



Akademik Eğitim ve Sosyal Bilimler Dergisi (AJESS Journal)

BIOETHICS AND THE ETHICAL DIMENSION

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Received: 31/07/2026 ; Accepted : 20/10/2026 ; Published : 05/11/2026

Abstract

The contemporary world has witnessed remarkable advances in medicine and biology. These developments have given rise to serious crises that threaten human existence, humanity's future, dignity, and identity. This situation has necessitated the emergence of a new field intended to reconcile scientific progress with ethical principles: bioethics, encompassing the ethics of medicine and biology. Bioethics seeks to regulate the relationship between human values and science and to establish dialogue between medical and biological practice and ethical thought. It aims to foster cooperation between medicine, biology, and human values while safeguarding human dignity.

Keywords: bioethics; ethics; medicine; biology; human values.

1. 1. Introduction

Scientific and technological progress is one of the most prominent characteristics of the modern age. Major advances have occurred in many areas of life, particularly medicine and biology, leading to developments in engineering, medicine and artificial intelligence. Yet this remarkable progress has also generated serious crises and profound ethical challenges that threaten human existence, dignity, future and the loss of identity. These necessitate the emergence of a new vital field aims first to reconcile between science and ethics: Bioethics, seeking to create discussion and synergy between medicine, biology, and human values within a framework that respects human dignity.

This biological revolution has resulted in ethical problems. Research and studies in biotechnology have flourished, while philosophical and ethical thought has lagged behind. Human beings' attempt to impose control did not stop at controlling nature; it extended to living organisms. Starting from biotechnology that takes living organisms as subjects of their experiments. As stated above, this biological revolution led to an imbalance between ethics and technology, which negatively affected human life. Therefore, strict laws must be established to limit practices that disturb human nature and threaten the human being. In this new philosophical field, there is a need to preserve human dignity and ensure that science and technology serve humanity in a fair and ethical manner. The importance of this subject in scientific and technological research lies in the following:

- Identifying the term bioethics, its concept and history.
- Identifying the most important fields and problems of bioethics.
- Identifying the extent to which ethics is central to bioethics.

From the above, the central research questions are: What is meant by bioethics? What are its most important problems? In the context of rapid and remarkable developments, has bioethics succeeded in establishing ethical limits on excesses in biological research?

As a new philosophical field, bioethics seeks to respond to ethical, social, and legal questions arising from scientific and technological change in contemporary society, particularly in medicine and biology.

2. Clarification of Concepts

2.1. The Concept of Bioethics

2.1.1. Linguistic meaning

The term “bioethics is composed of two elements: bio, referring to biology or the study of life, and ethics, referring broadly to moral principles. It can therefore be understood as the ethics of biology or the ethics of the life sciences. In French, it is rendered as: *bioéthique*. In Arabic, several expressions have been used, including ethics of life, biological ethics, medical and biological ethics, and ethics of the life sciences.” (Hadjer, n.d, p. 31).

La Bioethics is a “difficult term to define within a context because languages and cultures differ, more difficult when trying in a particular language. In French, for example, it may be expressed as the medical ethics of the life sciences. Translating it into Arabic is more complicated, since it may refer either to the ethics of biology or to the ethical of medicine and the life sciences (Courban, 2004, p. 77).

Even though Bioethics is the ethics of biology, biomedical sciences and life sciences, it has different specialities, bringing together fields such as the life sciences and the humanities. UNESCO has discussed ethical questions related to medicine, the life sciences, and the scope of technologies associated with human beings (Guessous, 2005–2007, p. 6).

Bioethics may thus be understood as an intellectual field concerned with the use of modern biomedical technologies, aiming to reconcile scientific research with respect for human dignity. It is an ethical philosophy applied to medical and biological sciences (Elrazzaq, 2015, pp. 120–121).

2.1.2. Technical meaning

It is difficult to provide one comprehensive definition of bioethics because languages and cultures differ. We shall therefore present some definitions offered by researchers, by way of example:

- The biologist “Van Rensselaer Potter”, who is credited with playing a major role in establishing bioethics through his famous book *Bioethics: Bridge to the Future*, explains that the term means the following: “Science for survival should be more than one science. Accordingly, I proposed the term bioethics in order to emphasize the two essential elements required for the completion of the new wisdom that we urgently need: biological knowledge and human values” (Mohamed, 2020, p. 54). Through this definition, Potter seeks to emphasize that bioethics is the field that has succeeded in uniting and bringing together human values and biological knowledge. In this way, bioethics has brought these two elements together and enabled them to coexist, despite the distance and gap that historically existed between them. In his view, there is an urgent need today to establish a new branch that provides us with certain methods of communication and enables us to move safely towards the future. All of this aims at survival and the preservation of human life. Bioethics is therefore a meeting point between interconnected disciplines.
- The French philosopher “Jacqueline Russ” defined bioethics as “a normative science that evaluates human conduct that may be accepted in matters relating to life and death. It is a study that brings together several disciplines and is concerned with all the conditions required for the responsible management of human life in the context of the rapid and complex progress of medical and biological knowledge and techniques. It also includes all the requirements for assessing and respecting the value and life of the human person in the fields of medicine and biology” (Hajer, n.d., p. 35).
- “David Roy” also defined it as “a study in which a set of conditions intersect, conditions required for the responsible management of human life amid the rapid and complex forms of progress in knowledge and medical-biological culture.” He drew attention to an extremely important point that became the main motivation for establishing this field: the technical development of biological knowledge. The task of bioethics is to frame this development ethically in such a way as to preserve the dignity of human life (Russ, 2001, p. 111).
- It has also been defined as “the search for a set of requirements for respecting human life and the human person, and for presenting the rules, laws, and principles intended to preserve human dignity in light of biological development” (Russ, 2001, p. 111).
- “Van Potter” defines it as a term made up of two Greek words: *bios*, meaning life, and *ethos*, meaning ethics or morals. This concept appeared in North America in the late 1960s to refer to the new questions raised by developments in medicine and biology. It was also regarded as a merging of biological knowledge and human values (Le Court, 2004, p. 71).
- Bioethics is “that interdisciplinary study concerned with the set of conditions imposed by the responsible management of human life or the human person” (Rajaa, 2009).

In summary, based on the foregoing, bioethics can be described as ethical research and study of certain issues arising from biotechnological progress. It studies the criteria that should guide our actions when intervening in human life in particular. Bioethics is therefore a search for solutions to the conflict between values and biomedical interventions. It is also a normative science of human conduct situated between biotechnological progress and ethical values. In other words, it is ethical reflection on life in terms of its nature, circumstances, origin, and conditions.

2.2. The Concept of Ethics

2.2.1. Linguistic meaning

In Arabic, as in some other languages, “ethics” is the plural of “character” (khuluq), and its root meaning is associated with habit. It is also connected with innate disposition, nature, custom, chivalry, and religion (Al-Kharraz, 2009, p. 21; Ibn Manzur, 1999, pp. 102–103).

In Lisan al-Arab, Ibn Manzur explains the derivation of the word khaliq and the expression “how fitting it is for him,” relating it to practice and habituation. When a person becomes accustomed to something, it becomes part of his character; that is, he has become practised in it (Ibn Manzur, 1999, p. 105). For this reason, some scholars have described ethics as “the science of habits. Ethics does not merely investigate voluntary human actions that train a person and those around him until they become habits and traditions; rather, it guides actions according to its rules, laws, and judgements, whether these are approved or condemned according to the criteria it establishes” (Badawi, 1975, p. 8).

Ethics (ethique) is generally the science whose subject concerns evaluative judgements and the distinction between good and evil in particular. It directly examines evaluative judgements about actions described as good or bad, which is why it is called the science of ethics. Whatever hypothesis one adopts regarding the origin and nature of ethical principles, the discussion of values relating to conduct concerns real phenomena whose characteristics can be identified. The study of conduct cannot replace the direct study of these phenomena, because human conduct does not always correspond to people’s judgements about it (Lalande, n.d., p. 371). Ethics has also been described as the science that identifies good and evil and explains how people ought to treat one another, as well as the purpose towards which their actions should be directed and the path they should follow (Hajer, n.d., p. 30).

2.2.2. Technical meaning

The origins of the terms éthique and morale are Greek. Among the ancients, the term referred to a disposition from which actions arise from the soul without deliberation, thought, or effort. It is also used to refer to all actions issuing from the soul, whether praiseworthy or blameworthy (Saliba, 1978, p. 38). In another context, ethics means “the totality of teachings accepted in a particular age and society, and the effort made to comply with these teachings and to follow them” (Lalande, n.d., p. 37).

Imam al-Ghazali, may God have mercy on him, explained that the words khuluq and khalq are used together. It is said that a person has good khuluq and khalq, meaning that both his outward and inward aspects are good. Khalq refers to the outward form, whereas khuluq refers to the inward form (al-Madani, 1988, p. 9).

The word ethics is also traced to the Greek word “ethikos,” from ethos, while “morale” is traced to the Latin word mores. Both refer to one concept: moral customs. Many Arab writers therefore tend to use “morals” for morale and “ethics” for éthique. The difference between the two meanings is that morale (morals) refers to the conduct of the individual, whereas éthique (ethics) refers to values belonging to society (Alrahman, 2000, p. 15).

Accordingly, ethics (morals) are based on individual virtue, whereas ethics (éthique) are based on social values. This is why the expression “social professions” is used, as in medical ethics (Abdelrahman, 2000, p. 35).

The development witnessed by the world today, together with technological progress and the dangers it has created for human life, has made people feel more endangered than ever before. This has led scholars and researchers to speak of a rift between science and humanity. Biologists have realized that if they continue at this pace without taking ethics into account, they will inevitably end up abandoning human life. This is why Jabri emphasized the need to return to ethics. He stated: “The severe crisis to which ethical values are exposed today as a result of scientific progress in the fields of biology and medicine lies behind what we have called ... the return of ethics. This return is particularly expressed in reactions that took shape in a distinctive way with the emergence, in recent years, of what has been called bioethics, that is, the ethics of biology (or the science of life)” (Al-Jabri, 1997, p. 64). Hence, there emerged a sense of the need to return to ethics and to call for respect for human dignity.

II. Formulation of the Research Problem:

1. Bioethics: Its Origins and Background:

Bioethics, as a vital intellectual field, emerged alongside the changes produced by the revolution in biology and the superiority, progress, and triumph achieved by science in the modern age. During the Renaissance, great reliance was placed on reason and materialism was given precedence. During the Second World War, unethical experiments were conducted on human beings. These events led to the Nuremberg trials in 1945, which dealt with the medical experiments carried out by the Nazis. This field arose in connection with developments in the use of technology in our age and in areas that directly affect human life itself (Guerlaglam, 2007, p. 121). This prompted the establishment of specialized centres concerned with theoretical and applied ethics, in order to confront and challenge biological transgressions. “From the 1960s or 1970s (1975), committees of theoretical ethics began to be established. When human experimentation in medicine began to spread, the need arose for theoretical ethical regulation, or a science of duties. Theoretical ethics soon emerged and grew” (Russ, 2001, p. 116), then began to spread and expand throughout the world.

It should be noted that ethics has been a concern of philosophy and philosophers throughout the ages. From the appearance of medicine in the time of Hippocrates to Aristotle, who emphasized “the need for deliberation and caution

when adopting positions in times of crisis, and then to the great ethical philosopher “Immanuel Kant” and his idea of the universal conscience, the discussion continued into the contemporary period and the establishment of committees of theoretical ethics” (Maachou & Abou El Kacem, 2021, p. 157). It was therefore necessary to take these issues seriously and rigorously in order to produce solutions appropriate to scientific and technological developments, using bioethics as a scientific solution to preserve the rights of the individual and of humanity as a whole.

2. The History of Medical Experiments and the Emergence of Bioethics:

As a result of medical and biological developments, ethical dilemmas have increased. Those working in medicine in general, and in medical biology in particular, have faced major and serious ethical problems. Scientific and technological progress has enabled doctors to contribute to solving old problems that were difficult and intractable. For example, “it has helped address infertility through temporary solutions such as test-tube babies; it has also made it possible to control genes to obtain different types of medicine, including insulin, and to detect many genetic diseases that were previously unknown, through genetic engineering. Medicine has also become capable of postponing human death through various life-support devices and artificial resuscitation (medical technology). However, these developments inevitably raise ethical questions, both for practitioners and researchers within the field and for those outside it, including philosophers and religious leaders” (Al-Qasami, 1993, p. 38). The subject of medicine and disease has become important because illness poses a danger to human life in general and to humanity in particular. This has led philosophers to give it great attention in philosophical reflection, “especially from the ethical perspective. Human beings, life, and death have been subjects with which philosophers have been concerned since the beginning of philosophical thought” (Awashria, 2016–2017, p. 17). This undoubtedly highlights the close relationship and connection between medicine and philosophy, and their relationship with ethics. Ethics has represented, and continues to represent, one of the major subjects of philosophy. This connection is also evident in philosophers’ classification of the sciences, including medicine. “If we consider the classification of sciences by the First Teacher, Aristotle, and his definition of philosophy as the search for the principles and causes of things, we find that medicine occupies a place among the sciences. Aristotle defines philosophy, or metaphysics, as the science of first causes, or the science of being qua being” (Atiya, 1988, p. 9). The theoretical sciences include mathematics and natural sciences, while the practical sciences include ethics, economics, and politics. “Medicine is closely connected with ethics. Here, ethics does not mean merely customs, conventions, or what arises from human nature; rather, it means that ethics is first and foremost connected with philosophy” (Al-Arabi, 1971, pp. 78–88). Ethics has not remained a set of normative issues alone; it has also become a form of social and international regulation. It has been moved from the sphere of conscience into the sphere of social institutions and has thus acquired a binding character. It has shifted from individuals to institutions, and from normative judgements that differ from one person to another to general ethical rules. We are therefore faced with a comprehensive ethical outlook that takes the form of a new law. Bioethics is also connected with many fields of knowledge, including philosophy, law, and religion. Consequently, the subjects and issues studied and analysed by bioethics cannot be confined to a single domain, since it covers the various fields of the life sciences. Nevertheless, the point on which there is agreement is that bioethics represents a restoration of trust between science and ethics.

3. Bioethics and Medical Ethics:

Some researchers and thinkers believe that bioethics is merely an extension of ancient medical ethics, which has become unable to keep pace with scientific and technological progress and has therefore been replaced by bioethics. Others have sought to include it within philosophy or law, according to their particular specialization. However, if we return to the circumstances and factors in which bioethics emerged, the difference between it and traditional medical ethics becomes clear, “whether in terms of its subject matter or the impact it has had on the medical and scientific environment and society as a whole. This does not mean that medical ethics is irrelevant to bioethics or that bioethics is detached from the environment in which the bioethical movement began” (Bouftas, 2011, p. 127). The ethical issues associated with medical practice did not first arise with bioethics; they go back to Hippocrates in the fifth century BC. This tradition later took “the form of a medical code or a code of the medical profession. Examples include the international code of medical ethics adopted by the World Medical Association in 1949, and the Declaration of Helsinki of 1964, which was amended in Tokyo in 1975, Venice in 1983, and Hong Kong in 1989” (Awashria, 2016–2017, p. 30).

The important matter here is the definition of medical ethics together with the definition of the duties of medicine towards its patients, in order to regulate the practice of this noble profession. Medical ethics was based on the conduct that physicians should observe towards their colleagues as well as their patients. “Physicians in England in the eighteenth century followed a tradition, associated with John Gregory, that emphasized the need for physicians to show compassion towards their patients. This view later developed under the influence of “Thomas Percival”, author of *Medical Ethics*” (Atiya, 2016, p. 308). Bioethics, as a new ethical outlook, sought to move away from a religious character and become a scientific approach. “Joseph Fletcher’s” writings are described as the first bioethical work, preceding “Potter’s” use of the term. In his work *Morals and Medicine*, Fletcher built his ethical argument for medical practice on the demands and rights of the patient. With the rise of technology in medical practice, it became possible to use medical and biological techniques for non-therapeutic purposes, such as selecting the sex of a foetus through early diagnosis, or implanting an

embryo in the womb of a menopausal woman or before the uterus is ready” (Bouftas, 2011, p. 309). Thus, scientific experiments conducted on the human body revealed cases and scandals involving experiments that were contrary to ethics and medical practice. These exposed ethical transgressions and violations of human rights. As a result, the need increased for a new and vital field that would ensure an ethical dimension for medical interventions and therapeutic practices for all humanity.

4. Epistemological Obstacles to Bioethics and the Challenges of Modern Biology:

Bioethics has faced ethical challenges in relation to medical experiments. Not all thinkers have rejected it. If we look back to an earlier period, for example, the French philosopher “Claude Bernard” argued that the experimental method could be applied to living matter and maintained that there was no problem with doing so. Nevertheless, it should not be said that the experimental method can be applied to living organisms automatically, nor should such medical and biological applications be allowed to proceed so easily. In light of technological developments and biological experiments on living organisms, ethics, or the ethical dimension, must be taken into account. “In general, there is agreement about the importance and value of controlling diseases and epidemics and eliminating them. However, the progress achieved through research and experiments—whether conducted on animals or human beings—raises questions. The use of animals continues despite objections from animal-welfare associations, but the real problem lies in carrying out experiments on human beings” (Al-Qasbi, 1993, p. 48). Therefore, caution is required in the use of technical tools and biological experiments, while taking account of the psychological, social, and mental aspects of the human being. When ethical aspects are discussed, bioethics is seen to face major challenges arising from biological developments. Many philosophers have therefore called for attention to the ethical dimension within philosophical frameworks. “Ethics occupies a central position in philosophy, particularly when the question concerns human existence and intervention in a person’s life and personality; such intervention may threaten freedom and autonomy” (Maachou and Abu al-Qasim, 2021, p. 159). It has accordingly been argued that “there should be a strict prohibition and legislation imposing penalties on anyone who claims ownership over life or over its material substance” (Rizq, 2007, p. 465). The human being must be considered above all else, and no one has the right to violate the value of a person or interfere with personal affairs. Human rights must therefore be protected by enacting deterrent laws against anyone who exceeds the limits in this field. Many international organizations call for the protection of human beings and their rights, including human-rights organizations, bioethics organizations, and other international bodies that call for peoples to have the full right to determine their own destinies and to be free from all aggression. Respect for the human being is therefore essential, because failure to oppose biological experiments conducted on humans may lead to risks that threaten human existence, identity, and future. Therefore, the emergence of bioethics may help limit these ethical problems and confront them. It can prevent threats to human life and help protect the human race from the dangers of biological experiments.

Conclusion:

In conclusion, bioethics is a branch of applied ethics concerned with studying the ethical problems that arise from progress in medicine, biology, and the life sciences in general. Bioethics is a new philosophical field used to identify the most important ethical principles that guide and regulate human conduct in medicine and in medical and biological technologies. Ethics therefore constitutes the essence of bioethics and the foundation upon which its most important principles must be based.

Bioethics is one of the most prominent contemporary philosophical trends, giving thinkers and philosophers an opportunity to engage with the new issues of the age, including technological progress and human rights. Through this engagement, bioethics contributes to the construction of ethical principles, rules, and policies capable of balancing scientific progress with human dignity and rights. Bioethics is thus a vital field that brings together many disciplines and can help achieve a balance between the achievements of biological progress and the human and ethical values of the medical and biological world.

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