

BIOETHICAL EDUCATION: AN ANALYTICAL REVIEW OF ITS RATIONALE AND CHALLENGES

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Abstract- Bioethics forms an intersection between life sciences, law, moral philosophy and social sciences. It is driven by the motive of balancing between progress in biosciences, the safety of living organism including human beings and the protection of the natural environment and its resources. This paper uses analytical approach, and aims to review the rationale and modern challenges of bioethical education.

Key words- education, progress, life sciences, technology, ethics, challenges

I. INTRODUCTION

the rationale of bioethics

Bioethics is very much related to biology, but the two subjects are different; the latter is a field of natural science that is designed to study the structure, functions, growth and distribution of living things. It studies the formation of cell units, functions of genes, and the driving force that propels synthesis of living cells and genes to form new organisms. It includes various disciplines that deal with the biological aspects of living organism such as morphology, physiology, anatomy, behavior, origin and distribution of living organism; subjects which are together known as biosciences. The term bioethics is a combination of two words, bio and ethics; the former is derived from the Greek root of bios, or life; living organism or biology, while the latter derives from Greek ethos i.e., behavior, a combination of which means moral behavior towards life. It is the study of ethical and moral implications of new biological discoveries and biomedical advances, as well as issues of environmental protection; (The American Heritage Dictionary of the English Language, 2000, 4th Ed). It addresses moral concerns about biological and medical advances, and the implications of such advances on human life and the natural environment; thus it functions as a link between biology, ecology, medicine and moral values (Hashi, Bioethics: A Comparative Study of its Concepts, Issues and Approaches, 2015, p. 43). While the main focus of biology is the study of living organisms, ethical problems arising from biological research and its applications in the field of biomedicine, biotechnology and environment, form the main subjects of bioethics.

This is so because, today men of science are indeed making an observable advances in the application of technology in biology and life sciences including practices such as abortion, birth control, artificial insemination, organ transplantation, cloning, tissue engineering, cosmetic surgery, surrogate mother, stem cell research, genetically modified food,

animal experimentation and clinical researches that involve human subjects. Nevertheless, while scientific researches are characterized by the motive of expending man's scientific knowledge, there are however genuine concerns about the implications of science and technology in life, not only on the contemporary human life but also on the life of generations to come. This concern does not however intend to limit the progress of science; rather it is a search for moral accountability in the age of scientific progress, so that continuity of life of current and future generations is not harmed by the progress of science. Among basic questions of bioethics is, whether or not the breakthroughs in science and technology should be led by the mode of maximizing the achievements of what we can, or breakthroughs in science and technology should be led by the attitude of doing only what ought to be achieved, rather than what can be achieved? (Hashi, Bioethics, 2015, op. cit., pp. 52-53). In other words balancing between what ought to be done and what can be done in life sciences, particularly in biomedical sciences, form the basic subject of bioethics.

II. RATIONALE AND SCOPE OF BIOETHICS

In the modern times bioethics appeared as an independent academic discipline, and deals with moral and legal issues in biotechnology and biomedical practices. This is so because, though modern breakthroughs in the field of biomedicine have offered fresh hopes of improving health conditions and life styles of many, nonetheless the undesirable consequences of certain practices in biomedicine did not want unnoticed, at least from two dimensions; (a) the environmental implications of nuclear waste, water and air pollution, gene-manipulated food, and large-scale livestock farming, as well as the ethical and social implications of stem cell research, cosmetic surgery, tissue engineering, artificial insemination, test tube and surrogate parenthood, techniques of induced abortion and etc., have in different degrees generated a general

impression that the new practices of biomedicine are indeed with negative implications on life and the natural environment, unless these advances are handled with due moral predicates. (b), similarly with the mind to discover more and thus expend man's knowledge in the field of biomedicine, the scientific experiments involving human subjects have increased. For instance, scientific experiments that have involved human subjects, such as the study done in 19th century by the American gynaecologist Marion Sims (d.1883) on selected African women suffering from prolapsed uterus disease,² the study done by the US army physician, Walter Reed (d.1902) and his team on germs of yellow fever on human subjects,³ Tuskegee Syphilis Study (also known as Public Health Service Syphilis Study), conducted from early 1930s up until 1970s of last century, which targeted the black Americans, and the study conducted at the University of Cincinnati Hospital in 1943, on the effect of freezing conditions on human physiology, as well as the scientific experiments conducted by the Nazis of Germany on large numbers of prisoners in the middle of last century, and etc., have exhibited the vulnerability of human body in the face of unregulated modern advances in biomedicine.

Though modern scientific discoveries in biomedicine are generally seen as positive steps towards improving the quality of life, the scientific community, ethicists and scholars of social sciences have categorically realized the threats these advances pose to the well-being of the society, unless these achievements are regulated, for a number of reasons; first, in some senses, the unregulated application of these advances to human life, would eventually violate the sanctity of human body under the whims and fancies of the scientists, and as result man's body becomes an experimental tool, which can be designed and perhaps redesigned in the scientific labs, a practices that degrades man's body merely into excremental product, rather than sanctified entity. Perhaps this is why the scientific community and ethicists have produced a number of moral codes, that are set to deal with this concern, including the Nuremberg Code, designed in 1947, Helsinki Declaration formulated by the World Medical Organization, in 1964, Belmont Report, which was created by the National Commission for the Protection of Human Subjects of Biomedical and Behavioural research, in 1979, and etc., which more or less consisted of similar contents, and have categorically exhibited real and genuine concern about the safety of life and protection of the environment in the face of rapidly increasing applications of technology in biomedicine, so that the sanctity of the human body is preserved without preventing scientific researches to advance. Second, unlike medicine which is traditionally driven by the tendency of healing and treatment of given illnesses, new biomedical practices consist of wider area, parts

of which fall beyond the scope of medicine, such as cosmetic surgery, artificial insemination, test tube babies, surrogate mother, and etc., the practices of which are not completely governed by doctor-patient relations morality; thus finding a moral code that addresses wider bioethical issues, was another main concern among the scholars of bioethics. Third, as mentioned elsewhere in this paper, bioethics covers a wider subject that includes not only therapeutic practices, but also practices that are set to enhance self-esteem, such as cosmetic surgery, in which the choice of the patient determines the type of health services offered. As a result, unlike the traditional healing practice in which doctor-patient relationship is governed by the concept of "doctor knows the best", the new biomedical practices exhibited the role of the patient in the determination of health decisions; thus moral dilemmas of reconciling between competing demands of pro-choices versus pro-life, freedom versus control, and etc., arise time and again, which needed new mechanisms of providing solutions. Fourth, while medicine is customarily driven by the noble aim of saving life, some biomedical practices particularly abortion, euthanasia and contraception imply either prevention of new life to commence or taking an already existing life, and thus might not necessarily serve the traditional noble aim of medicine; hence handling these issues form another great concern of bioethics.

Out of these concerns, bioethics emerged as an intersection between biology, ecology, medicine, moral values, law and other fields of social sciences. For it seeks to balance between the progress in life sciences, ecology, and moral establishments, law and social sciences, some scholars in the field described bioethics as an "imperative" discourse for life (Fritz Jahr,1927), while others called it, the "Science of Survival", (Van Rensseler Potter, 1970), or a "Bridge to the Future" (Van Rensseler Potter, 1970). Though moral issues of doctor-patient relationship form an important part of bioethics, however, bioethical discussions include environmental ethics, as well as the morality enhancing body appearance such as cosmetic surgery. Hence, bioethics primarily covers three fields; medical ethics, animal ethics and environmental ethics; medical ethics addresses moral issues related to doctor-patient relationship, while animal ethics focuses on measures of life preservation, whilst the main concern of environmental ethics is to protect the natural environment and its resources.

III. CHALLENGES OF BIOETHICAL EDUCATION

As mentioned earlier, besides addressing traditional concerns of health and therapeutic treatments, bioethics is also concerned about the moral questions on human life, death, dignity, creativity, role of religious beliefs in human innovations and moral

values, liability, justice, standards and professional practices of modern biomedical conducts. Bioethical discussions and studies were there in the early part of last century, particularly since Fritz Jahr's work in 1927, which described bioethics as an "imperative" discourse for life. From then up until today, bioethics has made enormous derive and progress in terms of academic writings, ethical declarations and teaching subjects that are designed to address relevant topics of bioethics in higher learning institutions. Yet, today bioethical education faces new challenges including, among others, the followings;

First, though the concern about moral challenges in the application of science and technology in biology are generally shared among the scholars in this field, yet scholars of this field gave different opinions about how to respond to the moral concerns of biomedical practices. To address these concerns, there are those among the scientific community, who exhibited pro-scientific attitude towards biomedicine and hold the view that regardless of the implications of science and technology, we ought to let the scientist do their job and expend our stock of knowledge. This is so because, in the eyes of this group of scientists, to discover the laws of nature including the laws of life sciences is the moral duty of scientists, hence "scientists are ethically bounded to increase their scientific discoveries further, so that man can master and control the laws of the natural phenomenon, including bioscience." (Hashi, *Bioethics*, 2015, op. cit., p.53). The mood here is, the expansion of man's knowledge justifies the morality of given practices, in such a way that we ought to do whatever we can do in scientific researches, so that we explore all potential discoveries in science. In contrast there are scientists and ethicists who argue that in the face of scientific expansion the sanctity of life should be protected, in such a way that man of science ought to discover the sciences that help the sanctity of life. Human life is sacred, says this group, therefore, we ought to handle it within ethical premises. Hence, unlike pro-scientific scholars who argue that scientific progress and technological advances should be left to the scientists; in the sense that what can be done scientifically should not be limited by what ought to be done, pro-ethical opinion states that, scientific advances in biomedicine is leading humanity to an evil end; (Hans Jonas, *The Imperative of Responsibility*, 1984). According to this group, in order to protect humanity from looming danger posed by modern practices of biomedicine, scientific progress in the field of biology should not only be placed under strict observation, but certain techniques in biomedical practices should also be prevented. There is another bioethical opinion, the position of which disagrees with both pro-ethical and prescientific tendencies of bioethics. This is because, says this group of bioethicists, given the fact that we are living in a multicultural society in which the moral truth of given issues means many things to

many people, and given the complexities associated with bioethical issues, proponents of this opinion hold that a pragmatic approach in which bioethical problems are solved on cases by case basis is the way forward; (Ololade Olakanmi, *Xenotransplantation: a Rational Choice*, 2006, p.39). Therefore, in some sense, to reconcile these bioethical opinions, is indeed a challenge to the efforts of forming universal standards of scientific practices in biomedicine.

Second, another difficulty of this field is the absence of real and genuine bioethical education in our primary educational curriculums. It is true that the second half of the last century has experienced the establishment of research centers and academic institutes like Hastings Center, Ethics and the Life Sciences founded in 1969, Kennedy Institute of Ethics of Georgetown University in 1971, and etc., as well as many academic programmes offered by different higher learning institutes in America, Europe, Australia, and elsewhere in the world, which are designed to emphasize on how to bring expertise to the rising moral problems of biomedicine, however arguably full scale bioethical education was not yet fully incorporated into primary educational curriculums; bioethical discussions are often addressed in the educational curriculums of bachelor level and above, not in secondary or primary schooling ages. This is so because the idea of teaching biology in primary and secondary schools without bioethical education, then calling to incorporate bioethical education in higher learning degrees, raises questions about the efficiency of bioethics.

Third, practices of biomedicine involve areas that were traditionally handled within the parameters of religious faiths, such as the sanctity of the human body. According to major religious traditions, human body is sanctified, and to extent it is a god given entity, maltreatment of which is prohibited. However, biomedical practices like tissue engineering, organ transplantation, and etc., seem to be in contradiction of this principle, hence there are instances in which bioethics is faced with the challenges of reconciling between research based knowledge versus personal beliefs and religious traditions.

Fourth, for it deals with universal moral issues related to inequality of health care opportunities, methods of prevention of transmittable diseases, international cooperation on health preservations and the applications of health guidelines to face health challenges collectively, concerns about the protection of individuals of poor countries from being exploited by the health researchers and industries, individual rights of given patients and integrity of the researchers, hence by nature bioethics is a universal subject that seeks a universal stand on given moral problems of biomedicine. Given the multicultural nature of our global village, in which people of different faiths and traditions are raping shoulders in all corners and neighborhoods of the world,

establishing common moral standards based on which moral dilemmas of biomedical and environmental problems are solved, is another challenge of this subject.

CONCLUSION

Bioethical education is indeed an imperative project, the development of which, no doubt, contributes to the improvement of life conditions and healing practices. This project however faces various challenges, which requires due attention from the relevant members of the scientific community, ethicists, professionals of law and leaders of religious traditions and social sciences, so that the role of bioethics is appreciated.

End notes

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