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Bioethics

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Bioethics

Biology and medicine are sciences, but they are both sciences that deal with living beings. They have direct effects on human beings and other living species, so they quickly raise ethical and other value problems as well as scientific ones. Bioethics is the branch of ethics, or moral decision-making, that deals with the problems of biology and medicine. It requires disciplined, systematic reflection on these difficult issues.

Scientists can change the genetic information in bacteria and are rapidly developing the capacity to change it in many animal species, including humans. But should they? People change the nature of the human population by aborting defective or unwanted fetuses, by controlling when pregnancy occurs, and by planning limits on population size. But should they? Physicians can keep seriously ill patients alive indefinitely, using artificial respirators, machines that take over the control of the beating of the heart, and drugs to control blood pressure and consciousness. But should they?

People are beginning to ask whether there comes a time when patients should be allowed to die. Citizens are claiming 'patients' rights,' insisting on being informed about medical procedures, and deciding how to allocate health resources fairly. When they ask these questions and make these decisions, they are dealing with bioethics.

Professional Medical Ethics

Systematic ethical thinking about these issues comes from several different sources, including medical professions, religious traditions, and secular, philosophical thought. The medical professions have formulated codes that date back as far as the Hippocratic oath, which originated on the Greek island of Cos in the 4th century BC. The Hippocratic oath includes a pledge like those taken when Greeks joined secret religious, philosophical, and scientific groups. It reflects the ideas of the Pythagoreans, an important group of the day.

Modern professional codes date from one written by the physician Thomas Percival in 1797. It was originally written to settle a dispute in Manchester, England, among three groups of medical specialists (physicians, surgeons, and apothecaries). It contained statements about the duties of physicians to one another, to patients, and to society, as well as the duties of patients to physicians and of society to physicians. It became the basis for the first United States code, written in 1847 by the American Medical Association. These codes all emphasize that the physician's primary duty is to benefit the patient. Usually they assume the physician knows what is best for the patient. In this sense they are paternalistic.

Nonprofessional Bioethics

One problem with the professional codes has been that they apply only to members of a professional group. Many who are not professionally involved in medicine do not always agree with what they say. Religious groups, especially Jews and Roman Catholics, have for centuries developed

their own positions on many important bioethical issues. Talmudic Judaism, for example, takes a strong stand against taking life (including fetal life), has strict rules about autopsy, and has special dietary laws.

Roman Catholic moral theology emphasizes five basic principles:

(1) The principle of stewardship. Life comes from God, and humans are 'stewards' responsible for the care of the body.

(2) The inviolability of human life. Innocent life may never purposefully be taken in actions such as abortion, suicide, or euthanasia.

(3) The principle of totality. A part of the body exists for the good of the whole, and therefore limbs, for example, may be amputated if it is necessary to protect the rest of the body.

(4) The principle of double effect. In certain difficult situations, it may be permissible to produce a bad effect in order to achieve a good one, provided that the action undertaken is not itself evil, that the evil is not intended, that it is not a means to the good result, and that there is at least as much good produced as evil. This principle justifies removing a cancerous uterus from a woman even though she is pregnant (because the evil of killing her fetus is indirect and unintended), but it does not justify directly intervening to kill the fetus even if killing the fetus might keep the woman from dying of a heart attack.

(5) The principle of sexuality. Human sexual functions exist for two purposes: for the procreation and nurturing of children and for the expression of the loving union within the marital bond. Thus sexual relations outside marriage and practices involving contraception have traditionally been condemned, though some within this tradition have accepted certain kinds of contraception, especially when it means that children already in the family are more responsibly cared for. (See also [Abortion: Birth Control](#).)

Other religious groups, including Protestant, Eastern Orthodox, Moslem, Hindu, and Buddhist, hold special positions on matters of medical and biological ethics, though their positions are usually not as well developed as those of Jews and Roman Catholics. In addition, secular philosophical and political traditions have increasingly developed positions on these issues. In 1972 a Patients' Bill of Rights was drafted by a group made up of both lay people and medical professionals.

It was the first effort to develop a formal systematic stance on issues of biological and medical ethics outside professional and religious circles. It expresses ethical thought that is closely related to that of early modern liberal political philosophers such as John Locke and Jean-Jacques Rousseau and to the tradition of the Founding Fathers of the United States, including Thomas Jefferson and the writers of the Bill of Rights of the United States Constitution. It is the first bioethical statement emphasizing the rights of patients rather than the more paternalistic ideas that are represented by the Hippocratic tradition.

Euthanasia

An example of the difference is seen in the ethical question of how to care for a terminally ill patient. Traditionally physicians have determined whether or not to tell a dying patient about his or her condition by trying to judge if it would help or hurt the patient to have the information. More recently physicians have increasingly favored disclosure. Many favor disclosure because they believe that the patient has the right to the information, regardless of whether it helps or hurts.

Similar tensions exist over the treatment of the dying patient. It is widely held that active killing even for mercy is morally unacceptable. Holders of this view say that it is morally more acceptable to let a patient die than to kill for mercy. Some philosophers argue that the results are the same, but most hold

that there is a difference-authorizing killing would set a dangerous precedent, and it is simply wrong to kill actively.

Virtually all groups recognize that there are some treatments available to dying patients that need not be given. Two criteria usually are used to identify treatments that are morally expendable: if they are useless or if they involve a grave burden. Traditionally it was left to the physician to decide if a treatment was useless or burdensome. It is now widely held, especially among those who emphasize the rights of patients, that this judgment must be made by the patient because it should be based on the patient's own beliefs, values, and religious tradition. Thus, in the United States, an adult patient who is mentally competent is never forced by legal means to undergo treatment against his or her wishes (unless the treatment is for the benefit of another, such as a vaccination or other public health measure). If the patient is not competent, the judgment must be made by a family member. If health professionals disagree strongly, they must seek a court order overturning the family member's judgment. This is done routinely, for example, in cases of parents who refuse a lifesaving blood transfusion for their child because of their religious beliefs.

Genetics

Bioethics includes questions of basic biology as well as clinical medicine, research, and health policy. Genetics provides an example of how clinical and broader biological ethical problems interconnect. Medicine now has the capacity to determine the likelihood that a child will be afflicted with a genetic disease. This can be done to some degree by considering family history or the age of the parents. Using techniques such as amniocentesis, chorionic villi biopsy, and ultrasound pictures, geneticists can examine the genetic and physical makeup of a fetus in time to abort if the fetus is afflicted and the parents so choose. This raises all the ethical problems of abortion, plus many more. Some people, for example, even if they accept abortion in general, object to the idea that a fetus with a known, specific condition can be aborted. They do not approve of deciding whether people should live or die based on their genetic or physical makeup. In some cases, such as in conditions in which diseases affect only children of one sex, the geneticist can determine the sex of the fetus but not whether the fetus is diseased. In such a case an expectant mother may have to choose abortion with the possibility of aborting a normal infant. The ability to determine the sex of the fetus also raises the possibility that some parents wanting a child of a certain sex may choose to abort simply because the fetus is of the unwanted sex.

Scientists are rapidly developing the capacity to go beyond aborting fetuses with genetic defects. They are learning how to change genetic material, how to move genes from one species to another, and how to replace a defective gene with a more normal one. When this technology is perfected, it may have crucial effects on agriculture, production of livestock, and production of drugs as well as providing the potential to replace defective genes in humans. While the benefits are potentially enormous, objections are also being raised. These include concern that new species of microorganisms, for example, may be created that could cause uncontrollable disease or some serious, unexpected harm. The most fundamental question raised by this new work is whether there is something basically unethical about human attempts to change genetic codes to create new species of animals.

Other Ethical Issues

Other ethical issues arise in the relationship between the clinician and the patient, including problems of **confidentiality**, informed consent, and respect for patient autonomy. The issues also include professional relations such as advertising, fee splitting, the reporting of incompetent practitioners, and the ethics of referring a patient from one physician to another.

Increasingly, however, biological and medical ethics confronts problems that extend beyond the isolated, individual physician-patient relationship. The ethics of research on human subjects is one such example. A related issue is to what extent the tissues of aborted fetuses may be used in medical research. Many ethical problems also surround the use of alternative means of achieving pregnancy-surrogate parenting and artificial insemination using donor sperm, for example (see [Fertility and](#)

[Infertility](#)). Problems of public health is another area of ethical controversy-whether, for instance, to quarantine certain individuals in danger of spreading a disease in order to protect others, or whether to force people to take treatments such as vaccinations and fluorides in their water supply.

A major new area of bioethics is the ethics of health policy and health-resource allocation. Typical ethical problems faced by health planners include whether people have a right to health care and whether society has a right to force people into healthful behavior when it must pay for their care if they become ill. The most basic health-planning ethical problem is balancing the efficient use of health-care resources against a more equitable distribution even when less good is done in total. If efficiency is the dominant goal, some who have rare diseases, who live in out-of-the-way places, or who are members of minority groups will probably go untreated.