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MORAL ENHANCEMENT: THE CASE OF OXYTOCIN

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MORAL ENHANCEMENT: THE CASE OF OXYTOCIN

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I certify that I have read this thesis and have found that it is fully adequate, in scope and in quality, as a thesis for the degree of Master of Philosophy.



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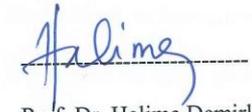
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ABSTRACT

MORAL ENHANCEMENT: THE CASE OF OXYTOCIN

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Biomedical moral enhancement is the interventions to improve normal, healthy human beings' moral capacities via biomedical methods. In this paper oxytocin use in these interventions and whether they are urgent are questioned. The defenders of moral enhancement insist that there is an urgent for biomedical moral enhancement because of the global problems. However, it is emphasized in this paper that there is not an urgent need for biomedical enhancement; rather there is a need for improvement people's knowledge and awareness on these global problems.

Keywords: Biomedical Moral Enhancement, Oxytocin, Traditional Moral Enhancement.

ÖZET

AHLAKÎ İYİLEŞTİRME: OKSİTOSİN ÖRNEĞİ

Sever Kıyak, Bilge

Yüksek Lisans, Felsefe Bölümü

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Biyomedikal ahlakî iyileştirme, normal, sağlıklı insanların ahlakî kapasitelerini artırmak için yapılan biyomedikal müdahalelerdir. Bu tezde bu tip müdahalelerde oksitosin hormonu kullanımı ve bu müdahalelere ivedi bir ihtiyaç olup olmadığı sorgulanmaktadır. Ahlakî iyileştirme tezini savunanlar, bu müdahalelerin küresel sorunları çözmek için acil bir ihtiyaç olduğu konusunda ısrar ederler. Fakat, bu tezde biyomedikal ahlakî iyileştirmeye acil bir ihtiyacın olmadığı, aksine ihtiyacımız olan şeyin bu küresel sorunlara yönelik bilgi ve farkındalığı artırmak olduğu vurgulanmaktadır.

Anahtar Kelimeler: Biyomedikal Ahlakî İyileştirme, Geleneksel Ahlakî İyileştirme, Oksitosin.

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INTRODUCTION

The suggestions about enhancing people's moral or cognitive traits have been continued to their existence for many decades. Discussions on cognitive enhancement bring about the questions about moral enhancement whether it is possible or ethically permissible. There are many other questions about moral enhancement. In this debate there are also many concerns because without a consensus on what is morally good, how can we suggest that we can make one person morally better person? However, some authors think that without a moral enhancement it is impossible for human race to survive for another century or half-century since with cognitive enhancement and development of knowledge more and more people can have access to knowledge of how to develop weapons of mass destruction and because of human made global warming and climate change (see Persson & Savulescu: 2008). By applying moral enhancement, we can have a chance to make people act morally or at least have moral capacities. The first group, on the other hand, claims that starting a debate about which traits are morally good or bad is nothing but opening the Pandora's Box (Raus, Focquaert, Schermer, Specker & Sterckx, 2014: 263).

In spite of the fact that moral enhancement could be exercised both by traditional means and by biomedical means, in this paper I will mainly focus on biomedical moral enhancement. There are many different methods for biomedical moral

enhancement, to name some; surgical, pharmacological, genetic, nanotechnological are some of them. To be more specific, I will focus on oxytocin hormone's use in biomedical moral enhancement. The reasons why I choose oxytocin are, first, that many papers and studies can be found in the literature and second, that it is easy for a human to take it in the body by exogenous means (for instance, by a nasal spray), and thus it is easy to use in studies (De Dreu et.al., 2010: 1408). Third, there is evolutionary importance of this hormone (see Churchland, 2011) for sympathy and survival.

I wish to defend that biomedical moral enhancement is not necessary; the key reason of the global problems, which the defenders of biomedical moral enhancement mention, is the lack of adequate knowledge and awareness in the society. In this paper, I will begin with the possible and extant descriptions of moral enhancement. There will be some questions such as “what kind of an intervention is possible or should be aimed at?” The second part of the paper will be on oxytocin hormone, what its known functions are and how it could be used in moral enhancement, what might be the possible side-effects of using oxytocin in moral enhancement experiments. In the third part of the paper, the most commonly discussed questions about moral bioenhancement will be put forward. In the literature there are many supports and worries about moral enhancement by biomedical means. I will try to touch all of these questions and arguments in this part. Finally, in the fourth chapter I will illustrate my thesis by answering the questions in the third chapter.

CHAPTER 1

WHAT IS MORAL ENHANCEMENT?

To begin with, there are many definitions and suggestions about moral enhancement. These generally try to delineate the concept of moral enhancement and what features it should include. For instance, some argue that moral enhancement should be effective. If we do not see the results, then this attempt will not be considered as moral enhancement. However, people like Thomas Douglas (2008) believe that the aim of moral enhancement should not be necessarily to change the actions of individuals but to change one's motivations. Since, he thinks that motives are more important than actions (Douglas, 2008: 230). I should mention that there is no clear definition of moral enhancement; instead, many authors state some criteria for it, such as to circumscribe which interventions can be seen as moral enhancement (Shook, 2010: 3). That is why I will mention some important and widely discussed categories which may establish a definition of the concept.

The first known category includes a debate between the intervention itself and individuals. Some authors argue that to give a definition of moral enhancement we should focus on the intervention and what kind of interventions could be moral

enhancement. For instance, David DeGriza considers that moral enhancement is the intervention that intends to affect our moral capacities like sympathy and fairness (as cited Raus et. al., 2014: 264). The definitions which concentrated on individuals take the question as ‘for an individual what is like to be enhanced?’, or ‘which kind of individuals can be said to be enhanced?’ (Raus et. al., 2014: 265).

The second differentiating feature is whether moral enhancement should be a broad intervention or specific intervention. For broad interventions, any attempt to improve one’s moral capacity is a kind of moral enhancement including moral educations. For some authors an intervention is moral enhancement if only it includes biomedical enhancements (Raus et. al., 2014: 265). In this sense, the methodology of moral enhancement is one of the points that is important for us to provide a meaning for moral enhancement.

Another difference between definitions is about whether moral enhancement should focus on to change the humanity or individuals. For instance Thomas Douglas thinks that moral enhancement is the intervention which intends to improve an individual’s moral motives (2008: 229). For him moral enhancement should affect the individual. Individuals who want to have more moral motives can choose to be enhanced by traditional means or biomedical means (Douglas, 2008: 231). On the other hand, people like Ingmar Persson and Julian Savulescu believe that moral enhancement should aim to change or improve moral traits of humanity (2008: 166). Since they believe that in order for humankind to survive and continue to exist, we need a change in human moral traits. In other words, we as humanity need moral enhancement to protect ourselves from ourselves.

The fourth component of the discussion about the definition of moral enhancement is the level of the improvement. Some argue that moral enhancement should improve moral traits towards the average and some of the authors argue that to bring one's moral capacity to the average level is just moral treatment. For them what moral enhancement should do is to bring people's moral capacity to a level above average (Raus et. al., 2014: 266).

For the fifth difference between the definitions of the concept, some people claim that moral enhancement should be effective. In other words, the results of an intervention should be successful. However, some experts disagree with the idea of the effectiveness of the interventions and argue that the intended alterations of moral capacity are enough for an intervention to be moral enhancement (Raus et. al., 2014: 267). For them it does not have to be a successful intervention. Thomas Douglas, for instance, states that after the moral enhancement, it is not necessary that the person will act more morally than before (2008: 239). John Harris objects by claiming that the definition of enhancement is not in the intentions, but in the effect of it (as cited Raus et. al., 2014).

Behavior improvement versus capacity improvement is another difference between definitions. Some people argue that moral enhancement should aim to change people's behavior, yet for the other group of people, it should aim to change moral capacities of people (Raus et. al., 2014: 268).

The last difference between definitions of moral enhancement is about how the individuals can get moral enhancement, by active involvement or passive receiving. In active involvement individuals need to attend with their conscious mental

processes, like attending moral education. Passive receiving, on the other hand, is more like taking a pill (Raus et. al., 2014: 270).

CHAPTER 2

OXYTOCIN HORMONE AND MORAL ENHANCEMENT

In this part of the paper, I will be concentrated on oxytocin hormone's use in moral enhancement. I choose to analyze oxytocin because there is evolutionary importance of this hormone and also there are some studies which show that there is a relation between oxytocin and sympathy. For many experts sympathy is one of the essential elements of human morality. However, there is no consensus in the literature on whether we should use oxytocin in moral enhancement.

Oxytocin is one of the oldest peptides, an amino acid chain. For some neuroendocrinology experts it has many roles when mammals are shaping their social life. Some experts even call this hormone "parenting-hormone" (see Patricia Churchland, 2011: 48). This hormone might be the source of sympathy towards and caring for others. From this, some commentators speculate that this hormone could possibly be used in moral enhancement studies. There have been several experiments on oxytocin conducted in recent years. For instance, biologist Barry Keverne made an experiment on sheep. In his experiment he injected neuropeptide oxytocin to sheep and the results show that this injection creates maternal behavior including

female sheep and lamp bounding (as cited Churchland, 2011: 68). However, it is also important for survival since it also regulates fear reactions, trust and cooperation. In neuroeconomics, this impact of oxytocin has been tested many times. Michael Kosfeld and his colleagues (2005), for instance, asked that if we give participants oxytocin in a game which requires trust, will they be more successful than the control group who did not get oxytocin. So, in order to test this he and his colleagues built a game called "TRUST". According to the game one player is investor and the other one is trustee. It is forbidden in the game for the participants to talk and to see each other. By this the elements of voice and appearance which can be taken as signs of trustworthiness are eliminated. If they can trust each other, they can gain more money. Before the game some players randomly took oxytocin by a nasal spray. The results show that the players who take oxytocin trusted more and gained more (Kosfeld, Heinrichs, Zak, Fischbacher & Fehr, 2005: 673-676). From this study it could be concluded that oxytocin has an enhancing effect on trust.

Another study, by De Dreu and his colleagues, was conducted to test intergroup conflicts (2010). In their experiments, there were many groups so that they can test the effect of oxytocin on in-group relations and on intergroup relations. Before the experiment, De Dreu and his colleagues hypothesized that oxytocin will increase trust in the group and it might boost up defensive emotions against to the out-group (2010: 1408). They knew that extant findings about oxytocin do not support the claim about out-group, but they do prove that oxytocin has an effect on in-group love. Though, there was a possibility that it might affect (in a positive way) out-group love as well. They conducted several experiments, changing some variable in each. In the first one there were no out-group conflict and hate. However, in another experiment there were conflicts between groups. Before each experiment the

participants were administered oxytocin by a nasal spray. According to the results, when there is no out-group conflict and hate, oxytocin only affected in-group love but did not affect out-group hate or other emotions. When there was out-group conflict, oxytocin promoted out-group hate and it boosted up in-group love (De Dreu, et. al., 2010: 1409-10). From this study we can conclude that oxytocin increases in-group love, but if we apply this method in today's world, which is full of intergroup conflicts and hate, oxytocin would have a negative impact. In fact, there are some studies illustrate that oxytocin might increase ethnocentrism (De Dreu, Greer, Van Kleef, Shalvi & Handgraaf, 2011).

In another study De Dreu and his colleagues (2011) conducted five experiments to see the relation between oxytocin and ethnocentrism. Supporting and loving in-group members is essential for survival and it is believed that it is like an instinct which is rooted very deeply in our nature (De Dreu, et. al. 2011: 1262). That is why, how much this instinct is connected with oxytocin and can this neuropeptide be affected on ethnocentrism were questioned in these five experiments. These experiments made on Dutch males and included two out-groups which consist of Arabs and Germans. Only Dutch males randomly administered oxytocin. In the first and second experiments, participants are asked to categorize positive words for out-group names and negative words for in-group names. The results showed that participants who took oxytocin spent more time to associate positive words with out-group names, with compared to participants who took placebo intranasal administration (De Dreu et. al. 2011: 1263). In the third experiment, Dutch males randomly administered oxytocin or placebo and this time they were asked to rate the secondary emotions (emotions like delight) that they experienced for out-group participants (Arabs or Germans) or for in-group participants. According to the results oxytocin causes

intergroup biases since the males who took oxytocin experienced more positive secondary emotions for in-group members. In the fourth and fifth experiments, the experimenters tested how Dutch males who are given oxytocin would treat out-group members. In these experiments the situations like Trolley dilemma were organized. The participants randomly would choose to sacrifice an out-group member named like Helmut or Mohammed, or they would choose in-group members to save five neutral people's life. Compared with placebo; the participants who administered oxytocin tended not to sacrifice an in-group member. Thus, the results illustrate that oxytocin promotes inter-group bias by promoting in-group favoritism. From this point of view, De Dreu and his colleagues (2011) state that the systems that make us ethnocentric are for the cooperation and coordination in-group. However, there were some outside effects in the formation of this ethnocentrism. For instance, even though the results were more or less similar, the reactions of Dutch males were different for Germans from for Arabs. This shows that stereotypic perceptions are also important. Hence, they concluded that though, oxytocin promotes in-group favoritism, but there is not enough evidence to claim that oxytocin create out-group derogation (De Dreu et. al. 2011: 1264-5).

For positive impacts of oxytocin, its relation with generosity can be mentioned. There are some evidences which show that intranasal administration of oxytocin can promote generous behavior to stranger human beings. In 2007, Paul J. Zak, Stanton and Ahmadi after some experiments showed the relation between generosity and oxytocin. According to their experiment, participants randomly were administered oxytocin or placebo. The experimenters showed that the participants who were given oxytocin were more generous than placebo (80% percentage more). Oxytocin is predicted to more effective than altruism on generosity, almost as twice as altruism

(Zak, et. al. 2007: 2-4). However, as we will illustrate in the fourth chapter, Zak is over exaggerating the positive impacts of oxytocin. He even called oxytocin as the ultimate source of morality (as cited Wiseman, 2016).

CHAPTER 3

DISCUSSIONS I

In this part of the paper, I will present six questions which are most commonly discussed throughout the literature. From the discussion on these questions, in the next chapter I will move on the modest version of moral enhancement conclusive reasons against biomedical moral enhancement and try to establish my own thesis.

3.1. The Urgent Need of Moral Enhancement

The first question we should look at is whether there is an urgent need for moral enhancement or Persson and Savulescu are just being too dramatic about the situation of the world and moral capacity of human beings.

Moral enhancement has been around for many years by traditional means but bioenhancement is a relatively new debate and its opponents see it as dangerous.

However, people who favor moral bioenhancement insist that there is an urgent need for moral enhancement. For instance, Persson and Savulescu (2008) think that cognitive enhancement and the growth of scientific knowledge are growing in an accelerated fashion day by day. This growth of knowledge enables everyone to gain

almost all kinds of knowledge. For a terrorist group, for example, it is easy to learn how to make a bomb even today and 50 years later they can do more powerful weapons of mass destruction and even biological weapons. Since we cannot stop the cognitive enhancement, or the growth of knowledge; we should improve our moral capacities. Thus, we can prevent for humanity from destroying itself. They mention one anecdote from physicist Stephen Hawking. According to this anecdote, Hawking asks a question on the internet which is “What is the greatest danger for humanity?” Many people answered the question but Hawking told a joke about aliens that the reason why aliens do not invade world is that when the civilizations develop as our civilization it destroy itself (as cited Persson & Savulescu, 2008: 167). Hence, we should be careful when we are supporting the development of the knowledge and we may only hope that biomedical studies can make us better people to not destroy ourselves. For the authors we need to see this and enhance humanity morally as well since, if we enhance people morally, people might turn into more moral individuals, so that they stay away from chemical, biological weapons or other mass destruction weapons (Persson & Savulescu, 2008: 167). That is why, we need moral enhancement. They believe that Socrates was wrong when he was saying that with the raise of the knowledge the moral sensitivity will raise (2008: 173).

It is a big issue whether cognitive enhancement and moral enhancement are differentiable. Even though Savulescu and Ingmar obviously think that they are different and that is why we need moral enhancement, Gabriela Pavarini, Alex McKeown and Ilina Singh (2018) argue that cognitive and moral capacities are not totally independent from each other (1). They present some of the reasons why there is a tendency to believe that these two enhancements are separated. The first reason is that people think that enhancing cognitive capacities is for the benefit of individual

but moral enhancement is for the benefit of the whole. Second is that it is considered that cognitive enhancement is applied to normal, healthy people but moral enhancement is applicable for morally unhealthy individuals. An easy example for this is that parents support cognitive enhancement for their children but they do not want to enhance their children morally because moral enhancement is considered something like a treatment in the society. However, some bioethicists, like Bostrom and Sonberg, do not take moral enhancement as divergent from cognitive enhancement. In fact, they think that a shift in cognitive capacities would affect culture, technology and economy (as cited Pavarini et. al. 2018: 3). Also, some commentators believe cognitive enhancement can improve social goods, because it improves rational thinking, if it is used by some groups of people like judges and doctors.

Thereby, the authors mention possible and extant effects of cognitive enhancement on moral capacities. There are some evidences prove that cognitive skills like attention are important to conforming into the right behavior norms (Pavarini et.al. 2018: 6). Another study shows that the individuals who have sleeping problems are more likely to be dishonest, disloyal and show some immoral attitudes (qtd. in Pavarini et.al. 2018: 6). It is indicated by that cognitive control skills are linked to behaviors of honesty and charity (Mead Morley, Campbell, Greig, McMurdo & Lawlor, 2009; Xu et.al. 2012; as cited Pavarini et.al. 2018: 6). Since individuals, whose cognitive control skills are weak, were less charitable and reliable. The opposite scenarios are also possible, for example, in a study it is illustrated that individuals who have powerful cognitive control skills are more likely to give their seats to suffering strangers (Condon, Desbordes, Mille & DeSteno, 2013; as cited Pavarini et.al. 2018: 6).

Pavarini and her colleagues mention about Walter Mischel's famous test which is known as Marshmallow Test. This test implies that there is a relation between cognitive control and self-control. According to this test, the individuals who have better cognitive control in the early childhood will be more successful both in their academic lives and social lives. Cognitive control is a mechanism that enables us to postpone the immediate reward for greater later rewards (Mischel, 2014). However, as the authors claim, the results of Marshmallow Test are in doubt lately because of some recent studies. That is why, the relation between cognitive control and self-control need more study.

Moral processes have some impacts on cognitive enhancement according to the paper (Pavarini et.al., 2018). One of the impacts is that the child who performs the behaviors like cooperation and helping is identified as more successful student in her or his adolescence ages. An experiment conducted by Dicken and DeSteno (2016) illustrates that there is a relation between cognitive skills and socio-moral processes. The participants in this study were likely to have as twice more self-control when they were feeling gratitude compared with when they are not feeling gratitude (as cited Pavarini et.al. 2018: 7). Some developmental psychologists like Vygotski thinks that cognition is also a social process, cognition grows and is shaped by the social input (Pavarini et.al. 2018: 7). The authors consider that from all these findings and evidences, we can claim that cognitive processes and moral processes have a link. Although obviously they are not the same but they are in a way intertwined. Pavarini and her colleagues from these judgments believe that there may not an urgent need for biomedical moral enhancement. Since, cognitive enhancement should also enhance humanity in respect to moral capacity (2018). Hence, they

would obviously claim that Socrates was not wrong when he was saying that with the growth of knowledge, the morality among society will also rise.

Pavarini et. al. are not alone on their claims on the urgent need of moral bioenhancement, one of the most ardent opponents of moral enhancement, Harris Wiseman, also declares that even though we might assume that biomedical moral enhancement can have some benefits, it cannot be able to have a world-salvatory effect (2016: 40). For him, the scenario of the world and pollution is too drastic, so individual person's taking oxytocin or some kind of pill will not be enough to solve the whole problem and make stop the developing countries' poisonous emissions. The political aspect of the climate change issue is much more efficacious than the individual's struggle (Wisemen, 2016: 40).

He continues his criticism on biomedical enhancement by emphasizing the limited nature of these interventions. Since our biology or neurology is not the only thing that is constituents of our moral functioning (Wisemen, 2016: 54). Basically what he thinks is that moral functioning and our biological system do not corresponds to each other so neatly. For biomedical moral enhancement to be as effective as Persson and Savulescu state, moral functioning and our biological systems should have been in a relation which is not a complicated one as it is now (Wisemen, 2016: 38). He assumes that the supporters of moral enhancement argue as they solve all the problems and complexity of neurological system (Wisemen, 2016: 18). In fact, today, we do not have a method of biomedical moral enhancement which is totally safe and realistic. Such an intervention will not be able to carry the weights of a mass social harm like pollution and climate change. That is why he maintains that moral enhancement by itself will not be the rescue, even if it might heal the situation in a

limited circle; hence there is not an urgent need for a potentially really dangerous intervention like moral bioenhancement (Wisemen, 2016: 1).

Nonetheless, I suppose Persson and Savulescu would answer such a criticism as stating that the pollution rate is really high for someone alone can handle with it, there is obviously a huge role that governments should take but if we as a society do not change our moral capacity, our government will not change. Persson and Savulescu believe that if a political party would say that “we will give your money (and really big money) to developing world to decline poisonous gas emission rates”, that party could not win the election. However, if we can change individual’s perspectives in that society, a government’s politics will change. That is why, it is important for individuals’ to undergone biomedical moral enhancements (2014*: 62).

3.2. Oxytocin Use as a Biomedical Moral Enhancer

In this part the discussion about the use of oxytocin as an enhancer and compulsory administration of this hormone will be introduced. The main questions of this part are:

- If oxytocin were effective for increasing trust, empathy, etc. would we count that as moral enhancement?
- Would it be a morally acceptable option to administer oxytocin by force?

There might be several methods for biomedical moral enhancement. Oxytocin is one of the most possible one. As it is mentioned before, there are some evidences which show that oxytocin might a good method. However, we have evidences which also illustrate some negative impacts of oxytocin as well. Persson and Savulescu from these evidences, to be more specific from the studies of de Dreu and his colleagues

(2010), claim that oxytocin will not be the best way for biomedical moral enhancement. Though, it might be used as an additional element in some situations (2014: 120). As another option selective serotonin reuptake inhibitors (SSRIs) mentioned in *Unfit for the Future* (Persson & Savulescu, 2014*). SSRIs generally used for depression and anxiety problems. According to Persson and Savulescu, lately scientists discovered that SSRIs effects of cooperation and sense of fairness (2014: 120). However, there is not enough evidence yet. That is why, SSRIs will not be mentioned in detail.

In a paper of Persson and Savulescu (2014), they stated that moral enhancement should be compulsory because even though we find a really effective way which does not have any side-effects and we do not use it, we would commit a crime against all humanity. However, for them moral enhancement cannot be that effective because we are not entirely free. For moral enhancement to be wholly effective, humans should have entirely free will, but we are limited by our biology and environment (251). Thus, they cannot claim that moral enhancement should be compulsory without solving the problem of free will.

When it comes to compulsory administration of oxytocin for moral enhancement, it might not end as an adequate moral enhancement. As Vojin Rakić says that oxytocin is not an effective method to use as compulsorily. Since, he thinks that compulsory administration of oxytocin makes moral reflection redundant and if we eliminate moral reflection the benefits of oxytocin will not cover its costs or problems with it, which is basically losing freedom (2017: 291). He mentions four types of moral enhancement with reference to Raus et. al. (2014). These are, first, reflecting the same acting the same, second reflecting the same acting differently, third reflecting differently acting the same and the fourth reflecting differently acting differently. For

Rakić (2017), the first one is not a moral enhancement since it does not change anything. For the type four if the method is safe this type of moral enhancement is not problematic (if it is voluntarily). However type 2 and 3 of moral enhancements are problematic and he criticizes the enhancements like these two. He again by referring Raus et. al. (2014) mention the case of pedophilic Jack. According to this, Jack wants to change and he takes many therapies to get over it, but after the therapies Jack still believes that there is nothing wrong with sexually molesting a child. This is why, without Jack's will a chip is implemented to Jack's brain to stop him molesting children. There are two questions about this example for Rakić. The first is 'is this moral?' and the second is 'is this a moral enhancement, at all?'. For Rakić, if we answer the first one as "yes", the answer of the second question is 'no' because this is not different from putting Jack in prison to stop his immoral behavior. He disagrees the ideas of compulsory administration of moral enhancement of Persson and Savulescu by claiming that if the situations will be like Jack's case these interventions will not be moral enhancement (Rakić, 2017: 292). Since, our moral reflections are theoretically eliminated.

It is believed that oxytocin has the potential of being a moral enhancer. Rakić mentions some of its benefits as follows (2017: 294):

- 1- Oxytocin promotes empathy and obviously empathy is considered to be important for morality.
- 2- Oxytocin decreases fear and thus it increases trust.
- 3- To control aggression oxytocin can be helpful.
- 4- According to some studies by increasing trust, oxytocin can promote fidelity in monogamy.

5- Oxytocin can decrease the tendency of addiction.

6- There might be a relation between oxytocin and generosity.

There are also some objections of using oxytocin as a moral enhancer (Rakić, 2017: 294-6):

1- Oxytocin can be affected on emotional components of morality. However, morality is not only about emotional reactions, but it is also about the cognitive moral decision making processes. For instance, when a judge making her final decision, trust and empathy might not be that useful. She needs cognitive processes as well. Or in moral dilemmas we are using cognitive processes more than emotional reactions.

2- Oxytocin might promote ethnocentrism.

3- Since oxytocin is affected on trust and empathy, in a dangerous situation we might not be able to run away from the danger.

4- Some experiments are doubtful because they failed to duplicate the results.

5- The psychopaths are “unconditional non-reciprocates” are not affected oxytocin.

6- Oxytocin has the ability to promote many social emotions, emotions like envy and jealousy.

7- For a cognitive enhancer, oxytocin’s role has not been identified yet. In some studies it is cognitive de-enhancer, but in some studies it plays some roles in learning.

8- The experiments make us act in a certain way. So, the participants might be different in real life.

9- The contents of experiments are different than real life.

Thus, Vojin Rakić believes that from a cost-benefit calculation compulsory administration of oxytocin is not a genuine moral enhancement (2017: 296).

Even though, there are some conflicts between Rakić's accounts of oxytocin and some other experts such as Patricia Churchland, it is generally admitted that oxytocin might not be the best method by itself, though it might be used as a supplementary element in some cases. Patricia Churchland (2012) states that oxytocin does not prevent us from escaping in dangerous situations. Further, it regulates fear reactions in mammals and in humans it differentiates its effects during danger. For instance, humans escape from or fight against the danger but some other mammals like rabbits just stop moving in such a situation (108).

Joshua Greene also declares that for some group of people oxytocin or just basically empathy or sympathy will not be that beneficial (2009: 8). For instance if a judge is empathetic to criminals, he might not give the right decisions.

3.3. Moral Enhancement but Whose Morality?

In order to enhance people morally experts believe that there should be some understanding about the capacities that should be enhanced. In this part we will look at what kind of moral capacities should be enhanced for different commentators. The main question of this part is:

- Is it really possible when we do not have a consensus about what is good and bad? In other words, whose morality will be the base point of what is morally good and bad? How we will decide which moral principles will be improved?

What kind of interventions could be moral enhancements, which moral elements should be included to a moral enhancement? Even though, some authors did not take into consideration this kind of questions into the debate, some of the authors especially started from presenting which moral capacities should we enhance. For instance, Persson and Savulescu (2014*) in their book state that moral enhancement should be focused on the improving altruistic behaviors which include empathy and sympathy. Altruism is essential for them because the main reason of moral enhancement is basically making people more altruistic about the people who live other parts of the world and even the people who have not been born yet. Empathy by itself is not enough because even sadistic people should have some kind of empathy to enjoy other people's pain (Persson & Savulescu, 2014*: 109).

Additionally they also add some secondary elements of motivations to act more morally. They claim that common-sense morality is limited, in other words, altruism, for instance, in common-sense morality is too narrow. It is acceptable according to common-sense morality for us to show altruism to whom only near to us (2014*: 123). In common-sense morality the bias towards near future is another issue, the outcomes of our actions do not consider the distant future and it is okay according to common-sense morality feeling irresponsible (or basically apathy) for huge number of sufferers (2014*: 123). Basically, they do not think that humanity is not moral, on the contrary, they offer an enhancement on the common-sense morality in which there are some level of moral capacities. The only thing we need to do is just improving these capacities (2014*: 123). Persson and Savulescu admit that their

model is just an extension of public morality which is philosophically controversial, but they firmly state that three things that they are adding into their way of moral enhancement are not enough as they are now and if we could extend these capacities, it would be quite effective (2014*: 123).

Thomas Douglas (2014) realizes that there is a bunch of criticism against moral enhancement in this respect and he answers these criticisms by claiming that even though we do not put forward what human behavior or capacities are moral explicitly, we have an implicit consensus on it. Since, we try to enhance some moral capacities of our children by traditional education (359).

3.4. Difficulty of Moral Enhancement by Biomedical Means

In this part the methodological difficulty of biomedical moral enhancement will be presented. The main question of this part is:

- Does "moral enhancement" make sense? Is it as clear as physical or intellectual enhancement?

When it comes to clearness of moral enhancement by biomedical means, many people including the defenders of it –like Persson and Savulescu- honestly confess that in today's circumstances biomedical moral enhancement is not as clear as traditional moral enhancement. There still big questions about the method of moral enhancement and its results. Oxytocin and SSRIs are known as not perfect way of moral enhancement and Persson and Savulescu think that we may never find a way to enhance human beings morally but this does not mean that we should give up all the studies and researches on it (2014*: 120). Since there is an urgent need for moral enhancement and this is a fact (2014*: 121). So every effort in this field should be welcomed.

3.5. Moral Issues

There are lots of questions of possible harms in case of a use of moral biomedical enhancement. This part will include these issues.

- What are the moral issues about moral enhancement? (How we are going to deal with the possibility of misuse and ideological differences when we define morality?)

In the debate of moral enhancement, the danger of misuse is an important issue to take into consideration because its costs might be huger than its benefits. Since, biomedical moral enhancement is a really powerful innovation; to control this technology should also be powerful. Even though, it contains a large risk of misuse, Persson and Savulescu state that all powerful technologies have the same risk. Even developments in medicine can be misused, like creating a biologic weapon (2014*: 124). They mention two problems with moral enhancement: first people should be willing to be enhanced to cover its costs and secondly, if we were able to develop a successful way of biomedical moral enhancement, how we can ensure a wise use of it and they state that the second one is the most problematic part of the moral enhancement. There is a great risk, so they warn that we should be careful twice as we think we should (Persson & Savulescu, 2014*, p. 124).

Moral responsibility and freedom is another moral problem with moral enhancement, for John Harris (2011). As Persson and Savulescu mention (2014*) Harris thinks that moral enhancement would destroy the capacity of freedom and thereby moral responsibility. However, moral enhancement will not do that because it just motivate people to act in a good way, after moral enhancement the person would not

automatically do morally good behaviors (2014*: 112). An enhancement cannot break the certain rules of human behavior.

By the moral enhancement people will not turn into robots who act automatically, unless the critics of John Harris. The people who undertook moral enhancement would be like the normal moral people who are not robot (Persson & Savulescu, 2014*:113). Persson and Savulescu mention Harris's another criticism about moral enhancement which objects the efficiency of moral enhancement. He affirms that motivational states of moral and immoral behaviors are really similar and moral enhancement cannot enhance the right sort of motivational state (2014*: 115). Persson and Savulescu, on the other hand, argues that this objection is wrong since high level of aggression is not a part of moral motivational state (2014*: 115). Hence, moral enhancement can target the right kind of motivational state.

CHAPTER 4

DISCUSSIONS II

In this part of the paper, the questions in the previous chapter will be reconsidered with respect to the main thesis of this paper. Throughout the other chapters, it has shown that what is moral enhancement, how oxytocin has been used in biomedical moral enhancement studies and what its known effects are, which are observed in scientific experiments – obviously these studies are only limited for today, in future we might obtain some other effects of oxytocin as well. Also, the discussions about moral enhancement by biomedical means and oxytocin use in these studies were mentioned. The six questions in chapter three and an additional one will be answered and while answering these questions the main thesis of this paper will be demonstrated. In this chapter I will, also, argue about the modest version of moral enhancement (Thomas Douglas) and conclusive reasons against biomedical enhancement.

Before delve into discussion, I want to start with the additional question which is what is moral enhancement I understand. At the very beginning of this paper I mentioned many differing understanding of moral enhancement. In order to explain

and defend my thesis, I should first explain my understanding of moral enhancement. Since, anyone who talks for or against biomedical moral enhancement should be specific because there so many views which are really different from each other (Wiseman, 2016: 13). For my point of view one of the most distinguishing features of moral enhancement is on its level, is it an enhancement or a treatment. I take moral enhancement as an intervention to affect normal people's moral traits. In this sense of moral enhancement the treatment, which means bringing an individual's moral traits towards the average level, is not enough for moral enhancement; as Persson and Savulescu believe that normal or average level of moral traits will not be effective if we consider motivations behind the moral enhancement (2014*: 108).

Besides, the aim of moral enhancement should be to change people's moral motives or the behaviors of the individual. If, however, humanity is as dangerous to itself as the scenario of Persson and Savulescu draw, a change only in motives will not be an urgent help that it should be. It is a known fact now that by the year 2050 the world will be 2°C more which is according to U.N. reports an alarming level especially for the certain countries like Netherlands and Turkey –especially for Istanbul- because of the rising sea levels (<https://www.un.org>). On the other hand, if we limit global warming 1,5°C, this will change many things. IPCC report clears that if we can limit global warming, there will be a more livable ecosystem comparatively with 2°C (<https://www.ipcc.ch/sr15/>, 2018). Persson and Savulescu claim that global warming is a fact and we can change or at least limit it by two ways; first there is a political side of the issue and second by improving people's moral traits (2014*: 38). For me their suggestions and evaluations on political side of the issue are too strong. They believe that democracy can have some blind spots, for instance freedom to everyone can be misused by morally deficient individuals (2014*: 64). Also some of their

suggestions might not be democratic for some other commentators- I will touch this point in the following paragraphs.

To clear it up, biomedical moral enhancement should aim to improve individual's moral traits to a level which is above the average and it should be effective.

Obviously one might ask that why we do not talk about moral enhancement by traditional means like education. It seems to me that such a question is a reasonable one and can be effective for morally enhance people –it will be mentioned in the following parts.

Biomedical moral enhancement can be seen really plausible from a consequentialist point of view and it may have some legitimate defenses like if humanity does not become a more moral society, it will extinct sooner or later. However, the idea of moral enhancement includes many handicaps and we might never actually be able to enhance humans. In theory, enhancing individuals sounds really appealing but in practice there are lots of things that can make us think twice. It is a technological innovation at the end and as many of other innovations it can have some side-effects, such a powerful innovation probably would have huge side-effects. Additionally, there are methodologically uncertainties. I think oxytocin is not definitely the right way of moral enhancement. Also, as Wiseman claims one of the main problems of the people who support moral enhancement is that they talk as if we solved all the puzzles about the brain but in fact our knowledge about brain is very limited (2016: 14). That is why, I believe that moral enhancement might never come true or be effective as it is thought right now. I prefer staying more skeptical side of the discussion but this does not mean that we should stop the studies of moral

bioenhancement. We should continue to discuss the moral and methodological handicaps of the issue and see whether it will come true.

4.1. Thomas Douglas and Non-cognitive Biomedical Moral Enhancement:

In this part of the paper I wish to mention Thomas Douglas's modest version of biomedical moral enhancement while I am developing my thesis because this version of bioenhancement might be more applicable for my perspective, though it also has some negative sides as well.

Thomas Douglas offers a moral bioenhancement which includes motives and impulses. For him moral bioenhancement should be non-cognitive which focuses to change people's motives by a direct emotion modulation (2011: 161). By emotion he means the emotions which are related with sympathy, moral reasoning and some other 'positive' emotions (Douglas, 2011: 161). Unlike Persson and Savulescu he thinks moral bioenhancement should be applied according to individual's will. He suggests that a person who wants to have more moral motives, but for some reason he or she by him/herself cannot be able to develop these moral motives can prefer to administer to biomedical moral enhancement (Douglas, 2011: 160). He mentions the "Biased Judge" example and according to this example James is a judge and he works in an area which is constituted from different races and his social environment was racist when he was growing up. That is why, he has some racist emotional reactions and he is aware of his emotions toward different races. So, this person can take a drug to get rid of his biased emotions (2011: 161). The charm of Douglas's modest non-cognitive moral enhancement is that it is up to the personal will, it is not mandatory. If one person wants to administer moral bioenhancement that person

should and can have an option. That is why, Douglas believes and insists that moral bioenhancement should be legitimate (2015: 23).

The reason why Douglas calls this type of enhancement as non-cognitive is that his suggestions only aim to change the impulsive –emotional- moral reactions; he is not suggesting altering the cognitive component of moral decision making processes. This alteration, for him, will be directly influence the emotions; it does not aim to improve cognition (Douglas, 2011: 162). So, basically non-cognitive moral enhancement does not focus moral reasoning and other parts of moral judgment, it just removes some emotions. Actually, this non-cognitive moral enhancement, as Douglas himself says, in some circumstances. For instance, remember Charles Whitman who killed 16 people including his wife and mother-in-law. According to data we have Charles Whitman before he killed these people wrote a note which states that Whitman felt like he was under control of some evil powers lately, and he wanted from doctors to after his death his brain should be examined. The doctors found a tumor in Whitman brain near next to amygdala which is related to emotional survival reactions (<https://www.britannica.com/biography/Charles-Whitman>). From that people like Damasio say that there are some impulsive reactions –and for them some certain brain regions which regulate these reactions- in our moral judgment. If non-cognitive moral enhancement was available in Whitman’s time may be when he realized that something wrong he might administer moral enhancement. This is an extreme example but for some psychological disorders this non-cognitive moral enhancement might be applicable.

However, right here we should ask that is this an enhancement or treatment. It sounds like it is a treatment rather than enhancement. As I mentioned at the very

beginning of this chapter, for this paper I take moral enhancement as the intervention to enhance moral capacities of normal people and Douglas, also, has a similar definition for moral enhancement (2015: 23). Hence, even though this might be applicable for treatment, not for enhancement, in that specific use in psychological disorders.

However, this does not mean that there will not be other areas and situations in which non-cognitive moral enhancement can be applicable. Douglas (2015) gives an example about how people have non-cognitive non-biomedical moral enhancement in their daily lives. He mentions a man who cheats his wife or girlfriend in other words he is a philanderer who does not want to harm the ones who near to him and wants to avoid the situation where he might lose self-control. He tells his friends that he will not go the places like a certain bars to control himself. Thus if he goes this places this will be an embarrassing situation in front of his friends. Hence, for Douglas, he basically uses non-cognitive non-biomedical moral enhancement, and this person with his free will can take a drug to help him if there would be a legitimate moral enhancement drug or pill. I believe that situations where an individual would freely choose to be enhanced then we should allow him or her to do. Some might argue that this cannot be legitimate because of the side-effects and risks. However, there are lots of other things that we choose freely use or take into our bodies which might have really strong side-effects. For instance, if a woman want to use contraceptives which includes some hormones just because she does not want to have babies –not because of a treatment of a disease- we cannot argue that she cannot take these pills because they have side effects which are including in the long-term use (+5 years) increases the risk of breast cancer and uterus cancers and have a risk to cause an emboli (prospectus of YAZZ-Bayer). Therefore after we

inform the individuals about the risks and side-effects we cannot forbid them to enhance themselves.

Even though, Douglas's premises are really democratic and applicable, as Harris Wisemen claims that this sounds as an atomistic explanations of our moral judgment mechanism (2016: 60). For Wisemen, Douglas assumes that there is a clear way to differentiate 'good' impulses from 'bad' impulses (60). Wisemen believes that this is not a realistic approach and he directs a criticism about the total removal of certain 'bad' emotions (2016). According to this, some of the negative emotions can be helpful in some circumstances and the removal of these emotions might be morally problematic. Joshua Greene also thinks that not all of our moral decision making processes are based on emotional responses. In some situations –especially during a hard moral dilemma or a case – our moral judgments generally based more on cognitive processes. Thus one can ask that are all the moral motives and capacities rooted in the emotions. Greene, obviously, will answer that no, they are not. Hence Douglas's premise is a limited understanding of moral processes and it might affect to a limited extend.

A similar concern is raised by John Harris; he highlights the importance of calibration of the level of these emotions (2011: 107). Since the morality we aim to reach requires of different balance of emotions for different people. The issue about being moral is not about having too much of an emotion or eliminating an emotion totally. Harris does not believe that such a fine-tuning can be achievable, so thinks that this approach might result moral decline.

Douglas mentions a research on enhancement which is a survey. This survey asks people which capacities you would like to improve in yourself. The results show that

people do not want to enhance their moral enhancement (2011: 162). I think this will be a problem for the people who see biomedical moral enhancement as the last chance of the humanity. For non-cognitive moral enhancement I do not think that this will be a big problem because it is a voluntary action which is more individual focused approach. As I will touch in the following part this might affect the pharmacology companies' willingness to produce these drugs.

4.2. The Urgent Need of Moral Enhancement:

In this part, I will try to answer the question whether there is an urgent need for biomedical moral enhancement as Persson and Savulescu believe and I will mention some the technological solutions that people offered for global issues.

Persson and Savulescu, as it is mentioned before, insist that there is an urgent because of the global warming and the possible terrorist actions. They are right that there is a huge risk of global warming according to U.N. reports. In very soon we or our children may face the risk of several famines and not even be able to find a piece of land to live because of the rising sea levels. Their suggestion really fits into the situation, since if we will become more responsible people, we can limit the global warming 1.5°C which is a livable environment for our kind.

However, as many people suggest that we need to see the real picture here which is this huge global problem might not be solved with a few individuals. Since, even if people become more moral people they will not turn into moral robots. After the enhancement, they will live according to their normal life and they might not think suffering people in Yemen just because they are enhanced. First, they need to know that there is a famine and a civil war in Yemen and the circumstances for people especially for children are getting worse day by day. Even though our world is now

global and anybody can learn so many things on the internet, people may not know the realities about global warming and the civil wars in the rest of the world. Since, in their daily routines they miss or basically do not want to see the bad news about many things. As Harris Wiseman says that a classic western person has too much in her life, for him, they can barely handle with their own life (2016: 70).

Norbert Paulo and Jan Christoph Bublitz (2019) mention a global survey in 40 nations which indicates that %54 of the people know that global warming is a concerning threat (2019: 90). I think in order for individuals to have such an effect to prevent the global warming and terrorism people should first accept that global warming is a very serious problem. However, as we see from this survey %46 of the people have not taken the situation of the world seriously and these people might not change their attitudes after the enhancement. For instance, in Turkey a regular person do not see the warnings about global warming and climate change on TV or internet, so many people are ignorant about the case.

What I am suggesting here is to first educate people in this way. There are lots of sources where people can access the realistic information about global warming and how people can do in order to prevent the coming scenario. For instance, TV ads can be really efficacious in Turkey, there are some documentaries on what are the risks of global warming but I believe that the rate of watching documentaries about this issue will not be that high. Another way might be politicians or sports people can take people's attention to global warming and protecting nature. The governments should ensure that the recycling system is working and everybody can have a place to give their waste products. Since another problem why people cannot join at least passively fighting against global warming is, for example, there are limited services

for the people who can bring their waste oil which is really dangerous for sea life and thus nature.

That is why, I believe that even today we can do something and if people would be aware of the situations they would act against global warming and we can limit the global warming at 1.5°C. Even by traditional means of enhancement like educating people and enable them to join the recycling and disposing of wastes will, I believe, solve the many problems related with the global warming. Thus, yes there is an urgent need but not necessarily for biomedical moral enhancement to solve these global problems but for create a serious awareness based on true information about them. If people lack of adequate knowledge about these global issues, the biomedical moral enhancement will not create new motives and information about global warming and thereby the intervention will not fit for the purpose.

In addition to this, despite the fact that global warming will change our world in a drastic way, it seems to me that people can find a way to continue to living not in a way that we live in today but because of the technological developments really hopeful innovations exist. For instance, on 3th April 2019 UN introduced us a new model of city which is called Oceanix City. According to this project cities will be floating on the ocean, and there will be anything that citizens of Oceanix will need, like hospital, school, the energy will be gained from the solar power, supermarkets and more (see, <https://oceanix.org>). The aim of this project is to protect people when the sea levels raised and according to recent data %50 of people live in near the coastal areas and they are the ones who will be affected first. Of course it is open to the debate that who is going to utilize from these kind of technologies, will wealthy people have more advantage to survive in the next centuries. Probably wealthier

people can have more chance to stay alive but the point is that technology is growing too fast and everyday new projects come true and thanks to these innovations humanity might not extinct. Obviously, I do not wish to claim that this will be a better life and we should give up trying to limiting global warming 1.5°C, we have to do our best but I do not think that the proposal “enhance or die” is %100 true. By education and creating opportunities for people to save the universe, we can limit the global warming. Besides, as I will mention there is not a proper method for biomedical moral enhancement, while trying to find a way we also try to impact people more traditional ways. As Harris Wiseman claims powerful narrators can also be helpful to motivate people.

4.3. Oxytocin Use as a Biomedical Moral Enhancer:

In this part of the paper, there will be two questions that I will answer about oxytocin which are aforementioned. One of them is about compulsory use of oxytocin but there will be also a discussion about compulsory administration of biomedical moral enhancement. The other is about oxytocin use in these interventions.

Scientific studies about oxytocin were mentioned in the second chapter of the paper and we saw that there are differing results of the experiments. Some of them identify oxytocin as the “TRUST” hormone yet for some others oxytocin promotes ethnocentrism in humans. That is why, to claim a certain thing seems hard. However, one thing should be said that we now know that oxytocin is not the ultimate moral hormone as Paul Zak (2009) claims. After a trust game that is mentioned in the second chapter, he came to the result that oxytocin is like a magic wind and once the person take it into his or her body it will automatically make this person an angel.

For him testosterone is the opposite of the oxytocin, it is the evil hormone (Zak, 2009: 1).

This strong view on these two hormones criticized by many people like Churchland and Wiseman because of the fact that it reduces all the moral decision making processes into one magical hormone and excluding other elements of moral thinking. I also agree that in spite of the oxytocin being one element of moral judgment, we cannot explain all the process only with oxytocin and testosterone. Additionally more recent studies show that cortisol is the natural opposite of oxytocin because it is related with stress level (Churchland, 2012: 132).

Oxytocin might not be the most appropriate method for moral enhancement both because it has some negative effects and it has different effects on different persons –this may because of the social environment- but it can be used in some special circumstances in the purpose of treatment and it also may be an additional elements for some people.

For the compulsory use of oxytocin, I would say that no need to be optimistic here, it might not result beneficial in a multi-cultural society. Even Persson and Savulescu changed their opinion about the use of oxytocin compulsorily.

Besides, if Persson and Savulescu are right, then moral bioenhancement should be globally applicable. However, this does not seem possible and realistic to me. Since in some parts of the world people refuses to use even some medical drugs and essential vaccinations -like polio-, for different reasons. Some believe that there are heavy metals in the drugs and some people have concerns that Western Capitalist states want to desexualize the eastern people and destroy the eastern culture. For instance the member of ISIS would not be willing to use a western drug. Even if

these concerns sound a little easy and stupid but this is the reality. For instance, in Turkey the rate of the unvaccinated girls raised %86 and the rate of unvaccinated boys raised %45 according to TNSA 2008- 2013 (Turkish Medical Association). What I am trying to say is that using oxytocin to enhance people might not be popular in the society. There need to political steps and again people first should be informed about biomedical issues. This will be necessary I think all kinds of biomedical moral enhancement not just about oxytocin. This concern can be valid for both for voluntary or compulsory administration of moral bioenhancement. In other words, in order to be moral enhancement can be successful –if we can find a proper method for it- we need to traditional enhancement in any case.

4.4. Moral Enhancement but Whose Morality?

In this part I will answer the following question:

Is it really possible when we do not have a consensus about what is good and bad? In other words, whose morality will be the base point of what is morally good and bad? How we will decide which moral principles will be improved?

In the previous chapter it was remarked that people generally mention to improve the capacity to empathy, sympathy and justice. Some argue that there is an implicit consensus on which human capacities are moral even if we do not express it explicitly, they employ that this is not particular to biomedical moral enhancement but it is also a problem for traditional moral education. Yet they did not mention about why empathy and sympathy. Are these two always better or being aggressive is always an immoral trait (Paulo & Bublitz, 2019: 101)? I suppose that we in our daily life have a frame about which human capacities are moral which are not, but bioenhancement is not a part of our daily life -at least for now- and if it is a world-

wide approach then it should premise people some understanding of what is moral. Consider the ISIS example in the previous part of the paper. Presumably they do not regard that what they are doing is morally wrong, rather they probably believe that what they are doing will help them in the afterlife. Also, they have an explicit consensus on what traits are moral, as being brave but we do not share their consensus. In such an extreme cases, what we will do? First destroy the ISIS and kill all the member of it and then enhance the rest of humanity? Or consider more modest communities or groups, they need to accept that acting in a way that it is favoring to one's own group is immoral (Paulo & Bublitz, 2019: 102). If moral bioenhancement can come true, it should face that establishing a consensus will be a tough assignment.

4.5. Difficulty of Moral Enhancement by Biomedical Means:

In this part of the paper, I will try to analyze the methodological and philosophical difficulties about biomedical moral enhancement. In the previous pages there are also some other difficulties about these interventions but this part will be especially for the difficulties that I did not comment on before.

To begin with there are lots of difficulty that should be answered for a proper way of moral enhancement. The first one is about the place of the emotions and our biology in moral decision making processes. There are lots of studies about this question, people like Jonathan Haidt thinks that many of our moral claims are not based on rational thinking, they are just emotional reflexes but we as human beings believe that they are the results of rational thinking (2001). Some objects that self is also important for morality and some other claims that social environment is also essential. There are also social psychologists who maintain that in order to analyze

the behavior of the groups we need to look directly at groups; group cannot be reduced into individuals.

For Persson and Savulescu the alteration in the individuals' biology will affect the society's moral dispositions. Since the global problems are because of the individuals' irresponsible and myopic moral traits. That is why, in a way they are reducing the morality to individuals' biology. However if this was the case, there would not be any problem about consensus on morally good capacities. Harris Wisemen argues that our socio-economic environment and selves also play important roles in morality but Persson and Savulescu do not mention other components of morality, they only include some parts of biology which is related to morality (2016: 6). For me not only Persson and Savulescu but many commentators who write on moral bioenhancement only mention the one side of the moral reasoning processes - namely Thomas Douglas. Even if human beings have emotional reactions, in some cases we also need cognitive processes as it is mentioned before. There might be some theories on biomedical moral enhancement which focus on the other sides of the issue. That is why, I believe that this type of reductionism is one difficulty about biomedical moral enhancement arguments that are aforementioned.

On the other hand, there is also second type of reductionism with Savulescu and Persson's representing the scenario. For Paulo and Bublitz (2019) their argument can open a way for such a reductionism because it is not clear to what extent a change in our biology will solve the global issues (98). For their perspective, in order to analyze the global issues, we also need to analyze the society as well. Since for them a building cannot be reduced to its building blocks, we may analyze the building blocks but they will not give us the whole picture and this will be misleading (2017:

100). They give an example from behaviorism thesis in 70's. According to this, behaviorism promised that in order to change human behaviors, changing the environment will be sufficient (101). Unfortunately, this argument failed and now we know that we are not solely composed of conditioning relatively the environmental change. That is why, they state that Persson and Savulescu's argument might be the anti-behaviorist argument (2017: 101). But we should also consider the social and environmental circumstances to solve these global issues. Hence, a successful moral enhancement should include individual and society together.

A related question might be whether a change in biology will cause a change in both sociology and beliefs. Since I wonder if a fundamentalist religious man administer the biomedical moral enhancement, can he affect the whole society and beliefs.

Additionally, for some different biological paradigms like "emergence" complex phenomena cannot be comprehensible by lower level elements (Wisemen, 2016: 270). Especially the self-organizing phenomena like human mind may not be conceivable by its building block as one hormone. That is why a different paradigm will need more rich perspective to explaining the complex concepts. Thereby, the biological paradigm will also affect the debate about biomedical moral enhancement.

Another issue of moral enhancement is mentioned by Thomas Douglas. According to a survey that he mentions in his paper, clears that people do not willing to enhance their moral capacities, they are more interested in enhancing their physical capacities (2011: 161). Harris Wisemen also states that there is an understanding in life that people should live so carelessly in their youth; they will come to world once (2016: 265). That is why, people may not be interested in administer biomedical moral enhancement. If the number of the enhanced people will be too low than this

approach will not again fit into its purposes. First, we need to create awareness about moral bioenhancement in people so that they will be interested in moral enhancement. Here Harris Wisemen suggests that an enhancement which does not have “moral” in its name can be and already is applicable. For instance, public health department may announce that they will help people who has addiction problem by supporting their self-control (2016: 273). However, it seems to me deceiving people, the aim of the approach should be clear to people who will be the target of the biomedical moral enhancement.

One of the methodological difficulties about moral bioenhancement is about the lower rate of the demand for the biomedical moral enhancement. In this paper the interventions, which are mentioned, generally based on pharmacological approaches. Pharmacology is at the end of the day an economic field and demand is one of the important reasons why those people do not stop producing new drugs. According to Harris Wisemen, this industry does not want to invest billion dollars to a drug which is not even for a treatment. It is not because it will cost lots of moneys but also to get the ethical approval is hard for these drugs. There is also no guarantee that these drugs will be sold or there will be enough demand in this way (2016: 78). However, in the future the demand might increase.

The last conceptual issue is how democratic moral bioenhancement is. Thomas Douglas offers an enhancement which is entirely up to the individual’s free will; this might be suitable in democracy. However, Persson and Savulescu can have problem in this point. Since Paulo and Bublitz (2019) taking ‘people as they are’ is a building block of democracy as they cite from Rousseau. For their point of view biomedical moral enhancement does not take people as they are and thus it does not fit to

democratic order. It seems that Persson and Savulescu are arguing so strongly that some of the democratic building blocks can be eliminated or they might have a different understanding of democracy. However, I think it fits to their claim which is “enhance or die”.

To conclude this part, there are lots of conceptual difficulties with biomedical moral enhancement and a lot of them are related with the traditional enhancement. Having the adequate knowledge about the world, being aware of the global problems like global warming and climate change and its results to our lives is essential for me, as I will mention in the following parts.

4.6. Moral Issues:

In this part of the paper, the danger of the misuse and freedom will be analyzed.

The danger of misuse I think is a serious question because in the history we saw that powerful technologies could be hazardous in wrong hands (nuclear bombs, for instance). Biomedical moral enhancement is also a powerful technology and it can be used to manipulate the society without their free will, if a fascist dictator gains a technology like biomedical moral enhancement. However, Persson and Savulescu object that the same risk is valid for every technological or even non-technological device either.

The reason why I think that there is a more possible risk of misuse in moral bioenhancement is, it is applicable by government easily without the announced this anyone. For instance consider that a government adds oxytocin in public water, nobody could not know that there is oxytocin in their drinking water. However, nuclear bombs for instance cannot be used as easily as oxytocin because of the

international pressures and the results would be catastrophic to her or his own country.

For the claims of biomedical moral enhancement will eliminate freedom and thus moral responsibility, besides Persson and Savulescu, even Harris Wisemen claims that nothing can change the basic principles that human moral understanding. Since it needs a fundamentalist approach and nobody offer such a proposal. People only approach to change normal human beings' moral capacities; it will not make people moral robots. People have already different levels of moral motives but this does not mean that some people have more free will than the other moral ones. For oxytocin, for instance, women have a higher level of oxytocin but women are not moral robots; they commit crimes as men do. Hence, I do not think that biomedical moral enhancement will eliminate the freedom of the will.

CONCLUSION

To sum up, throughout this paper, I mentioned first different understanding of what moral enhancement is and to make comment I narrow it down as biomedical moral enhancement that I analyze is the biomedical interventions to improve normal human beings moral capacities, in the fourth chapter. Then I moved to explain what scientific data about the effects of oxytocin are and we saw that even though it has some beneficial effects it also has some possible negative effects as well. For instance, for some commentators we saw that oxytocin boost up the ethnocentrism in human beings and told that this will not be a good idea to make people ethnocentric especially in today global multi-cultural circumstances. As it was represented in the third chapter almost all the authors that were mentioned do not think that oxytocin use will be a proper method for biomedical moral enhancement. In the third chapter, I mentioned six most commonly discussed questions in the literature and in the fourth chapter it was tried to answer these questions according to my point of view. It is defended in the fourth chapter that Thomas Douglas's understanding of non-cognitive moral enhancement draws a moderate frame for biomedical moral enhancement yet it must realized that some of the application of it might not be counted as an enhancement but rather a treatment. It is assume that even if it was directed some criticisms to biomedical moral enhancement, there is not any

conclusive reasons against it. The studies should continue and people can have access to it if they want and a proper method can be found. It was suggested that the need for biomedical enhancement is not the urgent one since we lack an adequate knowledge about what we can do without biomedical means and it was supported that with the raise of the knowledge and awareness in the society people will act on the global issues but it was believed that people do not know about the real situations of global warming, for instance. Since as Pavarini et al. (2018) showed us cognitive components and moral ones are intrinsic and they affect each other. That is why unlike Persson and Savulescu believe I insist that Socrates was not totally wrong when he was saying that if people will become more informed the morality will be raised in the society.

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