Harris Wiseman, *The Myth of the Moral Brain: The Limits of Moral Enhancement* (Cambridge, MA and London: The MIT Press, 2016), 340 pp.

The aspiration for understanding the nature of morality and promoting philosophical ideals of improving moral character has been one of the defining characteristics of human history. With the beginning of the so-called "golden age of neuroscience", this aspiration has radically transformed into a technological quest of finding biomedical means for moral enhancement. In his recent book, Harris Wiseman questions and challenges the scientific as well as the philosophical underpinnings of this quest and argues that the biomedical means alone are not sufficient for understanding and tackling the complexity of moral functioning. His main aim is to motivate an interdisciplinary and multidimensional approach that does not neglect the potential influence of psychological, sociological, and environmental factors on moral functioning. For this purpose, he approaches the debate on moral enhancement from the perspectives of four different disciplines, each of which are clearly dealt with in four distinct parts of the book, namely – philosophy, biology, theology and clinical psychology (Part I-IV respectively). Finally, he attempts to find a balance between the ideas from each of these disciplines and arrives at a novel "bio-psycho-socio model" for approaching the moral enhancement discourse.

It is no surprise to anyone familiar with the enhancement debate that the term "enhancement" itself is fraught with incredible diversity of meanings. Acknowledging this fact, Wiseman first lays out the foundation of the conceptual landscape he would engage with by drawing important distinctions such as that between voluntary *versus* compulsory and positive *versus* remedial moral enhancements. Adding to the list of these well-known distinctions, Wiseman introduces two unique and significant ones, namely, hard *versus* soft and realistic *versus* fantastical moral enhancements. The hard *versus* soft distinction differentiates between the idea of undergoing moral enhancement with the specific aim of becoming a more moral person and the idea of merely enhancing certain capacities which are related to moral functioning. In contrast, the realistic *versus* fantastical distinction is aimed at distinguishing abstract and unrealistic ideas from the reasonable and practically possible ideas of moral enhancements (Chapter 1). As we will soon see, these distinctions take the centre stage in the entire discussion in his book.

The first part of the book (Chapter 2 & 3) presents strong criticism of the philosophical rationale for moral enhancement, as proposed by influential figures in the field, namely, Persson & Savulescu, James Hughes and Tom

Douglas. To give an example, Wiseman disagrees with Persson & Savulescu's claim about "the urgent imperative to improve man's moral character" to save humanity from the "ultimate harm" of possible technological evils. As per him, such claims seem to be ill founded, mainly due to two reasons. One, Wiseman disapproves of the reductive characterization of "man's fate lies in his own biology" (p. 38) because such reductionism isolates the discourse on compulsory moral enhancement from the social and political background in which such discourse is advanced. Two, according to him, these philosophers seem to have overestimated the practical reality of what can be achieved from enhancement technologies at present – regardless of whether the biomedical interventions are compulsory or voluntary. Therefore, discussion of any such possibility of enhancement, as per Wiseman, is misguided because "the problems themselves are just so tangled and multicausal that simply offering a biomedical solution trivializes the problems to the point of absurdity" (p. 42).

Although Wiseman's criticism is directed towards those who share views similar to that of Persson & Savulescu, he by and large makes an overarching conclusion about the philosophical discourse on enhancement in its entirety, saying that "the philosophical machinations have gotten lost, becoming divorced from the reality they purport to be describing" (p. 264). Now one needs to be careful here while making such broad conclusions as it is a matter of fact that there is no shared opinion within the philosophy community on the matters of meaning and prospects of moral enhancement. A recent informative review by Specker et. al¹ on the diversity of ethical reasons presented in the literature for and against moral bioenhancement is a good illustration of how widely the philosophical community stands divided on the matter. In fact, the review provides a description of how many researchers actually share Wiseman's pessimism on the feasibility and practicality of the reductive approach, in light of the highly complex nature of human morality.

As much of the philosophical discussion is built upon the results of biomedical studies on "the moral brain", Wiseman then moves on to critically assess the empirical work on "means of intervention" and "brain chemistry" which are popularly associated with moral behavior and judgement in humans (Chapter 3, 4 & 5). Wiseman reaches the conclusion, and rightly so, that the popular means of technological interventions, namely pharmacological, neurostimulation and genetic approaches are "simply not fit for purpose" (p. 136), especially for hard and compulsory forms of enhancement. Problems arise with respect to the development of these technologies because – one, there is lack of financial incentive to invest in such research due to

¹ Specker, J., Focquaert, F., Raus, K., Sterckx, S., and Schermer, M. 2014. "The ethical desirability of moral bioenhancement: a review of reasons", *BMC Medical Ethics* 15(1). http://dx.doi.org/10.1186/1472-6939-15-67

riskiness, small demand in market, and time scale; two, the futuristic vision of such technology being implemented for matters of behavioral control in liberal, democratic societies is unrealistic; and three and most importantly, scientific understanding of moral functioning is far from clear, thereby making the current technological means inefficient, insufficient and impractical. Wiseman contends that the current scientific methods such as using fMRI machines, taking blood samples, conducting tightly controlled neuroscientific experiments to test the functions of serotonin, oxytocin and dopamine fail to adequately model the moral trait that is being investigated. For example, Zak's laboratorial studies on the famous trolley problem dilemma for testing causal relationship between a moral trait and oxytocin completely ignore the differences in qualitative, experiential and contextual features of the problem (p. 120).

Here, Wiseman makes an important point that if moral enhancement is not even fine-grained to reliably inform us about individual morally related biological traits, capacities, and emotions, then the ambition of utilizing moral enhancement to solve complex moral issues which involves collective social action (to create a morally desirable social world, for instance) can never be practically fulfilled. Therefore, if moral enhancement is truly and realistically desired, Wiseman suggests that we need to broaden our horizons by reconciling with traditional means of enhancement. He goes on to provide an interesting and innovative overview of associating the current ideals and aspirations of moral enhancement with the traditional teachings from religious or theological perspective (Chapter 6 & 7). Although the overview is limited in one sense that it is strictly centered around the idiosyncratic nature of Christian values and moral formation, it is needless to say that some generalizations can be made for other religious and non-religious perspectives. The purpose of the religious angle to the debate, according to Wiseman, is to provide "a more realistic picture of the sort of enhancement that is likely to come about" (p. 142) as he believes that faith traditions play a crucial role in shaping the moral landscape we live in. And this is true for not just religious, but also spiritual, social, environmental, economic, political as well as psychological dimensions of moral formation as well. (p. 167) It is only when the biological and non-biological influences on moral functioning are understood as thoroughly interwoven, the discourse on moral enhancement can progress.

So why and how exactly does a balanced, integrative approach for understanding moral functioning "change[s] the game completely" (p. 167) for moral enhancement, as Wiseman claims? The answer to this lies in the rationale behind his "bio-psycho-socio" framework (Chapter 8 & 9). As Wiseman is against all kinds of reductive approaches (reductionism at level of

biological, cultural, social or individual factors), he holds that all these factors mediate human behavior and morality by interacting in some complex way which cannot be grasped by looking at the level of only one particular factor. Moreover, given his belief about the interwoven nature of these factors, he adds a casuistic element to his approach. That is, he appeals to a case-by-case approach rather than a "one size fits all" approach to moral enhancement. He believes that given the broad range of possibilities that it encompasses, the particularities of a specific instance of moral enhancement become crucial. For instance, enhancement of which moral trait in which particular context under which social or cultural circumstances is desirable or undesirable can only be answered via a case-by-case approach.

However, this raises an important question for Wiseman's proposal. If the "comparatively simplistic and superficial manner" (p. 168) in which scientific approach deals with the matter is fantastical and therefore bound to fail, can the extensively integrated and complex approach of incorporating socio-environmental (including theological) and psychological influences fare any better? Wiseman thinks yes, and he gives a clear illustration of this by considering the case of pharmacological interventions in the treatment of alcoholism (Chapter 9). Through his example, he exemplifies some important points for the overall project of moral enhancement. One, medical interventions in conditions such as alcoholism, which often comes under the mental health umbrella, often work within a framework in which there is intermingling of biological factors with more personal and psychosocial factors. Two, there exists an overlap between medical interventions and moral discourse, and this further affects the way we think about moral enhancement. Three, these interventions that are usually considered as mental health or medical in nature are actually forms of soft enhancement in nature, implying that the prospects for employing bio-psycho-socio framework are not futuristic, but are actually inevitable and already occurring.

With this, Wiseman concludes his discussion by saying that appealing to the machinery of "the moral brain" may very well be "the *least* promising means to moral enhancement that can be made available to us" (Chapter 10, p. 276). Instead, moral enhancement must be understood as integrated in the sense embraced by the bio-psycho-socio approach. Most importantly, it must also continuously adapt to changes as the process of moral development progresses. As a result, this approach relies for the greatest part on the active participation of individuals in moving towards and shaping the overall good in society. According to Wiseman, it is finally up to the individual moral agent to take the responsibility for his or her own moral progress. However, it is yet to be seen whether his novel framework stands tall in the face of the urgent need to speed up the pace of moral improvement, as Persson & Savulescu say.

Overall, Wiseman's work successfully demonstrates that there are some serious practical difficulties in approaching the problems of moral enhancement from a strict scientific perspective. The book actively engages with different areas of academic inquiry in non-technical manner, making the text accessible to readers coming from a large variety of backgrounds. His own bio-psycho-socio framework tries to bring these different areas together as a nexus for approaching the debate in a nuances manner. Whether this framework succeeds in providing a more fine-grained, realistic approach to moral enhancement is left up to the reader to decide.

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