Special Section: Kant, Habermas, and Bioethics

On Moral Enhancement from a Habermasian Perspective

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> The human being's mastery of itself, on which the self is founded, practically always involves the annihilation of the subject in whose service that mastery is maintained, because the substance which is mastered, suppressed, and disintegrated by self-preservation is nothing other than the living entity.
> —M. Horkheimer, T.W. Adorno, *Dialectic of Enlightenment*

Introduction

Jürgen Habermas is not only undisputedly the most famous and internationally renowned living German philosopher, but he is also one of the exceptional thinkers whose reputation reaches far beyond academic philosophy. In Germany, he is well known and highly recognized for his interventions in public debates. One of these interventions, his essay entitled *The Future of Human Nature: On the Way to a Liberal Eugenics?*[1] became a major contribution to bioethics as well. Yet, this essay, which develops a position on the genetic modification of human nature, constitutes more than a mere public intervention of a famous philosopher who applies some basic concepts of his own theory. Habermas acknowledges the necessity of a certain modification and extension of his philosophical theory of morality and postmetaphysical thinking in the light of new problems generated by biotechnology. Thus, the reflection on bioethical problems has enriched and modified to a certain degree the Habermasian theory. Considering the same influence the other way around, we believe that some basic elements of this theory, which were only implicitly mentioned in *The Future of Human Nature*, would merit a greater awareness in bioethics than they currently receive, namely the concept of a "colonialisation of the lifeworld."

We believe that the recently suggested possibility of a "moral enhancement" provides an excellent opportunity to raise this awareness. For this purpose, we briefly outline two recent proposals on moral enhancement with biomedical means. Then, we try to sketch a possible Habermasian perspective on important aspects of this issue by referring to some basic conceptions of his philosophy. First, we outline what "morality" is according to Habermas. Then, we describe the concept of the "colonialisation of the lifeworld," which Habermas developed to explain social and personal pathologies particular to modern society. We believe that moral enhancement as understood by Douglas or Persson and Savulescu is likely to lead to severe social and personal pathologies from this

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perspective. Finally, we examine the overall legitimacy of moral enhancement from a Habermasian perspective. In our conclusion, we come back to what could be seen as the most eminent danger of such an endeavor, which will be a final step in the dialectics of the Enlightenment, the destruction of moral agency. We do not engage in a detailed criticism and analysis of the respective debates concerning the Habermasian concepts to which we refer, or in a detailed interpretation of the Habermasian concepts in the context of his work as a whole. Both would be beyond the scope of this article. Our more modest aim is to outline the concepts as Habermas develops them in some central passages of his work and how a Habermasian perspective on moral enhancement can be developed in general. Thus, we merely attempt to provide an example and a starting point of how such a perspective can be fruitfully applied in bioethical debates.

Two Conceptions of Moral Enhancement (Douglas and Persson/Savulescu)

The enquiry into the supposed biological basis of morality opens up the prospect of influencing moral behavior with corresponding interventions. An example is the influence of the neurotransmitter serotonin on moral decisionmaking as investigated by the Cambridge psychologist Molly J. Crockett.[2] According to some bioethicists, this type of research will sooner or later allow a modification of moral behavior and consequently an improvement of the "crooked timber" of human nature in terms of morality. Tom Douglas took this as an opportunity for a general argument for human enhancement. His point was to refute the bioconservative thesis that biomedical enhancement is not morally permissible even if it were possible. Moral enhancement should provide a counterexample to this thesis, including its main argument that enhancements may be good for the enhanced individuals but bad for others, and thus show that the bioconservative thesis is wrong. Whether and to what extent this argument succeeds is none of our concern here. For our purpose of developing a Habermasian perspective on moral enhancement, Douglas's conception is particularly interesting, because he outlines a very modest form of such an enhancement. This approach considers a theoretical disagreement on moral goodness and tries to define some common ground, which would allegedly be acceptable for most ethical theories or at least those that could expect a broader acceptance.[3] As we attempt to demonstrate, this cautious approach still includes some basic failures to understand moral phenomena adequately from a Habermasian perspective.

Douglas provides a short formula for his understanding of moral enhancement.[4] His point is that a person who decides to enhance his- or herself morally will likely have a "better set of motives," with "motives" defined as "psychological—mental or neural—states or processes that will, given the absence of opposing motives, cause a person to act." As examples he mentions "uncontroversially bad motives," that is, counter-moral emotions such as strong aversions against certain racial groups or impulses toward violent aggression. Douglas's examples suggest that the goal of the kind of moral enhancement he has in mind is to abolish akrasia or weakness of the will. The individuals he describes already seem to have convictions that qualify their own racist or aggressive behavior as bad; however, their counter-motives to act according to such convictions are too strong, so that they are likely to want to use moral enhancement to get rid of these undesired and undesirable feelings. Help could come, so Douglas argues, from neuroscience and

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the technologies that are about to emerge from it, such as new pharmaceuticals or brain stimulation.

The second conception of moral enhancement that we examine from a Habermasian perspective is more ambitious. Ingmar Persson and Julian Savulescu are concerned with moral evil in its strongest sense and boldly argue that it has to be abolished by creating trans- or posthumans. A morally enhanced person would then be a person with a better set of biological dispositions. Facing the new technological possibilities of biology and other scientific advancements, such a radical change becomes a necessity for the survival of civilization. An example is the creation of highly infectious disease germs and their abuse in terrorist attacks, as discussed in the ethics of dual use.[5] The main argument is that humans have created an environment of densely populated cities and technologies with a global reach for which biological evolution in small groups has not adapted them well.[6] This particularly applies to human moral psychology, and some of its typical motivational traits. As Persson and Savulescu believe, these consist of primarily avoiding harm (and less of doing good), a bias toward the near future, friendliness to members of our own groups and xenophobia to those of others, and a feeling of fairness based on reciprocity in altruism that creates anger or aggression when frustrated. This more or less corresponds to what evolutionary sociobiology has provided as a description and explanation of human morality and the corresponding rules of behavior.[7] For example, Lyall Watson, a biologist, summarizes the moral rules generated by biological evolution as follows: be mean to foreigners, be nice to relatives, and cheat where you can.[8] The morality that results from this set of motivations allegedly helped humans to survive to this day (or maybe it just was not bad enough to lead to an earlier extinction of the human species), but in the environment of a technological and global civilization, the limitations of this moral psychology may turn out to be fatal. The examples the authors provide are terrorist attacks, global poverty, and the destruction of the environment. In one way or another, all these types of moral evil result from or persist because of the limited capacity of our evolved morality; for example, among other reasons, global poverty persists because our altruism is directed toward group members, and environmental destruction results from our bias toward the near future.

Thus, the moral improvement of mankind is crucial to solving problems that pose a threat to the existence of civilization. If the authors are justified in raising doubts that this could be achieved by traditional means, biomedical moral enhancement would be extremely important for human survival. The technologies in question, which are not yet available but may be at some point in human history, would include gene therapy (as the reference to the genetic basis of our sense of fairness suggests) and again neurotransmitters, for which oxytocin (trust) and serotonin (aggression) provide examples. Considering that other enhancements might just exacerbate the existential problems of humanity, moral enhancement, if feasible, would be the most important one. Transhumanism would therefore be strongly desirable if understood to imply moral improvement.[9] These conceptions of moral enhancement by Douglas on the one hand and by Persson and Savulescu on the other appear to differ substantially in their aim and scope. But, they also have much in common as to their fundamental conceptions regarding moral agents, their shared naturalism, and the lack of consideration of the intersubjective and social aspects of morality. These traits will turn out to be particularly problematic from a Habermasian perspective.

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Morality According to Habermas

Before we can offer a Habermasian interpretation of moral enhancement, we must first clarify Habermas's understanding of morality. Although his work covers a wide range of topics, one of its main characteristics is the integration of philosophy and social science in a critical theory of society. This theory is developed in the tradition of the neo-Marxist Frankfurt school, whose first generation is represented by Herbert Marcuse, Theodor W. Adorno, and Max Horkheimer. Habermas connected this tradition with philosophical currents like pragmatism, analytical philosophy, and hermeneutics, to which his predecessors were either indifferent or even hostile. Also, in contrast to the founders of the Frankfurt school, he pursues the aim to defend modernity and save its very project, the Enlightenment, by developing a particular theory of rationality.

Adorno and Horkheimer described the social and individual pathologies brought about during the processes created by the Enlightenment by instrumental reason without suggesting an alternative or formulating a positive, normative foundation of their criticism. Correspondingly, the older representatives of the Frankfurt school do not offer their own approach to moral philosophy. Habermas tries to fill in this gap with the very fundament of his philosophy, his theory of communicative action, in which communicative rationality is embodied as one of three types of reason: epistemological, teleological (instrumental), and communicative reason. Just like his older colleagues at the Institute of Social Research, Habermas is interested in social evolution, and this is the first context in which he unfolds his theory of communicative reason. In one of his major philosophical works, *Knowledge and Human Interest*,[10] he mentions three challenges to human survival created by natural evolution: natural scarcity, social coordination, and social domination. This creates a genuine interest in technological domination (instrumental reason) and social integration (communicative reason). Both interests drive social evolution. At the core of this social evolution, social integration is achieved by processes of mutual understanding and cooperation or communicative action, which is the source of different forms of normativity, including morality.[11] It is noteworthy at this point that this interconnection between natural and social evolution is completely absent in the naturalism of the authors on moral enhancement cited previously.

The basic function of morality from the perspective of social evolution is to achieve higher degrees of social integration in an ongoing process that moves from the stages of preconventional morality (acceptance of authorities) to postconventional morality (reflection and recognition of basic principles). The main task of moral philosophy is to reconstruct how the normative validity of quotidian moral norms can be evaluated.[12] For Habermas, in our lifeworld (*Lebenswelt*)—our shared experiences of everyday life, which are governed by communicative reason and provide mutual understanding, meaning, and integration to our lives—we always have a prereflexive understanding of moral actions, which we acquire in the process of socialization through our communicative being in the world. In relation to this matter, Habermas distinguishes between the intuitive validity of moral norms used in everyday practice and the reflexive normative validity of norms when they become contested or problematic. This means that some members in a society no longer accept one or several of the existing moral norms, question their validity, and ask for their justification or reject them. In everyday life, we follow

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certain moral norms that, when they are questioned, we are able to defend using rational arguments and respecting basic rules of communication (avoiding contradictions, participating in debates, listening to each of the involved parts, etc.). This process of a common search for the validity and recognition of moral norms is a "discourse" (*Diskurs*). Understood in this way, moral discourses are not endlessly ongoing conversations on what to do but are ideal processes of reflection and recognition of moral norms that have become problematic. Based on normative implications of communicative reason, Habermas develops his moral theory in the form of "discourse ethics" (*Diskursethik*), together with Karl-Otto Apel, a German philosopher who adapted American pragmatism by connecting it with his own version of a transcendental reflection. Discourse ethics has its own transcendental dimension, but only in a weak form without a transcendental subject; although it is a necessary precondition of moral evaluation, it does not formulate absolute conditions for their possibility. Habermas himself describes his approach as Kantian pragmatism, as he tries to derive the conditions of the acceptability of moral norms from the validity claims implicit to communicative action.[13]

For Habermas, "moral phenomena" can only be discovered inside a "formal-pragmatic analysis of communicative action in which the actors are oriented to validity claims."[14] This means that a moral phenomenon is always a *social phenomenon* that can only be found in a rational-critical communication between many actors. By the word "communicative" Habermas means interactions in which the involved participants "coordinate their plans of action consensually, with the agreement reached at any point being evaluated in terms of the intersubjective recognition of validity claims."[15] In the "explicit linguistic processes" of reaching an agreement about something, the actors raise "three different claims to validity" with their speech acts: "claims to truth, claims to rightness or claims to truthfulness," depending on whether they refer to something in the objective world (worlds of facts), to something in the common social world, or to something in their own subjective world.[16] Whereas for Habermas the claim of truth is only accessible through a speech act, the normative claim of validity is originally based in norms and only in a derived way in speech acts.[17] Consequently, only social reality has an internal connection with normative validity claims.

As a result, all moral dilemmas arise for Habermas from the "horizon of the lifeworld,"[18] of the social communicative world, and therefore there are no moral phenomena that can only concern individuals. In this respect, Habermas distinguishes morality and ethics. In a pluralistic society with no shared metaphysical, cosmological worldview, no universal concept of the "good life" can be established, as he repeats in *The Future of Human Nature*.[19] Ethics deals according to Habermas with teleological questions concerning the individual good life. As part of the lifeworld, conceptions of the good life and life projects have a social dimension and are possibly subject to discourses, but in postmetaphysical and pluralistic societies there can be no strict obligations for the individual members on how to pursue happiness (e.g., which goals they should pursue). Morality, on the contrary, is related to norms that are strictly binding for the members of a society (e.g., questions of justice, of not harming others). If such norms become problematic or questioned, a practical discourse is the only adequate way to solve the related disputes.

Valid norms must deserve the recognition (*Anerkennung*) of every person involved. However, this recognition must transcend the merely partial, individual

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point of view, and therefore the process of validation of norms must be impartial and universal. Habermas's moral theory is consistent with Kant's claim that the universal validity of moral judgments must be justified by correspondence to a formal requirement of practical reason. Nevertheless, for Habermas, this requirement is not an imperative but rather describes the process of discourse ethics by moral reasoning. With the introduction of elements of Apel's theory of communication, Habermas reformulates Kant's categorical imperative. Habermas points out that the possibility of agreement can be found in a criterion of *universalization.* Because this criterion enables agreements, Habermas calls it a "bridging principle" between the different moral argumentations in the intersubjective communicative process.[20]

In a rational-critical communication we can agree on, and that means we can accept as valid, only those moral norms that pass the test of universalization. The criterion of universalization allows that particular wishes or interests can be morally justified in a community of actors, who orient their moral actions through rational reasons: "It is only their claim to *general* validity that gives an interest, a volition, or a norm the dignity of moral authority." [21] In this regard, it is the task of moral philosophy to elaborate to what extent our everyday moral intuition or an already-established legal norm has a rational foundation. Here, one can see very clearly the cognitivism of Habermas's moral theory, which is based on one elementary rational requirement: "To say that *I ought* to do something means that *I have good reasons* for doing it."[22] For Habermas, it is only on the basis of the universalization criterion that a discourse ethics can be grounded. The basic idea is that all moral arguments presuppose an implicit principle of universalization for the selection of norms in a rational, that is, discursive, process. The condition that any valid norm must fulfill is that "all affected can accept the consequences and the side effects its general observance can be anticipated to have for the satisfaction of everyone's interests."[23] In view of Habermas's moral theory, it should be obvious that moral norms can never be properly evaluated in a monologue but can only be evaluated by a cooperative effort in which the persons concerned by a moral disagreement continue their communicative actions in a reflexive attitude with the purpose of restoring a disturbed consensus.[24] When actors commonly recognize a norm, they not only carry out a reconstructive work by restoring a disturbed moral consensus but by doing so also assure an intersubjective recognition of the agreed norm.

One of the most important pragmatic conditions for the development of such practical discourses is the existence of a neutral public sphere for the debate of politics and moral matters. Habermas's theory of communicative action therefore has an important implication not only for morality but also for politics. As for Hannah Arendt, the public space is for Habermas a place of deliberation, debate, and decision in which only the rational persuasiveness of the arguments is crucial. Habermas develops his conception of the public sphere from the idea of deliberative democracy. Habermas's understanding of modern democracies has three main parts: the private autonomy of citizens who have the right to live their own life; democratic citizenship, that is, the equal inclusion of free and equal citizens in the political community; and an independent public politic, which is a sphere of the formation of free opinions and volitions (*freie Meinungs- und Willensbildung*) and integrates the state and the civil society.[25] The public sphere contributes to the democratic legitimacy of government action by selecting the

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politically relevant issues (which require common decisions), and deliberation processes regarding these problems, with more or less informed and reasoned statements to bundle competing public opinions.[26] From the public communication results a stimulating and at the same time orienting force, which is vital for the formation of the opinions and volitions (*Meinungs- und Willensbildung*) of citizens.[27] That is, for Habermas, the critical task of a political public sphere. The public space is the place for the benefit of mutual learning and decisionmaking, in which the participants in discourses focus on a common cause.

Colonization of the Very Core of the Lifeworld

So far, we have outlined the meaning of some basic concepts of morality according to Habermas. This enables us to examine whether moral enhancement would be legitimate in general if these concepts were applied. The next step is then to ask whether the means to achieve moral enhancement matter for this evaluation. This is a question that is often raised in the enhancement debate: whether the methods as such to achieve a goal generally considered as desirable do make any difference. For instance, technological devices or pharmaceutical drugs used in sports are criticized because they represent a shortcut to excellence in skills acquired by training efforts. This is why erythropoietin (EPO) and the use of oxygen-low chambers are justifiably banned, whereas high-altitude training is allowed.[28] To counter such criticisms, proponents of enhancements have to argue that using means for enhancements as such would not differ in any relevant sense from what we already accept and what is uncontroversial despite constituting a form of enhancement, for example, calculators and literacy.[29]

Improving moral goodness is certainly an uncontroversial goal. Furthermore, if moral perfection is considered to be an enhancement in the same way as literacy, it can be traced back to an ancient tradition, which would support the argument that enhancements are not morally problematic as such, because humanity has always enhanced itself. Moral philosophy seeks it from its very beginning. Therefore, it is obvious to use it in argumentative strategies for the justification of enhancements in general, as Tom Douglas indeed does. As mentioned previously, the moral enhancement Douglas has in mind is the reduction of counter-moral emotions and persons with a better set of motives.

He also discusses objections directed against the means. A weaker objection would be that it would be better if this moral enhancement could be achieved with means other than biomedical ones. Douglas concedes that this would be intuitively convincing if biomedical moral enhancement were to lead persons to give up any other efforts for moral self-improvement, but he finds this improbable.

A stronger objection would be that biomedical means as such are inappropriate to achieve moral improvement. Douglas refutes this objection by arguing that the underlying assumption is that such means are "unnatural" in some way. However, according to him, unnaturalness is never a convincing argument in this context. Considering Habermas's postmetaphysical perspective and appreciation of technology in general, there would be no objection against this argumentative strategy from a Habermasian perspective. However, an important shortcoming of this reflection on technology as a means is that it overlooks the social context of its application. This is the most important Habermasian criticism of both concepts of moral enhancement in this article.

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As mentioned previously, Habermas continues the tradition of social critique from the Frankfurt school. One of the most basic concepts in this tradition is the dialectics of the Enlightenment. In their book with the same title,[30] Theodor Adorno and Max Horkheimer argue that the project of the Enlightenment is ultimately self-destructive, because the instrumental form of reason, which is one of its main traits, does lead to the subjugation and oppression of the subjects, to whose liberation the Enlightenment was originally dedicated. Habermas develops his theory of communicative action not only to provide a positive basis for this criticism, but also to save the project of the Enlightenment by an alternative concept of rationality. Modernity, according to Habermas, is characterized by a process of differentiation in which social tasks are delegated to the subsystems of the market economy and the underlying legal system. This social evolution as such is beneficent, because it allows gains in efficiency and productivity. However, social problems generate from the tendency of the subsystems to extend their steering mechanisms, money, and power to the lifeworld. This leads to commercialization and juridification of the intersubjective relations and functions of the lifeworld and to different types of social and individual (psychological) pathologies. Habermas calls this process "colonialisation of the lifeworld," a concept that not only replaces the dialectic of the Enlightenment but also amends the Marxist concepts of reification and exploitation, which for Habermas are too exclusively focused on industrial labor. If the lifeworld is colonialized, it is conquered by the steering mechanisms of the subsystems, as a tribal community is conquered by colonial masters.[31]

The functions of the lifeworld are cultural reproduction, social integration, and socialization on the levels of culture, society, and the individual person. All these processes are governed by communicative reason. For example, on the level of society, social integration is achieved by the coordination of actions based on the mutual recognition of validity claims, and socialization is achieved by generating motivation for actions according to norms in an interpersonal communicative exchange.[32] If the coordination of actions and the generation of motivations by communicative interactions fail, and these parts of the lifeworld are colonialized, the resulting pathologies are anomy and the loss of motivation among the members of a society. On the level of the individual person, the colonialization of cultural knowledge (cultural reproduction), of the patterns of social adherence (social integration), and of the internalization of values (socialization) leads to a loss of orientation, to alienation, and to psychopathologies such as narcissism. Habermas describes these individual pathologies as "fragmented consciousness."[33]

Obviously, the proponents of moral enhancement refer to such pathologies: for example, inability to control violent impulses by counteracting internalized values and the social disintegration caused by racism (Douglas) or the anomy of global poverty and the psychopathology of prison inmates (Persson and Savulescu). The first problem of both conceptions of moral enhancement is that they ignore the social reasons for the pathologies they address. If the fact that such a high percentage of prison inmates are psychopaths is correct after all, is this a result of natural evolution? Does the same apply to terrorism and global poverty? It is evident that such explanations would oversimplify the social and institutional context in which these problems generate and do not describe the related phenomena sufficiently. Otherwise, we could replace sociological with biological research. Thus, all authors fail to understand the reasons and characteristics of social pathologies.

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The second problem is even worse. Biomedical technology and the way all authors suggest using it as a means to address these pathologies would be particularly prone to domination by the steering mechanisms of the subsystems of society instead of communicative actions. Not only will biomedical technologies alone fail to solve existing pathologies, but there is a high chance that they will create new ones. In the case of moral enhancement, these new pathologies could be even worse, as morality is one of the very cores of the lifeworld that will subsequently be colonialized. Both versions of such colonializations are conceivable in our context. There could be a market for moral enhancement for the treatment of akrasia in order to help people function better in society. Or, there could be a paternalistic or even totalitarian state that forces its subjects into alleged moral self-improvement or that generates universal trust by a generous provision of oxytocin or the like. Persson and Savulescu admit that there is a danger of totalitarian developments in the context of security technologies, but they seem to ignore the fact that such dangers apply to moral enhancement as well.

The Legitimacy of Moral Enhancement from a Habermasian Perspective

Does this mean that moral enhancement with biomedical means would generally not be legitimate from a Habermasian perspective? Not necessarily. The ethical acceptability of moral enhancement has to be considered not just with respect to its means, goals, or desired effects, but rather regarding relevant validity claims and the related practical discourses of recognition. This means that the norms underlying moral enhancement should be examined and accepted by satisfying the universalization criterion. If we assume that a norm such as "Person A should receive the possibility to morally enhance herself if the conditions x, y, and z are met" can be universalized, this would imply that we are no longer only legitimating the moral enhancement of individuals; we are legitimating the moral enhancement of society. This also implies that there has to be symmetry between the subjects and recipients of moral enhancement, and the recipients of moral enhancement would have to remain the authors of their own lives. As Habermas assumes in *The Future of Human Nature*, this could never apply to human beings who are genetically modified and designed by others, a controversial claim that is contested by many other authors.[34] Another general requirement of discourse ethics is more convincing: those who get morally enhanced should participate in a moral discourse regarding the relevant decisions prior to their moral enhancement. Such a procedure would be in principle legitimate. Otherwise, moral enhancement could easily be abused for repression. This clarifies that the moral legitimacy of technologies in a Habermasian perspective cannot only rely on their application by individuals. The social context, including existing pathologies of the lifeworld, also needs to be taken into account, and moral enhancements also have to be measured in terms of the goal of emancipation. Moral enhancement cannot be accomplished individually, but only by taking into account the validity claims involved. Considering global problems, the subject of moral enhancement can only be determined by the participants in a discourse that involves the entire community of rational actors.

This consideration helps us to realize again the importance of society for the evaluation and recognition of moral norms according to Habermas, which obviously have to underlie moral enhancements to avoid creating new pathologies.

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But this consideration should also show that a radically different understanding of human nature underlies both conceptions of moral enhancement compared to the one that Habermas develops. Both conceptions use examples that describe moral enhancement as a process that individuals use to correct their own deficiencies, resulting either from the neurological basis for their behavior (Douglas) or from their evolved behavioral dispositions (according to Persson and Savulescu, a defective sociobiological, evolutionary morality). Both imply a naturalistic anthropological conception mainly based on the defects of human beings. All three authors are assuming a fundamental deficit of human nature that should be corrected by a moral enhancement, but it is not clear what the basis of such an improvement would be, or that this basis could indeed be addressed by biomedical technologies. Persson and Savulescu mention moral sensitivity, human rights, and an improved altruism. It is also not clear from their underlying assumptions on the defective morality, which results from human evolution, how such moral phenomena could be explained and improved. They mention this problem as "bootstrapping," but they suggest no solution. Habermas's anthropological position, on the contrary, is based on the idea that human beings are rational beings and can improve themselves by communicative and cooperative actions in the lifeworld and in a practical discourse in the public sphere.

Conclusion

If some conditions were respected (the communicative character of morality, the universalization criterion, and the requirements for a moral discourse), some forms of moral enhancements with biomedical means could be legitimate from a Habermasian perspective. This applies to the cautious model of Thomas Douglas (i.e., a better set of motives), who also assumes that the recipient of moral enhancement can freely choose to make use of it. But, understood in this way, moral enhancement is never likely to be a sufficient means to solve the problems it addresses. For an improvement of moral capabilities, medical treatments alone would never be sufficient, because every rational human being can improve its moral acts through the lifeworld: education through cultural knowledge for personal orientation (cultural reproduction), development of patterns of adherence with others instead of alienation and social disintegration (social integration), and internalization of values (socialization) in cooperative communication with others. If these ways of self-improvement are disturbed, the underlying causes have to be addressed, and the deficient functions of the lifeworld have to be restored, in which process medical technologies obviously cannot play a role.

Whereas some forms of moral enhancement may be legitimate but contribute very little to solving the related problems, some other forms (i.e., better biological dispositions) are likely to be illegitimate from a Habermasian perspective. Not only does the bootstrapping problem of Persson and Savulescu show that they are unable to indicate the normative sources of the moral enhancement they propose; they also lack an adequate understanding of the origin of social and individual pathologies. According to their analysis, the pathologies they mention seem to result from the defectively evolved human morality, which is inadequate for modern civilization. If this were correct, it would still be difficult to understand how such defective moral agents do not abuse the potential of moral enhancements. Then, even if individual agents were able to morally enhance

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themselves, how could this be realized in the current institutional context, which incorporates many problems described by the colonialization of the lifeworld? How could this institutional context be appropriate to organize moral enhancement on a national scale, let alone a global scale, which would be necessary for addressing the global problems to which the authors refer? Although it is difficult to see how this should happen, Persson and Savulescu would have to assume that if a sufficient part of humanity is morally enhanced, these humans or transhumans would also automatically create better social institutions. But, would not any convincing concept of moral enhancement include an understanding of such institutions to see whether it would indeed constitute the intended improvement? The lack of such an understanding and of an adequate understanding of the reasons for social and individual pathologies generates the danger that moral enhancement in Persson and Savulescu's sense may result in a last step in the dialectics of the Enlightenment: the destruction of moral agency.

Notes

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11. See, e.g., Ingram D. *Habermas*. Ithaca, NY: Cornell University Press; 2010, at 44.
12. Habermas J. *Moral Consciousness and Communicative Action*. Cambridge, MA: MIT Press; 1990, at 44 (German original: Habermas J. *Moralbewußtsein und kommunikatives Handeln*. Frankfurt am Main: Suhrkamp; 1983, at 54).
13. See, e.g., Brunkhorst H, Kreide R, Lafont C, Habermas J. *Habermas-Handbuch*. Stuttgart [u.a.]: Metzler; 2009, at 116.
14. See note 12, Habermas 1990, at 44 (Habermas 1983, at 54).
15. See note 12, Habermas 1990, at 58 (Habermas 1983, at 68).
16. See note 12, Habermas 1990, at 58 (Habermas 1983, at 68).
17. See note 12, Habermas 1990, at 60 (Habermas 1983, at 70).
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20. See note 12, Habermas 1990, at 57 (Habermas 1983, at 67).
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23. See note 12, Habermas 1990, at 89.
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