MORAL ENHANCEMENT AND FREEDOM OF CHOICE: WHEN DOES MORAL ENHANCEMENT BECOME DEVIL ENHANCEMENT?

https://dx.doi.org/10.4314/ezumezu.v1i1.5

Submission: April 1, 2024 Accepted: June 27, 2024

Amara Esther CHIMAKONAM, csp
Centre for Phenomenology in South Africa,
Department of Philosophy
University of Fort Hare, South Africa
Email: Amaraesther35@gmail.com

ORCID No: https://orcid.org/0000-0002-3970-772X

Abstract

This essay contests the plausibility of David DeGrazia's claim that moral enhancement would not significantly threaten human freedom. He argues that morally enhanced persons would necessarily fulfil the three conditions for free action: "'A autonomously performs intentional action X if and only if (1) A does X because she prefers to do X, (2) A has this preference because she (at least dispositionally) identifies with and prefers to have it, and (3) this identification has not resulted primarily from influences that A would, on careful reflection, consider alienating. "I employ two arguments to show the implausibility of DeGrazia's argument. First, I introduce a thought experiment called 'devil enhancement' directed at enhancing immoral capacities as an analogy to the type of moral enhancement proposed by DeGrazia. This thought experiment will show that if devil enhancement impairs freedom of choice, moral enhancement will do the same. I situate my response within Afro-communitarianism. In particular, I evoke Ifeanyi Menkiti's normative account of personhood to argue that moral enhancement, like devil enhancement, will significantly threaten human freedom and undermine an individual's ability to decide whether to comply or not with relevant social norms required to attain full personhood. Second, this inquiry raises the question: what is the probability that moral enhancement could result in devil enhancement? Given the incomprehensibility of enhancement technologies, namely the uncertainties surrounding their outcome, I contend that this probability is high. It is not clear what the result of enhancement technologies will be, and DeGrazia did not do enough to support his claims that the outcome would always be moral excellence.

Keywords: Moral enhancement, devil enhancement, normative personhood, David DeGrazia, Afro-communitarianism

Introduction¹

In this essay, I will interrogate DeGrazia's argument that moral enhancement (ME) poses no relevant threat to human freedom. By introducing what can be called 'devil enhancement' (DE), I aim to contest the plausibility of the claim. In his article, "Moral Enhancement, Freedom, and What We (should) Value in Moral Behaviour," DeGrazia defends the idea that morally enhanced persons would not lose their freedom after such moral augmentation. He bases his argument on three conditions for free action, which I will highlight and discuss in a later section. He claims that morally enhanced persons would satisfactorily meet those three conditions because their actions will result from their free will.

I will argue that there is a reason to think that DeGrazia's argument is implausible. I will employ 'devil enhancement' (DE) as a counter to DeGrazia's argument. A devil enhancement is defined as biomedical and genetic interventions that could radically enhance individuals' capacities beyond what is considered humanly normal such that they would inevitably act in morally wrong ways. The argument of devil enhancement discloses that the attempt to enhance the human brain or genes does not guarantee that the outcome will always be moral excellence. It could also be immoral outcome: excelling in immorality! The question, therefore, is, what is the probability that ME could result in DE? To show the implausibility of DeGrazia's argument, I will evoke the DE as a thought experiment that parallels ME to show that DeGrzia's three conditions could also apply in the case of devil enhancement. If we could argue that the

Africa. I revised it to suit the focus of the present essay.

_

¹ Some parts of this essay are taken from my thesis, "Contending with Super Choice in the Transhumanist Future: Is the Normative Conception of Personhood Under Threat?" (2023), Department of Philosophy, University of Johannesburg, South

devil-enhanced people who perpetrate immoral and evil actions necessarily fulfil DeGrazia's three conditions, then their new immoral capacities would be the controlling effect of their enhancement and not their free choice. Therefore, if freedom of moral choice could be undermined by DE, it could also be undermined by ME. Thus, unless DeGrazia shows the contrary, ME, like DE, can undermine free moral choices, even when it results in good actions. It is exactly the good conduct that results from moral enhancement that blindsides DeGrazia into thinking that freedom of choice is preserved. To home in on this, I will situate my argument on Afro-communitarian personhood, particularly the account of normative personhood by Ifeanyi Menkiti.

In the first part of this essay, I will present DeGrazia's argument that ME does not significantly threaten human freedom. From the Afro-communitarian standpoint, the second and third parts will demonstrate that ME threatens human freedom in some significant ways. The final part will anticipate possible counterarguments from DeGrazia and provide plausible responses to them.

1. Would Moral Enhancement Undermine Free Moral Choice?

Are humans so morally defective to be needing ME? And would ME, if safe, effective, and universally available, undermine the freedom of those who decide to enhance their moral capacities? DeGrazia's motivation for ME derives from the fact that humans are suffering from serious moral defects and the inability of traditional moral education to fix those moral defects. These moral defects are what predispose humans to do evil against humanity and other sentient beings, like genocide, slavery, prostitution, and child pornography. DeGrazia believes that humans' ability to commit "truly massive harm" (DEGRAZIA 2014, 362) increases in relation to scientific and technological development. The rapid growth of science and technology increases the likelihood of an individual or group of individuals inflicting serious harm on humanity or other sentient beings, like "nuclear annihilation, pandemics caused by the intentional spread of smallpox, the ebola virus, or biological weapons, global economic ruin caused by cyber terrorism, eventual devastation by the effects of global climate change, or the like" (DEGRAZIA 2014, 362). The main problem here is that the positive psychological

changes humans require to utilize science and technology in morally effective ways come at a slower pace than their rapid development. Also, human moral defects have made our world not good enough and inhabitable. So, to avoid these calamitous situations and make our world habitable, we need to improve our moral behaviour through biotechnological means. That is to enhance human moral capacities so that we can be more amenable to empathy, justice, fairness, friendliness, love, altruism, etc.

I will follow DeGrazia in understanding the concept of moral bioenhancement (MB) to indicate any interventions aimed at enhancing humans' moral capacities using "more high tech" (DEGRAZIA 2014, 362) and radical scientific means. He believes that moral biotechnology, in this sense, would be different from moral enhancement (ME), defined as "interventions that are intended to improve our moral capacities such as our capacities for sympathy and fairness" (DEGRAZIA 2014, 361). However, I will not follow through with this sharp distinction since both ME and MB are often used interchangeably in the literature, even by their proponents (see PERSSON & SAVULESCU 2008; DOUGLASS 2008; RAKIC 2014). ME constitutes any intervention directed towards improving our moral motivation, insight and behaviour. Such improvement would leave us with "better motives", "better understanding" and "greater conformity to appropriate moral norms" (DEGRAZIA 2014, 362-363). Although DeGrazia did not make it entirely clear how we can achieve ME, he is optimistic that ME would yield the desired positive result of averting the truly massive harm. So why does DeGrazia find ME compatible with free moral choice?

DeGrazia understands human freedom in the compatibilist sense—the idea that human freedom tallies with universal causal determinism. On this view, human freedom requires individuals to "determine their actions through their own will" (DEGRAZIA 2014, 365). This idea of freedom requires that individuals have the will to reason and choose between the right or wrong course of action independently of compulsion or manipulation. This view brings human freedom closer to autonomy, which is individuals' ability to self-govern according to their desires or motives without external constraints. DeGrazia states that "'A autonomously performs intentional action X if and only if (1) A does X because she prefers to

do X, (2) A has this preference because she (at least dispositionally) identifies with and prefers to have it, and (3) this identification has not resulted primarily from influences that A would, on careful reflection, consider alienating" (italics original, DEGRAZIA 2014, 366-367). This means that an individual acts freely if (1) they have a clear preference to act in a certain way, (2) they identify and prefer such preferences in a careful self-reflective manner, (3) they will not find such preferences alienating or being externally influenced. Actions that satisfy these three criteria are free.

He argues that morally enhanced persons would necessarily or routinely satisfy these three conditions of free action. DeGrazia assumes that individuals would choose to undergo ME to improve their moral motivation, insight and behaviour. He also assumes that individuals would actively welcome the influence of ME on their moral behaviour since they chose to be morally enhanced. These two assumptions ground his claim that morally enhanced persons would act in accordance with their will since they welcome the influence of ME as their own. Because they would welcome the influence of ME as theirs, morally enhanced persons would not consider their actions to be alienating or being manipulated. Degrazia gives an example to illustrate that morally enhanced persons would act freely. He supposes that a morally enhanced person would be more inclined to help someone in need, even in an inconvenient situation, because it is the right course of action. DeGrazia reasons that in rendering assistance, even when doing so is inconvenient but morally required, morally enhanced persons "would not consider the influence of [ME] on [their] motivation to be alienating" (DEGRAZIA 2014, 366), since such influence was welcomed by them.

In the rest of this paper, I will challenge this claim from an Afrocommunitarian perspective and situate my argument on Menkiti's account of normative personhood. With normative personhood, I will show that ME threatens a vital aspect of human freedom: our ability to make moral decisions. Although I have argued this at length elsewhere (see AE CHIMAKONAM 2023), here I will introduce devil enhancement (DE) to argue that the attempt to enhance the human capacities, contra DeGrazia, does not guarantee that its end product would always be moral excellence. The end product could be immoral. With this, I will show that ME, like DE could undermine human capacity to make moral decisions in significant ways.

2. First Argument: Devil Enhancement Vs Moral Enhancement

In this section, I will engage with DeGrazia's claim that ME will not significantly reduce our freedom. To show the probability that ME could emerge as DE, I would deploy Menkiti's normative account of personhood to generate a parallel analogy. I concentrate on the aspects of normative personhood that permit individuals to decide whether to attain personhood or not. The first aspect is the process of incorporating into the community. The process of incorporation is a long and gradual process of social transformation that involves performing communal duties and obligations, complying with communal norms, and fulfilling communal rites and rituals. Menkiti points out that since individuals are an integral part of the community, it is through their participation and relationship with members and entities in the community that they realize their self-hood. This process of incorporation permits individuals to strive towards the attainment of "full personhood" (MENKITI 1984, 173). If individuals want to attain full personhood, they have to decide, for instance, whether to comply with relevant social norms and carry out their communal duties and obligations. As Menkiti puts it; "...personhood is the sort of thing which has to be attained, and is attained in direct proportion as one participates in communal life through the discharge of the various obligations defined of one's station" (MENKITI 1984, 176). Since the community confers personhood, individuals acquire moral excellence by acting in ways that promote the common good. So, individuals are subject to blame when they choose actions that detract from the common good and subject to praise if they choose actions that promote the common good.

Consider the second aspect in which individuals might attain full personhood. Although embedded in their community, individuals must embark on a personal journey of achieving personhood. They must make a conscious effort to strive towards personhood. In striving towards personhood, individuals must ensure they do not prevent others or create circumstances that would deter others from acquiring personhood due to their embeddedness in the community and ongoing

relationships with its members. Thus, the community prescribes the norms, and individuals are left to comply in order to achieve full personhood. Menkiti says that through this process of striving, individuals could "succeed" or "fail at personhood, become "competent or ineffective" and "better or worse" at it (MENKITI 1984, 173). This process of striving places individuals in charge of making an important moral decision of whether to attain personhood or not. It is in this ability to decide and choose one's preferred course of action that freedom is found.

Using Menkiti's account of normative personhood, I will show that ME would significantly undermine free moral choice, contrary to what DeGrazia would have us believe. To demonstrate this, I construct a parallel analogy called devil enhancement (DE). Let us think of DE as a counter to ME. As defined above, DE involves biomedical and genetic interventions that could radically enhance individuals' immoral capacities beyond what is considered humanly normal so that they would inevitably act in morally wrong ways. I will articulate this DE in relation to DeGrazia's argument. DeGrazia's three conditions presuppose that an individual carefully weighs their decision against all other complexities that might exert undue influence on their preferences before choosing them. For him, those who are morally enhanced would satisfactorily meet these criteria because their actions will result from their free will. He shows how morally enhanced will meet these criteria by offering an example of a morally enhanced person, acting out of dictates of morality and in an unfavorable condition, helps someone in need even when not doing so will not attract any moral cost to them. Such a person would not see the effect of moral enhancement on their judgment as something selfalienating but as something that boosts their free will to make better moral decisions and to be able to act accordingly.

DeGrazia's position implies that morally enhanced persons would embrace their new moral capacities as their own since they would not consider such capacities as originating from somewhere else. Also, it implies that morally enhanced persons would have the power to choose independently of external influence, making their decision to be authentic to them. In a way, they would not consider their ability to always conform to relevant social norms and attain full personhood as something externally influenced. However, there is a

reason to think that this is implausible. To illustrate, consider this devil enhancement (DE) analogy:

A technique of devil enhancement through scientific and technological means was invented to control individuals' dispositions, motivations, beliefs, thoughts, desires, attitudes, etc., within nanoseconds by inhibiting moral behaviours. Devil enhancement could produce immoral dispositions in individuals that would motivate or impel them to commit immoral acts such as rape, murder, racial cleansing, and others while thinking that their actions are freely chosen.

This DE is analogous to DeGrazia's ME, except that the outcomes are different. While ME inhibits immoral behaviors, DE inhibits moral behaviors. Suppose DeGrazia's three conditions are correct. In that case, those who are devil-enhanced will see their new immoral capacities as their own and their evil actions as products of their free choice, just like those who were morally enhanced. But this is not plausible because those new immoral capacities are the products of the control resulting from DE. Someone who is programmed to always do evil, just like another programmed to always do good is not free, whether they know it or not. If they feel and think that they are acting out of free choice, it is only because they were programmed to feel and think that way. In this light, those morally enhanced to attain full personhood would not act freely since their actions result from ME.

3. Second Argument: What is the probability that Moral Enhancement could result in Devil Enhancement?

In this section, I will provide plausible responses to the above question to show that the probability that ME could emerge as DE is high and could jeopardize everything DeGrazia has attempted to build. If the much-vaunted moral enhancement ends up as devil enhancement, then DeGrazia's beautiful castle collapses. Although my discussion of ME dovetailing to DE is not certain, I will show that such dovetailing would be sufficiently probable to justify limiting ME to safeguard our free moral choice. This probability lies in the incomprehensibility of the effect of enhancement technologies. There seems to be a significant barrier to sufficiently comprehend and foretell the full outcome of enhancement technologies: we cannot know for sure

whether the outcome would be excelling in morality or immorality. It is easy to claim, like DeGrazia, that enhancement technologies would produce moral excellence and virtues. But it is difficult to sustain such a claim. Why? Because the results of such enhancement technologies are riddled with uncertainties. Viorel Rotila captures this point thus:

We miss each time the hazard that accompanies the technological development, namely the significant dose of uncertainty that entails it. The anticipatory development schemes of the humane proposed by transhumanism are based on an increase in technological complexity, which is in fact an increase in the degree of uncertainty. Transhumanism is a prediction of the humane development towards something else, based on a set of complex technological interventions, given that such interventions have a high degree of uncertainty about their effects. (ROTILA 2016, 467)

In other words, the effect of enhancement technologies is increasingly less predictable, far from how DeGrazia paints it: a greater level of complex technological and scientific interventions would make humans morally virtuous. Such belief in technological certainty often results in underestimating the possibility that enhancement technologies might not yield moral excellence as envisioned.

Although DeGrazia might argue that the scientific revolution has shown that by studying the human brain bit by bit, we could project into the future of humanity. It only takes the right model and calculations to arrive at a technological certainty that could be extended into the future. For instance, scientists have identified parts of the brain responsible for aggression and happy mood. In 2008, Molly Crockett (as cited in WISEMAN 2016) portrayed the human brain responsible for moral behaviour with the Jekyll and Hyde analogy. While Jekyll is morally good with "sufficient serotonin levels, appropriate amygdala response and activity in the prefrontal control network and Goal-oriented thinking," Hyde is aggressive and morally defective, characterized by "low serotonin levels, emotionally reactive, malfunctioning frontostriatal dopamine system" and susceptible to evil (WISEMAN 2016, 25). During moral decisions, Jekyll and Hyde compete to control our actions, and it is serotonin

that ensures our rational brain, JekyII, wins. In 2012, Paul Zak declared oxytocin as the "ultimate moral molecule" responsible for trustworthiness and argued that a high level of testosterone prevents the brain from releasing oxytocin, resulting in aggression and petty evils. Both serotonin and oxytocin are among the happy hormones or feel-good hormones responsible for pro-social behaviours. And if we admit this technological certainty, then we must admit the possibility of enhancement technologies yielding the desired moral outcome. But if Zak were absolutely correct, then women who do not generally possess high levels of testosterone would be moral paragons and living saints. What this indicates is that moral enhancement is not merely about hormones and genes. It may involve something more elusive than we know, making it a dicey prospect. The problem with technological certainty is that it lures one into focusing and even believing in a single outcome while failing to imagine other highly probable consequential outcomes.

The uncertainties of enhancement technologies increase the probability of ME dovetailing into DE. These uncertainties leave room for abuse of such technologies, say by a mad scientist, who might reconfigure them to enhance people to always behave immorally. My claim is that the incomprehensibility of the uncertainties of enhancement technologies regarding their outcome increases the probability of ME emerging as DE, irrespective of the intended outcome.

Although one might not know for certain the outcome of enhancement technologies due to their incomprehensibility, one could only guess how ME might affect us. This is similar to Blaise Pascal's wager, which runs somewhat like this: even though I do not know for certain whether God exists, I know I have everything to gain by believing that he exists and everything to lose by believing he doesn't. Therefore, I believe he exists. Although Pascal's wager has been shown to be theologically flawed, it has fundamental importance outside of religion. It emphasizes the need to focus on the effect of future events by weighing the positive and negative consequences. The effect of a future event can be guessed without us knowing when exactly it will happen. Consider the charge against using mice/rats for cancer research by some animal rights activists. The continuous use of mice and rats for research would benefit cancer patients and prevent

many deaths resulting from terminal cancer. But it has been criticized because it would decimate this group of animal species. It is so bad that it has been argued that the benefit that would accrue from this research would not compensate for its bad consequences on those animal species. In a similar way, the probability of ME emerging as DE would pose a significant challenge to human free moral choice. No doubt, some individuals would benefit from ME, but the consequence of it would be so bad that individuals always acting morally would hardly outweigh it. This consequence would be the loss of free moral choice, which cannot be compensated by the meagre benefit that accrued from it.

4. DeGrazia's Possible Objections to My Arguments

Contrarily, DeGrazia could argue that devil-enhanced people chose such enhancement and freely consented to eliminating their freedom to choose a moral course of action. This is because he argues that those who will be morally enhanced would freely choose and consent to it. After all, they are not forced to undergo such enhancement. Thus, in a way, they chose to inevitably follow an immoral course of action. A plausible response to this argument would be that in making it impossible for devil-enhanced people to choose between moral and immoral actions, even if they would have preferred the immoral ones, DE makes nonsense of their original choice to be devil-enhanced. People change their minds all the time, which is proof of the existence of freedom of choice. Because the devil-enhanced no longer have the possibility to choose a different course of action or the freedom to stick with their initial choice despite the option of changing their minds, DE eliminates freedom in its entirety.

Normative personhood, for example, comprises the ability to choose to attain personhood or not. Likewise, in making it impossible for us to choose whether to comply or not to comply with relevant social norms, ME eliminates this vital aspect of normative personhood. What is worse is that ME would determine normative personhood. An idea I referred to elsewhere as "technologized moralism," defined "as the technological determination of values that involves adherence to [relevant] social norms without reference to the journey and strive associated with acquiring personhood" (italics original, AE CHIMAKONAM 2023, 63-64). The problem with this is

that it eliminates the process of attaining personhood, making personhood to be what we could automatically become by implanting a computer chip in our head or popping in some moral pills. It is this process that encapsulates moral choice, the ability to decide to comply or not with relevant social norms. Thus, we would not be free to choose either to comply or not because ME controls us to always comply with relevant social norms, thereby making us inevitably attain personhood, i.e. technologized personhood (see AE CHIMAKONAM 2021). Technologized personhood involves the automatic attainment of personhood through radical technological and scientific augmentation of human moral capacities. The community would no longer confer personhood on individuals; more high-tech and science would do so. And morally enhanced persons would no longer strive towards personhood but automatically do the right course of actions.

My point thus far is that DeGrazia's claim that ME does not limit free moral choice is based on a highly contestable assumption. The assumption is that morally enhanced persons are free agents acting out of their free will. But this assumption does not hold up to closer scrutiny, as my devil enhancement parallel analogy shows. Even though their actions appear to be free, their actions do not result from a deliberation that arises from having moral alternatives. They are merely acting out of the impulse of their enhancement in a situation where they could not do otherwise. The question that exposes this assumption is: Could an individual who has been morally enhanced act otherwise? Let us put it in context. Consider the example employed by DeGrazia. He believes that morally enhanced persons would be inclined to help those in need. Could a morally enhanced individual act otherwise in this context? On the one hand, if DeGrazia answers yes to the above question, then his argument that enhanced persons would always act in morally right ways would collapse. On the other hand, if he answers no to the question, then his argument that moral enhancement accommodates free moral choice would collapse. Here, we have a dilemma that exposes the weakness of DeGrazia's argument.

DeGrazia may take the first option and respond that some MEs might possess a "freedom-robbing quality" (DEGRAZIA 2014, 366). An ME that involves an extreme case of motivational improvement is

an example of this freedom-robbing augmentation of human moral capacities. This extreme case of motivational improvement involves implanting a computer chip in our brain that changes our minds whenever we decide to take the wrong course of action. Even if we welcome this motivational improvement, it would substantially reduce our freedom of action and make us unfree in some relevant ways. DeGrazia claims that this reduction of freedom would be worthwhile if, as a result of ME, individuals are better disposed to act morally. Moreover, there are other things to be valued in human behaviour other than free action. He asserts that while human freedom is significantly valuable, moral behaviour is equally important. Although he does not provide a justification for this assertion, he only appeals to our emotions to accept it. The majority of us would agree with him that our actions and their expected consequences, irrespective of them being free, equally matter since the primary aim of moral actions is to act in ways that would create a better world for us and other creatures.

However, I am not trying to exaggerate the value of free moral choice, and I agree with DeGrazia that freedom is but one value of humanity. Nevertheless, freedom is an essential value of humanity (see RAKIC 2014; HARRIS 2016). I am also not arguing that the value of free choice outweighs all the evils that humans have committed or could commit. My argument in the context of Afrocommunitarianism is that moral choice is crucial to attaining full personhood. From the Afro-communitarian standpoint, individuals have the freedom to conform to relevant social norms and attain full personhood or not to adhere to relevant social norms and fail to attain full personhood. This decision to attain or not attain full personhood rests on individuals. Individuals ought to strive through conscious effort and self-discipline to conform to relevant social norms, which means that individuals could fail at attaining full personhood.

If individuals are morally enhanced to inevitably conform to relevant social norms, how then can we account for the moral worth placed on attaining personhood that arises out of one being accountable for their actions which invoke praiseworthiness and blameworthiness? Individuals are praised or blamed insofar as they have the freedom to choose whether to adhere to relevant social norms. ME would not only eliminate blameworthiness attributed to

those who fail to comply with relevant social norms but also eliminate the praiseworthiness that attaining personhood entails alongside moral responsibility. In this sense, personhood would be devaluated because of the way it is engineered. An individual who attained technologized personhood, for instance, through ME would not be praiseworthy in any way insofar as such personhood does not result from his conscious decision to resist the lure of an alternative choice and conform to the right social norms. Only free actions that conform to relevant social norms are morally praiseworthy because it is through such actions that one can attain personhood. Personhood is something chosen, and someone who is morally enhanced to attain personhood has lost that freedom of choice.

Conclusion

In this essay, I have argued, contra DeGrazia, that ME would significantly undermine free moral choice. For the sake of argument, I introduced devil enhancement to illustrate an example of an immoral intervention which eliminated human free moral choices. I also argued that DeGrazia's entire project on moral enhancement might spell doom and disaster if, in the end, the outcome becomes devil enhancement instead. Moreover, I argued that the inability of those who are devil-enhanced to perform moral actions is similar to the loss of free moral choice occasioned by ME. I situated my argument within Menkiti's account of normative personhood and argued that individuals whose moral enhancement has made it impossible to choose not to comply with relevant social norms have lost the freedom to make moral choices, i.e., freedom has been lost to the extent that it is inimical to personhood. In other words, morally enhancing individuals to comply with relevant social norms in order to attain full personhood significantly inhibits the freedom not to comply with those norms, for we are free to attain full personhood where we are free to comply or not to comply, for reasons well-considered, to relevant social norms.

Declarations

*The author declares no conflict of interest or ethical issues for this work.

Relevant Literature

- 1. CHIMAKONAM, A. E. "Afro-communitarianism and Transhumanism," [Handbook of African Philosophy, E. IMAFIDON, M. TSHIVHASE and B. FRETER, Ed.], pp49-68, 2023. Springer: Cham.
- 2. _____. "Transhumanism in Africa: A Conversation with Fayemi on his Afrofuturistic Account of Personhood," [Arumaruka: Journal of Conversational Thinking], pp42-56, 2021. Vol 1. No2.
- 3. DEGRAZIA, D. "Moral Enhancement, Freedom, and What We (should) Value in Moral Behaviour," [Journal of Medical Ethics], pp361-8, 2014. Vol 40. No6.
- 4. DOUGLAS, T. "Moral Enhancement," [Journal of Applied Philosophy], pp228-245, 2008. Vol 25, No3.
- 5. HARRIS, J. [How to be Good: The Possibility of Moral Enhancement], 2016. Oxford University Press: Oxford.
- 6. MENKITI, I. "Person and Community in African Traditional Thought," [African Philosophy: An Introduction, R. WRIGHT, Ed.], pp171–181, 1984. University Press of America: New York.
- 7. PERSSON, I. and Savulescu, J. "The Perils of Cognitive Enhancement and the Urgent Imperative to Enhance Moral Character of Humanity," [Journal of Applied Philosophy], pp162-177, 2008. Vol 25. No3.
- 8. RAKIC, V. "Voluntary Moral Enhancement and the Survival-at-Any-Cost Bias." [Journal of Medical Ethics], pp246-250, 2014. Vol 40. No4.
- 9. ROTILA, V. "Two Issues of Transhumanism: Insufficient Evidence and Epistemic Arrogance," [New Approaches in Social and Humanistic Sciences, A. Sandu, A. FRUNZA, G. GORGHIU and E. CIONGARU, Eds.], pp463-468, 2016. Medimond Publishing Company: Bologna.
- 10. WISEMAN, H. [The Myth of the Moral Brain: The Limits of Moral Enhancement], 2016. MIT Press: Cambridge.
- 11. ZAK, P. [The Moral Molecule: The New Science of What Makes Us Good or Evil], 2012. Bantam Press: London.

Ezumezu: African Perspectives on Logic, Transhumanism and AI Ethics Vol 1. No1. 2024