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THE CONTINGENCY OF THE "ENHANCEMENT" ARGUMENTS: THE POSSIBLE TRANSITION FROM ETHICAL DEBATE TO SOCIAL AND POLITICAL PROGRAMS

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Abstract: Whatever we speak about enhancement as the, just, one array of the wide range of the bioethical fields, or as the kind of ideological and theoretical field, it is necessary to emphasize relevant ideological and theoretical distinctions between different approaches. Trying to give some fundamental shape to debate among them, as well within themselves, I specified three possible streams with more or less arbitrary boundaries. First one is *transhumanistic* stream, whose representatives openly promote the practice of genetic, prosthetic and cognitive enhancement of human kind - transition from human to a post human society; *bioconservative,* whose representatives perceive a threat in the violation of human dignity, meddling in "God's business" (*playing God*), and in changes to the nature of human beings; representatives of the "middle standpoint" consider that danger lies within the dialectic relation of "capitalism and medicine."
I present the tree ideological standpoints trying to building consistency through different ethical arguments. Discussing the relevant theoretical/ideological distinction between standpoints and their claims, I will argue that ideological distinction among standpoints is less relevant than contingency within their arguments. Such mutual contingence creates some similarity regarding epistemological and social issues.

Key Words: Enhancement, Cloning, Immunization, Transhumanism, Bioconservativism, Middle standpoint.

Introduction and main hypotheses

Human Enhancement could be described as the use of medicine, surgery and other kinds of medical technology, not just to cure or control illness, but rather to enhance or improve human capacities and characteristics.[1] One of the well-known and most contradictory definitions of *Enhancement* is that it represents a directed use of biotechnical power through direct intervention in order to alter the 'normal' functions of the human body and psyche – not the disease processes – and to increase or improve the innate capacities and performances of the body.[2]

Despite common division on the two bioethical standpoints[3] in the contemporary study of human enhancement, I am inclining to differentiate at least three ethical or theoretical approaches. In the first section, I will present three main bioethical standpoints or approaches to the enhancement debate. The first one is a *transhumanist* approach, whose advocates explicitly promote the practice of genetic, prosthetic and cognitive enhancement of humankind, that is the transition from a human to a post-human society; the second approach is a *bioconservative* one and its proponents perceive such experiments on human beings as a violation of human dignity, meddling in "God's business" (*playing God*), and generally as a threat to humankind; while the representatives of the so-called *middle standpoint* see the danger in the dialectical relation between capitalism and medicine. The authors of this middle approach perceive the accessibility to, and application of, biotechnology as a certain resource for ensuring better social positions.

Thus, it is necessary to know to what extent the bio-medical enhancement supports or clashes with the socially accepted activities such as attending trainings, courses, language or music lessons, talent building, immunization, etc. Regarding this question, we need to explore some epistemological and social implications of the main pro and contra arguments.

The term enhancement is not problematic only in semantic overlaps between the meaning of enhancement and the meaning of therapy. A more general problem is that *enhancement* could be postulated as the inevitable idea of the social *progress*, namely technological increase controlled by large multinational corporations with more global reach than global responsibility.[4]

Debate and usage of the new Human Enhancement Technologies (HET) started in economically and technically most developed societies, in the second half of the XXth century. Following Potter's ideas, such progressive process continues to survive from generation to generation with little concern and responsibility for less developed states and for the biosphere as well.[5] We could assume that a developing country that does not follow such progressive and scientifically proofed ideas could be

understood as the "dangerous," health risky and less democratic societies. At the same time such societies would be more vulnerable, with less capacity for defense as well as less intelligence services capacities, than other neighbors.[6] Having in mind such parallel development of HET and the ethical debate about their use in a global sense, I am inclined to understand *enhancement* as a type of ideology. The first reason is that, depending on their particular 'team colors', the advocates in the enhancement debate use scientific facts and language beyond the objective reach of the actual scientific results. In other words, they promise "better life" with or, in the opposite case, without biotechnology. The second reason is that the advocates of HET promote not only "better life" but rather one exclusive and only right way of life: "enhanced" life on the one hand, or "natural" on the other.[7] But it is naïve to believe only in the extreme poles of one ideological axis. Most human life burdens, e.g. motives, actions, expectations, obligations, tend to be found somewhere in the middle of such axis. Therefore there is enough space for a new ideology that balances the two extremes and explains how we should act and live in a biotech era, balancing between global responsibility and progress.

The main hypotheses are: the mentioned ideological approaches could not provide "global responsibilities" beside "global progres," because they converge in the same point. The inner and mutual ethical inconsistency within bioethical standpoints is a cornerstone of the cultural and technological hegemony instead of global survival and responsibility.

The first hypothesis is crystallized in the last one. Having that in mind, in the second section I will argue that, despite ideological and theoretical divergences among the two already mentioned bioethical standpoints, both of them encounter the same epistemological problems. The communication between standpoints, as well as among the cornerstone of the enhancement arguments may become a political platform for the Global Society in the next centuries. Such communication will be more visible after analyzing mentioned standpoints and they main arguments. The intersection between fallacy of (a) transhumanistic and (b) bioconservative arguments opened debate about sociological and the biological structuration of the new-formed Global Society, within the frame of the new reproductive relationship—reproduction of the genetic capital. (c) The middle standpoint of both arguments is, in most of the cases, against uncontrolled usage of biotech means in pursuit for happiness. Be that as it may, the fallacy of their argument justified the already mentioned reproduction by dealing with "old" religious, social and moral constrains—Weber's Protestant ethics, which should not be part of the discussion.

Ideological and theoretical standpoints

(a) Transhumanism

Transhumanism is based on the active support of technological development in general. This standpoint encourages practices of the genetic, prosthetic and cognitive modifications of human beings. The advocates of transhumanism believe that technological and scientific progress, within a market economy society, leads to individuals tremendously prosperous.[8]

Main positions of transhumanism can be illustrated by some of its most prominent advocates. In the work of Nicholas Agar it is the characteristics of individual autonomy and freedom of choice. But, what is really freedom of choice in Agar's sense? He defended *Liberal Eugenics* and reproductive cloning as the autonomous way for choosing most valuable genotype. Most valuable individual genotype could be provided from Somatic Cell Nuclear Transfer (SCNT), i.e. cloning of an extraordinary person or genius.[9]

Why should we use the smartest or stronger genotype was explained by the transhumanistic position that is best-represented trough the ideological standing of Julian Savulescu. He defends a moral theory of maximization of the life chances. According to Savulescu such maximization is represented through social mobility up to the higher social positions by using of genetic engineering, e.g. by creating the most valuable genotype[10]. His moral theory of maximizing life chances is nothing else than a moral appeal for the evolutionary opportunism, by commanded selection and supra prevention[11]. Such plea is in its essence no more than justification for conservative naturalism. The next transhumanistic position is most visible in the work of John Harris. This author suggests the unacceptability of an egalitarian approach in the case of enhancement. Such conclusion arises from the comparison between the principles of "no harm" at one hand, and principle of "beneficence" at the other. According to Harris every person who has the possibility to enhance himself/herself or their children, should neither be legally nor morally restricted with the burden of equality. Social equality does not deny a benefit to any until it can be delivered to all.[12] There is one more important issue regarding transhumanism advocates. The point concerns the normal functioning and characteristics of human beings.[13] According to transhumanists there should be no divide between medical procedures towards healing and the enhancement or procedures aiming to go even further than that. In the section about fallacy of the main arguments I will come back to this issue showing how fear and disgust are normal and typical human traits. Accordingly, I argue that cloning of humans should not be acceptable.

(b) Bioconservatives

These theoretical and ideological standpoints represent ethical concerns relating the use of the new biotechnologies. Bioconservatives are in general against genetic, prosthetic or cognitive transformations of humans. This standpoint ranges from conventionally right politics of the religious/cultural conservativism at one hand, and conventionally left oriented politics of the *conservation* of the human's environment at the other hand. The *nature*, as a moral category, serves for bioconservatives objections for biotechnological interventions toward enhancing of the actual human and cultural borders of the national states.[14]

As in the previous standpoint, here it is obvious that main positions of bioconservativism could be related to some of its major proponents. Kass' bioconservative position is characterised by suspicion that nature can serve as a moral guide. "Natural knowledge may be very useful in selecting our means, but not in discerning our ends; and it is utterly useless in deciding how to balance one good against another."[15] In work of Leon Kass enhancement is perceived as a violation of human dignity, meddling in "God's business" (*playing God*)[16]. According to Kass any enhancing practice should be perceived as the destruction of the human being, which was created according to the image of God. Fukuyama is more oriented to preservation of the human genome. Such preservation is induced by Fukuyama's glorification of the *factor X*. The factor X is a factor that differentiates between human at one hand, and other animals at the other hand. Although, at the first glance, Kass and Fukuyama have different view towards nature, this so-called factor X is the point of their convergence.[17] I suggest such position argues for respecting both the human dignity and the human genome.[18]

The next noteworthy position within bioconservativism is Fukuyama's objection to Savulescu's moral theory of maximization of life chances by using genetic enhancement. Fukuyama believes in the competitive nature of human beings. In the first part of his objection he argues that in the race for the best genotype it would be impossible to detect who is the winner, because, hypothetically speaking, every individual would be urged to become superhuman. When analysing a second aspect of the competitive nature of the HET, both Fukuyama and Kass argued that biotechnologies induced "dangerous" social inequalities. One of the examples they refer to is the objection against the transhumanistic's *supra prevention* or preventing biomedicine. "The worry over unequal access to PGD (Preimplantation Genetic Diagnosis) is, in effect, a worry about the inability of the *economically* poor to practice the ultimate discrimination against the *genetically* poor."[19]

(c) Middle standpoints

The last bioconservative concern about the transhumanist's supra-prevention actually opens the field for exploring a set of approaches that

are neither transhumanist nor bioconservative. I will refer to such approaches as *middle standpoints* or the *middle stream*. The name "middle stream" suggests a position between two ideological and theoretical poles, and arguably is the less bad solution. The advocates that I placed within this approach argued for a certain caution in the acceptance of HET. Those advocates are at the same time different from bioconservatives. They perceive the bioconservative approach as unsustainable. They argue that once scientific research started and its results are made public, e.g. the prolonging of life, regenerative interventions, PGD, etc, it will be impossible to stop such research, particularly in free market economies. It seems that, indeed, any restrictive solutions in the major legal and ethical aspects would lead to the total transformation of the social and economic system.[20]

One such advocate, who is often perceived as holding a standpoint very close to bioconservatives is Carl Elliot.[21] But, at the same time, the author could be seen as belonging to the middle approach since he advocates the discussion of issues such as gene therapy for cystic fibrosis. However, such position discourages people from experimenting with genetics in order to intervene with personality, intelligence or physical appearance. As in the case of other advocates belonging to this stream, Elliot argues that genetic engineering may eventually lead to the destruction of biological and cultural heterogeneity of the people, national societies and the biosphere.[22]

Having in mind the cultural gap between, on the one hand, *altruism*, which advocates helping very sick people even with the use of gene therapy, and the caution, related to the *destroying capacity* of genetic engineering, on the other, Erik Parens suggests the so-called middle solution. Namely, Parens underlies the importance of the challenge to simultaneously learn to attend to the suffering of individuals and to criticize and resist the systems that produce that suffering.[23]

For such type of attendance, we need to develop a moral distinction in the enhancement debate, making use of the work of Thomas Murray. Murray argues for a distinction between enhanced people and people that not only publicize enhancement but also experiment with more powerful and riskier procedures.[24]

Bearing in mind all the views within this standpoint, it is clear that they are not limited to trying to point out the possible and real consequences of enhancement. They go far beyond that, trying to use enhancement as the boundary in describing social goals and values. If health is one of the most valuable social goals, then biotech should figure among the interventions that prevent and heal illnesses. In the most general terms, enhancement could be used as a moral signpost in both an individual and a social sense. We should bear in mind that a range of biomedical interventions cannot be measured only according to the benefits, but should rather be measured by taking into account the risks as

well. Despite the great attraction of the promised enhancement effects, the exposure of healthy people to risks even of small quantity or for a short period of time is, according to the Hippocratic Oath and the Belmont report, characterized as unethical experimentation on humans.[25]

Sociologically speaking, the importance of the scientific and technological roles in the enhancement debate lies in the scientific (as well as everyday) language or explanations of the scientific improvements. Ideological usage of scientific explanations beyond the objective results of biomedicine creates a potential path toward the social and political program of a new type of eugenics: e.g. equalizing success in the healing of the Huntington's disease on the one hand, and the promises of success in the enhancement through gene therapy, on the other.

After these short introductions of the standpoints of most proponents of HET and their key advocates, it is more or less visible that the first two approaches within the enhancement debate have a common element: the human nature or essence. Both of them assume that there is a relation between human nature and morality. Although transhumanists believe in the moral obligation of the enhancement of human nature through science and technology, they perceive such goals as social progress. Bioconservatives, on the other hand, emphasize the preservation of human nature in accordance with the old conservative model of a "natural order of morality".

The transhumanist view on the maximizing of life chances and adopting a non-egalitarian or rather non-solidary approach seems to tend towards creating a new type of immobile social structure; i.e. of a naturalistic rather than religious type. Such ideological path of transhumanism is only one step from their opponents—that is, bioconservatives.

But, how is that possible? If we know that Evolution is powerful and opportunistic, but is neither intelligent nor instructive,[26] it can be said that Agar's model is working on the instructed selection of the best genotype. To conclude, Agar's and Savulescu's moral justification of the enhancing of biological and brain processes through technological instructed selection and opportunism is nothing but the already mentioned model of the natural order.

Let us briefly consider what bioconservatives advocate regarding Evolution. They seem to be forgetting one important fact, that human being is integrated into nature and especially into culture.[27] Besides, nature as well as culture are undergoing constant change. To conclude, bioconservatives and transhumanists converge around the same naturalism, although their paths are different. Bioconservatives are rather for a petrifaction of the actual social and technological divisions between the developed and developing countries.

At a first glance, transhumanism and bioconservativism were placed at two detectable poles of an ideological axis. The latent characteristics of

those two standing points suggested their ontological convergence. Such discovery, however, placed the middle approach in an uncomfortable position. The middle standpoint could be seen as an alternative to such latent convergence. But it could also be possible to suggest that such position brings certain "softness" and "splits" into their arguments, because of the knowledge that the two extremes in the enhancement debate are actually somewhat blurred.

Analyzing the first hypothesis, i.e. who can provide global responsibility, we have seen that the first two approaches converge in a naturalistic model which, as is known, leads to social petrifaction. The third approach is now to be tested.

In the next section I shall try to go further, analyzing the second hypothesis, which concerns the intersection of social petrification and technological hegemony. The section will also discuss the inner contingency of the major bioethical arguments.

Fallacy of the main bioethical arguments

a) Transhumanistic fallacy: Could Irrationality be operative in ethical debates?

In this section it will be addressed a plea for *irrationality* in case of rejecting of the reproductive cloning. From the transhumanistic view, irrationality is understood as epistemologically non-operative in case of reproductive human cloning. I will not speak about religion only from the bioconservative points, as exclusive irrational or rational. [28] Namely, I shall try to show that irrationality in case of cloning could be operative even if we do not directly speak about metaphysical and religious beliefs. I argue that this type of "irrationality" is part of a *normal human function*. At the same time, the normal human function term appears as a valid argument in this kind of epistemological explanation.

Regarding the diverse types of objections in cloning debate,[29] I will try to avoid a possible reductionism. From such view I shall orient my arguments to the scientific and empirical arguments that supported some types of irrationality. Such irrationality could play certainly a role in the other categories of the objections.[30]

But first let me start with the issue of term "normal functions" of the humankind that I shall later use for justification of the specific type of irrationality in case of cloning. Harris emphasizes that Daniels' definition of health and, hence, of illness in terms of departures from normal functioning or departures from species-typical functioning, is unacceptable in those cases like Chemical or Genetic enhancement. Immunization, as Harris underlies, is also a kind of health change, which goes beyond species-typical functioning.[31]

I would remind that Harris overlook double effects of such immunizations procedures. Although *immunization* is a sort of health improvement and one of the most valuable social goals, especially in the domain of children and youth's social—and healthcare, it should not be forgotten that not all *vaccinations* are risk free and morally acceptable.[32] More risky procedures of genetic and chemical enhancement make the last comment more relevant; although there are some optimistic perspectives in terms of health; genetic or chemical means are still unexplored knowledge, risky and ethically questionable.[33]

However, Harris and Agar claim that the difference between the moral justification of (1) mechanical enhancement or vaccination, and of (2) chemical or genetic enhancement is in the irrationality of the "yuck factor" or queasiness.[34] Both of the transhumanistic advocates perceived normal function and the "yuck factor" as well, as an unacceptable argument in enhancement debate.

At this point of the discussion it is good to transferring this analysis toward the irrationality argument, while promising that I shall come back to the correlation between normal functions of the humans and queasiness.

When new technologies are introduced, the first reaction is often either "wow—this is amazing!" or "yuck—this is sick!" Harris deals with the reasons and arguments that underlie both reactions, and how it can sometimes be rational to move from "yuck!" to "wow!" The same author further claims that when using the *yuck factor* we only make an appeal to custom and law, "to feel a considerable unease reflected in custom and law."[35]

Agar underlies that the problem with the irrationality of *yuck* argument is the following: if we lack a rationally persuasive reason to find the existence of biotechnological interventions wrongful, we should not translate queasiness into moral condemnation.[36]

In his book *Liberal Eugenics-In Defence of Human Enhancement*, Agar criticized the argument that human cloning and genetic engineering are wrong because they violate some deep, inchoate sense of what is right for us. According to Agar, such line of thinking is called "yuck" argument. Placing the conservative's conclusion about biotechnology beyond reason's reach goes against the grain for those who are used to rationally justify their moral conclusions. The "yuck" argument is designed for reactions of disgust that lack an obvious rational reason, especially in the case of the cloning of human beings.[37] It is important to underlie that here human cloning means the use of the technology of a Somatic Cell Nuclear Transfer (SCNT) to produce a human embryo.[38]

But Agar's assumption about yuck argument as an irrational, i.e. non operational, argument, clashes with at least two kinds of problems. The first group represents scientific facts about the negative effects of cloning or genetic engineering. The second problem is related to it. Once one has

become familiar with the real dangers of the cloning procedure, fear and uneasiness, based on several empirical data that we will later show, one cannot be irrational, but are part of the normal (*and everyday* author's note) human judgment.[39]

The examination of these problems starts from the concrete procedure of SCNT, as well as from the challenges that are related to cloning. When we speak about cloning, as Agar emphasizes, "Cloning can serve the end of human enhancement so long as the traits that parents want for their children are influenced by genes. Replicating all of a person's genome reproduces, in a new person, all of the genetic influences that helped shape her. Another biotechnology might enable more precise choices of hereditary influences."[40]

However, Agar also underlines that the actual experiment of the realization of reproductive cloning opens many practical problems. The first one is that the foetus of the clone develops faster (about 30%) than the naturally fertilized foetus. Success in cloning a sheep does not guarantee success in cloning other organisms.[41] The procedure of the cloning of the experimental animal shows several serious problems:

(1) Reproductive and other invasive medical interventions, required on a large scale because the process is so inefficient. These are performed on donor animals—for oocyte extraction—and on surrogate mothers, who often give birth by caesarean .[42]

(2) Suffering caused to surrogate mothers. Pregnancy is typically prolonged and cloned calves (and lambs) may be 25% heavier than normal. Higher birth weights lead to painful births and often the need for caesarean section.[43]

(3) Abnormal foetal development and late pregnancy mortality, leading to frequent death at various stages of development. Death in the second half of gestation is common, with the occurrence of hydro-allantois, excess accumulation of fluid in the allantois.[44]

(4) Postnatal mortality: In August 2003 three cloned adult pigs died from heart attack. The three pigs, part of a group of four (the 4th one died only a few days after birth) did not live to six months. The research leader, Jerry Yang, of the University of Connecticut, said it was "dramatic and shocking when all three died suddenly from similar problems."[45] He had described the animals as "normal, cloned piglets." The sow from which the piglets had been cloned was still alive in 2003 and showed no signs of cardiovascular problems. Furthermore, the piglets all had separate surrogate mothers. According to Yang himself, that puts suspicion firmly on the cloning procedure.

In 2001 the biotech company *Immerge Biotherapeutics* and the University of Missouri produced transgenic cloned miniature piglets. Twenty-eight surrogate sows were implanted with cloned embryos. Three sows, implanted with approx 100 embryos each, gave birth by caesarean to seven cloned piglets. Two piglets died shortly after birth from breathing

problems and a third died after 17 days from heart failure. Of the surviving piglets, one had heart and lung abnormalities, one had eye and ear abnormalities and one had a leg joint abnormality. Of the dead piglets, two had leg problems and one had a cleft palate.[46]

(5) Health problems during life. Regarding a study of N. D. Wells,[47] it is notified that Clones may have a greater propensity in later life for respiratory problems and immune system deficiencies compared with normal animals. Any underlying frailties in cloned animals may not be fully revealed until the animals are stressed in some manner.

Having in mind such problems Agar agrees in one sense with Kass. In that way he pointed out that the phenomenon of the DNA copying error is something that we may all confront, but the problem could be more expressed for someone whose genome comes from the somatic cell of a fifty-year old man or woman[48], because aging increases the possibility of mistake by the process of DNA replication (which could be reflected in the wrong information stored in the chromosome of the potential clone). Scientists suggest that the problem may lie in the fact that an egg with a new somatic nucleus must reprogram itself in a matter of minutes or hours (whereas the nucleus of an unaltered egg has been prepared over months and years). But this agreeing is only at the level of the recognizing of the scientific issues. In Agar's case such problems should be overcome with future experimentations. In Kass' case cloning experimentations should be forbidden.[49]

It is important to know that Agar does not speak about cloned Genius, but rather about genetic copy of the Genius. Regarding such distinction, I am agreeing with Staicu who claims: "It is wrong to think that through cloning we can obtain a copy of a particular individual." But at same time I also disagree with the very same author who claims, "through cloning we can obtain a genetic copy of a particular individual."[50]

It is well known that even a cloned organism such as Dolly does not inherit its entire DNA from its progenitor; a small amount of mitochondrial DNA is bequeathed to it by the enucleated oocyte (i.e. by the contributor of the egg). Mitochondrial DNA is not located in the nucleus, but in the cytoplasm of a cell. It codes for a number of metabolic proteins and is passed down exclusively through the female of a species. When we talk about cloning an organism of either sex, we must remember that the cloned organism will not inherit its mitochondrial DNA from its progenitor unless its progenitor also donates the oocyte. That means that males genotype cannot be perfectly cloned, while females can only if the somatic cell and the oocyte come from the same individual—i.e. if the individual that is being cloned also provides the egg.[51]

In this sense, Agar's vision of the Liberal Eugenics is a circular explanation. In the described manner, a "perfectly cloned genius" or his genotype as well, whose role is crucial in the fertilization or replication of a "perfect baby," can be created from the same genius, who, at the same

time, must be a woman. A cloned embryo must have the same progenitor and donor of the egg who must have healthy cytoplasm[52]. In such a Global Enhanced Society, reproductive cloning would not exist. Hence, we should speak about the infinite process of the self-reproduction of extraordinary persons, who must be exclusively women.

Perhaps the biggest factor of uncertainty is the effect that the environment has on the development of an organism with the same genetic base. A relevant example of the interaction between the genotype and the environment is a research of the behaviour of twins.[53]

Examples of the behaviour of twin pairs shall lead us to interesting conclusions, that the explanatory choice between genetic determinism and environmental (cultural) determinism is a false dichotomy. The first case is about monozygotic twins, who are raised in different families, but both persons have identical life stories. This case concludes that genes, not environment and socialization, have the main role in determining human behaviour. The second case is about dizygotic twins raised in the same family, but whose life stories are significantly different. This case shows that genes, again, have the dominant causal role regarding human behaviour. But the fact is that both stories are not completely true. In the second case, socialization in the same family does not necessarily mean the same conditions for different children. In the first case, socialization in totally different families may be very similar, thanks to the same culture, values and norms, besides having the same genetic. Thus, the behaviour of certain species is a result of the interaction between the environment, the nature of certain species and, especially, culture.[54] Having in mind the specific natural traits, the environment can create, thanks to a certain cultural context, various relations with different individuals who were raised in almost the same conditions. Thanks to a particular cultural context, the environment can play both the role of fostering the emergence of uniform social relations, and that of influencing the individuals to develop very diverse and particular responses to their social surroundings. To that extent, individuals growing up in seemingly identical social and cultural conditions can develop totally different relationship towards their immediate surroundings.[55] Regarding that, I partly agree with one of Staicu's argument: "if the environment plays an important role in the evolution of any organism, then a clone can be expected to be significantly different from the organism whose genetic material it possesses."[56] But I would go beyond such claims. We should always bear in mind not only the role of the environment in determining behaviour in a general sense, but also the unique role of the cultural environment in determining human behaviour in particular. The interaction between our genetic selves and our cultural selves is very complex indeed.

This example shows that fertilization with the copy of a cloned genius does not guarantee geniality or superiority of the offspring.

Practically, with this conclusion we have showed that Agar's concept of Liberal Eugenics cannot survive the test of a complex interaction between several factors in determining human behaviour.

Considering the complex interaction between genes and environment, Leon Kass underlines that in vitro fertilization did more than "supply what one or both bodies lack, namely, a reasonable chance to produce an infant." By putting the origin of human life literally in human hands, it began a process that would lead, in practice, to the increasing technical mastery of the process of human generation and, in thought, to a continuing erosion of respect for the mystery of sexuality and human renewal. A society that allows cloning has, with or without knowing it, tacitly said yes to converting procreation into manufacturing and to treating our children as pure projects of our will.[57]

Opposite to Kass, and in favour of cloning, Wilson underlines that cloning presents no special ethical risk if society does all in its power to establish that the child is born to a married woman and is the joint responsibility of the married couple.[58]

Apart from all their confrontations, both authors agree that the challenge of human cloning is not just that it is a problematic reproductive technique, but that it is also a dramatically important subject for many critical social questions. Having in mind other similar dilemmas, I am going to repeat the title of this section—is the argument from disgust unacceptable because of its irrationality? Bearing such question in mind here, I shall analyse the relationship between normal functions of humans on one hand, and disgust on the other.

While confronting Agar and Harris' ideas, I are going to give just a few of the many scientific explanations of normal human functioning, and thus considering the situations when humans are faced with fear, risk, disgust, etc. Here we want to underline the importance of subjective or irrational reactions for the formatting of the everyday social and cultural human activities.

Although it is now clear that the amygdale is not so specialized for fear, but processes a broader range of emotions, it was found that certain persons were impaired in their ability to judge the level of arousal of their emotions with negative valence (unpleasant emotions), including fear, anger, disgust and sadness. It was found that, in the case of these persons, the normal aging process caused the amygdale's dysfunction.[59] Since fear is normally judged as one of the most arousing unpleasant emotions, the impaired individuals' reaction may be disproportionate to fear for this reason. The amygdale's role is not limited to making judgments about basic emotions, but includes a role in making social judgments.[60] There is also the question of cultural relativism, i.e. of the impossibility of a universal measurement of the irrationality of decisions. In the so-called measurement of decisions, the age issue may also be the problem. Although relatively few studies have concentrated on the effects of

healthy aging on amygdale volume, the available research suggests a fairly modest atrophy - in the order of 2–20%. In the mentioned research the atrophy is 4%. Besides, recent findings on aging suggest that the differences in the medial PFC (pre-frontal cortex)–amygdale interactions that are related to aging, may result in decreased amygdale responses to negative versus neutral stimuli. Researchers assume that the described alternations are playing a role in decision making, whereby the role of emotional influences is less important.[61]

Considering the real and possible (medical and social) consequences of the described alternations, at one hand, and the "protectoral" function of fear, when a person is faced with a certain risk or an unpleasant intervention and another social role of amygdales, on the other, we do not find enough arguments that fear or disgust can be rejected as non-scientific or irrational human reactions. Besides, some old and empirically proven socio-anthropological examinations[62] suggest that disgust is having a great influence on the social organization of communities, and that it cannot be added to the spectrum of purely irrational human activities; it is completely clear that such actions are part of the social and cultural life of human communities.[63] It could also be added that there is an old argument about disgust as an emotion that possesses a protectoral and survival function—that it is related to a biological mechanism of a rejection of "suspicious" (filthy, infectious) substances. According to this finding disgust is a very rational reaction. Because of that, the „argument from irrationality", in the case of human cloning and genetic engineering, can be accepted. Regarding such operational function of the irrationality and amygdale's functions as well, the term „normal human functioning" can be used as the epistemological base of a similar account in enhancement debates. Finally, the point is not that genes don't matter human's characteristics or that science will never find way to clone human being with success, but rather that we should not exclude some of the normal and existential human characteristic as irrational or non-operative in *negative* and *instructive*, i.e. Eugenically, selection.

(b) Is the Two Tier Society possible?

In this section I shall test the common argument in the enhancement debate, namely that economical resources can be transformed into genetically potentials, creating a two-tier society. A comparison among all three approaches should provide us with knowledge about real and possible social transformation from Global to Global Enhanced Society (GES). In the next lines I will explain how and which strata will be created. A society divided in two classes is less problematic than the way, or process, that shall provide such crystal clear social structure. Finally, an existential question is, what could happen with other strata that shall be created during the establishment of the two-class society?

According to bio-conservatives (as well as some of the middle approach authors), these bio-medical interventions and unequal access to biotechnologies leads to a genetically divided society; e.g. two classes: Natural and Gen rich.[64] Regarding the named social division, transhumanist ideas follow two directions. The first direction supports the idea that such class dichotomy does not create any special or new ethical issue: "We must remember that nature allots advantage and disadvantage with no gesture to fairness. Some are born horribly disadvantaged, destined to die after short and miserable lives. Some suffer great genetic disadvantage while others are born gifted, physically, musically, or intellectually. There is no secret that there are "gifted" children naturally. Allowing choice to change our biology will, if anything, be more egalitarian, allowing the ungifted to approach the gifted. There is nothing fair about the natural lottery: allowing enhancement may be fairer." [65]

A second direction of the transhumanist claim is Nicholas Agar's techno-optimistic idea of innovation and diffusion. Innovation of enhancement technologies tends towards the greater polarization of society, but the process of diffusion of these technologies points in the opposite direction, promoting their spread.[66]

The middle stream focuses on the fact that we are faced with the actual problem of an unequal allocation of social power, which is even more problematic if one has in mind the availability of biotechnologies to powerful social groups, that is, their substantially greater purchasing power of genetic material.[67] Those who have already economic resources will readily gain access to new technologies, and these new technologies in turn make them stronger competitors for more resources. Those who had access to technology would, as a result of their newfound productivity, win more resources. Those without resources to purchase new technology would be that much farther behind. Parenthetically, we should note that it is logically possible that all members of our society might gain access to the same technology, thereby providing no competitive or positional advantage to anyone.[68] I argued that the problems related to this idea (which is common to all three streams) are rooted in bio (class) reductionism. In the following debate I will explain this problem from the perspective of the most correctly comprehensive of all possibilities (the above described middle stream or Parens' case) of social power acquirement. Considering Potter's classification of surviving types[69], as well as Murray's note on the distinction between enhanced persons and people who make profit from developing, possessing and selling enhancement products or interventions, it seems that Parens oversees the contingency of this process. So, I shall try to make some sociological distinctions within the division between Gen Rich and Naturals.

Following Parens' idea (a similar argument can be found in the previous section by Fukuyama and Kass), in the context of the competitive

character of developed societies, a sociological analysis of social mobility could suppose that the socio-economically stronger groups should be directly classified as a potentially genetically superior class. Those who do not have enough socio-economical power will lose their standing within the social hierarchy by staying in a "natural" condition.[70]

But this claim is not completely true. The existence of two bio-classes could not being the cause behind the creation of the future GES, but only a logical consequence. So the analysis of this type of society depends on the grade and manner of the use of the biotechnology. With respect to the previous claim, such an analysis could be done on the basis of the social status as well as that of the *power elite* approach. The variables that are important for such an analysis are: The level of the economic and technological development of society, social layers or classes involved in socio-technological reproduction, particular technology that is used (reversible or irreversible effect, outside or inside body), etc. Therefore, this claim is perhaps most illustratively presented through an intersection between Wright Mills' *The Power Elite*[71] and M. Foucault's concept of "contractor" or *user* (italic added) in *The Birth of the Clinic*.[72]

Following this perspective, a group with a better structural position has the power to impose new social and medical norms. We suppose, also, that the very same group has the power to finance and create new techniques and technology, which provides them with certain bio-technological power. But bio-technological power does not yet mean the genetic superiority of the class that creates such power. For a capitalization of biotech power they need a group of people who are educated for the usage of biotechnology. That group is a class of specialists who will try to secure a greater share of power. In the process, they not only publicize the procedure but also experiment with more powerful and riskier techniques. There are also groups of socio-economically lower classes that represent a potential experimental group whose safety is compromised, although the patients may be the last ones to know this.[73] And, last but not least, there is the group that should justify such interventions – a class of bioethicists.[74] We must have in mind that the middle group (the proletarians from Marx's earlier class dichotomy) is, in this case, the one, which does not possess biotechnology. Foucault's idea in *The Birth of the Clinic* gives a certain dynamic to such a class constellation. In the free-market regime, the clinic discovers the possibility to arouse, in a group of rich men, an interest to invest into medical research. The clinic establishes a gradual payoff for the other contractor – a payoff which, from the perspective of the pauper, is actually an *interest* paid for the clinical capitalization that the rich man had in fact approved; this interest has to be understood in all the complexity of its meaning, as we are actually referring here to a compensation that is part of an objective interest of science and of an existential interest of the rich man.[75]

This implies that it is possible to identify several strata in the future Global Enhanced Society. Today there are already big biomedical magnates (e.g. *Geron*, *PPL-Therapeutics*) who possess biotech resources. Therefore, in the context of new biotech research, we can recognize a stratum of specialists who, because of their professional skills, have a particular social position. After all, there are ambivalent, structurally intermediate classes, who are neither Gen-Rich, nor Naturals. Today we already know of such strata: "transgenetic organisms created for xenotransplantation;"[76] "babies with DNA from two mothers" where cytoplasm is transplanted from a healthy woman to a second woman whose ovum has sick cytoplasm;[77] children with surgically created anatomical traits,[78] while the genetically engineered organism would represent a transition from an ambivalent to an unambiguous class of genetically enhanced human. Only through a dialectical relation of the mentioned socio-technological process with all the transitional strata it is possible to realize a transition from the economic to the genome-based capital.

This dynamic might remind us of Agar's idea of the diffusion of technology to the lower social layers, but at the same time it raises the question about the nature and range of such diffusion. From a sociological perspective, it is the question of the structure and function of such processes. As we already described, the structure of "diffusion" represents an expansion of the prior bio-medical effects towards an experimentation phase, and the real advantage stays in the higher circles – gradually, from an economic compensation for the specialists, through the objective interest ("knowledge") for science, to the final and accident-free genetic enhancement for its sponsors. This process is provided with the help of cultural complicity, including the special role of the class of bioethicists, in which their community spots the partial interests that are framed with the possession of social power.

It is obvious that the so-called "Agar's diffusion" cannot be assumed as a type of cultural diffusion, but rather as cultural-technological hegemony.

(c) Torsion of the Weber's Protestant Ethics: Could the Drugs become an intrinsic good?

In the third part of the second section, I will analyse the consistency in the middle standpoint's concern about usage of the Weber's Idea of the *Protestant Ethic* in pursuit to happiness. The middle standpoint has two directions. The first one is close to the transhumanistic pole. It has an optimistic view, towards possible reconciliation of religious outlooks and the biotech creation of a better human. "A central value in almost all religions is the development of morally enhanced human beings"... "Cognitive/moral enhancement is an intervention in what is natural, but if it is solely directed to the creation of a morally improved human, it can become a matter of preference for many religious outlooks as well. In fact,

it will become a preferred religious perspective if the dislike toward interventions in what has been created by God or shaped by nature is trumped by the worth of a morally improved human - even if his improvement has been achieved by artificial means."[79] The second view is less optimistic, ontologically the same, but opposite directed, than the previous one. It is closer to the bioconservative pole. Such view alerts how the dominant Ethic of Capitalism, which is based at certain religious symbols and emotions as well (e.g. asceticism, suffering, fear etc), could provide consistence between religious outlooks at one hand, and the creation of enhanced, unauthentic, humans with help of biotech means, on the other hand.[80] The first view mutated different means, i.e. ignoring the timeframe of religious actions and also the orthopraxis; the second one suggests mutated needs and motivations, i.e. mutated utility and functionality and jeopardizes orthodoxies. Altogether they are going much beyond, towards destroying nature of the spiritual believing.

I will argue from the standpoint of Cliford Geertz who underlies the importance of religious suffering in creating of Cultural systems and symbols. In that way his pointed: "As a religious problem, the problem of suffering is, paradoxically, not how to avoid suffering but how to suffer, how to make of physical pain, personal loss, worldly defeat, or the helpless contemplation of others' agony something bearable, supportable—something, as we say, sufferable."[81] The asceticism and endurable compulsive saving as a certain religious suffering is intrinsic good and in the same way path to predestination and finally certain happiness. Having that in mind, the middle standpoint arguing based on Weber model, justifying the use of biotech means in reification of the intrinsic good, which is an ontological and epistemological fallacy.

Some of the authors from different standpoints already referred to suggested in such unacceptable way: "...For many of it [the idea of self-fulfilment – author's note] comes to mean that if we are not aggressively pursuing prosperity and happiness with the fervour urged by our Founding Fathers, then we are letting ourselves down and squandering our time on Earth. Given that many Americans feel it is our duty to pursue self-fulfilment and happiness on the Weberian model, it would not be surprising if many of us came to feel it is our duty to use any means possible to fulfil it, including taking drugs like Prozac". [Note that here we are not talking about using drugs like Prozac to treat clinical illness].[82]

Besides the sociological inconsistency in part (b) of this section, about direct transition from socio-economic to socio-biological class dichotomy or a direct transition from economic to genetic "positional good", we also find similar problems with Parens' and Harris's claim about enhancement as an "intrinsic good."[83] In the following lines I will try to show that the Weberian model offers no epistemological basis for such statements. Regarding the previous claim, similar to, but not completely the same as that of Harris, Parens argue that in the context of Weber's

Protestant ethic of the American society, cognitive enhancement can be a means of self-fulfillment.

Analyzing both ideas, we have come to the conclusion of the so-called fallacy of the empirical arbitrariness, because some enhancements can be "intrinsically good" at one moment, but a positional good at the next one. The best example is the use of Ritalin for better comprehension of certain literary works, and the use of the same improvement for a school exam. In other words, empirical arbitrariness depends on something that Parens and other authors call different "life projects" or a capacity for auto-creativity.[84]

Even with the correct emphasis on the so-called mistake of empirical arbitrariness, Parens does not recognize a more important sociological anomaly bounded with the moral justification of enhancement as an intrinsic good, via Weber's *Protestant Ethic and the Spirit of Capitalism* (2005) that glorified productivity in the name of God.[85]

But, like in the case of a genetically divided society, this mutuality of means, as well as resources such as spirituality at one hand, and chemical means on the other, cannot be coherent. Regarding the mentioned problem, it is important to clarify that Parens glosses over the essence of Weber's thought, and that he not just jeopardizes the whole conception of the Protestant Ethics, but certainly brings the whole conception to a particular "vulgarization." Namely, he emphasizes the possibility of consistency between biotech means and spirituality. The concept of the intrinsic good occurs as one of the most important bases of *The Protestant Ethic,* seen through the "asceticism" and the "compulsive saving" for the glory of God.[86] According to Weber, "asceticism" is the most important cause of the genesis of Capitalism. Weber's model of self-fulfillment is, at the very end, "motivated" by the religious idea of Predestination. This model is represented through the concept of work in calling, as well as the concept of asceticism and saving. Thus, work in calling and asceticism with believing in God's choice or predestination is the core of the intrinsic good. Regarding this matter, we cannot accept that chemical enhancement induced Pilgrim's idea of Progress in the same way as the religious spiritualism. It thus becomes obvious that the consistency between religious spiritualism and chemical enhancement is based on a false analogy between *utility* and *functionality*. If in a highly developed society Pilgrims' asceticism becomes needless, we cannot compare his inner function with the function of chemical enhancement in the biotech epoch.

Having in mind Geertz thesis about Religion as a Cultural system, my conclusion is that the biotech usage as expressed throughout Weber's model is the negation of major religious symbols (e.g. "asceticism") of the Capitalism, at least, his Cultural subsystem rather than Economical subsystem. Usage of the biotech means, a contrary, is the negation of

(religious) suffering and possibility of a momentary satisfaction through bio-medical enhancement (especially through genetic engineering).

The aggressive pursuit of prosperity and happiness, with the fervor urged by our Founding Fathers, and with the help of bio-tech means, excludes the long and patient process of socialization, labor and abandonment in the spirit of Weber's Calling and more generally that of the Protestant Ethic. Having in mind this kind of "bio-tech distortion of Max Weber", we can neither approve of the epistemological basis of self-fulfillment, nor of the intrinsic good argument. The mentioned evidence has led to a subsequent rejection of these arguments. They are nothing else than a fallacy of the potential justifications of chemical enhancement through a religious model.

Conclusion

In the recapitulation I shall provide a short review of major findings. My idea was to show how each of the next paragraphs could became a separate issue in the political communication of the Global Enhanced Society (GES). At the same time, the ethical contingency of the enhancement could be used for realization of all discussed issues, forgetting all social concerns. In fact those issues can frame the new social program of GES.

The first section considered the different ethical approaches of the three bioethical streams. At the very beginning I have assumed that what defines one (bio) ethical approach is ideology. Avoiding fine nuancing of the description of what was covered previously, it is important to repeat that the first two of them converge in the point of social model based at natural order, which both approaches define as a new type of conservatives. The middle standpoint appears as the new alternative approach. In later analysis it has became obvious that advocates of such middle approach can lose their sharpness and end up closer or farther from the one of the previously existent ideological poles. This was explained in the second section, in subsections (b) and (c).

In the second section I have analysed some relevant arguments. The analysis of these issues led us to a better comprehension of the actual ideological problems in bioethical debates. The first challenge has two faces. We have showed some real and possible dangers of cloning or genetic engineering. Based on these objectivities, we described and explained the structure of human behaviour as caused by fear or disgust.

Regarding the second challenge, about transhumanistic rejection of the term human normal functioning, it has been underlined that some preventive procedures (vaccine), in spite of the wide cultural acceptance of the immunization practice, and thanks to the same connections between fear or the feeling of unease on the one hand, and cognition and moral disgust on the other, can be rejected, like in the case of AH1N1

vaccination. Thus, normal human functioning in the cases of unease, fear or disgust, can in certain cases implicate rejection, although the procedure is culturally legitimatized. It is more difficult with procedures (reproductive cloning or genetic engineering) that are cognitively poor, technically imperfect, and, at the same time, cannot be socially and ethically accepted.

The second section's issue emphasizes all the troubles with genotypes and, at same time, it emphasizes bio-class dichotomy. It is so obvious, but easily neglected, that the process of the transformation of the socio-economic into genetic power is neither coherent nor expressed. There is no direct or wide-ranging diffusion of biotech innovations. Yet, the transformation of a socio-economic into a genetic class requires, and results in, more than two social layers. The social and biological ambivalence of the newly created stratums can be long lasting. Efficiency and perfection in the creation of the two clear-cut classes (Naturals and Gen-Rich), open the social and moral questions not only for the class of the Naturals, but more dangerous questions of the vanishing manners of the ambivalent classes. Presumably, if we accept pharmaceutical modifications of disgust in case of cloning, or as intrinsic good in case of spiritual issues, then the next step could be towards technological instructed selection and vanishing, unclean and ambivalent structures, which induced a perfectly created natural order.

The next finding refers to a perhaps less dangerous relation of the false proportionality between the individual and social changes. Very fast and efficient change in the individual genetic structure is disproportionate to social mobility. That means that providing a better social position for the Gen-Rich people requires a slow and long process of the wide ethical and social acceptance of genetic engineering. There is no process of technical and social diffusion, but rather cultural and technical hegemony. With regard to the ideological convergence or ethical contingency, in such long process the previous scenario of elimination of the ambivalent structure could be assumed as the real and possible accelerator of social mobility for the Gen rich class.

The third challenge shows a distortion of one idea or theoretical model. This issue could also be seen as a kind of oxymoron – the Instrumentalization of Spiritualism [author's note]. Max Weber, in his classical book *The Protestant Ethic and the Spirit of Capitalism*, described the rise of capitalism as caused by religious spiritualism, which is reflected through the "asceticism" and "compulsive saving" for the glory of God, coupled with a belief in individual Predestination. But, Harris's (transhumanist) or Parens's (middle stream) view of this idea overlooked spiritualism which is motivated by the Puritan striving for work in calling and for the glory of God, which results in everyday asceticism that began to dominate the world morality and to constitute a part of the tremendous cosmos of the modern economic order. Thus, the real damage coming

from this epistemological distortion is in the overlooking of one of the most complex problems of Weber's mental imaginary.

The problem we are referring to is the problem of alienation. In Weber's terms, this means that the trapping of human beings in the socioeconomic structures of their own making; man is trapped in a "shell as hard as steel" (*stahlhartes Gehäuse*). In a situation of the earlier described transition from socioeconomic to biological power (in the subsection (b) of the second section), we are faced with Meta-alienations; the abandonment of our own biology and getting captured in a much more dangerous and isolated type of shell.[87]

In spite of the basic differences, it is obvious that all ideological streams are dealing with the same epistemological and social implications. Their moral beliefs should be based on a sort of consistency and coherence. But we have shown that instead of coherence, it is more appropriate to speak of a kind of contingency in frame of the ideological concepts. Such contingency among as well as between those arguments could be easily transformed into social and political programs, or a way of the new social and political communication. The new political discourse would be much more dangerous than old Eugenics programs, because it would be explained in scientific language and accepted as social progress.

Most visible example is nowadays debate about so-called moral enhancement. Regardless irrationality of the fear and disgust in the process of the human decision-making, we have showed that the moral queasiness is a part of the normal human functioning and everyday life. The Empathy is in the same way as the queasiness a part of the normal human (in certain sense irrational) functioning and sensibility. Although, according with several authors[88] increasing of the empathy is the inevitable way to the moral enhancement and preserving of the human survival at the Earth. The question which I repeated and which underlies the discussion is: Should we use biomedicine for the adjusting of the moral disgust towards new and ambivalent social layers in the Bio-tech Era?

Notes:

[1] Carl Elliott, "What's wrong with enhancement technologies?", *CHIPS Public Lecture*, (Minnesota: University of Minnesota, Center for Bioethics, University of Minnesota, 1998)
http://www.ucl.ac.uk/~ucbtdag/bioethics/writings/Elliott.html
(accessed 05 November, 2013).

[2] Leon R. Kass, editor, *Beyond Therapy: Biotechnology and the Pursuit of Happiness*, (Washington, D.C.: The President's Council on Bioethics, 2003), 287.

[3] Vojin Rakić, "From Cognitive to Moral Enhancement: A possible Reconciliation of Religious outlooks and the Biotechnological creation of a better human", *Journal for the Study of Religions and Ideologies*, vol. 11, issue 31 (Spring 2012), 114. Erik Parens, "Authenticity and Ambivalence: Toward Understanding the Enhancement Debate," *The Hasting Centre Report* 35, 3 (2005), 34-41.

[4] Van Rensselaer Potter and Lisa Potter, "Global Bioethics: Converting Sustainable Development to Global Survival", *Medicine and Global Survival*, 2, 3 (1995), 185.
[5] Potter and Potter, 186-187.
„*Mere* survival is a term used scornfully by people who dislike talk about survival. Mere survival implies food, shelter, and reproductive maintenance, but no progress beyond a more or less steady state. It implies no libraries, no written history, no cities, and no agriculture for urban support—essentially a"hunting and gathering" society. For many thousands of years the Eskimos on the shores of the Arctic Ocean appear to have been archetypal examples of mere survival. But they had pride and standards of behavior. They had a survival bioethic insofar as they had learned over many generations what they had to know about their environment (the philosophers' "is" concept) and what they had to do to survive in perpetuity (the "ought" concept). Life was not too bad. Now the Eskimos have outboard motors and rifles and their future is in doubt.
Miserable survival is a state that tends to be identified with the ravages of disease or war, and the toll of malnutrition, starvation, or parasitism. All of these disasters occur in combinations. Since that occasion the sexually transmitted disease known as AIDS has burst upon the global scene and has given millions of people miserable survival until they die. Today miserable survival can be found in pockets all over the world, including the U.S. People cannot agree on the components of *idealistic* survival, but they can universally agree on the desirability of health and the undesirability of preventable disease. No culture or religion, primitive or modern, has ever placed a premium on, or aspired to, starvation, malnutrition, diarrhea, intestinal worms, or other parasitic infestations. Clearly, the elimination of these scourges is something that all can agree on as a component of idealistic survival. But today we can offer acceptable survival as a proposed goal for idealistic survival: global survival in the form of acceptable survival that is world-wide and sustainable.
But today we can offer *acceptable* survival as a proposed goal for idealistic survival: global survival in the form of acceptable survival that is world-wide and sustainable ethics. The dominant world culture at present tends to be quite irresponsible and not acceptable in terms of global survival.
Irresponsible survival is doing anything that runs counter to the concepts of idealistic and acceptable survival. Many people have more than any society could duplicate and yet have little concern for people who suffer with miserable survival. This cohort continues to survive from generation to generation with little thought for its miserable neighbors in the short term or for the species in the long term. Overpopulation and overconsumption, and the depletion and degradation of the biosphere, are examples of irresponsible survival. The dominant culture has been based on conspicuous consumption that has been coupled with the exploitation and progressive depletion and degradation of the natural resource base. The present economic model provides employment at high wages for a privileged few while millions are below the poverty level. The dominant culture is irresponsible and not acceptable. It cannot survive in the long term.
[6] Veselin Mitrović, *Iskorak Bioetike. Nove biotehnologije i društveni aspekti "poboljšanja" zdravih*, (Beograd: Čigoja štampa i Institut za sociološka istraživanja, Filozofski fakultet, Univerzitet u Beogradu, 2012), 13-14.

[7] Let's consider only two points of view. First, Nicholas Agar's *Liberal Eugenics: In Defence of Human Enhancement*, (Oxford: Blackwell, 2003) which starts from liberal positions. The position argues for the freedom to choose the best cloned genotype in the pursuit of happines. And the second, which starts from the opposite ideological premise. This is a position of the religiously oriented conservativism toward preventing the creation of a 'brave new world', and toward the promotion of thinking about the world (biblical) order not only as a created order, but of the order *as created.* Leon R. Kass, "Why the dietary laws," *Commentary* 97, 6 (Jun 1994), 48. Leon R. Kass, "Preventing a brave new world", *Human Life Review* 27, 3 (Summer 2001).
[8] Mitrović, 15.
[9] Agar, 1-2.
[10] Jullian Savulescu, "Genetic Interventions and the Ethics of Enhancement of Human Being", in *The Oxford Handbook of Bioethics*, ed. Steinbock Bonnie (Oxford: Oxford University Press, 2007), 517-528.
[11] Savulescu, 533.
[12] John Harris, *Enhancing Evolution: The Ethical Case for Making Better People*, (Princeton: Princeton University Press, 2007), 28.
[13] Norman Daniels, "Normal Functioning and the Treatment-Enhancement Distinction", *Cambridge Quarterly of Healthcare Ethics* 9 (2000): 309-322.
[14] Mitrović, 57.
[15] Leon Kass, "The Troubled Dream of Nature as a Moral Guide," *The Hastings Center Report* 26, 6 (Nov/Dec 1996), 23.
[16] Leon R. Kass "Moral meaning of genetic technology," *Commentary* 108, 2 (September 1999), 32-38
[17] Francis Fukuyama, *Our Posthuman Future: Consequences of the Biotechology Revolution*, (Farrar, Straus and Giroux 2002).
[18] Among nummerous of Kass' articles this positions is mostly visible in the Leon R Kass, "Defending Human Dignity," *Commentary* 124, 5 (Dec 2007): 53-61.
[19] Francis Fukuyama, "Transhumanism: The world's Most dangerous Idea?", *Foreign Policy*, 4. (September/October 2004), 32; Kass, *Beyond Therapy*, 52. Kass, "Defending Human Dignity," 57.
[20] Mitrović, 84.
[21] Rakić, 115.
[22] Veselin Mitrović, ''The Human Enhancement: Toward the Creation of Patterns of Injustice?'' in *Theorethical and Applied Ethics*, ed. Hannes Nykänen, Ole Preben Riis and Jörg Zeller (Aalborg: Aalborg University Press, 2013), 262.
[23] Erik Parens, "Special Supplement: Is Better Always Good? The Enhancment Project", *The Hasting Center Report*, 28, 1, (1998): S14.
[24] Thomas Murray, "Enhancement", in *The Oxford Handbook of Bioethics*, ed. Steinbock Bonnie (Oxford: Oxford University Press, 2007), 491-516.
[25] Mitrović, 85.
[26] Gerald M. Edelman, *Second Nature: Brain Science and Human Knowledge*, (London: Yale University Press, 2007), 54-5.
[27] Edelman, 55.
[28] Leon R. Kass, "Science, Religion and the Human Nature," *Commentary* 123, 4 (Apr 2007), 38.
[29] Laurenţiu Staicu, "Human cloning and the myth of disenchantment," *Journal for the Study of Religions and Ideologies,* vol. 11, issue 31 (Spring 2012), 152. "The

objections against human cloning can be divided into three main categories: empirical or scientific objections; ethical and legal; religious."
[30] Mihai Curelaru, Adrian Neculau, Mioara Cristea, "What people think about cloning?", *Journal for the Study of Religions and Ideologies,* vol. 11, issue 31 (Spring 2012), 14-15; 22. In this study terms such as "fear","sin" "immoral", "God" etc, associete more negative emotions to cloning than postive emotions, as compared to the less religious participants.
[31] Harris, 21.
[32] George J. Annas, "Smallpox vaccine: Not worth the risk," *Hasting Center Report* 33, 2 (Mar/Apr 2003), 6. Lawrence O. Gostin, "What Duties Do Poor Countries Have for the Health of Their Own People?", *Hasting Center Report* 40, 2 (Mar/Apr 2010), 9.
[33] Leon R. Kass, "Moral meaning of genetic technology," 38.
[34] Harris, 20.
[35] Harris, 1-4; 20.
[36] Agar, 58.
[37] Agar, 55-6.
[38] Kass, 14-35.
[39] Christopher I. Wright, "The Human Amygdala in Normal Aging and Alzheimer's Disease", in *The Human Amygdala*, ed. Whalen J. Paul and Phelps Elizabeth (The Guilford Press, 2009), 382-405; Tony W. Buchanon, „The Human Amygdala in Social Function", in *The Human Amygdala*, ed. Whalen J. Paul and Phelps Elizabeth, (The Guilford Press, 2009), 289-320.
[40] Agar, 10-11.
[41] Long Clarisa and De Muth Christopher, *Ethics of Human Cloning*, (Washington, DC: The AEI Press, 1998), xiii.
[42]E.g., *Compassion in World Farming,*
http://www.ciwf.org.uk/about_us/default.aspx; (accesed January 22. 2012).
[43] E.g.,*Compassion in World Farming,*
http://www.ciwf.org.uk/about_us/default.aspx; (accesed January 22. 2012).
[44] E.g.,*Compassion in World Farming,*
http://www.ciwf.org.uk/about_us/default.aspx; (accesed January 22. 2012).
[45] Phillip Cohen, "Sad ending for three little pigs", *New Scientist* 179, 2411 (6 September 2003), 12; E.g., Lee, J. W et. al. "Production of Cloned Pigs by Whole-Cell Intracytoplasmic Microinjection", *Biological Reproduction* 69 (2003), 995-1001.
[46] E.g., Lai, L et. al. "Production of -1,3-Galactosyltransferase Knockout Pigs by Nuclear Transfer Cloning" *Science* 295 (2002), 1089-1092.
[47] D.N. Wells, "Animal cloning: problems and prospects," *Revue scientifique et technique* 24, 1 (2005), 251-264.
[48] Agar, 25-27.
[49] Agar, 25-27; E.g., Kass, 2001.
[50] Staicu, 150.
[51] Long et al., xiv.
[52] Mark S. Frankel, "Inheritable Genetic Modification and a Brave new World: Did Huxley Have It Wrong?", *The Hasting Center Report* 33, 2 (Mar/Apr 2003): 31.
„The named technique is a transfer of ooplasm, which surrounds the nucleus of the egg and is essential for it to thrive, from the donor eggs into the eggs of women who have experienced recurring implantation failure –fertilisation occurs, but the resulting embryo will not implant in their uterus. An inadvertent

consequence of this procedure was that mitochondrial DNA found in the ooplasm of the donated material was introduced into the recipient eggs.
This author empahasized that one of the clinics reported that the technique had led to the birth of 30 babies worldwide. The clinic also reported that both the donated mitochondrial DNA and that of the birth mother were found in all the cells of those babies born by this method – a modification of the children's genome, since they inherited mitochondrial DNA from two mothers. Presumably, they will pass this inheritance on their offspring. The report was met with ethical disapproval in some quarters of the United States, and the Brtish reminded us that the procedure would be illegal in the United Kingdom."
[53]E.g., William Clark, and Michael Grunstein, *Are We Hard Wired? The Role of Genes in Human Behavior*, (Oxford: University Press, 2000).
[54] Clark and Grunstein, 3-7.
[55] Clark and Grunstein, 7.
[56] Staicu, 150.
[57] Leon, Kass "Family Needs Its Natural Roots", in *Ethics of Human Cloning*, ed. Long Clarisa and De Muth Christopher (Washington, DC: The AEI Press, 1998): 77-89.
[58] James, Wilson Q. "Sex and Family", in *Ethics of Human Cloning*, ed. Long Clarisa and De Muth Christopher (Washington, DC: The AEI Press, 1998): 89-101.
[59] E.g. P. Roiser et. al. "A Genetically Mediated Bias in Decision-Making Driven by the Failure of the Amygdala Control," *The journal of Neuroscience*, 29, 18 (2009), 5985-5991.
This group of the authors emphasized: "The damaged Amygdale resulted in a permanent handicap in the domain of choice making".
[60] Buchanon et al., 304.
[61] Wright, 382-396.
[62] Mary Douglas, *Purity and Danger: An Analysis of Concepts of Pollution and Taboo* (London: Routledge and Kegan Paul, 1966).
[63] Kass, "Why the dietary laws," 45.
[64] Lee Silver, comment on " It's not the meek who will inherit," At the hart of the higher education debate, comment posted at January 19, 1998, http://www.timeshighereducation.co.uk/story.asp?storycode=105415 (accessed: October 30, 2012). One scenario that has been envisaged is the idea of human society being divided between the "gene enriched" and the "naturals" - some people having the resources to exploit all aspects of the technology to improve their life, with others left to live and breed naturally. Princeton University's Lee Silver believes that although such a dystopia is not imminent, it is plausible and could eventually lead to two species of humans. If the accumulation of genetic knowledge and advances in genetic enhancement technology continue at the present rate, Silver says, "then by the end of the third millennium, the genrich class and the natural class will become the GenRich humans and the Natural humans - entirely separate species with no ability to cross-breed and with as much romantic interest in each other as a current human would have for a chimpanzee."
[65] Savulescu, 530.
[66] Agar, 140.
[67] Mitrović, "The Human Enhancemnt," 264.
[68] Parens, S7-S8.
[69] Potter and Potter 185-191. See endnote 5.

[70] Parens, S8.
[71] Wrigth C. Mills, 1956, *The Power Elite*, (New York: Oxford Univesity Press, 1956), 3-4.
„The power elite is composed of men whose positions enable them to transcend the ordinary environments of ordinary men and women; they are in positions to make decisions having major consequences. Whether they do or do not make such decisions is less important than the fact that they do occupy such pivotal positions: their failure to act, their failure to make decisions, is itself an act that is often of greater consequence than the decisions they do make. They are in command of the major hierarchies and organizations of modern society. They rule the big corporations. They run the machinery of the state and claim its prerogatives. They direct the military establishment. They occupy the strategic command posts of the social structure, in which are now centered the effective means of the power and wealth and the celebrity which they enjoy."
[72] Micheal Foucault, *The Birth of the Clinic*: *An Archaeology of Medical Perception* (New York: Vintage Books Edition, 1994)
[73] Murray, 500.
[74] Carl Elliott, "The Tyranny of Expertise", in *The Ethics of Bioethics: Mapping The Moral Landscape*, ed. Eckenwiler A. Lisa and Cohn G. Felicia (Baltimore: The Johns Hopkins University Press, 2007), 45-46.
[75] Foucault, 84.
[76] Phillip Cohen, "This little piggy had none", *New Scientist* 173, 2325 (1 December 2002): 7.
[77] E.g., Mark S. Frankel, 2003.
[78] Alicia Ouellete, "Eyes Wide Open: Surgery to Westernize the Eyes of an Asian Child," *The Hastings Center Report*, 39, 1 (Jan-Feb 2009), 15.
[79] Rakić, 123.
[80] Parens, S11.
[81] Cliford Geertz, "Religion as a cultural system", in *The interpretation of cultures: selected essays*, Geertz, Clifford, 87-125.(Fontana Press, 1993).
[82] Parens, S11-S12.
[83] Harris, 28-29.
[84] Parens, S12; David DeGrazia, "Prozac, Enhancement, and Self-Creation", *The Hasting Report Center*, 30, 2 (March-April 2000), 34-40.
[85] Parens, S11-S12.
[86] Max Weber, *Protestant Ethic and the Spirit of Capitalism* (New York: Taylor & Francis e-Library, 2005).
[87] Mitrović, 158.
[88] E.g., Thomas Douglas, "Moral Enhancement", in *Enhancing Human Capacities*, ed. Julian Savulescu; Ruud ter Meulen; Guy Kahane, (Chichester: Blackwell Publishing, 2011), 609–651; Julian Savulescu and Ingmar Persson, "Moral Enhancement, Freedom, and the God Machine", *The Monist,* 95, 3, (2012), 399-421. Ingmar Persson and Julian Savulescu, „Unfit for the Future? Human Nature, Scientific Progress, and the Need for the Moral Enhancement", in *Enhancing Human Capacities,* ed. Julian Savulescu, Ruud ter Meulen, Guy Kahane (Chichester: Blackwell Publishing, 2011), 632–651.

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