

Letter to the Editor

Some Implications of Human Genome Research and Its Related Ethical Discourse

Victor Christiano *

ABSTRACT

We discuss a number of ethical considerations related to genome research and results of human genome project's efforts. It shall become apparent that there are ethical risks and also numerous questions which are open and yet to be defined by those reputable teams, especially concerning the use of genetic enhancement and genetic enrichment of particular human being in comparison with other human being given differences in economics position in society.

Key Words: human genome, genetic enhancement, genetic enrichment, risk, ethical issues.

Despite a number of widespreading articles [2][3] considering the completion and possible advantages of human genome project (HGP), there are only few articles which focus on ethical concerns related to HGP, see article [1] for instance. These ethical concerns include germline intervention and also enhancement engineering, for example.

“Germline interventions involve more significant ethical concerns, because risks will extend across generations, magnifying the impact of unforeseen consequences. While these greater risks call for added caution, most ethicists would not object to the use of germline interventions for the treatment of serious disease if we reach the point where such interventions could be performed safely and effectively.”[1]

“Enhancement engineering is widely regarded as both scientifically and ethically problematic. From a scientific standpoint, it is unlikely that we will soon be able to enhance normally functioning genes without risking grave side effects.”[1]

Furthermore, one should keep in mind that Genome Project was actually a sequence of eugenics research in the past (eugenics office was part of the United Nations shortly after the Second World War, and eugenics are kept into practice in the form of depopulation policy(ii), depopulation policy are being put into practice until now in the form of NSSM 200), and therefore it should be considered more cautiously with respect to ethical and moral conducts in practice. In practice, however, there is risk that enhancement engineering is translated to become genetic enrichment, but then there is question concerning who is responsible for both the effect of enrichment and whether the treatment will not leave under-developed countries in unwelcome condition. For instance, if numerous kids in developed countries receive genetic enrichment treatment while people in underdeveloped countries do not receive that treatment because of economics consideration, then can it be considered as malthusian selection?

In general, malthusian selection(i) is a way created by human to introduce certain effects in order to create preferences of certain race with respect to its probability of survival. By

* Correspondence: Victor Christiano, <http://www.sciprint.org> E-mail: victorchristiano@gmail.com

introducing malthusian selection effect to a particular race then such a practice can be considered as violation of human right, since it would mean that certain genetic engineering treatment and enhancement engineering are available only for certain race for particular malthusian reasons.

Whether such a malthusian selection is true or not is yet to be confirmed by either NIH or genome project consortium, and it is apparent that genetic enhancement (engineering) will not be considered available to many human being in the foreseeable future. It is much more making sense that genetic engineers who are doctors that are responsible for genetic enhancement only offer their special service for a particular number of patients who are economically possible to give them better position to get genetic enhancement and enrichment treatment.

Apart from malthusian aspects of such enhancement engineering,[1] there are other aspects of both genetic and genome related research which can be considered unethical, that is: who will be the subject of genome extensive research in the forthcoming years.[4] It is known that for certain basic research, researchers often use mice or other animals, but for disease treatment and other drug related research, it is often required to conduct treatment test to human being. But as the effect of genetic treatment or enhancement will be spreading and extended towards other genetic related persons of the subject being treated medically, then whom will offer themselves to be the lab mice? History tells us that the victims of such drug testing abuse were often soldiers, prisoners, or people in under-developed countries. See for example the movie "Constant Gardener" (based on true story) in order you to know how such an abuse can be very large scale and country-wide, and sometimes it is backed by soldiers from developed countries. Such unethical practices and abuse in drug testing and also in distributing and delivery of obsolete drug to under-developed countries should be stopped and be avoided completely.

Concluding Remarks

We have discussed a number of ethical considerations related to genome research and results of human genome project's efforts. It becomes clearly apparent that there are ethical risks and also numerous questions which are open and yet to be defined by those reputable teams, especially concerning the use of genetic enhancement and genetic enrichment of particular human being in comparison with other human being given differences in economics position in society.

If such questions are deemed to be valid then one should begin to explore further ethical and critical questions concerning suitability of particular enhancement engineering treatment as a means of both malthusian selection or social darwinism agenda, which resemble in sort of eugenics in the past. These questions demand further thinking and ethical considerations beyond what are common to most genetic engineers.

References:

- [1] M. Carroll & J. Ciaffa (2003), "The Human Genome Project: a scientific and ethical overview," http://www.actionbioscience.org/genomic/carroll_ciaffa.html
- [2] NIH (2010) <http://ghr.nlm.nih.gov/handbook/hgp.pdf> dated November 7, 2010
- [3] <http://www.nytimes.com/2001/02/13/science/an-online-tour-of-the-human-genome-is-just-a-few-clicks-away.html>
- [4] TIME magazine (2001), "The future of drugs," january 22, page 31-41.

Endnote:

- (i) malthusian selection, on the other hand, is proposed as a force for selection at the level of populations in addition to natural selection. "...the malthusian paradigm pictures competition between organisms of the same species as an important force. Attention was shifted from the struggle between the lion and the lamb to that between the lamb and the lamb." source: http://members.optusnet.com.au/exponentialist/malthus_evolution.htm
- (ii) depopulation policy. See NSSM 200, that is depopulation policy as part of social darwinism. Source: http://policestateplanning.com/chapter_14_.htm