

A concise study on the history of Bioethics: some reflections

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Abstract

The history of bioethics and its principles are analyzed in a concise way in this commentary. The origin of the term bioethics was coined in 1927 and was improved, in 1970, from four fronts, namely, experimentation on human beings, new technologies, ecological ethics and religion. Early founders of bioethics have also defined the four principles of bioethics, namely, non-maleficence, justice, beneficence and autonomy. The highest goal of Bioethics is to promote a global revolution in human consciousness that leads to an holistic worldview.

Key words: History of bioethics; Bioethics principles; Branches of bioethics

Please cite this article as: Paulo Nuno Martins. A concise study on the history of Bioethics: some reflections. *Middle East Journal of Business*. 2018; 13(1): 35-37
DOI: 10.5742/MEJB.2018.93183

Introduction

The origin of the term bioethics (from Greek bios or life; ethos or behaviour) was coined in 1927 by Fritz Jahr in an article about a "bioethical imperative" regarding the use of animals and plants in scientific research [1]. Later, bioethics was improved from four fronts, namely, experimentation on human beings, new technologies, ecological ethics and religion. In this Era of bioethics [2], we have, first of all, to consider the ethical aspects of medical practice [3]. The term bioethics has spread so quickly throughout the world that today it is a vital reference for the practice of scientific research [4]. The field of bioethics has addressed a broad swathe of human inquiry, ranging from debates over the boundaries of life (e.g. euthanasia), the allocation of scarce health care resources (e.g. organ donation), genetic manipulation (e.g. reproductive technology) and to the right to refuse medical care for religious or cultural reasons. Bioethicists often disagree among themselves over the precise limits of their discipline, debating whether the field should concern itself with the ethical evaluation of all questions involving biology and medicine, or only a subset of these questions. In this respect, van Rensselaer Potter insisted on Global Bioethics concept [5] which is a discipline centered on the link between biology, ecology, medicine and human values. However, while science is universal, we need to take into consideration the regional cultures in the application of the principles of bioethics, that is, the same scientific applications may have diverse ethical valuation in different countries. Regardless of country, bioethics is the struggle for genuine progress of science, of man and society, or if we want to, such as the Oriental definition that Darryl Macer gave of Bioethics: "Bioethics is Love of Life" [6].

Methods

I want to mention that the main reference book used in the writing of this essay was Archer L. Da Genética à Bioética. Gráfica de Coimbra 2. 2006.

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The first front of bioethics was related to human experimentation. Following World War II, it came to knowledge that the Nazi physicians had submitted human beings of the concentration camps to genetic experiments. In this respect, the Nuremberg Tribunal, drafted in 1947, a code (named "The Nuremberg Code") that prescribes that no experiment might be performed on humans, without their informed consent [7]. Then, in 1948, the Universal Declaration of Human Rights, of the United Nations, enshrined the same principle. Meanwhile, there have been reports about abuse in human beings [8]. So, in 1953, the National Institutes of Health (NIH) of the United States stipulated that any investigation in human beings held in their clinics in Bethesda (Maryland) should have to be approved by Ethical Committees. In 1964, these standards were approved through the famous "Declaration of Helsinki" which was a milestone in the construction of bioethics [9]. This declaration was reviewed and amended at the Medical Assembly, in Tokyo, in 1975. The main idea is that the goals of science cannot overlap with those of humans. In 1978, it was issued in the publication of the "Belmont Report" which proposes four fundamental ethical principles, namely non-maleficence, beneficence, autonomy and justice [10]. In 1981, federal standards of the United States claims that an Ethical Committee (named the "Clinical Research Ethical Committee") should be created in order to ensure the quality and dignity of the research carried out in human beings.

A second front of bioethics came from new technologies. In 1960, Belding Scribner invented hemodialysis and created a Medical Center for treating patients with indications for kidney therapy. He created a Committee to decide on the hierarchy of priorities that would enable the fair selection of patients. However, this project has not had any success. In 1967, the biologist Marshall Nirenberg predicted that 25 years later, it would be possible to genetically manipulate human cells, although it could result from this procedure, ethically reproducible consequences. Thus, he argued that this practice should only be used for the benefit of humankind. Moreover, in 1968, the medical school of Harvard University published a study about the ethical and legal conditions to switch off the ventilator for patients in brain death [11]. In 1969, Daniel Callahan and Willard Gayling began to promote meetings with scientists, philosophers and professionals of other areas that look for the advances in biomedical sciences. These meetings resulted in the creation of Institute of Society, Ethics and Life Sciences at Hastings-on-the-Hudson (New York), now known as The Hastings Center [12]. Around the same time, in 1970 and 1971, appeared the Massachusetts General Hospital and the Hennepin Country Medical Center (Minneapolis) with innovative technologies for the treatment of terminal patients that would not allow the ethically reproducible scientific practices.

A third front of bioethics was related with ecological ethics. The oncological physician van Rensselaer Potter proposed the term "Bioethics" and has written the article titled "Bioethics, the Science of Survival" [13], followed by a book entitled *Bioethics, Bridge to the Future* [14], related with ecological ethics. Potter was particularly concerned with the responsibility of genetic engineering to improve the quality of human life, but also, with the ecological preservation of an ecosystem that makes

the Earth sustainable for humankind living [15]. Moreover, the physician André Hellegers was also very interested in birth regulation, taking into account the finite resources that humankind has at their disposal.

The fourth front of bioethics is related to religion. In 1972, André Hellegers promoted a fraternal dialogue between the great ethical-religious currents in Western society that led to the creation of The Joseph and Rose Kennedy Institute for the Study of Human Reproduction and Bioethics (currently called Kennedy Institute of Ethics). This Bioethics Institute served as a reference for the creation of others, such as, the Institute Borja of Bioethics of sant Cugat, Barcelona, created by Francesc Abel, the Bioethics Institute of Brussels created by Jean Malherbe, and the Institute of Bioethics of Maastricht created by Louis Stuyt and Maurice de Wachter. On the other hand, Paul Ramsey wrote two works of reference in the field of bioethics and religion, in particular *The Patient as Person*, in 1970, [16] and *Ethics at the Edges of Life*, in 1978 [17]. Moreover, Joseph Fletcher had also written the work *Morals and Medicine* [18] in which the central figure of ethics was not the physician but the patient. Around 1980, catholic theologians promoted an important series of talks that led to the creation, in 1983, of the International Study Group of Bioethics which sought to bring together theological knowledge with scientific progress in order to update theologians on scientific matters.

A concise study of the four principles of bioethics

Early founders of bioethics, particularly Tom Beauchamp and James Childress [19], have defined the four principles of bioethics.

The first principle is non-maleficence and claims that one should avoid causing harm. The healthcare professional should not harm the patient. All treatment involves some harm, even if minimal, but the harm should not be disproportionate to the benefits of treatment. This principle is a version of the Latin term *primum non nocere* ("First of all, do not harm the patient") which is used as a moral requirement of the medical practice. In fact, the higher the risk of causing harm, greater must be the care of the medical procedure so that it can be considered an ethical procedure [20].

The second principle is justice and defends that benefits and resources should be fairly distributed. Justice is a moral principle and holds that all people should have access to decent health care and be treated in a similar manner, whatever the religion, race, sex, economic condition, social position. An example of this principle is the case of two patients in a Hospital of National Health Service, in which the first to be cured, is the most sick (Manchester Triage) [21].

The third principle is beneficence and says that one should take positive steps to help others. The healthcare professional should act in a way that benefits the patient. For example, to prevent and remove the disease or disability, promoting the physical, emotional and mental health of the patient.

However, we need to consider the balancing of benefits of treatment against the risks and costs. For example, when a researcher submits a project to be financed, he/she needs to justify whether the benefits to the patient outweigh the expenses of the procedure in order to be considered useful and appropriate [22].

The fourth principle is autonomy and refers that one should respect the right of individuals to make reasoned informed choices. Many bioethicists, especially medical scholars, accord the highest priority to autonomy. They believe that the patient should always have the freedom to choose their own treatment. This principle is supported by the thought of Immanuel Kant and John Mill. Kant claims that people only preserve dignity when they have freedom of choice. John Stuart Mill also argues that the individual should act according to personal convictions, as long as they do not harm the freedom of others [23].

These four principles have been some of the most widely discussed issues in Biomedical Ethics with arguments for and against them. For example, the relationship of physician-patient is based primarily on the principle of beneficence and autonomy, although when they are in conflict, for example by scarcity of resources, the principle of justice is also taken into account in order to compensate the social inequality of patients.

Conclusions

Bioethics intends to be, for the individual and for society, a genuine and sustainable guide to human self-realization [24]. To do so, human beings need to become aware of the limits to impose on themselves in order to live in a harmonious way with others and with their own environment. This means that bioethics requires a transdisciplinary approach, through an intersection of a variety of disciplines, both in the areas of science, such as biology and medicine, and the areas of the humanities, such as philosophy, psychology and law in order to obtain the most appropriate solutions for the preservation of human dignity [25]. Bioethics has several branches, namely, conceptual, clinic, normative, social and cultural. However, bioethics has been condemned for its lack of diversity in thought, particularly with regards to race, for example, the notion of white normativity, which establishes the dominance of white hegemonic structures in bioethical academia [26] and tends to reinforce existing biases. Moreover, throughout the world the most vulnerable (children, women, aged) still continue to be neglected and punished (exploitation and corruption, pedophilia and prostitution). In other words, a new paradigm reflecting new way of thinking, feeling and acting needs to be implemented on Earth so that the Divine Light, Love and Grace might manifest through humanity itself. This is the highest goal of Bioethics: help to promote a global revolution in human consciousness that leads to an holistic worldview.

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