Bioethics

—The Bases of Ethical Decision—

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I. Introduction

It is a great honor to be here and to be invited to address the subject chosen: *Bioethics: The Basis of Ethical Decision*. It was a very stimulating commission and one which required me to clarify my thought concerning what I believe and what I know. Some have said, “What is Bioethics and how can any one talk about that?” I admit to a certain anxiety but it does seem to me that as biologists and physicians we should know what ethics control our thought and conduct. President Tsuchiya evidently thinks we should and presumably that is why he invited me to make this attempt.

My plan for dealing with the subject is shown in Slide 1 and initially I would like to make some statements which will reveal the complexity of the formulation of our ethics.

1. Animals have behavioral requirements but only man constructs ethics. Man's ethic is determined by his objectives and ideals. The question is: What creates our concept of the ideal?

2. The major objective of ethical man is *self respect* and a *successful society*.

3. The current mores are determined by the *Biological* and the *Ideological*. They set the requirements for survival, for attaining an adequate social order and self respect.

An ethic enunciates the basic principles by which the behavior of man, *the biological* and man *the ideological*, must be governed. Thus man's ethic must incorporate two elements because each of us is two different but inseparable individuals: the biological and

Slide 1. Lecture Plan

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- I. Introduction: Two Themes of Thought-Biological Mores, Ideological Mores
  - II. Definitions: Life and Ethics
  - III. The Requirements of Life: Existence and Function
  - IV. The Nature of Man: Animal and Something Else
  - V. The Bases for Man's Ethical Decisions:
    - 1) The Biological; 2) The Ideological
  - VI. Bioethics and Problems of the Present and the Future: Science and Ethics, Medicine and Ethics
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the ideological.

4. The concept of an ethic implies a choice, an acquisition not something fully developed in us but characteristic of us. We are not born with fully developed knowledge of right and wrong but in all men there seems to be a desire to identify the right, formulate its principles in codes and mores.

I shall eventually return to defend this last statement but I should like to build a foundation first.

II. Definitions

Slide 2 gives some dictionary definitions of life, ethics, the moral and the mores, the implications of the word bioethics and the nature of ethics. In defining life it can be said that *Life* is a flow of processes nurtured from the environment and affected by the environment. I suppose the objective or ethic of life and of the simplistic biological man is to survive. We need to know what the *requirements* for maintenance of life really are if we expect to formulate successful ethics.

Man is also ideological and this mysterious force or rationality drives him to seek a higher ethic than that of mere animalistic survival. He must define the ideal which is to be attained and maintained by an adequate ethic.

Finally, we must deal with change in ethics and with ethics in conflict because life is a flow ever changing. Ethics-bioethics must change too if we are to meet tomorrow's problems. But change is dangerous—we must not lose the essential as we adopt the new—man has records of both biological and ideological ethical failure. In illustration: the Christian church once failed because it adopted as the “right” (the ethical procedure) the practice of compelling all men to accept one doctrine. The Inquisition created self damage from which it never completely recovered. The ethic adopted by communistic power will ultimately prevent the success of communism as the road to ideal life, man ultimately demands freedom of thought.

Some knowledge of the fundamental nature and requirements of life provides perspective which is useful in considering formulation of ethical concepts by biological and ideological man.

Slide 2. Definitions

Bio=life — the course of life

Ethics=relating to morals; treating of moral questions; regulation of conduct

Moral=concern with the distinction between right and wrong

Mores=the rules of proper behavior

Bioethics=requires identification of right and wrong.

It defines the principles of right action in living.

The nature of the Ethic (right and wrong) is determined by the *Objective* and the *Concept of the Ideal*.

III. The Requirements of Life

Life as the fundamental process is governed by *necessity*—survival; continuation is its primary *objective*. Appetites are drives to meet the needs for survival—to meet the requirements of the life process. Appetites are ethical unless perverted or out of balance with need.

Life is a maintained state and is characterized by certain properties or abilities. These are summarized in Slide 3; it lists the essential cooperative—self sustaining abilities which identify life.

Man, like all other species has and must maintain these abilities. Man has gained a sufficient degree of freedom and self determination to develop moral codes and ethics relative to meeting biological requirement. To a degree these requirements of the biological ethic must be met by the ideological ethic—sensitivity, adaptation, continuation balance etc.

Among the hosts of other species comprising the animal kingdom there have been minor degrees of freedom gained from the immediate constant struggle to meet necessity. Cooperative patterns of behavior for food gathering, storage, protection, etc. have been established which are rigidly enforced by community authority. But what is seen in nature is so minuscule in comparison to man's state and requirements that comparison of the "ethics" of the honey bee, the wolf pack, to the ethics of man is absurd. However, *it is important to be able to perceive whether we are behaving in life as mere animals or as man. Our greatest danger is man the animal—man without an adequate ethic.*

Those considering man's moral code cannot ignore his necessity to meet these basic requirements of life shown in Slide 3. In this man shares with other species the fundamental *biological mores*: Survival.

There is one other requirement of life which must be recognized by man in formulat-

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Slide 3. The Requirements of Life: The Properties and Nature of Life

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1. Irritability	—	Excitability — ability to detect and Response — react to stimuli
2. Metabolism — Energy use	—	Catabolism (Exergonic) Anabolism (Inergonic)
3. Reproduction	—	Multiply Grow Differentiate Restore and duplicate
4. Adapt	—	Change — Evolution and Devolution — mutation Maintain constancies — Genetic inheritance
5. Maintain balances	—	Homeostasis Heterostasis
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ing his bioethic (sense of right and wrong) and his behavior. It is that life is interdependent, living systems create to a great extent their own ability to exist. *There is an essential balance in nature* as in the individualized complex of cooperating organ systems. *This cannot be destroyed*; Anarchy, pure self interest, is not appropriate to biological or moral survival.

Destruction of elements in the food chain, of balance between growth or reproduction and availability of renewable or unrenovable resources, etc. is unethical in the sense that it destroys the biological objective—that is the continuation of life—in its totality. Don't exterminate the whale, the seal, the eel, the deer, forests, plant life. Nature has its adaptive ability and its inherent mechanisms of control which only one *species* can permanently destroy: *That species is man*.

A principle ethic of man as the biological entity; a principle component of his bioethic is that he should not destroy life or make the continuation of life impossible. Life is destroyed by preventing it from maintaining any of its essential properties identified in Slide 3.

IV. The Nature of Man and the Evolution of his Ethic

Man is an animal and very frequently behaves as one. Animals, bacteria, even plants rush into an area of abundant food or resource and consume it all without thought of the future. The resulting burgeoning population is checked by famine, disease, growth of predators and a balance is restored because none of the counter reactions are absolute. Man can for a while counteract these "cruel" corrective measures but he cannot defy this law forever.

Man often behaves in a similar fashion: The U.S.A. is a lush pasture, no one seems to realize there is any inherent destructive consequence to the inrush of legal (2 million) or illegal (8 million) immigrants a year to the culture or resource stability and balance of our country. What should our ethic be relative to this question? A second example is this; the general concept is that wicked men are solely responsible for the 15,000,000 refugees in today's world. Wickedness is responsible to a degree but this expulsion is also a symptom of man's animalistic behavior—a basic struggle for the ever scarcer resource for life. In this struggle the "weak" are driven out.

Man is an animal and will degenerate into the barbarian-animalistic man, obedient only to the biological and bioethic, unless the spiritual, idealistic man triumphs: man with forethought and ideological ethics. *Again it is a requirement of man's mores that the ideological, spiritual, must triumph.*

Man is more than an *animal*. He can transcend himself and control himself and rule himself. That is not romanticism, it is hard fact. Man is something special—he can destroy all but he might be able to save all. *The second real ethic is that which governs this responsibility.* Thus man is *something else*: He really has two ethics and the second—the ideological—is essential to control of the first—man the animal (the biological).

V. The Bases of Man's Ethical Decisions

1. The Biological

The ethic of man the animal, the biological ethic evolves into the ethics of the ideological man. The biological, the merely physical animal acts on the bases of the objective to survive, attain security and comfort. To insure this, ancient man slowly recognized a requirement to learn, to change, to effect adaptive adjustment. He found that some preparation for the future was necessary and that the meeting of responsibility was essential and inevitable. Thus he evolved a higher ethic.

The environment changes and life must change with it in maintaining existence and essential balance. To effect this there are *two* requirements: *First*, maintain maximum fitness—survival of the fittest—Wallace and Darwin are usually given credit for this concept. Fitness requires adaptation to the environment. *Second*, the principle of mutual aid. Man is a social animal. *One must protect others to protect self*. If the numbers of a species fall below effective mass the species become extinct. Man must protect not only man but the environment.

Man, as the superior product of the biological force, gained a primitive sense of responsibility for mutual aid beyond self; he realized that this too was essential to his own life. He became a domesticator and a grower of crops—he found he had to cease to be a gatherer and a predator, a hunter; he found he had to preserve life. Thus he made use of symbiosis.

It is only a short step from protecting the clan, protecting domesticated animals and crops to protecting the ecology—the environment, the life chain. Thus the wise primitive man began to evolve into the ideological man. Slide 4 is an attempt to summarize the simple biological ethic and its evolution toward the ideological.

2. The Ethic of the Ideological Man

This too has evolved throughout man's history.

A. As recorded history became possible man acquired a means of determining what succeeded and what did not. He has often attended it and we still attend it though often poorly. However, our modern codes of ethics and our laws are influenced by what occurred before our time and the consequences thereof.

Slide 4. Man's Biological Ethic

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1. Survive: Maintain the 6 essential abilities
  2. Reproduce: Preserve life in a continuum
  3. Protect essential resources: Territory and community
  4. Develop and maintain superiority: Fitness
  5. Use mutual aid symbiosis: Protect life, nature's balance
  6. Accept the responsibility of superiority: Responsibility for dependency, for present and future: *For the totality of life — all life.*
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Slide 5. Evolution of the Ethical Perceptions of the Ideological Man **Slide 6.** The Ethic of the Ideological Man

1. Recognition of Personal responsibility.
2. Acceptance of and obligation to cultivate the instinct, the search for and the recognition of right and wrong.
3. Reliance on the two known authorities: God and man.
4. Use the sources of ethical knowledge: Revelation and experience subjected to reason.
5. Cultivate the will and faith that the right can be found and will dominate.

Even before recorded history man had a sense of the right and the wrong. Laws were established to preserve the "right" and the "wrong" was punished. These practices have formed a basis for ethical decision in the past.

The problem is: What are our ethics of today and how must they continue to evolve, remain adequate? What must we *retain* which is essential and how must we *change*? But first—where are we today?

B. Our present resource for ethical decision can be defined as follows: Man has characteristically relied on two authorities: 1) An "eternal force" generally called God; a force or entity beyond and greater than man; and 2) *Man*: His experience and power

of reason and ideology. Man's perceptions of both himself and of God have evolved. Slide 5 is an analysis presented for consideration. It shows the development of man and his concepts of that force defined as God. As a result of this concept it is possible to suggest some elements of the ethic of the ideological man.

Slide 6 summarizes some of the ethical concepts of the ideological man. These are principles. How must one *apply* them and *elaborate* them? This introduces our final point, *Bioethics of the Present and the Future*.

VI. Bioethics and Problems of the Present and the Future

I do not possess the knowledge to be specific relative to *many* fields: Industry, Politics, etc. I will speak briefly only of the problems and ethics of science and medicine:

A. The Problems and the Ethics of Science

I will define science as a study of the order of things. It progresses by accumulating facts by sensory and extended sensory perceptions, by application of reason and by genesis of conclusions called hypothesis. These are tested by experiment, rejected, modified or accepted as fact if thus confirmed. The essence is *perception*, application of *reason* and application of *testing*.

Science and its ethic were originally very simple. Its major concepts were that,

1. Man can know—all is knowable.
2. Man has a right to know and an obligation to know.
3. All knowledge is good—much is immediately useful, the rest ultimately beneficial.
4. How knowledge is used is *not the responsibility of the scientist*.
5. The basic ethic of science is *Truth*: What is said must be tested and must be

true.

All this has changed: The above simple ethic is not enough.

1. Science has been so successful that mankind has been persuaded to assume that science can do everything: With time and money any need can be satisfied: a) all diseases eventually can be cured; b) science can find ways to meet the energy shortage; c) there can always be food for all, etc.

Unfortunately: Science cannot control man—just increase expectation. we have misled the people; science can not resolve all problems.

2. Scientific discoveries are impinging on the life and survival of man—when one touches man there must be an ethic more sophisticated than that one must merely tell the scientific truth. Many problems of man require humanistic, esthetic considerations. These are problems not solved by scientific method or scientific truth—sympathy and humanistic wisdom are essential.

3. Is all knowledge useful? Man is swamped by an avalanche of factual knowledge. It has begun to seem that science is not adequate to produce wisdom—only knowledge and truth. I state it with reluctance but I fear just facts of discovery in themselves are

Slide 7. Problems of the Future that will Tax Ethical Perception and Control

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1. Overpopulation and quality imbalance.
  2. Resource dissipation and destruction of the ecology.
  3. Food and water insufficiency.
  4. The struggles for energy and dangers of all new technologies.
  5. Pollution and ecology.
  6. Conflict: Ideological and pragmatic relative to power and possession.
  7. The world-wide failure of maintenance of law and order: the rise of crime.
  8. Finally and basically: The control of man by man and of the consequences of his desperate efforts to *adapt, survive, gain security* and a "*better life.*"
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not always of value.

4. The National Academy of Science, U. S. A. once was asked: "How can we do this?" Now it is asked: "Should we do this and what are the consequences?"

Lets us look at what are obviously some of the major problems of today and tomorrow. I have listed 8 major examples which will tax the power of the next generation to develop an adequate ethic for handling them. Slide 7 lists some of these problems of the future that will tax ethical perception and control.

Science (Bioscience) has the ethic of truth. We know the basic biological requirements. But the problems of the humane treatment of men, of bioecology and of the custodianship of this our world are not resolved; our ethics are in confusion. Science even at its best is not the sole source of wisdom. From whence will come the new needed sense of ethics for science?

B. The Problems and the Ethics of Medicine

Medicine has always dealt with man, his coming into life, his suffering and his death. From the very beginning it has been recognized both by physician and society that there must be rules of ethics, codes of behavior, governing medicine. These codes have had two origins:

1. Codes formulated by, accepted by, and adhered to by physicians. The professions have claimed right and responsibility to police (maintain) ethical compliance. This method has been dominant in the western world. The Code of Hippocrates has been the great humane documents that helped develop the ideology of western medicine; and ideology now being lost. Inevitably if physicians will not again find the ideal they will fall under the control of the more common discipline—full state control.

2. Codes formulated by society or the rulers of society (Kings and Judges).

A listing of the major codes reveals their origin and the evolution of medicine's ethical concepts—possibly I should say retrenchment or retreat from ideals also. Slide 8 lists some of the major codes of Medicine and their characteristics. Brief descriptions of these codes will show their characteristics.

Slide 8. Ancient Codes of Medicine

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1. Ancient statements of requirements for health and treatment of disease: Religious writings—Bible.
  2. Code of the Chinese physician: The Yellow Emperor—Huang-ti: in the *Neiching* 2697 B.C.
  3. The secret code of the Egyptian Physician: The Hermetic Book of Toth 3000 to 2500 B.C.
  4. The Code of Hammurabi—King of Babylon 1958–1905 B.C. Vendidad—Book of Law of the Persians 1000 B.C.
  5. Oath of the Hindu Physician—Rig Veda (1500 B.C.); Charoka Samhita (Brahminical Medicine 200 A.D.).
  6. Oath of Hippocrates (460–370 B.C.) Greece.
  7. Oath of Asoph and Jochannan (6th Century A.D.)—First Jewish code.
  8. Europe: Codes of the Visigoths and Bavarians (5th and 7th Century A.D.) Oath of Maimonides—Jewish Physician, 12th Century. (Really written 1970.)
  9. National Medical Codes: American Medical Association 1847 adopted Hippocratic Code and Oath.
  10. Modern Revisions
Nuremberg Rules (1946) and Declaration of Geneva (1948)
Declaration of Helsinki (1964) adopted by World Medical Association Recent AMA abbreviated statement.
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1. There is recognition of the value of the physician—but healing is associated with the will of God. Medicine was under dominance of religion until the time of Hippocrates but in many places it is still regulated by ideologies and religions and can not become good medicine.

2. The early Chinese Codes came from the Emperor. The state controlled medicine. They required conformity in procedure.

3. In Egypt medicine was priest controlled but also state approved. A physician had to follow prescribed orthodox procedures for four days before using his judgment.

4. The Code of Hammurabi was punitive. If a physician accepted a case he had to meet expectation or receive punishment.

5. The Hindu Code was behavioral—that of the physician. It expresses society's requirement in many procedures.

6. The Code of Hippocrates was a professional code free of state or Temple—this great code is characterized by concern for the patient.

7. The Jewish Code mentioned was religion based—concerned with justice.

8. The early primitive Codes of the west, after contact with the Greek heritage was lost, were restrictive and penalty defining, like the Code of Hammurabi—punitive.

9. The professional Codes dominate in the West—Concern for the patient was originally the objective. There has been a decay of ethics and new codes such as shown in Slide 8 had to be developed.

The trend of the times is to legislate ethics: In many schools physicians take no oath at all. In other schools the ancient oaths have been modified to mean nothing at all.

Medical irresponsibility has caused a loss of trust—socialization of medicine has made it less personal—this results in the requirement only to be correct in conformity with standard practice. Present thought and Codes require behavior to be legally correct but not necessarily ethically ideal. One senses they are permissive (Slide 9).

In conclusion, let us return to some problems of bioethics—medical and social which we find difficult today.

1. The Problem of the Definitely Wrong

The major problem now is unwillingness to *act* relative to ethical requirements.

There is no ethical or any other *justification* for terrorism, for crime and acts of violence against the uninvolved and innocent.

There are many such things tolerated because people will not accept the only possible solutions as ethical.

A characteristic of the time is conflict of ethical concepts. We are paralyzed by inability to find comfortable resolutions to even fatal problems—What is the ethic of ending evil?

The proper ethic is to end it but to correct its cause.

2. The Problem of Good Intent and a Needed Action but an Undesired Consequence

a) Does one cure disease and thus create starvation—foster overpopulation?

Slide 9.

PRINCIPLES OF MEDICAL ETHICS

PREAMBLE

The medical profession has long subscribed to a body of ethical statements developed primarily for the benefit of the patient. As a member of this profession, a physician must recognize responsibility not only to patients, but also to society, to other health professionals, and to self. The following Principles adopted by the American Medical Association are not laws, but standards of conduct which define the essentials of honorable behavior for the physician.

I. A physician shall be dedicated to providing competent medical service with compassion and respect for human dignity.	V. A physician shall continue to study, apply and advance scientific knowledge, make relevant information available to patients, colleagues and the public, obtain consultation, and use the talents of other health professionals when indicated.
II. A physician shall deal honestly with patients and colleagues, and strive to expose those physicians deficient in character or competence, or who engage in fraud or deception.	VI. A physician shall, in the provision of appropriate patient care except in emergencies, be free to choose whom to serve, with whom to associate, and the environment in which to provide medical services.
III. A physician shall respect the law and also recognize a responsibility to seek changes in those requirements which are contrary to the best interests of the patient.	VII. A physician shall recognize a responsibility to participate in activities contributing to an improved community.
IV. A physician shall respect the rights of patients, of colleagues, and of other health professionals, and shall safeguard patient confidences within the constraints of the law.	

b) Should one force or persuade families in primitive societies to reduce family size without giving a guarantee that the one or two children born will live?

The ethic I think is to consider the totality, the consequences of actions; obviously one should act to resolve and not create problems. One should not abolish one wrong by creating a greater.

c) How much should society do for the retarded, the deficient, the disabled? How big a load should a new generation be required to carry in support of indigents (unemployable, deficient, incapable) or those who retire early on pensions, though they are still capable of working?

d) Does an individual have a right to a heart transplant just because he might live a little longer and is a good subject despite the fact that he cannot possibly pay the cost (\$120,000)? Can he or the physician eager to test his skill require society to pay the bill?

e) How much income can a trade union demand of an industry? How big an income should physicians expect; do they deserve all they can get?

There is nothing to be gained by merely reciting problems.
I can't resolve them all but there are principles.

Physicians carry a rather heavy ethical responsibility. The medical students worry about it a good deal until hardened by professionalism. In my day of contact with them I could tell them only this:

1. Never use your power or privilege to harm any individual or society.
2. Attain sufficient skill in your profession and judgment that no one will ever be unfortunate because of coming to you rather than another physician. One must maintain the highest standard. Know and only undertake what he can do.
3. Do not cure one ill and create another. Ask only what the individual or society can readily afford to pay you.
4. Live and act in a fashion appropriate to one who is entrusted with responsibility for the relief of suffering and the secrets of life and death of human beings. How can one serve man and sustain such responsibility without personal nobility and an ethic of life above reproach?

In conclusion I should like to say this. An essential element of both the Biological ethic and the Ideological ethic is to gain and maintain a freedom essential to the maximum attainments of man. The scientist and the physician has an obligation to maintain for others the privilege of "life, liberty and the pursuit of happiness". More compelling even than this obligation of the Bioethic is the fact that neither Biological science nor Medicine itself can thrive, progress, attain its maximal potential when men are not free to inquire, to think independently and to search for the good. Our bioethic, the ethic of science and of medicine, should be to maintain freedom and liberty for man.

Freedom is not attained by the rejection of all restraint; freedom is gained by an assumption of responsibility. You, the individual must assume the obligation to guarantee

that others will be free to attain the highest quality of life. Others will in turn assume the responsibility for the defense of your freedom. A bioethic, worthy of the name, is one which provides for man the privilege of freedom: freedom of thought, freedom to engage in the building of a good life, freedom to attain the best that man has ever dreamed of.

Our problem, however, is not entirely that of identifying the components of the ideological bioethic; it is that of accepting the obligation and of acquiring the selfdiscipline necessary to attain this goal. Such purposes are the only one worthy of men who possess within themselves something more, much much more, than ability to sustain the simplistic bioethic of survival; we can attain a nobler ideological goal than that.

バイオエシックス
—倫理決定の基盤—

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要 旨: 人間は一種の動物であり、かつ理性をもった存在である。生命の倫理はこの二つの側面をもっている。生物の目的は生存であり、生存のための条件を満たすことが生物学的な善である。種の生存のための共同生活の総和として生物界は生態学的なバランスを保っているが、これを破壊する人間の行動は悪である。生物学的倫理をコントロールするのは理性的倫理である。常に未来に理想をもつ人間は、神と人間理性の両者をよりどころとして善悪の観念を発展させてきたが、現代ではその基準が混乱し、様々な矛盾を生んでいる。科学者はもはや常に真理の探究に止まらず、科学の倫理を追求しなくてはならない。医師の戒律は古来からいろいろあるが、現代は昔の理想を忘れて医の倫理を法制化して事足りりとする傾向がある。人類の最大幸福につながる生命の倫理を確立するためには、その前提として、個人の責任にもとづいた思想・研究の自由が保障されるべきである。

J. UOEH (産業医大誌), 3(4): 469-480 (1981)