundamental obligation to the best interests of one’s patient” remains central (Robertson & Walter, 2008, p. 233). However, when focusing on forensic contexts¹⁶ ethical issues become more complex and controversial (Sharma & Sharma, 2006, p. 98), as these contexts are much more motivated by non-offender considerations (Ward, 2013, p. 95).

The so-called “dual-role dilemma,” central in the ethics of forensic psychiatry, refers to possible tension between psychiatrists’ obligations of beneficence toward their patients, and conflicting obligations to the community or third parties (Robertson & Walter, 2008). This tension or dissonance is something an individual psychiatrist might experience when “attempting to adhere to the conflicting ethical requirements associated with client well-being and community protection” (Ward et al., 2015). This tension might also be inextricably linked to the profession, as forensic psychiatry “involves an interaction between two distinct state institutions, the criminal justice and mental health systems” (Ward, 2013, p. 92) that each carry varying sets of ethical norms that can conflict.

In a classic text from 1984, Alan Stone formulated fundamental criticism on the lack of clear ethical boundaries for the professional roles of forensic psychiatrists (Stone, 1984). His main worry was that the role of evaluator moves the forensic psychiatrist away from the role of physician and the fundamental notion of nonmaleficence: “helping the patient, which is the ethical thesis of the practitioner, becomes the ethical temptation in the legal context” (Stone, 1984, p. 171). Paul Appelbaum on the other hand argued that beneficence and nonmaleficence are not central notions in forensic psychiatry, and that forensic psychiatry is instead guided by a distinct set of ethics. The ethics of the “forensicist” is directed toward the benefit of society, and, therefore, the central responsibility of the forensicist is to justice, not the patient (Appelbaum, 1990, 1997). A notable example is forensic risk assessment, where the welfare of the patient is not necessarily the immediate object of concern, but rather the immediate concern is about public safety (Roychowdhury & Adshead, 2014).

16 Contexts that involve court-mandated forensic psychiatric evaluation and assessment, risk management, and forensic treatment. There is great variation in what the profession of forensic psychiatrist entails. There are large differences in the range of forensic psychiatric services available, there are no unified standards, and forensic psychiatry is not recognized as distinct subspecialty everywhere (Velinov & Marinov, 2006).

This distinction suggests three directions for mandatory moral bioenhancement interventions. Either moral bioenhancement will be situated firmly within a health context, in which the interests and well-being of the patient are central and the patient's right to treatment and other forms of support is emphasized, and in which in principle medical doctors prescribe a potential moral bioenhancement intervention, and monitor and weigh potential risks. An alternative option is to position mandatory moral bioenhancement within correctional, criminal justice contexts, where non-offender considerations, such as community protection and risk assessment, are primary. Whereas the first option presupposes the primacy of medical ethical considerations, the latter would function within a more general ethical framework, in which respect for persons, justice, and human rights are important considerations. A third, hybrid model would explicitly acknowledge that "more than one ethical theory will be required to justify and guide offender treatment" (Ward, 2013, p. 97), and would seek a pragmatic, procedural solution to solve potential conflicts between the different sets of norms and values. The Dutch Entrustment Act for example represents a rather exceptional combination of punishment and treatment (van Marle, 2002), a system that is criticized for (possible infinite) preventive detention (Petrila & de Ruiter, 2011), but that is also praised for the quality of the care provided to prisoners and the lower recidivism rates. However, the fact that "individuals may be unable to ethically justify their professional actions and could move somewhat erratically between different courses of action" (Ward, 2013, p. 98) remains a concern, one that should also be addressed with respect to those who would implement potential moral bioenhancement interventions.

Imagining Moral Bioenhancement Practices

To distil a number of ethical considerations that are relevant for the moral evaluation of proposals for moral bioenhancement but have not yet been sufficiently recognized in the discussion on moral bioenhancement yet, we have imagined practices and domains in which potential moral bioenhancement might first be implemented.

In the domain of moral education, a similar focus on the practical application of the scientific study of morality is visible. In seeking practical applicability and effectiveness, it transcends the separation of moral functioning into cognitive, emotional, and affective domains, and instead aims to formulate integrative models and interventions. Within moral education debates, discussions on the appropriate role of educators and parents, and a commitment to securing the (future) autonomy rights of children, are visible. In addition to providing a reason to be cautious in forcing on children certain choices

(based on the negative claim right that follows from the right to an open future), this principle might under certain circumstances also provide reason to intervene in order to secure better chances in life for the child in question.

This connects to the second cluster: ethical concerns with respect to potential early detection of children at risk of exhibiting antisocial behavior (either now or in later life). On what basis the intended target population for potential preventive interventions should be determined (and what the intended population should be) is something that needs to be discussed, especially in view of potential unjustified labeling resulting in stigmatization and potentially unnecessary interventions that may carry risks and burdens. Moreover, a comprehensive screening program for antisocial behavior needs to address possible tensions between the interests of society and the interests of the individual, and be clear on its intended purpose.

In the field of forensic psychiatry as well, safety and risk management concerns often need to be balanced with the interests and well-being of the individual. The dual role dilemma describes the tension between distinct sets of norms that guide professional conduct, which may be “personal, universal, agency related, or professional in nature” (Ward, 2013, p. 98). If neither a purely medical nor a purely criminal justice frame is appropriate, professionals in forensic psychiatry risk being bound to navigate a complex ethical landscape without clear ethical frameworks to justify their professional conduct.

In imagining moral bioenhancement in practice, we have seen that unlike other forms of enhancement, moral enhancement fundamentally asks how the interests and preferences of the individual and the interests of others should be weighed (in view of public safety and managing public risk). Whereas enhancement in general is advocated for contributing to both the individual and collective good, moral enhancement appears to be predominantly aimed at the collective good. Because morality is fundamentally something relational, and hence asks for concern for others, a focus on interventions that would merely benefit the individual and not others is not a very likely perspective for *moral* enhancement. The opposite—moral enhancement solely in light of some greater good—might be possible, but would run the risk of neglecting the freedom and preferences of the individual. Especially in the genetic enhancement debate, such a one-sided focus on the benefits for society has been fiercely opposed because of its—historically evident—potential for abuse. Therefore, the need for balancing individual and collective interests may well be inherent in moral enhancement, and something that ought to be considered in more depth. Likewise, whereas it is an open question whether many people would consider moral bioenhancement voluntarily, the condi-

tions for offering or even mandating potential moral bioenhancement interventions should be discussed as well (E. Shaw, 2014).

Mandatory treatment is subject to strict conditions, and liberal democratic societies generally share a commitment to tolerance and value pluralism, and respect the (future) autonomy rights of individuals. Although value pluralism is considered a challenge within moral education debates, it is not considered a reason (“principled” or “practical”) to stop moral education programs from being implemented. In line with the views from moral progressivists, an important “guiding concern” in implementing potential moral bioenhancement interventions might be to focus on enhancing morally relevant capacities, without imposing one particular comprehensive moral doctrine. However, it should be noted that in societies that do not share this commitment to pluralism and tolerance, any possibilities for moral bioenhancement might lead to risks.

In asking which occupational group would be charged with implementing moral bioenhancement, the particular institutional setting in which they work becomes highly relevant. With respect to cognitive enhancement, the options discussed in this respect are rather limited: either enhancement will be obtained from the free market, or it will be prescribed by physicians, or possibly by so-called “schmocters” (Parens, 1998, p. 11). With moral enhancement, highly diverse domains such as education, mental health, and the judicial domain might be involved, and moral bioenhancement might challenge existing institutional settings.

Given these highly variable contexts and domains, it appears unlikely that there will be a distinct set of practices that will be referred to as moral bioenhancement. Rather than attempting to formulate a single evaluative framework, the current debate on the ethical desirability of moral bioenhancement might point to aspects of moral betterment within our current practices, and might invite us to consider a number of ethical issues anew.