AMERICAN REGULATION OF BIOMEDICINE:
LIBERAL HUMANISM IN CRISIS

By

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ABSTRACT

Sociological studies indicate that American regulation of biomedicine is not achieving its goals. It is the purpose of this thesis to show that this is due more to an inadequate conceptualization of issues than to ineffectual implementation. It will argue that this conceptualization is determined by the origins of the American tradition of liberal humanism in the history of ideas, and that therefore the present social crisis has a theoretical counterpart in philosophy which must be examined.

In sum, this thesis describes the influence of Descartes, Hobbes and Locke on the founding of the American tradition. It identifies as the original point of theoretical difficulty Descartes' rational anthropology whose dualism ultimately produces an antagonism in American regulation of biomedicine between ethics and science and between individual and society. Further it shows that because a rational anthropology characterizes man inadequately that American regulation cannot meet the theoretical requirements of liberal humanism and that, despite its roots in a rationalist natural law philosophy, it is gradually approaching biological pragmatism.

Finally this thesis concludes that philosophers and policy-makers who would be faithful to the principles of liberal humanism within the context of biomedicine must show how the biomedical project of human self-creation can serve the moral process of human self-emancipation.
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There is not much in this thesis that is my own. My thoughts belong to my husband, my family and my friends who have listened patiently to more than I could say and who have told me more than I could hear.

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This thesis is submitted in memory of my Aunt,

Dorothy A. Plant
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INTRODUCTION

Any action, whether it is collective or individual, can be characterized as "human" if it presupposes a knowledge of two things: first, knowledge of what it is that is happening, and secondly, knowledge of what difference it will make. Yet knowledge of both these factors cannot explain human action unless both together are rooted in a coherent interpretation of the nature of man - of who he is as actor, and where he stands within the world with which he interacts. Men, whether poets or psychologists, priests or scientists, politicians or parents, all bring to their actions, images of themselves as human beings, not conjured from convenient daydreams but carefully woven by many deft hands - images whose weft and warp are the insights of human history closely crossed by the intractible fibres of everyday experience. And as all don cloaks of man-made fabric they choose a way of life where stimulus calls forth responsibility and action expresses purpose.

An analysis of the history of images which have shaped the way of life each of us has chosen, if properly pursued, would be a task for many disciplines. Nevertheless, there is present in our culture, as in any other, a dominant tradition unifying this multiplicity of images - a tradition which, as it provides formal organization of all aspects of human experience, expresses a philosophy. In our culture, this philosophy and way of life is best termed "liberal humanism."
Such a philosophy may not be as rigorously systematic as the writings within the discipline itself; yet the philosophers who have been honoured as the greatest members of their age have been those who were able not only to explain human experience in a most comprehensive way but to utilize the most powerful of images already operative in the lives of the men around them. Thus, as philosophers, they have been able to help men make a satisfactory adjustment to reality and to choose a way of life and activity destined to become the threads for new traditions.

This integrity of human ideals and human action carries with it two implications.

First of all, the validity of any way of life, and thus, of any philosophy, must lie at least in its adequacy. If practical factors emerge in human experience which remain ambiguous — i.e. their existence in the light of a philosophy seem irrelevant — or if resolution of any practical problem according to a held philosophy generates more difficulties than it resolves, then that philosophy must be analyzed from its roots, in search of conflicting assumptions. On the other hand, any philosophy (or for that matter, any theoretical activity) is purely imaginary if it has no origin in practical requirements, or if it makes no difference to practical activity. Both the meaning and the validity of philosophy lie in its capacity to organize human experience.

Secondly, the significance of the interrelation between theoretical and practical activities means that a breakdown in social tradition goes hand-in-hand with a similar breakdown in philosophical tradition. As long as a social tradition remains cohesive and human relations function
smoothly, the philosopher's task is one of conceptual clarification and application. However, what appears as a cultural crisis will have a formal counterpart. Thus the alert philosopher who recognizes that contemporary argument is no longer simply the healthy exercise of insight but a creeping malaise will initiate a total rethinking of the philosophical framework assumed by that tradition in order to identify assumptions which make current concepts divisive or finally impotent.

With these two principles I begin with the assumption that there is a necessary relation between philosophy and social practice. This is not to claim that particular laws, political policies and social mores are logically related to philosophical ideas as conclusions entailed by a premise. The relationship is much looser than this but still very powerful: rather than determining what we think, philosophical ideas tend to affect what we see and only then what we think about what we see.

In particular I begin with the assumption that our way of life which I have called "liberal humanism" is in its expression in our own society necessarily related to the history of modern philosophy. It is the purpose of this thesis to identify and analyze a crisis in our society especially as it is revealed by our pursuit of the biomedical sciences - a crisis which is rooted in our expression of the liberal humanist philosophy. Thus this analysis is based on an investigation of the development of the ideas of liberal humanism from an historical viewpoint, in order to show what this way of life and philosophy means to us and how it shapes our perception of issues and formulation of principles in our practical affairs. As such an analysis is of
philosophical interest, the issues arising in relation to biomedicine serve as a stimulus for studying the history of philosophical ideas. But this is also of bioethical interest as resolution of these issues are posing great practical difficulty.

Twenty five years ago John Macmurray, a British philosopher, identified the trouble spot for both philosophers and society which he saw underlay the growing tension within liberalism of his time. This he termed a crisis of the personal, and he outlined what were its theoretical and practical counterparts. It is worth understanding what he meant by this because the theoretical question which he raised as central for modern philosophers, "what is the form of the personal?" is finding a practical existence as a point of stalemate in bioethics as the question "what is a person?" That is, because the theoretical question has not been answered adequately, it is emerging in the practical sphere where decisions must be made, as a point of impasse.

Macmurray saw the practical aspect of the crisis of the personal expressed in two factors. First of all, there was occurring what he called an "apotheosis of the state." Men were abandoning responsibility for their own lives, subordinating personal values to functional exigencies, and looking to the state as a source of salvation. The second and related factor, he said, concerned the general decline of religion. Because religion gives men a sensitivity to personal values and to human dignity, its decline has simply reinforced state authority. Thus he prophesied with depressing accuracy:

"Success will tend to become the criterion of rightness, and there will spread through society a temper which is extraverted, pragmatic and merely objective, for which all problems are soluble by better
organization." 3

The philosophical counterpart to this social crisis was to be found in the question of the form of the personal. To justify this identification, he gave a summary account of the development of the modern philosophical tradition and the significance of the points of conflict within that tradition. The following is a summary of his argument.

A successful philosophy, as it has already been noted, must be able to organize all human experience - i.e. to express within it's system the form of that experience. This system must include especially a philosophical anthropology adequate for explaining how man experiences himself and why this experience appears as it does. However it has been precisely this point which has proved most troublesome for modern philosophers - as they have expressed it, it is the problem of the nature of the self.

Modern philosophers have understood knowledge to be of whatever is real in human experience as opposed to whatever is "subjective" (the product of the imagination) - that is, to be whatever can be referred to an object. At the inception of modern philosophy such knowledge was thought to be whatever was determinable within a mathematical system and the object was understood as a combination of identical units, known as its "substance". Modern philosophers, in this first phase, then gave,

"... a primary attention to the form through which the material world - the world of substantial objects - could be rationally determined. Its problem was the form of the material." 4

However, the attempt to establish the reality of the self in terms of substance led to a scepticism for it required (as for any other object) an a priori synthesis, and for this no objective basis could be assigned.
For one could know other objects by explaining them in terms of a mathematical system, by relating the identical units of objects according to mathematical laws. But how could one know the nature of the self for to represent the "self" in this way would require another, more fundamental self to give the mathematical relationship, and so on, ad infinitum. Furthermore, regardless of the question of its "reality", the concept "substance" could not account for nor give meaning to man's conscious experience of spontaneous self-directed development.

The new biology provided philosophy with a frame more suited to the latter task, at least. This arose out of the concept of the "organic". Macmurray defines the organic, in its full form as "a dynamic equilibrium of functions maintained through a progressive differentiation of elements within the whole." 5 With this new concept came dialectic, a new logic which competed, in biology, with the mathematical logic of physics. The self, like an organism taken as a whole, was seen as a harmonious balance of differences (rather than a combination of identical units) which continued to act in a spontaneous progressive differentiation.

This concept of the organic, Macmurray said, continued to dominate modern philosophy from Rousseau until Whitehead, when once again questions about the adequacy of the form of the concept were raised. There remained, despite its explicative powers, a twofold problem which has resulted in two kinds of break from the Kantian tradition - the first school, logical empiricism, claimed that the concept of the organic was unnecessary as a logical form, and the second, existentialism, that it also was inadequate.

Logical empiricism denied that dialectical logic was necessary
or even useful as a tool for the sciences. This criticism was given force by the development of a new mathematics capable of representing biological functions and processes. Consequently it dismissed most philosophy which attempted to express and resolve human problems as a meaningless metaphysics and confined itself to rigorous analysis of language.

The existentialist school also broke with the central philosophical stream but in a different way. Kirkegaard, a leading existentialist, realized that the organic was still unable to express the problem of the existing individual. He saw that for personal life where there occurred a tension of opposites, synthesis did not occur in a spontaneous fashion but required a specific personal choice between them. In other words, he was forced to believe in the existence of a self prior to personal development, an existence which was not expressible within the dialectic form. In consequence, he abandoned logical from altogether in favour of direct confrontation with problems of personal existence. This however was also, Macmurray said, an abdication of systematic philosophy itself; for expression of these problems could be given only poetically.

What then can be the outcome for philosophy? Macmurray summarizes his position in this way:

"We need not accept this scepticism as final. Philosophical scepticism is always formal; that is to say, it is relative to a particular form of thought. It arises from the discovery, through philosophical analysis, that the most adequate instrument of systematic thought which we possess is unable to represent our experience as a unity: and since the unity of experience is the correlate of the unity of the Self, this means that the form of our thought is inadequate for the comprehension of selfhood. Thus Hume's scepticism is a
scepticism of the adequacy of the concept of substance, and so of the form of the material. The Self cannot be conceived on the analogy of a material object. The scepticism of Kierkegaard—the most devastating of all modern scepticisms—is a criticism of the form of the organic in its fully developed Hegelian form. It means that the true Self cannot be conceived through the organic analogy. It is not an organic unity. Such scepticism is valid under a condition. It is valid only if the form in question is not merely the most inclusive form of understanding we yet possess, but the most inclusive form we can ever construct. This, however, can never be demonstrated. The answer to Hume's scepticism of the form of the material was the construction of the form of the organic. To the contemporary scepticism of the organic, the answer will be, if we can achieve it, the construction of the form of the personal. Such an instrument of thought would have a finality denied to the other two, for we should no longer be attempting to understand our human experience on the analogy of our knowledge of organisms or of physical substances, but directly, in terms of the personal character which is its own unique distinction."

Macmurray concluded from his study of these new directions that the philosophical problem facing the modern tradition was rightly recognized by the existentialists to be that of the personal (especially because it is confirmed by a corresponding cultural crisis). Yet the logical empiricists also perceived rightly in identifying the philosophical problem to be one of form. Thus he concludes that the central question must be, "what is the form of the personal?" He saw that any new system of philosophy must be able to identify the underlying form of all experience including that of the biological, physical and social sciences and that the test of adequacy for this system will be its capacity to express man's experience of himself in all its aspects.

Given both the philosophical and the practical crisis, Macmurray returned to the original assumptions of the modern tradition, to pursue a line of reasoning developed from their corresponding alternatives. The central starting point he chose, in contrast to Descartes, the philosophical father of liberalism, was a conception of the self not first as thinker, but as agent.
At Macmurray's time of writing, this step appeared interesting but perhaps not really compelling. In isolation from pressing practical issues academic speculation often remains in texts and journals. If his step was not compelling it was because, while, as he said, people acknowledged in a general way that our century is one of revolution, characteristics denoting a crisis of liberalism seemed particularized in remote countries whether fascist or communist, and hardly evident in their own backyards. But Macmurray saw that, as human history had now become whole cloth, the free world was inextricably involved. Symptomatic was the fact that people in his own nation were simply abandoning personal responsibilities to political authority and the state was being forced to assume functions in areas where it was by nature unfit.\footnote{7}

Today, in countries where liberal democracy has championed personal freedom, often despite political and economic cost, uneasy tension exists between individual and state prerogatives. What is so ironic about this tension is that it appears to be generated in those areas where liberalism has been especially protected — for example, in the rise of top heavy bureaucracy with self government, the growth of totalitarian multinational corporations with free enterprise, and the domination of ideas and values by the media with the protection of free expression.

Of particular interest to me in this thesis is the individual-state tension arising as a consequence of our pursuit of the life sciences. Scientific research by its very nature must be a cooperative enterprise. First of all, obviously it is very costly and only governments and large corporations can afford to support it. Secondly it
proceeds in a very piecemeal fashion - the solution for a particular problem requires co-ordinated groundwork in a number of different areas, and further, sometimes the results of projects which were apparently unrelated, when seen together, suddenly stimulate new insights. The state, as it has an interest in finding answers to biomedical problems, will provide generous funding for research and will define the kinds of goals which ought to be given priority by researchers.

However, here what is (or ought to be) the form of the personal has become a practical issue. Search for the biological keys to human disease means also probing for the controls of human life, and in a survey of the total agenda of biomedicine it can be seen that, from conception to death, man is becoming his own project. He is learning how to alter the fine print of the genetic code, how to repair and rebuild limbs and organs, how to understand and how to direct human thoughts and emotions, and how to shape whole men to their environments, and environments to men. To many the possibilities make human biology appear to be mere clay to be molded at will.

Further, personal freedom is here threatened in a very concrete way. Achievement of a better health care standard seems to require that some individuals or groups - as conscripted benefactors of their bodies, time or money, or as victims of our culture's escalating preoccupation with bodily ills and increasing intolerance for the costly abnormalities - sacrifice already dearly won personal freedoms to state-determined goals.

In sum, whatever choices might be made by the state on behalf of the populace, the consequences will not be merely material - not merely affecting human chemistry as if it were an isolatable variable
of human life - but highly personal because they will alter the possibility and the quality of relations among men.

In discussion about this threat to personal freedom, policy makers usually express Macmurray's question not in terms of its form but rather in terms of its material characteristics: "what is a person?" In fact, it might be closer to the truth to say that most assume that it is quite self-evident what persons are and the problem is simply to compare other "less normal" human beings with this standard, in order to determine what ethical concern usually accorded to persons is owing to them.

When we contemplate making human biology a vehicle for human improvement or change, we raise the question "how is it possible for us to know whether we are beneficiaries or victims?" "How can we know whether we have changed human nature for better or worse?" Then the question, "what is a person?" becomes problematic; for it may be that our growing control over human nature implies that characteristics thought to be the "normal" indication of personhood may have no necessity at all. We can not use a definition of "person" in a material sense to guide the activities of biomedicine when its very intent is to alter it.8

The fact that these two more fundamental questions remain unconsidered by policy-makers contributes to the growing tension between individual and state interests. It will be seen in this thesis that they generally accept that this tension is both natural and necessary for a healthy society, and that the best regulation provides a just balance between them. But in my view, balance in itself is not constructive for it provides no direction, and stability per se is not necessarily just.
It would seem then that what is necessary is a moral revolution of a very fundamental kind. It must be a revolution which challenges not only those who appear to be disregarding personal values of the liberalistic tradition but also those who would limit biomedicine with an absolutist definition of human nature — whether rooted in the natural world or in some supernatural realm. Equal consideration must be given to understanding the form of the personal and, within that, the form of the various kinds of personal experience — especially moral experience.

The people in our society who profess to be liberal humanists and who think they are in touch with what is most unique in man, claim that we are already in the midst of such a revolution. Paul Kurtz, for example, in his essay titled in that vein, "Humanism and the Moral Revolution", states the following:

"There have been many kinds of revolution in human history: political, economic, social, scientific. The revolution that we are experiencing today is a moral revolution. Although it has many dimensions, at its roots the revolution is humanistic. It involves a critique of religious, ideological and moralistic philosophies that tend to deny or denigrate the most genuine qualities of human existence. And it is an attempt to recover the most human aspects of life that have been lost in post-industrial society.

The basic assumption of the new morality is the conviction that the good life is achieved when we realize the human potential. This means that we ought to reject all those creeds and dogmas that impede human fulfillment or impose external authoritarian rules upon human beings. The traditional supernaturalistic moral commandments are especially repressive of our human needs. They are immoral insofar as they foster illusions about human destiny and suppress vital inclinations."

While, in my opening paragraphs, I referred to the dominant philosophy of our culture as "liberal humanism", because I was referring in the subsequent discussion of this philosophy in crisis to Macmurray's approach, I spoke of it primarily as a crisis of liberalism. However
the foundation for this liberalism is the humanistic tradition itself and, while the issues in bioethics focus on problems of personal freedom (e.g. consent), the difficulties there cannot be separated from that foundation. In other words the crisis is as much one for the humanist as it is for the liberal, for in rejecting a moral tradition which roots values in a realm external to man he is going to have to show how it is possible to make meaningful statements about human "need", "potential" or "destiny", particularly within the context of the biomedical project. He too must rethink his philosophy of morals.

Both the weakness and the strength of this thesis lie in the fact that it cuts across a number of areas which might themselves be treated as isolated tropics— liberal humanism, its origin and expression in our society; theory of rights; philosophical anthropology; relationship of morality, ethics and law; origins and development of the American regulative tradition; philosophy of science and the biological revolution; the theory of evolution. Thus this thesis stands as much as an agenda for research as it does as a completed project. If it shows nothing more than the need for serious philosophical analysis of our formulation of present social issues (especially in the regulation of the life sciences) I will be satisfied that my objective has been realized.

In order to narrow my discussion, I have made several specific choices which may in the end, by what they exclude, alter parts of my argument. However, after spending some time working within the bioethics field discussing such things as the problem of informed consent, and the calculation of risks and benefits, it seems necessary for me to address broader issues about the field itself. Further, my intention
is not to provide guidelines for any area of biomedicine but to show
that at the level of policy making at least, the very formulation of
issues is inadequate and the cause of polarization and breakdown of dis-
cussion.

Ultimately my goal is practical, so that I will be referring to
a narrow selection of bioethical literature - that which is directly
related to the public arena. Of course, no clear line can be drawn
between this and the more academic discussions because government bodies
are drawing more and more on philosophers, theologians, sociologists
and biologists to aid them in policy making. Yet scrutiny of the re-
ports written by such people and submitted to those bodies shows that
they have been shaped by a certain expectation about what impact moral
and legal concerns should have on public policy.

Biomedical research is a large field. My examples will be drawn
from the area loosely entitled "human reproductive research and technol-
ogy", an area including birth control, artificial insemination, in
vitro fertilization, fetal experimentation, amniocentesis, abortion,
cloning, D.N.A. transfer. The phrase "genetic engineering" is sometimes
used to refer to this group. I prefer however, to restrict the use of
that phrase to situations where direct control and manipulation of
genes or chromosomes is involved. The "engineering" of whole human
beings in A.I.D. or in vitro fertilization, for instance, may be used to
alter the human genetic load perhaps, but that effect would be achieved
only as part of larger goals related to reproduction. That is, unlike
the sociobiologists, I see genetic reproduction, precisely because it
is lawful and subject to control, as capable of serving personal
reproductive goals which are not.

Further, in formulating regulations for biomedical research and application, public institutions generally choose a different sort of classification related to what are perceived to be the ethical issues involved - i.e. questions related to the values of liberalism, the matters of informed consent, and the risks to the individual subjects in relation to the benefits to be achieved for society. The biomedical activities are thus classified according to three groups: as therapy, where the aims of physician and patient should normally coincide; as pure research, where the research is in the laboratory where human subjects are not used; and as clinical research, where human subjects are used for ends which do not necessarily coincide with their own needs.

Because I am challenging the very approach to regulation of biomedicine for the reason that it is determined by some inadequate assumptions about what are the relevant issues, I also object to this kind of classification as the starting point for discussion. It not only reflects this inadequacy but also tends to prevent further questions from being raised which might begin to correct it. My choice of "human reproductive research and technology" represents a different kind of classification - one related to the purpose of the activities - and cuts across all three of the traditional areas of concern. In this way, I will be able to point out what are the more fundamental issues which ought to be addressed and then to show how these take up the important but secondary issues represented by the traditional method of classification.

Many examples of guidelines can be found with reference to this one area of biomedicine. I have also reduced that field by choosing the
American approach because, first of all, it is most highly developed as an example of applied liberal humanism; and because, secondly, it is exerting a strong influence on our less developed Canadian deliberations.

I will not be discussing any document in itself but will be using each for purposes of illustration. The following is a list of the documents on which I will be basing my discussion:


Some of my observations about the American approach to regulation are dependent upon the work of others who have studied it more intensively. In particular, I would note the essay by Mark Frankel, "The Development of Policy Guidelines Governing Human Experimentation in the United States: A case study of public policy - making for science and technology." The pattern he describes which matures with the first major policy statement in May 1969, has been maintained through the ten
years which follow it and which the selection of documents listed above represents.

I shall refer particularly to the first documents produced by the American "National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research", Research on the Fetus, Report and Recommendations, and Appendix, and the related guidelines produced by the Department of Health, Education and Welfare (D.H.E.W.). These documents are especially interesting because it is claimed that they stand as an unprecedented, indeed experimental approach to policy making— that is, they were produced in spite of and free from political interests and bureaucratic exigencies. Finally, they serve as a model for other issues which the Commission has tackled since then. Despite these advantages the problems of liberalism are present there too. In them, as in the others the central issue is the question of personhood in the material sense: e.g. "is the fetus (embryo) a person?" My analysis of this group of documents will show why this appears to be the central issue and why, as a result, there is occurring, a gradual abdication from significant moral reflection, and indeed, from the principles of liberal humanism in American regulation.

In sum, my thesis will present an analysis of both the practical and theoretical elements of this crisis of liberal humanism as it is found in the attempt to regulate the development of the life sciences and technologies. It will also attempt to provide a general framework for constructive moral discussion compatible with the basic ideals of liberal humanism— i.e. with the belief in the essential dignity and freedom of man.
Introduction: footnotes

1. For a similar view, see Alan Ryan, "The Nature of Human Nature in Hobbes and Rousseau", in The Limits of Human Nature (1974), pages 3 and 4. See also Macmurray (1957), Chapter I (especially page 26). I am indebted to Macmurray for clarifying the theme which underlies my thesis, that there is some parallel between the history of ideas and philosophical issues, and social practice.
2. For a somewhat similar view, see Kaplan (1963), pages 8-10.
4. Ibid., p. 33.
5. Ibid.
6. Ibid., p. 82.
7. Ibid., p. 31.
8. We are all familiar with the "sci-fi" pocketbooks and futurist magazine articles which project from what we are able to do now, or from what we are attempting to do, sensational "human" chimera. For instance, see David Rorvick's book Brave New Baby, with such chapter headings as "Molecular Mastery of the Mind: Education by Injection" and "The Cyborg: Evolution to Machine - And Beyond". Regardless of the validity of these speculations, I will argue in my thesis that these questions are important because man is and always has been indirectly a creator of his own biology.
11. Documents 1. and 2. can also be found in document 4. In my text these documents will be referred to in the following manner:
   1) the 1973 document
   2) the 1974 document
   3) Research on the Fetus: Report
   4) Research on the Fetus: Appendix
   5) the 1979 document.
"I have given you, Adam, neither a predetermined place nor a particular aspect nor any special prerogatives in order that you may take and possess these through your own decision and choice. The limitations on the nature of other creatures are contained within my pre-scribed laws. You shall determine your own nature without constraint entrusted you. I have placed you at the centre of the world so that from that point you might see better what is in the world. I have made you neither heavenly nor earthly, neither mortal nor immortal so that, like a free and sovereign artificer, you might mold and fashion yourself into that form you yourself shall have chosen." 1

Oration on the Dignity of Man

by Pico della Mirandola (1463-1494)
I

LIBERAL HUMANISM: MAN THE SELF-CREATOR


American regulation of the biomedical sciences provides an interesting subject for study, for two reasons. First of all, both the method of regulation as well as its content are based on a well articulated set of beliefs about the nature of man and his place in society.

Gunnar Myrdal, in his book, An American Dilemma, calls this body of beliefs "the American creed." He says,

"America, compared to every other country in Western civilization, large or small, has the most explicitly expressed system of general ideals in reference to human interrelations. This body of ideals is more widely understood and appreciated than similar ideals are anywhere else."  

Secondly, these beliefs stand in the eyes of many people in the world as values which transcend any social institution or legal system - values which reach far back into the Judeo-Christian tradition and which have survived the rise and fall of nations. Further, the United States exports these values along with its achievements in science and technology, with its financial and military expertise, to many countries, including Canada, which tends to latch onto American concepts and goals despite the fact that its own institutions reflect a somewhat different understanding of what constitutes a vital society.

The American Creed is liberal humanism. While it tends to be articulated in the "rights" idiom, this creed is "a living reality, in a developing democracy...not a fixed and clear-cut dogma". It is one which continuously attempts to defend, in a mushrooming society, "the ideals of the essential dignity of the individual human being, of the
fundamental equality of all men, and of certain inalienable rights to freedom, justice, and a fair opportunity." The ideals are written into the American Declaration of Independence, the Bill of Rights, and the Preamble to its Constitution. The Supreme Court, the highest judicial body, appeals to the Constitution in its judgements about the acceptability of human affairs. There is no question that moral concerns have a separate and unique significance from those which are legal and institutional.

Development of the biomedical sciences has proved to be no small challenge to these ideals. Its handling of the moral and legal implications of such things as experimentation with human subjects, the development of recombinant D.N.A. technology, abortion, sterilization, behavior modification, and genetic screening provide landmarks for other countries who are equally disturbed about the moral issues implied by these activities. In Canada our Law Reform Commission, which has produced to date twenty six documents in its "Protection of Life Project", shows a high consciousness of the issues as Americans have raised and dealt with them. Thus, I see the study of the American approach as helpful preparation for understanding what is happening in Canada.

Regulation of Biomedical activities began first for experimentation with human subjects. Thus the classic example of the American approach to regulation of biomedicine in general is to be found here.

In 1966, the National Institute of Health (NIH) began to regulate the funding and ethical standards of biomedical research projects with well defined guidelines. In 1974, "The National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research" was
established to study ethical issues underlying such research and to make recommendations to the Department of Health Education and welfare (formerly the N.I.H.) and to Congress. Up to this time, researchers had been expected to adhere voluntarily to the ethical principles of the medical profession as outlined for instance, in the Nuremberg Code of Ethics and the Declaration of Helsinki. They were always, of course, also subject to the law (though it was little developed in this area) which provided a court for appeal on matters of legal consent and "due care." However, the government recognized that even together the professional codes of ethics and American common law did not guarantee that the research profession as a whole would not gradually relax its standards of protection afforded human subjects as experiments were proposed which seemed to promise desirable social benefits or professional rewards. Mark Frankel who has studied the American approach to policy-making summarizes the focus of this policy:

There remains, therefore, the very important question of how best to protect the patient/subject from investigators who, for one reason or another, behave unethically when conducting medical research. One approach is to educate physicians and medical researchers about the proper and humane treatment of human subjects. This approach, while essential to any fundamental change in the behavior of clinical investigators, is, by necessity, a long-term process. A second approach, and one which is the focus of this paper, is to establish social policy which will guide the investigator in the conduct of his research and provide proper protection for the research subject. It seems both appropriate and timely, therefore, to examine such an effort to develop social policy - the federal government's initial guidelines governing research involving human subjects. These guidelines reflect society's concern for protecting the individual research subject against possible injury or abuse while simultaneously seeking to maximize the freedom of scientific inquiry.

Thus the D.H.E.W. assumed the responsibility for implementing the democratic ideals of liberal humanism, and in particular, the protection of
human research subjects, while at the same time encouraging the pursuit of research which promised substantial improvement in the standard of health care.

Because the D.H.E.W. conducts scientific research of its own and funds the majority of the research projects at other institutions in the United States, it regulates that research in two ways. First, it has established a number of National Advisory Councils made up of distinguished representatives of the scientific community which review projects according to scientific merit and recommend the priority which they ought to be given - i.e. a priority according to medical requirements. Also, it has formulated ethical guidelines which express values it believes acceptable both to the medical profession and to the American people; and it has implemented them by requiring that institutions applying for funding establish "Primary Review Committees" (made up of professionals and laymen) which will determine the scientific and ethical acceptability of each research proposal.

The process of determining whether or not the government should restrict, allow, or even actively support biomedical activities, I have titled the "Risk/benefits Calculus." Taken as a whole, this phrase refers to how American policy makers assess the impact of biomedicine on their society and way of life. What more precisely is their conception of risks and benefits will be a major subject for this thesis, because it represents the most comprehensive and articulate expression of the ideals of liberal humanism and their application to biomedicine.

The potential of the American form of regulation seems to lie in its capacity to make public the kinds of experimentation being supported
in the United States and to incorporate a representation of diverse viewpoints, including those from the general public into the review process. Further this increased visibility of research in itself, provides an added incentive for adequate professional self-regulation which is believed in the end to be the most effective (as it is the most knowledgeable) control on what is done with human subjects.

Yet while bioethicists discuss the ethical issues of human experimentation or other aspects of biomedicine, social realities seem to force them to relegate their conclusions to the hollow halls of academia. A compromise between human dignity and human achievement, between risk to the individual and benefit to society appears not only inevitable but necessary. Individualism and the right to self determination are fundamental presuppositions of American society but as Myrdal has said there is a gap between "the high and uncompromising ideals" and "the spotty reality." This gap has been noted by a number of writers discussing human experimentation and the law. For instance, Jaffe makes the following estimation of the importance of these ideals:

"The common law sets a high value on consent to physical invasions that threaten the health or psychic integrity of the individual. The law rightly recognizes that the body is his fortress. Nevertheless, the inviolability of the body is not absolute... (consider the case of O'Brian vs the Cunard steamship lines where Mrs. O'Brian claimed she did not consent to be vaccinated before entering the United States)... the law will look at the entire structure of the situation to see what is demanded in terms of the interest of society, on the one hand, and the interest of the individual on the other."9

Walsh McDermott in his reply to Jaffe's essay, agrees with him, rejecting "the proposition that society really holds that the individual is always, as he says, an end in himself and must not figure as a means to an end beyond his own interest."10
Jaffe and McDermott are speaking about the methods and attitudes of the courts of law. If the moral ideals are in fact operative in American society, over and above that law, satisfaction of legal and institutional demands should represent only the base line for professional behavior. However, studies performed in the United States show that this is not the case.

A comprehensive study of medical professionals in two teaching hospitals was carried out by Bernard Barber (et. al.). In his book Research on Human Subjects: Problems of Social Control in Medical Experimentation, he describes the results of this study. He concludes that despite increasing governmental concern, their attitudes towards ethical issues and peer review, and towards the welfare of their patients, are more altered by professional pressures than by either genuine moral concern or responsibility to the public. If they are concerned to maintain proper ethical standards, their motivation appears to be pragmatic - to keep the public which funds them, satisfied. 11

Another study entitled Human Subjects in Medical Experimentation carried out by Bradford Gray, showed that despite even a conscious implementation of the regulations requiring review and proper procedures for obtaining informed consent, human subjects still tend to become involved in experiments through their own vulnerability and ignorance rather than through an informed desire to contribute to the development of good health care. 12

In sum, the activities of the life sciences - whether researchers treat human subjects as means to socially desired ends, whether they reduce patient needs to biochemical formulae, whether they translate
the exigencies for successful organ transplant into a "scientific" def-

inition of death, whether they define abortion and infant euthanasia
as responsible parenthood — are forcing us to face the fact that our
society no longer comprehends (if it ever really did) the principle,
"every person created free and equal" in the scientific marketplace.
The sociological studies cited above show the symptoms of societal neu-
roosis. Our way of life — supposedly liberal humanism at its best (at
least as it is presently formulated) — can not explain the moral signi-
ficance of what we are doing in making of man a scientific project.
And as the ideals fall short of making sense of this, so also do they
become powerless for motivating researchers to be morally self conscious
in what they are doing. Rather, they represent frustrating legalism —
to be gotten out of the way so that they can get on with their work.

If a way of life, a philosophy, cannot coherently relate the
human values it defends with human activities which it endorses, it must
contain a contradiction of some sort — perhaps some incompatible elements
forcibly welded together for some further end. That there is a break-
down in American regulation (differences seem to be resolved only through
compromise, and people seem indifferent to the solutions) suggests that
there is need for an analysis of the origin of its principles and method
of implementation.

Liberal humanism as a philosophy represents one of two alterna-
tives for man. Either man is part of a fixed order, natural and/or
supernatural, which demands that he simply discover this order and con-
form, or he is an active agent in a changing and developing natural
(and perhaps supernatural) order which invites his creative (and con-


quently his self-creative) involvement. The latter view, I will show is the one which is implied by the principles of liberal humanism. In this thesis, I accept these principles as my starting point partly because, for me the latter interpretation is more adequate, but primarily because they have become the working reality for us in our western so-
society. They are what has given shape to the society in which we live, and has made us what we are. However, because liberal humanism is first of all an image of man, it seems that specific codes and social institutions have difficulty in giving faithful articulation to it.

My purpose in the rest of this chapter then is not to defend liberal humanism as such but to point out its basic premises and the implication of these for moral reasoning and decision-making in biomedicine.

2. Principles of Liberal Humanism: theoretical requirements

What then, is liberal humanism? One has only to read a few essays about humanism to see that the "humanist alternative" both in its interpretation of man and in its implied ethical stance is fraught with difficulties. When humanists try to give theoretical coherence to their position, they do not entirely agree among themselves about the relevance or priority of certain principles. There are in fact many claims to adherence from people whose basic convictions are opposed. For instance, there is a variety called atheistic humanism and yet also one called Christian humanism; there is scientific humanism and also ethical humanism; in contrast to liberal humanism there is also social humanism. Some elements seem compatible with each of these; others do
not. The first problem then is to attempt to establish the core principles which, regardless of their application, have a validity for very diverse thinkers all calling themselves "humanist."

Before outlining these principles, it is important to note an observation made by J.P. Van Praag in his brief essay "What is Humanism?" which limits such an inquiry:

"Is it possible to define the concept of Humanism? In my view it is not possible in the sense in which scientific concepts are defined. The latter are shaped for the purpose of serving in a more theoretical framework of coherent notions. They can be unambiguously defined by eliminating confusing existential elements. Humanism, on the contrary, is what it is through its existential value. It is bound up with emotions and evaluations. It is a moral conviction rather than a theoretical speculation. Therefore it is more suited for a clarifying description than for an unambiguous definition." 14

This point must be born in mind in any attempt to capture and analyze the "philosophy" which underlies our way of life and our approach to the regulation of our activities and lives. For moral conviction often does precede and condition rational statement—whether humanists are marching on parliament hill with the abortionists or with the anti-abortionists. As part of our culture, it is a "movement" or "lifestyle", and it calls for articulation in a systematic way once we find it satisfactory. Because humanism does have existential value, to treat it critically is necessarily to remove it from public life and to place it in some philosophical laboratory where, under close observation, much of its power seems lost. Nevertheless, because our way of life is becoming increasingly fragmented, and competing expressions of that way are being reduced to slogan warfare, there is need for analysis.

This section will outline the principles of liberal humanism. First it will describe four principles which are common to the many
varieties of humanism. Then it will give two more principles which
make humanism, a liberal humanism. In each of these two sections, it
will raise a question about those principles and describe the answers
which must be given to it in order to maintain a philosophical coherence
among them. The third section will then show how these two questions
have particular force within the context of biomedicine, and will raise
a third question which is the practical counterpart of the first two.
It will be seen in Chapter III, where I analyse American regulation of
biomedicine that the problems there arise because the questions raised
in Chapter I are not only not answered in the way necessary to maintain
the principles of liberal humanism, but indeed, are hardly even formu-
lated. Why they do not arise will be the subject of Chapter II, which
describes the historical roots of the American tradition.

A. Humanism: morality as a constructive process

Humanism was originally specified as a philosophical position by
thinkers in the Renaissance who were seeking to free men from the au-
thority of empire, feudalism and the church. These three institutions
were guardians of a cosmic metaphysics which prescribed for man his
appropriate place and actions within a universal order. To the new
humanists this was an order beyond reach or appeal and man was thus
enslaved by an ethic of obedience and conformity to the institutions
which represented it.

To free man from this external and traditional authority, it
was necessary to deny not the order itself perhaps, but the prerogative
of the established institutions to regulate human life. Thus humanists
affirmed the capacity and freedom of men to discover order and to define
for themselves a place within it. This self-creative responsibility depended upon their being educated to their own self worth and abilities. Emphasis was placed on self-knowledge, on one's own life and also on the lives and achievements of men who already knew and had expressed their freedom.

There are four principles basic to humanism which can be presented as faithful to these origins but also as a fair summary of the core of modern humanism:

(1) Man has value and dignity in himself: For the humanist, man is the moral centre of the universe. He exists in and for himself and the absolute value of his life requires no defense.

This is the positive claim resulting from the Renaissance humanist belief that man did not need the authority of an external order and tradition to give him a reason for existence. While this belief was not in its origin regarded as antithetical to religion, today the humanist position is often represented as an alternative to religion for man and his universe are all seen to be complete whether or not there is God.

Because Humanism centres its philosophy on man, its adequacy depends upon a comprehensive philosophical anthropology.

(2) Man is essentially active: As the traditional position placed man in an objective order, it gave to him, as his natural activity, the role of passive contemplation. Man's highest virtue was wisdom - that is, to know the nature of reality and to keep in step with its pattern and rhythm. By seeking a path of least resistance, he would live a happy and just life.
If however the relevance of this order is denied, man is suddenly presented with the opportunity for creative action. His nature is not to contemplate the world but to move about within it and to consciously change it. Nature and its resources, society and its institutions become his instruments, passive in his hands and bearing the consequences of human impact.

(3) **Man is free:** Unlike the world of unconscious nature, human action cannot be reduced to the materialistic explanations of the physical sciences nor to the theological ones of religion. Man is not creative but self creative, and his ultimate activity is to assume total responsibility for himself— for what he is, and can become.

It must be remembered in a day when we are so conscious of the potential power of the biological sciences, that to a thinker such as the Renaissance Humanist, Pico della Mirandola, man's capacity to "mold and fashion" himself was a moral one and the problem of human nature itself was also moral.¹⁵

(4) **Man is the measure of human good:** The universe is entirely ambiguous. It is man who gives it meaning. He has the choice of either taking hope in his life or retreating in despair. He may choose compassion for or alienation from his fellow men. However, humanism as an ethics claims to express normative principles which, though not absolute, give positive moral direction to human action. They express human good not merely as a function of human desire but as an ideal towards which man ought to strive. In other words humanism, unlike a non-naturalist ethic, rejects the possibility of absolute moral statements but, unlike
a naturalist ethic, does give morality a unique significance beyond questions of fact. Anthony Flew gives a succinct summary of this position:

"I take my stand as a scientific Humanist. For as I construe the phrase scientific Humanist the first word indicates an approach to matters of fact while the second refers primarily to fundamental criteria of evaluation. To adopt such a scientific approach unreservedly is to appeal to the evidence of experience alone; a court subordinate to no higher authority, to be overridden by no prejudice however comfortable. To commit oneself to humanist values is to put the welfare of human beings first, to make people supremely important, to adopt human welfare and human goods as the ultimate criteria of right and wrong." 16

Once this is affirmed, however, it becomes a very difficult problem to define precisely what is "human welfare" without, as will be seen in the historical analysis of liberal humanism, sliding into a strictly naturalist or non-naturalist explanation. In fact, the central objection to the humanist position concerns the internal compatibility of the four principles outlined above: how is it possible to claim that man is the moral centre of the universe, giving it both value and meaning, and at the same time to maintain a distinction between an order of values which he might prefer to assign to it and one which he can see ought to be given to it? In other words, how can a moral "ought" be distinguished from a factual "is" in the human self-creative process?

The humanist answer to this problem can only be to provide some definition of human good as a function of man's capacities and limitations - i.e. of his freedom to be uniquely self creative. Otherwise, man will once more be subjected to an external authority.

I will briefly describe what are the implications of such an approach so that the limits of the historical attempt to answer this problem (culminating in the American tradition) will be seen more clearly.
To take this approach is to provide an integrated assessment of human nature which can account for all of the aspects of human experience that contribute to human development and to show that the highest human potential as it may be envisioned is an affirmation of that total developmental process itself. This assessment is, first of all, a creative synthesis of a multitude of diverse insights into one powerful interpretation or image - an image which both explains and reveals who man is and what he can become. David Bohm, in his essay *Human Nature as the Product of our Mental Models* explains the role of reason in this act of synthesis. He states that it is a kind of "formative cause":

In the ancient view, the notion of formative cause was considered to be of essentially the same nature for the mind as it was for life and for the cosmos as a whole. One can understand this notion in more modern terms by considering the flowing movement of awareness. Thought can then be perceived within this flow as a series of momentary product forms, continuously being created and dissolved in the whole movement, as ripples, waves and vortices are created and dissolved in a flowing stream of water. In this process, one can in the first instance discern associative thoughts, in which one step follows another relatively mechanically, through association determined by habit and conditioning. Each such associative change is external to the inner structure of the thought in question, so that associative changes act rather like a series of efficient causes. But to see the reason for something is not a mechanical activity of this nature. Rather, one is aware of each aspect as assimilated within a single whole, all of whose parts are inwardly related. Here one has to emphasize that reason is essentially a kind of perception through the intellect, similar in certain ways to artistic perception, and not merely the associative repetition of reasons that are already known. Thus one may be extremely puzzled by a wide range of factors, things that do not fit together, until suddenly there is a flash of understanding, and thereafter one sees how these factors are all related as aspects of one totality. Fundamental scientific discoveries generally involve perception of a similar nature. For example, there is Newton's well-known insight into the law of gravitation, in which he saw what he called the apple falls, so the moon falls, and so everything falls, under the influence of the universal force of gravity. Such acts of perception cannot properly be given a detailed analysis or description. Rather, they are to be considered as aspects of the forming activity of the mind. A particular structure of concepts is then the product of this activity, and these products are what are linked by the series of efficient causes that operate in ordinary associative thinking. Likewise, in this view, one regards the forming activity as
primary, in nature as it is in the mind, so that the product-forms in nature are also what are linked by efficient causes.17

Because it is man himself who makes these images, (albeit out of what has been given to him from the past, from other men and cultures), and because it is in response to these images that he acts on the world, changes it and is changed, he is a self-creator. Thus, human development itself is a moral process, and the humanist who provides this assessment is a moralist - a kind of everyman. He is speaking on behalf of man and when he speaks well, he has the power to nurture what he sees.

Thus, a definition of human good cannot be a theological one, for man is not God and does not see as God does. Further the human process is not predetermined and the end results are neither contained in their origins nor predictable from them. Adam's fall is neither happy nor unhappy. Man has not been made a shepherd or saint. At his beginning, his possibilities were infinite. Gradually through a process of elimination, he is choosing one. If in the course of his existence he becomes either of these, it will be because he has learned to look at the world and to see what things there speak to him about what he is - because he will see that sheep are there that he can shepherd, and that God is there that he can worship. And if he responds to what he sees, he will know that what he has chosen to respond to is real when he becomes freer to look farther and to choose with greater understanding. Without any self-image then, man's possibilities were limitless, but he had no choices. A totally wise self-image will make all of the choices in the world available to him, but he will have a single possible end.

As long as there remain options to man - if parts of the
universe are unfathomned as either fact or value - he will experience himself as unfinished and imperfect. No moral principle will define what is his final good because he will know that all has not been accounted for, in the world and in himself. Thus, the moral process cannot countenance absolute principles. It will be a continuous self-conscious experience of inadequacy - of the sense that the highest human good has not yet been achieved. It will also be a constant measurement of the image he projects to see how it maintains, nurtures and recreates his uniquely human capacities. And a moral judgement will concern what is appropriate in the given conditions to further the process.

A definition of human good then begins precisely from that point where man is independent of determinisms (although they may exist as reality principles which he must always take account) where he is able to say that he knows what these are and is able to take hold of them and give them purpose. Thus it will not be the role of moral principles to justify actions which would achieve prescribed ends. Rather their role will be to differentiate between actions which enhance the self-creative process and those which tend to reduce it to unconscious determinism.

It must be noted very emphatically that the capacities for this process are not themselves a definition of human welfare; the ability to act, to judge, to be free, are not the end or highest human good. The moral process is a constructive one where man discovers the instrumental means to whatever this may be by engaging with his universe and creating answers to his limitations; and then in that equilibrium knowing the residue of power available for turning it into new directions. As he is a moral being, these limits then are simply his place of work
- for he must have some place in space and time; they are his ground to
stand on but the point is not the ground itself but the fact that he is
standing.

An analogy can be made with the artistic process. Artistic imagina-
tion makes possible great art but the nature of the work which is
produced cannot be predicted either by analyzing the medium out of which
it is made - though this medium does give the work a certain limit - or
by explaining how the imagination works. Both of these explanations
must necessarily be empirical, taking account of what he has found in
the past to be the most creative actions - i.e. where something new has
been achieved rather than a mere rearrangement of material. However,
by understanding both the external and internal limitations on the art-
stic process, the artist can formulate principles which teach him how
to exploit the process to its fullest - thereby creating new works of
art which are now expressions of his highest potential.

In the meantime, as he projects different possibilities, while
he is not able to know what this will be, he will be able to recognize
what is "not yet" such an expression because all that he has to bring
to bear on the project has not been considered. There is self-discipline
here which is often extremely demanding. It is obviously quite distin-
guishable from his inclinations to ride passively with the pattern of
the material or idle play of his fancy.

As man is actor, then, morality is first some sort of construc-
tive process before it is a body of principles. The latter are placed
as markers, both deduced as confirmation that he is a moral being and
preserved as safeguard which he builds on them.
A "constructive" morality then is to be contrasted with a "deductive" ethics for there is a distinction to be made between the moral synthetic process of image-making and the moral principles which assert the relationship of values implied by that image, and the identification of ethical principles which are revealed within that image (given the image they appear to be self-evident) and their systematic application. The status of the ethical principles is entirely dependent upon the adequacy of the image, although those principles cannot be deduced directly from the image itself.

For instance, it may be taken as a moral image that the universe is completely organized according to natural purpose, and that when all things relate to one another in purposeful ways, each serving the biological and physical needs according to this order, the greatest good possible is achieved. The moral principle which this image implies is the imperative that all, including human beings should serve this order in whatever they do. However, it cannot be deduced from this image or principle what ought to be done in a specific case. For instance, it cannot be shown whether a consistent use of artificial placentas for extra corporeal gestation of fetuses would better serve this order than consistent use of women for this gestation. Rather the image motivates man to try to organize the world which he knows in such a pattern and then to deduce from this pattern specific ethical imperatives which will acknowledge what he has constructed. If through a period of time as new factors appear, he finds it increasingly more difficult to act consistently in terms of this pattern, he may either reorganize the ethical system to accommodate the presupposed image, or indeed reassess the
image itself.

The principles of medical ethics give concrete illustration that the difference between moral and ethical principles is very helpful. Consider, for instance, the opening statements of the Declaration of Helsinki, a code of ethics for clinical research formulated in 1964 by the World Medical Association:

"It is the mission of the doctor to safeguard the health of the people. His knowledge and conscience are dedicated to the fulfillment of this mission." 18

These statements express the purpose of medicine. It is a moral one because it affects who people are (including the doctor) and what they can become. As a unified interpretation or image of what the doctor is, it can help him distinguish within its framework what activities are appropriate to him as a doctor and what are not. These can be expressed as moral principles. Because medical research is continually presenting new situations to him and making available new kinds of techniques, this image helps him to chose from among them those which are faithful to what he is. However, he must always be aware that his own self-understanding too undergoes (as it should) a gradual revision as he practices his art and learns in a very concrete way what this mission is and can be.

Medical ethics is the ethics of the profession which already is committed to this "mission". Its principles, such as that of getting informed consent from the patient, do not justify this mission, but are entailed by it because they provide rules or guidelines which if followed usually tend to enhance the moral intent of the activity. (They are related rationally to the moral principles which state this intent).
Sometimes, for instance, where the patient is mentally or emotionally incompetent to give consent, the ethical rule is sacrificed for the sake of the patient's own welfare, which is the purpose of the activity in the first place. Indeed, a doctor who would consistently apply the ethical principle in an uncompromising way would be regarded by his peers as a very poor doctor. If it appears within the medical profession that there is a growing conflict about the application of the ethical principles, probably what is required is not a further specification of those principles but a reassessment of the original image - of what must be the purpose of medicine in relation to human welfare. A set of ethical principles, however, is useful to the profession in most instances and tends both to be timesaving in that complete moral reflection is not necessary all the time, and to be a safeguard in that people often are more swayed by immediate inclination than careful moral reflection.

In sum, ethical principles make sense, and have the power to motivate men to a certain kind of action, only as they relate to a broader image which belongs to the moral process itself. Because the image is an interpretation, an attempt to capture all the many relevant experiences in a single ideal, no set of ethical principles can possibly exhaust its meaning. What the image does is to give them coherence and intelligibility as a set.

Further, ethically good action is that which is in keeping with the set of principles deduced within the framework of the image. Moral action is that which follows a broader assessment of the set of principles themselves in relation to a particular context. It follows the
conclusion that such an action whether or not entailed by the ethical principles either confirms the adequacy of the moral image or assumes one which can be shown to be more adequate. Finally, it is the outcome of the conclusion that of all the choices possible, the one chosen best nurtures the moral process itself: it reveals most clearly what are the limits to present human capacities but also what is possibly the "not yet" - the way of life now imaginable because of the action but far from achieved.

B. **Liberal humanism: Society as subordinate to human community**

In order for the humanist to distinguish between "ought" and "is", and at the same time to assert that man is self creatively free, he must, as I said, ask what man's limits and capacities in this process. As in the case of the artist there are two kinds. The first has to do with those internal to him, as he is individual - that is, his ability to know himself and his world objectively. Above, it was seen that he is a moral being and this precludes an explanation of mental events as solely an extension of natural phenomena in the physical world, or the reverse. It requires a view of morality as a constructive process where man as image maker is creator of that process. The second kind has to do with conditions external to him - as he is part of his environment - that is, his ability to remain self consciously separate from it and able to use it for his own self-development? Because man is a social being, his personal relationships especially when they are institution-alized as "society" in which he lives become a central consideration in this second question. Again, if man is a moral being, this precludes explanation of personal decisions solely as an extension of cultural
conditions or the reverse.

The following two principles raise a second question which concerns the external limits to man's capacity to be self creatively free and at the same time to make significant moral judgements. I will describe what this is and also the kind of answer which must be given to this question if these principles are to be maintained:

1. **Maximization of individual human potential:** The liberal humanist stresses not simply that man as a species has dignity and value, but that each individual person has an inherent dignity. He argues then that each person, regardless of circumstances which produce social and biological differences, ought to be treated as an end in himself. That is, the separate destinies of each individual are thought to be equally important, and are constructive of the final good of man as species.

   Further, it is argued that each individual is able to pursue the course of his own life best when there is as little interference or regulation from others as possible. The role of government then is to establish order in the society so that all may pursue their individual goals in the best way possible. It defines the rules of the road.

2. **Social Justice:** Men are born into widely differing circumstances, and some are more able than others to assume responsibility for their own lives. Further, it seems that the destiny of each person is somehow tied to that of others, and the difficulties of each somewhat of a limit to all. Thus, since the destiny of each individual is important for the good of all, the government in seeking a minimal order must not only
define rules of the road in order to prevent accidents, but it must also build roads and operate an accessible public transit system so that all may be able to assume self-responsibility in achieving their destinations.

The implication of this activity, however, is moral, for the government is affecting and changing the given order of human relationships. Yet if individual development has priority over institutional exigencies, and it is only in that development that ultimate human good is created, how is it possible for both the government to act as a moral instrument and individuals still to remain free? This is the particular question which the liberal must answer in showing what are the external limits to the human capacity to be self-creative.

For the liberal humanist, the answer must lie in a distinction between an open self constructive human community and regulative but closed human society. The difference between the two depends upon the way order is produced and maintained. In a community, it is the nature and purpose of personal relationships which give shape to the community and which defines its boundaries. A "neighbourhood" community provides a simple example of this. The extent to which there occur such things as a sharing of garden tools, a concern for the children in the area, or perhaps organization of a playground, will depend upon how individuals in the neighbourhood relate to one another.

It is interesting to see that often new families can move into such a community and for the first time be drawn into neighbourhood activities, and enjoy being part of the larger group. Indeed, because its members change over a period of time, the community is a dynamic
structure which changes in its nature. Individuals in their own development contribute to the culture and way of life of the whole, but the opposite also occurs. The way of life of the human community has a certain impact on individuals. In other words, individual and cultural images are closely interrelated, and in fact often mediated by other intermediary (or perhaps conflicting) groups such as the family or a religious organization. Values which people hold then are related to cultural values but they are not reducible to them. Further, because they arise within a historical context at a point where man has not achieved a total self-image, they are not absolute. But they don't deny the possibility of absolutes, for to do so would be to remove the motivating power underlying the continuous creation and assessment of human images. And it would make no more sense to man to stop asking, "what difference does it make", than it would to stop asking, "what is it".

A society, on the other hand, is an institutionalized community. What has been seen to be necessary to maintain good relations among its members (perhaps because the community has become large and complex) will be formalized as rules for order. In this case, the reverse is true: it is the society which defines what are to be the kind of personal relationships and it does this in order to safeguard its existence. This "institutionalization" may be the mores of a society, or a tacit acceptance of etiquette, but also, obviously, government and its laws.

If the two principles of liberalism are to be maintained, it must be the case that society be seen as consequent to human community and existing in order to serve that community. Society, will always be at risk (just as ethical principles are always at risk in the moral
process) for revision and redefinition of its obligations and rules. A society which serves human community moreover, will not only not establish a totalitarian status quo but it will, in fact, establish its principles in a way which will encourage the individual moral process and the inner cohesiveness of human community. That is, it will not try to define what is human welfare but will foster the process of its discovery.

In sum, to answer the question, how is it possible to maintain both that man is the measure of human good and that moral judgements are significant, it is necessary to show what are the conditions for and limits to human individuality and human community. Given an answer to this question, meaningful ethical statements can be made about various societal goals in view of the requirements of community and individual development, without reducing the human process to a teleology.

The historical answer to this question as well as the first one will be given in the next chapter in order to explain the nature of present difficulties in regulation of the biomedical sciences. In the meantime, to complete a description of liberal humanism, the theoretical issues raised above will be given practical expression within the framework of biomedicine.

Finally, a very important distinction must be made between classical humanism and the position of some modern humanists. It is possible to defend human freedom and a universal (perhaps divine) moral order. If there is such an order, a natural or supernatural moral law, the moral process is one of discovery. Through active engagement with the world man may learn what are the reality principles about himself.
and his universe which he cannot ignore without sacrificing moral goodness. These principles are not available to him except as he lives and strives towards goals which he creates. In this sense he is the measure of the universe and completely free to determine his own moral destiny. He can recreate himself, draw upon all resources available to him and, by implication, build his own salvation.

Some modern humanists would take a step from the fact that no external moral order can be proven, to a denial that one does in fact exist. The moral process then is not simply one of discovery but one that is totally self-creative. Theoretically at least, there are no obstacles or limitations which man cannot overcome and turn to his own purposes.

A morality which represents the former view is made up of principles of prudence. If the process of discovery is confined to the natural order, the principles of prudence amount to pragmatism. While in this view it is admitted that human spirit is something different from biological life, ultimately it is accepted only as instrumental to the practical demands of that life. If this process were perhaps to recreate the natural and, in that action, discover certain reality principles about man and the universe not reducible to the laws of nature, in some sense these principles would express a supernatural order—principles of prudence which would be termed wisdom. In either case, the salvation which man builds for himself is a place already prepared for him. He is not determined to achieve it but he will discover in the end that none other is completely satisfactory.

The latter morality calls for the same kind of human activity
but claims that the final moral order (if one can project an end to time) will be whatever man does create. It will be the best because there is no other.

It is my view that there is no way to know which alternative is true. Each takes the risk that the other may be correct, but both behave in the same way. The only difference between them is that a defender of the former view claims the kinds of resources he draws upon increase his capacity to achieve a fully integrated and satisfactory life. And this, given the full use of all his faculties including reason, can be his only test.

3. Liberal Humanism and Biomedicine: practical questions

The theoretical questions raised above are ones which have been subject matter for moral philosophy. However, they have a very important practical counterpart which should concern anyone responsible for giving directions to the sciences. For, if it is the case that man does not know what are the limits to his capacity to be individual, and to maintain a vital human community, choices that he makes can become self-destructive. When he is pursuing new possibilities which may alter who he is and the kinds of relationships he has, he may in the end become victim rather than beneficiary of his own genius. This arrogance (sometimes referred to as "hubris") is observable in individuals and has often been the subject of literature: it is not the mediocre but the great who destroy themselves because they don't comprehend the nature and limits of their own abilities. This is also true, I think, of societies and of man as species.
In the past, moral principles have provided a safeguard (among other things) primarily against personal disintegration and also, against social breakdown. Liberal humanism claims however that no moral principle is absolute and no moral order of man predetermined. Man is measure of the universe and he is free to make of himself what he chooses. It is possible as I said above, to hold the view that man is free to determine his own moral destiny without denying that there is a fixed natural order to which he will conform ultimately as he achieves human perfection. (This assumption, it will be seen, underlies American liberal humanism). The moral process then is constructive in the sense that man does not inevitably achieve his highest good but it is primarily one of discovery through his engagement with the world and his attempts to make of it what he would. But in the end, morality really becomes simply a matter of pragmatism. It amounts to taking account of the intractable demands of natural environment, and of his biology and acting within these limits. If nature is completely lawful, then moral obligation is completely determinable. To most humanists this is not acceptable because human freedom is sacrificed to the workings of nature. To use a phrase from the vernacular - he is free only "to like it or lump it."

However, it seems that the biomedical sciences are denying also that there is a fixed natural order. John Maynard Smith, a geneticist, states the following, which explains what is meant by the idea of "changing human nature":

"It is impossible - by definition - to alter the nature of an individual once conceived, but it may be possible to alter the frequency in the human population of individuals of different genetic constitutions."
Such an alteration of course would have a tremendous impact on society, on its preoccupations, and on the things it values. Gradually man's self-image would also be altered and the way he would perceive the world and the possibilities available to him.

Geneticists are working towards the total comprehension, control and recreation of human biology and in fact have already had partial success in isolating and controlling genetic material. If man is able to alter the natural order, specifically his own nature, according to the ends he chooses, then not only is morality a constructive process, but so also is biology as it has gained self-conscious direction in man. The exciting thing about this possibility is that, once morality is not tied to a fixed natural order, neither is it reducible to determined natural law. Man may be able to speak about "ought" in a way which embraces pragmatic issues but steps beyond it.

In any case, man is still faced with the theoretical question in a practical form. Given the liberal humanist claims both that man is free and that moral judgements are significant, it is the following: how is it possible for man as a self-constructive project to be beneficiary rather than victim of this project? How can what is uniquely human (according to the humanist, his capacity to be moral) be enhanced rather than reduced in his assuming the self-creative responsibility for his biology?

Some may say that this is a false question because human nature is not completely malleable and man cannot be totally self creative. However, whether or not the goals we set in biomedicine are realizable,
it seems clear that the images we hold of ourselves are to a certain degree self-fulfilling, and that human nature is indirectly malleable. David Bohm makes this point also:

"When we speak of human nature, we generally imply that we are talking about something that is more or less fixed in its qualities and properties, and that exists essentially independently of our thought about it. In this essay, however, I am going to propose that that aspect of behaviour which has been attributed to such a fixed and independently existent human nature is actually a continuously changing and developing artefact, created in the course of human work and social relationship, and very much dependent on how it has been considered in thought.

What is especially significant in this regard is that throughout all his activity man has developed a way of thinking about himself in terms of generalized models of what the human being is or ought to be. When accepted as true, these models have served to shape the character of the individual, who feels impelled to conform, either through fear of being stigmatized as abnormal or deviant, or through the sheer attractions of the models. Evidently such models not only act as positive stimuli to certain kinds of behaviour, but also function negatively as limits, tending to inhibit exploration of new modes of thinking and new forms of social relationship. That is to say, they are not merely structures of abstract thought taking place inside people's heads, but rather, they operate in the individual and in society as functioning realities which play a key part in helping to fix the bounds of that very human nature, of which they are supposed to be a model." 21

Mental models (or "images" as I prefer to call them, because this word implies that it is not possible to give a completely systematic explanation of them) have been articulated to try to capture what man understands by human welfare or virtue and are found abundantly in mythology and religion. The Greek gods and heroes for instance, were idealizations of human virtues which people admired and emulated. In this light, what some would regard as intolerable living conditions would for others be entirely reasonable given the nature of the image itself which made sense of them.

Further, just as it can be seen from everyday experience that
children tend to be shaped by the images or expectations others have of them, so it seems that it has been man's capacity to project an image of what his life ought to be has had a significant effect on his own biological evolution. René Dubos, a noted biologist, has developed this point in his book *Man, Medicine and Environment*. He makes the distinction between the biological condition of man, that is, a matter of health, which is relative to the environment in which he happens to live, and man's assessment of his own welfare. Man is distinctive from the animals because, instead of evolving in direct relationship with his natural environment, he has instead gradually built a "buffer", his culture, which expresses who he is and what he thinks is important, and his evolution has occurred in relation to that. In other words biology including the genetic selection which has occurred (and that much more slowly than the animals because he has maintained the subtropical conditions of his origins by building shelters and wearing clothes) has been shaped by his own self-images.\(^{22}\)

Further, in evolutionary terms, the human process seems to be one of gradual emancipation - not away from biology, but out of it. That is, man's development has had his biological origins as a necessary precondition for his freedom to be self-creative. Now as individuals we are biological beings still, even though we are free. Our biology is a "material cause" of our capacity to be directors of the human process.

Altogether, considering also what was said in section 2, it appears that the images man creates have three functions. First, they
have a cognitive function: they make sense of the world and within them a rational system can be deduced. Secondly, they have an affective function: they express a commitment to what matters and they motivate man to act in a certain way. Thirdly, they are, to a certain degree at least, self-fulfilling; man admires, imitates and gradually is shaped by what he knows and sees. These three elements are true for man as individual or species, in a family or in society.

Thus, whether or not science will ever be able to manipulate the human genetic code and to change human nature (Dubos, for instance, thinks not, whereas H.J. Muller thought this would be possible) the fact that our society sees man to be an appropriate subject for experimental research and improvement will also have a self-creative effect, indeed, doubly so. The longer term selection which can occur in the light of this image can be more quickly affirmed by the expectations placed upon the subject in any particular experiment. What the experiment seeks to establish will tend to be confirmed by the subject himself who, approving of its goals, will conform to them. (Hence the need for "double-blind" experiments in the testing of drugs. However, most experiments cannot be controlled as rigorously.) The goals we set for ourselves, however illusory, have, insofar as we pursue them, an impact on us as moral beings, and especially so in biomedicine. It is far more important to understand why we are doing what we do than what are the methods we are using to do it — although the methods we choose will probably appear to be appropriate because they also will be selected because of prior commitments we have.

The above question, 'how can man be beneficiary rather than
victim of his biological project; has this broader context then. Regardless of the potential reach of genetics, it is the case that man has always in all indirect way been creative of his biology, and the question still applies. To answer it, we cannot appeal to absolutes about the nature of man or society, for this would deny the theoretical requirement of liberal humanism that human development be understood as a self-constructive process. Instead we must, in view of the form of the process itself, ask what image (or images) of man is implied by the activities which we would pursue — in particular by the agenda of biomedicine, — and whether the image itself to which science and its technologies are themselves subordinate is one which, if fulfilled, enhances the self-creative process or contradicts it.

The purpose of this section then is to show more particularly how the development and application of the reproductive technologies seem to reveal an irony in the principles of liberal humanism (as described above) and the necessity of answering the question, "how is it possible to be beneficiary rather than victim" in this context — that is, the necessity of asking what is the image of man implied here, and will it be contributive to the self constructive process?

Liberal humanism is obviously stimulus and rationale for the biomedical sciences, for in some way the application of these sciences contributes to human welfare by reducing the limits of disability and disease. A person's health is highly relevant to his assessment of options, to his self image and sense of self worth. The moral affirmation of individual dignity and uniqueness is only pious platitude if it is not earthborn and well fed.
Central to human uniqueness is the qualitative transformation which human beings give to reproduction. While "species preservation" is an explanatory model in biology and applicable to man as well as every other form of life, men and women often choose or refuse parenthood for a variety of reasons which make of biological processes a highly personal form of self expression, creativity and communication. That there is about one recorded abortion for every six pregnancies in Canada (and one in every three carried in the U.S.A.) attests to the fact that most people find reproduction to affect radically the moral process of self determination.

"Control" of pregnancy has a positive as well as a negative thrust, for biomedicine is committed to facilitating as well as preventing it. The preventative technologies - birth control, sterilization and abortion - are matched by those developed to help the ten to fourteen percent of couples who are infertile - artificial insemination, in vitro fertilization, embryo transfer, etc. In other words, while many focus on abortion as a symptom indicating a growing disregard for human life in our society, a broader assessment of reproductive technologies suggests that it is part of an increasing desire to subordinate human biology to personal goals, biological life to personal life. It is pointless to judge whether this shows, generally speaking, disregard or a very high regard for human life until we can better understand how the biological constructive process relates to the moral one - until we can see whether it can be used to foster human wellbeing. This "can" depends upon biological, psychological, social and cultural factors.

Control of pregnancy also means control to a certain degree of
the biological quality of the offspring, for part of the reason children have such significant impact on the parents' sense of self determination is that their physical, mental and emotional characteristics are so closely tied to those of the parents - as they resemble them and reveal what kind of people the parents are both biologically and socially, and as they affect the freedom of their parents, either as confirmation and support, or as a drain on their time and energies. When parents and children are both able to achieve a normal productive existence, the society of families is thereby enriched and freed from the burden of providing compensatory institutional care. However, studies have shown that in Canada there is one child in every fifty born with some congenital problem - problems ranging in severity from spina bifida, anencephaly and Downs Syndrome, to cleft palate and club foot. Admissions at Montreal Children's Hospital show that about twenty-seven percent of these are made up of genetic diseases and other congenital malformations.

"Quality control" however, is much less developed in biomedicine than "quantity control" and in fact where disorders are discovered in fetuses and newborns, the former approach is still hardly distinguishable from the latter. In most cases parents who are at risk for producing defective children will simply be screened for those diseases which are detectable and offered either effective control methods, selective abortion or in some cases non-treatment of newborns.

Ideally, of course, parents usually prefer effective treatment to killing the fetus or newborn. (The latter, despite the jargon of genetic counsellors, is hardly classifiable as "therapy"). Researchers
are working towards corrective treatment as a solution to this problem and they have had some success in a few cases in perfecting techniques for fetal and newborn therapy. In a couple of instances such research has provided striking benefits for society. The following description of the consequences which research on R.H. Isoimmunization disease has achieved shows that biomedical technology for control of human reproduction is no small illustration of the humanistic imperative in practice:

"Approximately 12 percent of couples in the United States are at risk for having an affected infant. Nearly 25,000 infants could be affected yearly. Since initiation of exchange transfusion, neonatal mortality of affected infants has dropped to about 2.5 percent. Intrauterine transfusion has reduced the annual number of stillbirths due to the disease from 10,000 to less than half that number. The entire amount of money used to support Rh disease research from 1930 through the successful development of the vaccine in 1966 is the equivalent of the present cost to society for lifetime care of six children irreparably brain damaged by the disease."30

This approach to fetal disease is, broadly speaking, referred to as "negative eugenics." Its purpose is to help prevent the birth of abnormal children for the sake of the parents, of society — and even of the children themselves! From a scientific viewpoint perhaps the more exciting area of research is that aimed at "positive eugenics" — that is, genetic engineering in the most precise sense. The goals here include both treatment of genetic disease by the alteration of the genetic complement of individual fetuses (perhaps in vitro at the blastocyst stage) by D.N.A. transfer and improvement of the genetic quality of the human gene pool by genetic surgery or selective breeding. Such a goal was proposed by the scientific humanist and Nobel Prize winner Dr. H.J. Muller, as a necessity, because the positive eugenic effect of natural selection will eventually be lost as medicine makes it more and more possible for people to reproduce their own defects.32 This
program might be best pursued through population wide genetic screening for the most debilitating abnormalities and the use of banks of frozen sperm, ova and human embryos, especially in cases where parents are unable to produce healthy children of their own.

Muller's position regarding the necessity for a positive eugenic program is still highly controversial on scientific grounds and may or may not be acceptable even as a practical solution, but it is the first indication of the irony which seems internal to liberal humanism when it endorses man as a project for biological improvement. It is precisely because we have chosen to serve human welfare specifically by freeing individuals from their biological chains that now there are more people suffering from genetic disease and continually escalating costs of health care. And still we espouse an egalitarian standard in treatment. This irony may be emerging simply because the power of our piecemeal technologies reaches far beyond our understanding of the complexities of nature with which they interfere. Nevertheless, this has also a moral counterpart, for the very principles of liberal humanism are being denied (or at least shown to be inadequately examined) by the consequences of their implementation.

What points of difficulty appear when biomedicine is pursued within the context of liberal humanism? This section will identify these questions in very general terms in order to indicate what issues will be the test of the American tradition, and also what are some of the deeper issues which must be addressed before we can make justifiable judgements about what ought to be our scientific agenda. The four questions which will be raised are subquestions whose answers would help in
turn to answer the practical one, "how can man be beneficiary rather than victim of his own genius?"

1. **Man has value and dignity in himself**: In our society we protect the life and dignity of each person as a self-determining and responsible individual. This has expression both in the ethical codes of the medical profession and in the courts, which safeguard the values society judges necessary for its very existence. Both proscribe interference by a physician or researcher in the life of a person, even where that person may be acting in full awareness against his own best interests. Neither will they permit persons to be used without their informed consent as means to other ends such as those of research.  

As long as humanism was regarded as an expression of moral self determination, and discussion of the "nature" of man about his moral capacities, the biological element as constitutive of that nature was considered only as it was seen as a distractor from the "pilgrim's progress." Within that framework, the assumption that it is quite evident who are persons to whom the philosophy applies remains dormant, for the distinction is made as one simply between life and death. Similarly the doctor and the law apply the principle of informed consent given the knowledge of who are the patients. In other words, the moral relationship establishes the principle, and the existence of two cognisant people (or proxy) the relationship.

However, with the growing control of biological processes, the "either/or" condition of life and death has become blurred by a series of gradations which require the physician (or parents, or hospital, or
society) to decide what must be the nature of the relationship between himself and the human being in question. But on what grounds is he to do this? The discussion above indicated that a consistent position espousing the principles of liberal humanism required a constructive morality, one where the means for ultimate human dignity and value were not to be identified with that end itself, and where means such as food, and shelter and health care which permitted man to step beyond the demands of his biology were thus only examples of such instrumental goods— not to be ignored or denied but met in order to begin that freeing process where further human activities show that they make no difference. If human health then is an instrumental good for human dignity, a decision about whether the health of the human being in question falls within the area of the physician's concern, cannot be dependent upon a prior assessment or assumption of his value or dignity, for it does not exist any more than a piece of art as it is still a work of the future in the mind of the artist. What then does the humanist mean when he says man has value and dignity in himself? Is he speaking about all of the biological variations which fall under the species category "human being"? Does he mean that this value is identifiable and inherent in each individual?

There is a growing fear, on the one hand, that we are becoming increasingly indifferent to human life as it deviates from some desirable norm. On the other, many feel we are over-protecting it with a senseless moral fastidiousness. With the addition of biological self-determination to the humanistic project, this question must be faced by those responsible for the regulation of the life sciences. The next
chapters will show that this problem is articulated as "What is a person", and thus "Is X a person?", why such a formulation has occurred, and why both the formulation and thus its resolution are inadequate.

2. Man is essentially active: The new reproductive technologies are making Mirandola's oration a literal reality as genetic engineers are beginning to improve the human race by selective breeding and genetic manipulation. This seems to some scientists, as I said, to be a growing necessity because medical intervention in the natural selective process has already paradoxically increased the limits on man's capacity to act on his world. Longer and healthier lives have produced a population explosion, a heavy load of genetic defects on the gene pool, strain on the environment and natural resources and tensions within society with increasing health care costs. Yet will such a proposal by geneticists also have a similar effect?

How are we to proceed in this matter? To breed for a superior species seems to require decisions first about what truly is superiority. In fact Muller did not go ahead with his AIID program because he could not agree with the man who was going to fund it about whose sperm ought to be used.

The state must in some way regulate our choices, if only first of all to ensure that in the face of limited resources we do make the most of what we use. Yet demanding a solid return on investment does not define what is "solid" or "desirable" about any return. To simply breed for desire or satisfaction may produce a highly inactive Brave New World scenario where genetic engineering will have simply completed
the species reduction originated by antibiotics. Walsh McDermott, when Chairman of the Department of Public Health at Cornell University Medical College, commented about human experimentation, for instance, in a way typical of many who are closely associated with formulation of public policy:

"He asks 1) From where does society get its rights or interest that makes it imperative to perform biomedical studies on an individual? 2) how is the individual subject selected? and 3) how are the social priorities decided?... "The social priorities are easy, he replies; any small group of certified medical statesmen can settle them in an afternoon. As we all know it is the other two questions that are so thorny."34

It is highly unlikely, given the complex interrelationships existing between human biology and environment (as well as the questionable one between what might be called "bodily" and "mental" states), that social priorities if settled easily will be settled wisely. But what is more frightening about his summary comment is that he shows little awareness that the solutions to all these questions (as well as some others) will be very much related. The origin of a society's rights and interests, and its treatment of individuals, will be of a piece with its determination of priorities in the health field.

To ask how we can know what decisions are most conducive to human welfare within the context of the constructive morality faithful to principles of liberal humanism is to ask not what must be the ends achieved but rather, how can man be director of his self creative project rather than just material for biological evolution?

It will be seen, however, that the problem is being perceived in a very limited way because there is a gap existing between "ethics" and "science", between protection of persons on the one hand, and
formulation of scientific goals, on the other. This question instead will appear as the following: how much risk to individuals can be justified for the sake of biomedical benefits for all?

Why this is the case will emerge in my analysis of the philosophical resolution to the theoretical questions raised about liberal humanism in part 1.1.

3. Man is free: Pursuit of the life sciences is necessarily a collective activity because we all must participate in one way or another, if not as part of a particular group of scientists and doctors, as subjects and patients, as taxpayers and, perhaps most importantly, as evaluators of social policy. Thus the moral individualism implied by the Renaissance humanists, even now in retrospect questionable, is certainly impossible when the human project is biological self determination. The history of the development of several prenatal therapies which was presented to the American "National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research" shows how complex is the ongoing development of knowledge - of observation and experiment, of testing and retesting, and the growing perfection of consequent techniques through actual application. This development cannot be separated from the moral assessment of what is the value and dignity of human life; and of what is the nature and role of individual freedom on the one hand, and of societal goals, on the other, in affirming that value.

For instance, a study of the research program and development of policies to deal with congenital rubella syndrome shows very concretely how the concept of moral freedom of individuals as represented by
the principles in the first section is still highly simplistic. 36 Congenital rubella syndrome has been one of the most damaging diseases to affect the fetus. If a pregnant woman contracts rubella in the early stages of gestation it produces a wide range of defects and, in 31% of the cases, mental retardation in varying degrees. Because rubella has been a common childhood disease occurring in families at a time when the mother is most likely to be pregnant, it has posed a very grave threat both psychologically and economically to the family and to society. Now, because of extensive research, the cases of congenital rubella syndrome have been drastically reduced. However, two points concerning this achievement must be noted.

First of all, it was discovered that despite the contraindications of animal studies, a newly developed virus vaccine could not be used on pregnant women because, like the virus itself, it also crossed the placenta and was damaging to the fetus. The only way this could be discovered was by researching its use either prospectively where women were planning to abort a fetus in any case, or retrospectively where a sufficient number of accidental vaccinations had occurred to give support to a definite conclusion about its safety. This was a choice between using human fetuses for research which was damaging to them or retarding research at the expense of victims of such accidents. Today we are as much the inheritors of the moral element as we are of the knowledge achieved - first-of all, because the child affected inadvertently by this or other detectable diseases is less tolerated now than he ever has been. In other words unreflective technology answering the biological demand is answering the first two questions raised above for
us — that is, what do we mean by the principles, "man has inherent value", and what is the meaning of human welfare! Surely this is an abdication from self determination.

Secondly, as it was discovered that the vaccine could not be used with pregnant women, elimination of the fetal syndrome had to be achieved indirectly by an effective and comprehensive program for immunization of all children for a disease relatively harmless to them. In other words, the solution was to eliminate the likelihood of a pregnant woman's exposure to the disease, by applying certain controls on the population as a whole.

In fact, although biomedical research began on the premise that social justice should serve individual freedom, the demands both of the biological problems themselves and of the research protocol suggest that humanism as it is liberal works only as we have the luxury of unlimited resources and isolable biomedical problems. To be serious about humanitarian concerns as they require research and technology seems to require "barefoot doctor" collectivism in some form. In other words, it seems that while we are abdicating through default, we are also being deposed by the biological agenda to improve human nature.

As we choose to seek therapy or to eliminate other kinds of fetal diseases — in particular, genetic diseases — the two points above may be replayed continually. There it seems individual freedom will not only have to be compromised if the biological project is to be effective — a project purporting to enhance human freedom — but a certain moral determinism of individuals resulting from research decisions will be operative. How, then, can we pursue biomedical goals at all — an
activity which requires a collective approach, and the use of individuals for common goals — and at the same time maintain the moral freedom and priority of individuals?

This problem is being presented, however, only superficially, as the inevitable tension which always exists in society where collective goals cannot permit total individual freedom. Conclusions about what must be done about this projected tension tend to overlook the deeper problem: usually, the implied question is, "what is feasible", of what is acceptable to the general public, while what is required is a fundamental understanding of the nature of man as a moral being as he is both individual and social. The reduction of this problem to "feasibility" is as I will show the consequence of the particular historical answer given to the question which now remains as an unquestioned assumption.

4. Man is the measure of human good: If the theoretical problem of maintaining the principles both of human freedom and of meaningful moral judgements has not seemed very pressing to humanists in the past, it is perhaps because what must constitute human welfare seemed entirely self evident. Mill was able to speak about "the greatest happiness for the greatest number" because in everyday affairs men struggled for the same things. The threat was not internal disagreement about what those things were but, rather, external politics which interfered with that achievement. In other words there was a tacit assumption about the baseline for human normalcy which acted as the measure for human decisions about such things as family priorities and reproduction.
Today we tend to regard the nuclear family structure—father, mother and two offspring—as somehow normative and somehow proving "traditional" values such as the sacredness of new life and the priority of the new generation. These values affect reproductive decisions and the mode of parental care given children, and they permit the permissive social structure which must then interfere only in cases of need or default. It is because this way of life seems so normal and necessary that ironically the important practical effect of liberal humanism is the growing fear that because of the new reproductive technologies which now permit a separation among the genetic, nutritive and social variables of parenthood, we seem to be facing a breakdown not only of the traditional family structure but of our society as a whole. And the outcome must inevitably be replacement of families with social organization according to state defined prudential values.

For instance, Dr. Steptoe, who was one of the two doctors who achieved the first reported live birth of a baby who had been conceived in a test tube and as a blastocyst implanted in her mother's uterus, was quoted by the Globe and Mail as stating categorically that the use of surrogate mothers to carry embryos for another couple should not be practiced. In other words, he approved the use of the technique only as it served the traditional form of family, although it was now possible (adding the AID possibility) to have several people involved as a parenthood package and anyone (or several or none of them) remain as the "social" parent.

Yet why should not a mother with an Rh. problem, or a blossoming career, choose a baby carrier as readily as she might a babysitter?
Why not permit singles to have children if they wish (as they have been able to by adoption) by AID (in the case of a woman) or surrogate mother (in the case of a man)? A report produced by the Royal Commission on Family and Children's Law, entitled Artificial Insemination, would not recommend against the possibility of single parenthood through the use of AID. Rather, it argued that availability of the technology depend upon the applicants "ability to nurture" a child on her own. Will it be the role of the state or public institutions (if not Dr. Steptoe) to ensure the proper use of sperm banks to dictate what constitutes the ability to nurture a child?

This is the fourth question then which must be asked: man going to measure the value of any biomedical goal? That in the American tradition this question appears instead decides? These are the four issues which arise when the biomedical project is placed within the context of the principles of liberal humanism:

1. What does it mean to say that man has value and dignity?
2. How can man remain as director of this self creative project rather than be merely its material?
3. How can man pursue this necessarily collective activity while at the same time maintain as a priority the moral freedom of individuals?
4. How is man able to measure the value of biomedical goals?

It is not possible to answer the general practical question about biomedicine - that is, "how can man be beneficiary rather than victim of his own genius?" - without considering these more particular subquestions. Because liberal humanism is a way of life rather than a systematic philosophy, its principles in themselves cannot answer these questions.
Some effort must be made to look more deeply at their requirements - at what must be the nature of a biological species who can claim that the principles of liberal humanism are indeed applicable to it. I have suggested in the preceding sections that man, who makes this claim, must be engaged in a self-constructive process which both is made possible and is governed by his capacity to make images - to give formal coherence to all that he experiences. Because images have the two theoretical functions (cognitive and motivational) and the third practical one (they are self-filling), they precede human action and condition it. Thus the answer to the question, "how can man be beneficiary rather than victim of his activities"? must be given in terms of the images assumed by the activities themselves. That is, the liberal humanist must ask whether the nature of man implied by the activity enhances a constructive moral process or denies it. The principles of liberal humanism will be true for man only if he chooses to make them so.

The growing sense of unease resulting from the development of the new and supposedly therapeutic techniques which have been described in this section is really the result of the practical impotency of the principles in themselves to express what it means to be human and to help us to know whether we are beneficiaries or victims of the biomedical agenda. Faced with this problem American decision-makers, instead of looking more deeply into this question, are tending to look to the social sciences for a definition of normalcy and to the voting populace for a definition of what is desirable. This approach has been described as navigating "by a landmark tied to your own ship's head," because both reduce discussions about what ought to be pursued for the sake of
human welfare to a gulf of how people usually behave and of what they generally desire.

The first section of this chapter described some of the symptoms of breakdown in the American regulative tradition. That this is occurring suggests that its expression of liberal humanism is not meeting the theoretical requirements described in section two, nor therefore facing the questions raised about biomedicine in section three. In order to analyze the kind of regulation which the United States does give to biomedicine, it is necessary first to show what have been the historical answers to the questions about the nature of man – that is about his internal-and external capacities and limits in his self creative process – which have given to the United States its particular form of liberal humanism. This will be the focus of the second chapter of this thesis.

Chapter 1: Footnotes

1. The Encyclopedia of Philosophy, Volume 4, p. 70.
3. Ibid., p. 23.
4. Ibid., p. 4.
5. Ibid., p. 1.
6. These are a series of working papers which discuss ethical and legal issues related to the protection of life in Canada. They also conclude with specific recommendations. They are available, free of charge from this address: Law Reform Commission of Canada, Protection of Life Series, 130 Albert St., Ottawa, Ontario. K1A 0L6
The Food and Drug Administration as well as the National Institutes of Health belongs to the Department of Health Education and Welfare. It has unique problems of its own which I have not considered in this thesis. However, on the basis of Curran's essay I have judged that my own analysis would not be altered significantly if I were to do so.

8. Frankel, p. 46.
10. Ibid., p. 218.
14. Ibid., p. 43.
15. See note 1.
17. The Limits of Human Nature, pages 95 and 96.
19. "Pragmatism. The other, more cautious form of biologism concedes that spirit is something different from life. But it is only a subsidiary organ of life. It does not contain its purpose intrinsically; its task is not, as the Greeks claimed, to discover truth as rich and deep as possible for its own sake. It is intended merely to provide life with sufficient orientation for it to move about purposefully and safely in the world with its help. All its truth is therefore designed from the start to meet the needs of life, in fact the criterion of truth is its service to life. 'We think in the categories of our actions!' - Landmann, p. 128.

20. Ibid., p. 131.
25. See Frederick J. Evans, "The Power of a Sugar Pill" in Ethical Issues in Modern Medicine, p. 277.
29. "One example is vitamin B12-responsive methylnsalicyclic acidemia. This condition, if diagnosed antenatally, may be treated by giving large doses of vitamin B12 to the mother. Similarly, if the fetus is found to have galactosemia the maternal diet can be altered to exclude lactose and avert the fetal effects of this disorder of lactose metabolism." Ibid.
31. The most helpful explanation of the nature of the cell, and such processes as DNA transfer which I have seen is in National Geographic, September 1976, in the essay "The Awesome Worlds Within a Cell" by Robert Gore.
34. Experimentation With Human Subjects, p. 317.
35. Detailed accounts of the development of four developments in repro-
ductive technology are presented in Research on the Fetus: Appendix,
Chapter 15. These include the development of Rubella vaccine, amni-
ocentesis, isoimmunization, and treatment of respiratory distress
syndrome.
36. Ibid., p. 15-9
Perspective" in Bioethics and Human Rights, p. 341-350. Sidel gives
an interesting description (p. 345) of the way China has trained in
a short period of time, one and one-half million "barefoot doctors"
who provide medical care in rural communes.
38. See R.A. McCormick, "Experimentation on the Fetus: Policy Proposals",
in Research on the Fetus: Appendix, pages 5-1 and 5-2.
39. Dr. David Suzuki, Geneticist, University of British Columbia has
pointed to this separation in a special C.B.C. documentary on in
vitro fertilization. (date and title unknown).
40. Ninth Report of the Royal Commission on Family and Children's Law,
II

AMERICAN LIBERAL HUMANISM: HISTORICAL ORIGINS

The first chapter has defined the thematic problem for this thesis: what is the significance of the fact that man has become his own project, not only in a moral sense, but physically, as a subject for biological control. The analysis of liberal humanism as a philosophy showed two related theoretical questions: First, how is it possible to maintain both that man is the measure of human good and that moral judgements are meaningful; and secondly, how is it possible to defend moral individualism while at the same time to ascribe to the state a moral function? A corresponding practical problem appears when the principles of liberal humanism are questioned in the context of biomedicine: how is it possible for man to remain beneficiary rather than victim of his project?

In order to consistently maintain the principles of humanism, the humanist must root his answers to these questions in an adequate philosophy of human nature, a philosophical anthropology. He must define human good as a function of man's capacities and limitations - both those which are internal and those which are external to him. Discussion about the former concerns man as individual and his ability to know himself and his world, to be able to distinguish between them and to make objective judgements about them. The latter concerns his capacity as a social being to be free in an environment of which he is necessarily a part.

This chapter leaves aside the biomedical issues in order to
describe the contributions made historically to the resolution of the humanist problem. It will describe how Descartes establishes rationality as the ground for man's internal capacity to be self-determining; how Hobbes and Locke deal with man in his political environment by using rational man as their starting point; and how the fathers of American liberalism root their ideals about autonomous man and the role of government in Locke and Hobbes. It is the purpose of this chapter to trace the problem of liberal humanism through the several centuries represented in order to reveal what are the assumptions and difficulties operative now. Necessarily, each of the periods will be treated very cursorily and the particular details of the thought of each philosopher left aside for later research. What emerges in this discussion is the fact that the way we live and think now is so closely tied to the heritage of ideas which these men have left us - ideas with which we must come to grips before we can move on freely and responsibly in biomedicine or any other human activity.

1. Internal Limits to Self-Creation: Cartesian rational anthropology

How can I know the world external to me, and that it is not me, and I am not it? How can I know regardless of the authority of tradition that the judgements that I make about it - about what things are, and about what difference they make - are true? Who am I?

Descartes stands, according to John Macmurray, as the father of modern liberalism, for he justified the assertion that man is essentially free by rooting the foundation for all knowledge in the rationality of man. Man could be the measure of the universe because he was a
What did Descartes mean by this? Descartes was born into the age of scientific emancipation from the scholastics who had traditionally interpreted the phenomena of the natural world as an expression of divine purpose and somewhat elusive of exact description. The success of the new science showed that teleological explanation aided by common sensory experience was less reliable than the reason of man for knowing the nature of the universe. Descartes' contribution to the history of ideas was to understand the universe to be a rational system, one which could be known by deduction from mathematical principles, self-evident to man and described with precision. Thus he searched for clear and distinct ideas which could be used as a solid foundation of axioms for building a rational system of knowledge. His method of search was to doubt systematically any idea which could not stand as self-evident. These ideas would be free of authority and sensory experience; they would be innate to the mind.

Descartes discovered in his analysis that finally the only idea which withstood his method of doubt was the fact that he was doubting. Thus he formulated his famous proposition: cogito ergo sum. This proposition affirmed that it was the essence of man to think (that being human and thinking were identical) and that this fact alone could serve as a measure of what was true. But it is important to note that what Descartes meant by thinking was rational deduction. In characterizing man as a thinking being he was also giving primacy to the theoretical aspect of knowledge — to knowledge as a system of axioms and conclusions. In this sense his philosophy of man is a "rational anthropology" for it
stresses that man's most unique capacity lies in his ability to think systematically.

Macmurray summarizes the significance of Descartes' starting point, the primacy of the theoretical, for liberalism:

"Historically, the 'Cogito' represents a challenge to authority and a declaration of independence; and so well did its author know this that he went in fear of the penalties that his boldness might incur. For Descartes it was equivalent to the assertion 'I am a substance whose essence is thinking,'... We may paraphrase its significance for its time in the following way. 'I am a thinking being: to think is my essential nature. I have therefore both the right and the duty to think for myself, and to refuse to accept any authority other than my own reason as a guarantor of truth.' In this way the 'Cogito' constitutes an appeal from authority to reason."

However, Descartes' legacy was the desired human freedom but also a problematic dualism, for his rational anthropology isolated man as knowing subject from the universe, from his known object. Given this gap between them, there are four logically distinct alternative approaches to an understanding of man as a moral being and the status of moral statements - alternatives which today stand opposed to one another without resolution.

I will show briefly that the origin of this Cartesian dualism lies in the reification of what are only polarities of reflection. My point in doing so is to then show what are the consequent alternatives available to moral philosophers working within the Cartesian tradition, and thus to the American regulatory tradition which also has arisen within it. It will be seen that none of these alternatives can satisfy the requirements of liberal humanism which were described in chapter one. Further, it will also be seen that the very conceptualization of issues surrounding biomedicine by American policy makers is limited by
these alternatives.

It is commonly accepted that reflection about an experience immediately involves a distinction between the aspects of that experience which are private to the person to whom the experience belongs and the aspects which constitute the object in the world external to him and which correspond to that experience. Both are kinds of facts, answering the question "What is it?" and the statements about each require their own specific kind of verification. These two kinds of facts, however, are contained within a single experience and both can be implied by a single statement about that experience. Whether or not this statement is true depends upon whether both kinds of facts are verified in the way appropriate to them.

For example, an experience of a fetal heart beat can be stated this way: "I heard a fetal heart beat." This statement about this experience can then be separated into two different sentences which represent different kinds of facts:

A. What I heard sounded like a fetal heart beat.

B. There was an audible fetal heart beat.

Verification of sentence A is private to the person who heard the sound. No other person can show that he was mistaken about what he heard. For the one who experienced the sound, verification occurs through a comparison of experiences which he has had previously, and which he has already verified.

Verification of sentence B is quite different. Facts of this sort are public - that is, they are verifiable according to a methodology agreed to beforehand, and thus facts for everyone.
A similar distinction can be made about values. We can differentiate between what we think we value (desire) and what is valuable, apart from our own preferences. Both are specific kinds of values — each answering the question, "What difference does it make", and each requires a distinctive kind of verification.

For example, an experience of valuing human fetuses can be stated this way: "I value human fetuses." This statement can then be separated into two different ones representing two different aspects of this valuing:

C. What I value are human fetuses.

D. Human fetuses are valuable.

Verification of sentence C, as in the case of sentence A, depends upon the subject’s own judgment — in this case, upon his organization of values according to judgments made in his accumulated experience of his likes and dislikes. Verification of sentence D as in the case of sentence B is also public in the sense that the value expressed is universal according to a method agreed upon.

It must be emphasized that neither of each pair by itself constitutes knowledge. In the first pair neither alone can answer the question, "What is it?" or therefore stand for the single statement of fact. In the second pair, neither alone can answer the question "what difference does it make?" nor stand for the single statement of value. A person can say for instance, that he heard a fetal heart beat, but the experience may be imaginary. He may, on the other hand, assert without ever listening that there is a fetal heart beat, but whether this is true or false is never shown unless he does listen.
Similarly, in the second pair, neither alone can answer the question, "What difference does it make?" or therefore stand for the single statement of value. A person may say that he values human fetuses but his doing so does not establish that human fetuses are indeed valuable. On the other hand, he may assert that human fetuses are valuable but if he never does value them, his single statement, "I value human fetuses" remains neither true nor false.

In other words, what we mean by knowledge is twofold. First, we characterize as knowledge mental acts or states which belong to someone; that is, knowledge does not exist in isolation from persons. Thus, the comprehension of the object, not the object itself, constitutes knowledge. Yet, secondly, we make a distinction between what is real (that is, what are mental experiences derived from the world of objects which exist apart from us), and what is the product of the thinker's imagination (that is, satisfactory to the self, perhaps, but having no such objective correspondence). Knowledge must be verifiable in a public sense. Thus, it is evident that both types of statements arising from reflection about an experience are constitutive of what it means to know something.

It is a simple but important reality then that man, in reflection, is to himself a centre of awareness to whom everything else in the universe is other; the division of experience into subjective and objective elements in itself is not strange. This is a immediate consequence of self-conscious thought. Further this theoretical polarity seems to make sense of an existential polarity: man in his very struggle for survival lives in tension with all that is other (nature, other
persons, social institutions) - a universe into whose order he will be absorbed, or one whose order he must learn how to subdue and control for his own ends. The humanist rebellion against authority, whether institutional or cosmic order, is an experience of self against other. His choice of self as measure of the universe is a choice in favor of control. Thus to further characterize man as thinker (and not merely the origin of the subjective element of knowledge), as Descartes did, seems not only to justify man as a being having dignity and value in himself but also to give rational explanation of the existential experience.

However, to identify the existential experience of self versus other with the theoretical polarity of the subjective and the objective, which has arisen only as reflection about experience, gives a primacy to the theoretical which produces philosophical difficulties. This step reifies the subjective and objective elements of experience, as a subject/object dualism - a dualism which can never be bridged. With this reification we can never proceed from particular mental experiences to a conclusion about the physical world, nor can we deduce from physical laws the necessity of any mental experience. Similarly, we cannot derive from the existence of personal desires a conclusion about what is universally desirable, nor from principles about what is good, the likelihood that any given person will ever desire it. The problem remains then for the philosopher to show how it is possible to link statements A and B, and statements C and D. The humanist then may characterize man as a thinking being who can discern what is either true or good by a mental process of analysis and deduction and thus may make man judge
of the universe, but he also thereby places man in isolation from it.

In the next section it will be seen that a characterization of man as rational being also gives rise to two kinds of sciences of man. Michael Landmann describes the nature of this division in his book *Philosophical Anthropology*:

"Rational anthropology is dualistic. For though man has reason, he is not identifiable exclusively with it. A divided being, he consists of reason and the somatic physiology on which reason depends. Therefore two groups of sciences are necessary to study him. This consequence, unsatisfactory as it may be, is inescapable. His rational side is investigated by philosophy, psychology, and the liberal arts (Geisteswissenschaften), his vital side by biology and medicine. Only when one, as it were, adds together the two groups of sciences does one have the whole man."

Yet just as there remains a theoretical gap between subjective and objective experience, there also remains a practical one between the two sciences. Simple addition does not produce an integrated human being. The choice is only to take one side or the other and to explain the other within its terms. Hobbes and Locke represent these respective alternatives: Hobbes will biologize thought while Locke will rationalize biological nature - steps which, it will be seen in chapter three, are replayed in the American approach to regulation of biomedicine.

Following Descartes, philosophers have made various attempts at bridging the theoretical gap while maintaining rationality as the internal capacity of man for determining the nature of the universe and his place in it.

However, to give human thought this authority is to place both requirements for knowledge (that it belong to someone, and that it be verifiable) together: the person to whom the experience belongs can also, privately, judge whether it is true or false. That is, the two
sentences which represent the two theoretical aspects of a single statement both have the same kind of verification. Thus the problem for philosophers is to explain the difference between what is true and false in terms of how thought is possible, and how statements about knowledge are derived. To do this they may choose as their starting point or posture either the world of the subject or that of the object and within the limits of this choice explain the nature and relationship of the corresponding world. These explanations can assume either a deductive approach where knowledge is thought to be an axiomatic system or an inductive one where knowledge is represented as generalizations from particular experiences. Thus by combining these two pairs of alternatives, four kinds of explanation are available.

In moral philosophy which concerns knowledge of values, there are similarly four alternative kinds of explanation, each of which tries to show how man can know what he ought to do. For the liberal humanist who would maintain a rational anthropology as the explanation of man's internal capacity and limits to freedom, within the biomedical context, these four alternatives are his only methods for answering the question, "how can man be beneficiary rather than victim in the self-creative process?" That is, this question is first a problem of knowledge, and its answer in turn stipulates what human action is beneficial and what is not. All four alternatives therefore (although two do derive their moral principles inductively) represent what I have called a "deductive morality"; all require that man act only on the basis of set normative principles. None are adequate to the requirements of liberal humanism.

The following is a diagram of the four alternatives. It shows
four ways how it can be shown how man can know a given moral statement. These all give as an example, a particular origin for the moral statement, "fetuses ought to be protected." My specification of these four alternatives as egocentrism, intuitionism, relativism and absolutism is only an attempt to give them names which relate generally to various approaches to moral philosophy which have been taken by philosophers. I do not by this intend to be totally faithful to the many ways these terms have been used. Similarly, I characterize the inductive approach as generally related to "naturalism" and the deductive approach, to "non-naturalism". The former represents the attempt to derive principles from generalizations about experience (either private or public) whereas the latter shows the attempt to derive principles from "laws" (either derived internally as private experience, or externally as a public one).
"Human Fetuses Ought To Be Protected"

<table>
<thead>
<tr>
<th>SUBJECTIVE POSTURE: private</th>
<th>INDUCTIVE METHOD (naturalism)</th>
<th>DEDUCTIVE METHOD (non-naturalism)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Here, the self is taken as starting point.</td>
<td>egocentrism: discernible only to the individual because he knows what he generally approves of. &quot;I approve of fetuses being protected. You generally think as I do and you ought to protect them too.&quot;</td>
<td>intuitionism: immediately discernible to any normal human being because it is his nature to know what is good. &quot;Any normal person protects fetuses. You are a normal person, and you ought to protect them too.&quot;</td>
</tr>
</tbody>
</table>

| OBJECTIVE POSTURE: public | relativism: discernible to anyone who studies society. "My society protects fetuses. You belong to my society and you ought to protect them too." | absolutism: discernible to anyone who studies the moral order of the universe "Fetuses belong to the class 'protectable human beings', and you ought to protect them too." |
The naturalist denied that moral questions are different from questions about the facts of human nature: value terms are derivable from factual premises. Questions about what man ought to do are simply questions about what he would really like to do; they amount to a statistical relativism. The non-naturalist on the other hand claims that value terms are not derivable from factual premises. Moral statements give information about what man ought to do which is not reducible to statements of fact—such as facts about what man desires, and why. But both are faced with the same problem: how is it possible to justify moral principles? The naturalist generalizes either from his own experience of what he finds desirable or from what most people find desirable and prescribes actions which provide the best means for these ends. The non-naturalist seeks a set of indubitable moral principles which can act as axioms for rational deduction of good actions, by turning either inward in search of self-evident axioms, or outward in search of a cosmic moral order. These four alternatives may be called egocentrism and relativism, intuitionism and absolutism, respectively.

However, none of these positions can be satisfactory to the humanist. If the world of objects is chosen as reference point, he must explain both what man thinks and how he behaves in terms of science or cosmology. Man will be given a place like a cog in a machine. He will be explained as an extension of a natural or supernatural order and moral prescriptions will describe proper human action as part of the proper or ordered functioning of the whole. This starting point permits man as thinker to make judgements which can be rationally justified, about what he ought to do, but the cost is high for he also loses
his freedom.

On the other hand, if the world of the subject is chosen as a reference point, human experience is explained in terms of the interplay of mental events. Here freedom is maintained but the result is moral solipsism. Given this posture, the subject cannot see past his own mental images nor provide any justification for saying either that other people desire the same things that he does, or that they find to be self evident the same moral principles.

In looking at humanism as a movement of ideals it seems that, in fact, egocentrism and absolutism are usually rejected very readily. Egocentrism not only is solipsistic but also makes reason except as a capacity for generalization (a capacity which most animals, have albeit unconsciously) irrelevant to value judgements. Most humanists see this as incurring a loss of human dignity. Similarly while some argue that humanism is a religion, or compatible with it, (e.g. "Christian humanism"), the absolutist approach is rejected as authoritarian and also a reduction of human dignity. However, the relativist and the intuitionist alternatives are finding a certain favor among humanists, especially as they tend to slide in either direction in their attempts to justify moral principles. For instance, a behaviorist like Skinner, who argues that his theories are compatible with humanist goals, for instance, explains human action as a product of his biology and his natural and social environment. He sees a moral life as one where there is comprehensive assessment of the conditions of life and effective self-management in the face of conflicts between immediate and
deferred consequences. But ultimately he rejects human autonomy: "The life-old mistake is to look for salvation in the character of autonomous men and women rather than in the social environment that has appeared in the evolution of cultures that can be explicitly designed."

The intuitionist position which claims that human good is immediately self-evident to all men seems to be present implicitly in much of the liberal humanist movement, despite the fact that the validity of these principles is private to the subscriber. However, the problem of establishing self-evident principles as axiomatic guidelines for human action occurs only when the people concerned do not share them. In the various essays by humanists who contributed to 'Kurtz' book, The Humanist Alternative, many of the values expressed have a reassuring ring. For example, the following is an excerpt from a list of twelve ideals, all developed in similar vein:

"...The Humanist holds as his highest ethical goal the this-worldly happiness, freedom and progress - economic cultural and material - of all mankind, irrespective of nation, race, religion, sex or economic status. Reserving the word 'love' for his family and friends, he has an attitude of compassionate concern toward his fellow man."

Once these principles are stated, however, then the difficulties begin. It is not self-evident whether genetic screening is "progress", whether surrogate motherhood brings "happiness", whether recombinant D.N.A. techniques bring "cultural freedom". Then the intuitionists begin to disagree among themselves, and there is no possibility of resolving their differences.

The above analysis has shown that none of the four alternatives is adequate for the humanist. The problem which he faces is the need to justify moral judgments, and to do this he must choose between
showing how objective judgements are possible and maintaining human freedom. However, more than this, none of the four alternatives can qualify as a 'constructive morality' which it was seen in chapter I is a necessary answer to the first question how is it possible to maintain both that man is the measure of the universe and that moral judgements are significant. Whether the principles of morality in the four alternatives are derived deductively or inductively, they all are used as axioms for an ethical system. This use implies that morality as a whole is "deductive", that man knows how he ought to act by deriving principles of action from an unquestionable set of moral principles. What is the problem with this approach is that it only provides a partial explanation of morality. It cannot explain why the first principles which are accepted, do appear to be so to some individuals and group and not others, and why these change over a period of time.

Because these principles are used as axioms for an ethical system they are imposed upon man, and his actions which do change the world and himself, supposedly make no difference to them. Moral experience then amounts to attempting to conform to these principles, and discovering how difficult (or easy) it is. Human development cannot be seen as a self-creative process, and the biological agenda (the activity of man's changing himself) will appear to be either "playing God" (from the point of view of the absolutist or the intuitionist) or curiosity (from the point of view of the egotist or the relativist). It will not contribute to a free determining of human welfare, because such freedom is impossible.

It is important to note then that the possible alternatives for
moral philosophy were entailed by the Cartesian characterization of man as a thinking being—a being which thinks either deductively or inductively. He does not include in this assessment reason as a synthetic activity of man. In so far as the American tradition remains within the Cartesian assumptions it will not be able to represent moral experience as constructive nor then give coherence to the principles of liberal humanism.

Nevertheless, "relativist" and "intuitionist" humanists both tend to look for a gradual bridging of the gap between the subjective and objective aspects of moral knowledge by appealing to science which has had more success in coming to terms with its comparable rationalist and materialist elements. This brings the historical analysis of liberal humanism to its second stage.

2. External Limits to Self-Creation: two political sciences

In Descartes man has established a ground for his claim to dignity and to the possibility for self determination in his capacity to reason. He can differentiate between the values and goals he holds and those which are dictated to him from outside by circumstance and authority. Yet he is left with a theoretical dilemma: either he can maintain his freedom at the expense of universalizable moral judgements or he can choose to assert objective moral judgements in exchange for his freedom.

This second section describes the antithetical contributions of Hobbes and Locke to the historical development of liberal humanism. Each addresses the second aspect of the question raised in chapter one:
What are the external limits to man's capacity be self-determining. For them this question focuses on the nature of man in society and the requirements for good government, and they approach it with two kinds of political science (materialist and rationalist) based on a Cartesian rational anthropology. Their answers in so far as they are taken up by the American tradition will answer the question, how is it possible to defend moral individualism while at the same time to ascribe to the state a moral function?

Both Hobbes and Locke wrote during a time of political upheaval in England and, in the Cartesian tradition, sought to give rational justification to the particular point of view which each espoused concerning the nature of good government, and hence the kind of government which ought to exist in England. Each placed their faith in the possibility of objective knowledge, as each had been influenced by the success of the new natural philosophy; their task really amounted to a kind of political science. For this reason, they are usually classed as empiricists, in contrast to French rationalism.

In order to make clear their conceptualization of the problem of man in society and the limits to their respective answers, it is necessary to begin with the relevant aspects of the Newtonian universe which provided them with a scientific model. This will also prepare for a major point of the third chapter of this thesis which will show that when we draw upon their answers to questions of government in order to express what are the present issues in the regulation of biomedicine, so too are we conceiving the problem itself in a similar way and accepting the assumptions about the nature of the universe and of
men in society inherent there.

Newton's universe was perceived as a mechanism, self-contained and complete. Its mechanics operated according to exact laws deducible by mathematics and verifiable by scientific experiment. The fact that these mathematical laws represented natural phenomena in quantifiable terms - i.e. in terms of the space and time coordinates - and were applied as theoretical absolutes regardless of the qualities evident to the senses in any particular case, gave birth to the theory that natural phenomena had an underlying reality which was called its "substance". It was thought that, since there was evident a uniformity in nature where all observable motions regardless of their location in the universe obeyed the same laws, the universe must consist of identical mathematical units of substance which always interacted with each other in a set pattern.

Because of this atomistic view of nature it was the self-imposed task for science "to describe all observable phenomena in terms of simple forces between unalterable objects." Helmholtz, a mid-nineteenth century scientist working in this framework, gave a clear self-conscious formulation of this agenda:

"Finally, therefore, we discover the problem of physical material science to be to refer natural phenomena back to unchangeable attractive and repulsive forces whose intensity depends wholly upon distance. The solubility of this problem is the condition of the complete comprehensibility of nature."

Thus the course of science is strictly determined:

"And its vocation will be ended as soon as the reduction of natural phenomena to simple forces is complete and the proof given that this is the only reduction of which the phenomena are capable."
This was the credo of the new science. It was considered to be a rejection of all metaphysics—the need or even significance of a priori statements claiming to give information about the objective world. Newton himself refused to extrapolate from the success he had had in applying mathematics in his experiments to a rationalist view of the universe.\(^{14}\)

Despite Newton's reservations, however, there was nevertheless a unity achieved between the empiricist and rationalist elements of natural philosophy precisely because they together were grounded in a theory (a mechanical atomism) which on the one hand dictated what kinds of experiments ought to be performed and what kinds of data were relevant, and on the other what form the mathematical laws would take to give the data intelligibility.

Both Hobbes and Locke sought an objective explanation of the nature of government modeled on the methods of Newtonian science. They took an "atomic view of man and his social relations" in order "to discover the gas laws of human conduct" and "to reconstruct human society from its component parts by means of a causal definition."\(^{15}\) They assumed that man was like any other natural object: underlying the many individual and historical appearances, he had identifiable properties which determined his observable behavior. Society was an aggregate of men which were its simplest units, each possessing these properties, and social forces the consequent interplay among them. These natural properties were not immediately evident, however, because specific situations altered their expression (just as inertia, a property of bodies in motion, is not observable but only deducible from
experimental data). What made these difficult to discern (compared to physical properties of material bodies) was the fact that one could not put human beings or societies into a controlled experimental situation. Both Hobbes and Locke performed "thought experiments" in order to strip away such appearances (akin to Galileo's demonstration of the law of uniform motion, for example).\(^{16}\)

As empiricists then, they rejected metaphysics but they nevertheless accepted Descartes' view that all scientific knowledge constituted a rational system. Hobbes brought his love for Euclidean geometry to his philosophy in his belief that all thought should be presented as an axiomatic system.\(^{17}\) Locke propounded a theory of "self-evident principles" which he argued were perceived immediately to be true.\(^{18}\)

Given the fact that both men were attempting to give causal definitions of society, and to outline a rational system of government based on a kind of human atomism, what accounts for the fact that Hobbes defended the absolute sovereignty of the British monarch while Locke argued for a liberal parliamentary system?

Just as it was the theory of substance and its characteristics which provided a unifying foundation for natural philosophy so that observations could be related in an intelligible way (according to laws about mathematically determinable quantities), so too the atomistic theory of men as the smallest units of a society provided a similar unification of observation and principles. However Hobbes and Locke saw different characteristics to be fundamental to human nature (probably selecting characteristics which would be suitable for justifying the political theory they wished to defend), and consequently saw also
the "natural" actions of men in a society to be very different. Their empiricism, in other words, was not a straightforward generalization of particular appearances, but a qualitative selection of observations which confirmed metaphysical theories — one stressing the material (biological) aspect of man, and the other, the rational.

Hobbes' philosophy of man coincided with the rigidly materialistic aspect of Newtonian science, and he clearly took Galileo as his model for the rational construction of a metaphysics of mechanism. He says,

"The world...that is, the whole mass of all things that are, is corporeal, that is to say, body; and hath the dimensions of magnitude, namely, length, breadth and depth: also every part of a body, is likewise body, and hath the like dimensions; and consequently every part of the universe, is body; and that which is not body, is no part of the universe."  

For Hobbes to ask what was the nature of the universe, then was to envision it in its simplest state — that is, a body. Having achieved this, he sets it in motion:

"That when a thing lies still, unless somewhat else stir it, it will lie still forever, is a truth that no man doubts of. But when a thing is in motion, it will be eternally in motion, unless somewhat else stay it, though the reason be the same, namely, that nothing can change itself, is not so easily assented to."  

Lawful motion was simply a description of the temporal relations of moving bodies. Cause and effect were equivalent to before and after.

To define the nature of man was similarly to provide a description of the temporal relations among men, as they occurred. Nothing could change these; government could only interfere, control or redirect them. Man was not self-moving but only responsive to the movements upon him. What he might think or reason about the universe
were also actions in the universe and part of the material chain of
events.

What were these temporal relations? If an underlying rationa-
li ness did not distinguish men from the rest of nature, and did not give
positive value to him, it would seem logical to draw the opposite con-
clusion — a negative one, descriptive of men as they are — a simple
picture of bodies in collision.

Hobbes draws a picture of mutual antagonism among men. He ar-
gues that it is human nature to act entirely in a self-interested way,
to grasp what one is able to get safely and to satisfy one's own needs
and desires. Men are not naturally sociable — that is, cooperative —
but necessarily live in a society and under a government in order to
achieve self-protection from each other and greater strength against
attack from outside. A civil state is therefore an artificial con-
struction only.

Government of this artificial association (embodied in the
sovereign) can do nothing to change this natural antagonism; it can
only try to maintain order, safety, and peace by taking account of men
as they really are. This indeed is its only obligation. Civil law
which it constructs is the only true law binding men, and whatever li-
berties they enjoy come only through the discretion and beneficence of
the sovereign. In sum, men owe obedience to the sovereign because he
maintains peace.

According to Allan Ryan, Hobbes' philosophy permits two differ-
ent interpretations about the kind of political order which is required
to achieve his objective; the first shows why association between
secular utilitarianism and liberalism has been possible; while the second is highly totalitarian:

"On the one view, the sovereign creates a minimal order of peace and security. Men may do what they wish, within the limits of keeping the peace. The sovereign certainly judges, for example, what religious views may be put forward - but he does not judge their truth; all he does is ensure that ceremonies of praise and honour to a deity are agreed on and cause no dissention."

"The Leviathan is more than a mere contractual arrangement. It is as Hobbes says, a real and perfect unity of them all. We become literally one body - though an artificial body, none the less a real one... The state is to take each of us and mould us that we become elements of it. Yet the way in which this is to occur is not through coercion, but through teaching us the language of civility, a vocabulary in which treason becomes unsayable, hence unthinkable."

The value of the first position for the liberal humanist lies in its rejection of cosmic authority in favor of human freedom within the limits of safety. Human obligation is distinguishable from simple desire insomuch as it concerns matters of prudence. Nevertheless because order and safety themselves are instrumental to desire, they cannot in the long run represent a significant morality. What will be most conducive to civil order will be a state which has as its ideals for human activity, those which already are compatible or identical with the desires of the majority. The best laws of human conduct will thus be derived from a thoroughly comprehensive study of what most men want and of what most try to achieve. Of the four alternatives derived from Cartesian rationalism, Hobbes represents a statistical relativism.

Because order serves desire, the second alternative might also be justified as it serves the first. If the variety of conflicting desires in the society becomes so unwieldy, the more effective
alternative (since one desire has no more validity than another) might be to alter the desires themselves. In other words, Hobbes' view of human nature—that man is aggressive—will permit a gradation of control to the point of conditioning people and what they value to fit the predetermined needs of society. If there is an identity of individual desires and state order where the body as a whole is the well-shaped sum of its parts, tension should be at a minimum. A scientific humanism would see this achievement as a unity of rational order and empirical concerns.

However, Hobbes' *Leviathan* is an ideal and, in practice, there will be a tension between the order the state would impose and the individual needs and interests of its citizens. The best government, being the safest one, would find that the most prudential interest is the dominant one. In other words, Hobbes' scientific ideal in practice recedes into relativism, where civil law is arbitrator at the bargaining table, and values a function of surviving interests.

While Hobbes denied that man was either sociable or malleable, Locke chose the opposite view. The metaphysical unity underlying his empiricism and social theory was not the material aspect of nature but its lawfulness. To Locke, the fact that man was part of nature meant that he was subject both to the fact that nature was lawful, and to the fact that, being lawful, it was intelligible—that is, reasonable. Thus the natural interaction of men was inherently rational, and society, which is simply the lawful ordering of men, the natural state for men to be in. Men were not aggressive, but cooperative.

Locke did not deceive himself about the many appearances of
irrational behavior by men around him. The law of nature was the under-
lying reality, to be discerned and imitated because it was the ideal
law. A religious rationale might be given for this, but imitation of
the natural laws of human behavior made sense from a scientific view-
point. This can be seen by analogy: although the law of inertia
underlies the many appearances of motion and is never actualized in
particular events, it makes sense, nevertheless, to take account of
this law by oiling the wheels of a cart and smoothing the road so that
the motion of the cart may imitate its natural motion as much as possi-
ble, and proceed more easily. Similarly the natural relations among
men will occur more smoothly if they imitate the underlying law of
nature.

What is this law of nature?

"The state of nature has a law to govern it which obliges
everyone: and reason, which is that law teaches all mankind, who will
but consult it, that being all equal and independent, no one ought to
harm another in his life, health, liberty or possessions... In transgressing
the law of nature, the offender declares himself to live by another rule than that of reason and common equity, which is
that measure God has set to the actions of men..." 25

The best government then is to be patterned accordingly. It
establishes laws which would recognize implicitly the rights to equali-
ty and independence of all men by ordering men's affairs only insofar
as it was necessary to permit rational and cooperative intercourse to
occur. This government would be acceptable because it would be con-
stituted by the consent of the governed who would understand its neces-
sity.

It is important to see that in equating natural law with the
ideal, or with God's law, Locke has taken a step from a descriptive to
an evaluative framework - a step from "rational" to "reasonable", from lawful interplay to cooperation. (This same step from a descriptive to an evaluative framework in fact is also implicit in Hobbes' view as he concludes from his mechanical and material metaphysics that man is antagonistic). The approval Locke gives to rational interplay implies also an approval of the basic units involved in that interaction. He takes the step from his initial assumption that men are identical units in society to the view that they are morally equal.

If this is acceptable, it makes sense to say that courts have a moral obligation to imitate the law of inertia. That is, there must be an identity of being and goodness. This then reduces morality to questions of prudence.

With his theory of natural law Locke like Hobbes achieves the possibility for moral judgements but at the price of human freedom. Man's role is simply to discover his place in the natural order and to assume it. This is his perfection. It is a process of self-emancipation but for a predetermined end.

As in the case of Hobbes' philosophy two different readings can be given to Locke's view of what is required for a well ordered society. The first permits an extreme liberal individualism while the second is more utilitarian:

1. Man is basically cooperative and has a natural inclination to peace and perfection. Civil law is necessary simply to curb offenders and to remove the roadblocks (such as economic hardship) which will permit expression of that perfection to occur. The governed would accept limitations of some natural rights in order to protect more
fundamental ones.

Locke in subordinating civil law to natural law and the rights of men protected by that law is treating natural law as a "higher" court of appeal against which laws of a particular society are to be measured. This guaranteed the natural right of men both to rational dissent, and if necessary to social revolution, if civil laws violate this natural law.

2. Locke's works on theology and education, according to Passmore, show that he thought that man is not born with a "natural tendency towards goodness;" while he did reject the doctrine of original sin he did not believe man was born free:

"A man can act freely, he admits, in the sense that he does not always pursue immediate pleasure or immediate pain. But this freedom is something he has to learn; he is no more born free, as Pelagius had thought, than he is born depraved. "It seems plain to me," Locke writes in Concerning Education "that the principle of all virtue and excellency lies in a power of denying ourselves the satisfaction of our own desires, where reason does not authorize them. This power is to be got and improved by customs, made easy and familiar by an early practice."26

One might say that this is looking at the same natural phenomenon from two different viewpoints: neither is the cart in motion, "born free", for without continual pushing it comes to a standstill though the underlying natural law is still inertia. Man too needs to be continually assisted, and this through the inculcation of good habits. Men are not born equal in virtue or potential but they are malleable. Good government will seek to assist men in achieving their natural state of cooperation, by smoothing the road and oiling the wheels.

Further, it should be noted that the right to revolution is a
two-edged sword:

"Since Nature was not the new God, source of all wisdom and righteousness, it was to Nature that the eighteenth century looked for guidance, from Nature that it expected to receive the tablets of the law. And it was just as necessary now as ever for the mind of the rational creature to share in the mind of this new God, in order that his conduct, including the 'positive laws of particular states,' might conform to the universal purpose."27

The law of Nature also gives citizens (and society on behalf of its citizens) the incentive to demand that civil law deal with those who are offending against natural law. The danger of this utilitarian application of natural law is that moral virtue becomes identified with civic virtue: obedience to civil law saves one the trouble of rational dissent.

Like Hobbes' ideal state, Locke's has a unity of individual experience and social form as it remains a consistent political science. However, in practice tension will occur between people or groups who differ about the characteristics natural to men and their entailed rights. His political science then tends to recede into the intuitionist view of morality, where, as Abraham Kaplan states in his book, American Ethics and Public Policy, "natural law is not the ground of political morality but its projective expression":

"For the "nature" of the theory is not the nature disclosed to empirical enquiry, but what is identified as 'natural' in the sense of conforming to a norm externally imposed. Is it 'natural' for a mother to deprive her children, or a ruler his royal subjects, of their lives and liberties? Such things have been done. Nature as the totality of observed and observable fact includes the violation of every 'natural right' and 'natural law' that political theorists have laid down. The 'nature' of the theory is only what answers to the norms of the theorizer; it is these norms, not nature herself, from which the political rights are derived."28

Whether one takes Locke's or Hobbes' interpretation of human
nature, the outcome of the question, "What is the internal limit to man's capacity to self-determination", is the same for each. Both place man within a rational order which becomes the authority over human action. For Hobbes this order is artificial but practically necessary for man to live in relative peace and safety. For Locke, this order is natural and quite acceptable to man who is a rational being, but it too is necessary, for it is the law of nature to which man must conform for self-realization.

This in fact is a scientific humanism and it anticipates a coincidence of empirical assessment of human behaviour and rationalistic formulation of moral principles through an interplay of hypothesis and experiment. It is science then which is able to show what is the difference between good and evil for man. In a sense because man is also the scientist, he is still the measure of human good, but he is also object for study by his science. This makes the universe a closed system within which he is once again a cog and his own actions must be subordinated to contemplation and conformity. Because this form of humanism, one which really is rejected by most humanists, is the consequence of Cartesian rational anthropology, a political science like that of Hobbes and Locke should force those who would uphold the principles of liberal humanism to reassess Descartes' cogito ergo sum, and the role of reason assumed there.

However, in regard to the second question, what are the external limits to man's capacity for self-determination, Hobbes and Locke give opposite replies: Hobbes sacrifices human dignity for social order, stating that the state is the maker of man, whereas Locke preserves
human dignity and places social order at risk, and he sees men in cooperation with one another as makers of the state.

Where both can achieve an identity of individual and social concerns (by identifying civic virtue with biological perfection, on the one hand, or with moral virtue on the other) rational order, natural or supernatural becomes the limit on human autonomy for both.

The steps which occur, beginning with Descartes' rational anthropology should be kept in mind in order to understand completely the origin of the difficulties which will emerge in the American tradition. It should be remembered that although Locke and Hobbes presented alternative external limitations, to the freedom of men in society, these limitations in both cases nevertheless subordinated him to a rational order which existed external to him. This rational order in both instances appeared because they assumed that the test of knowledge lay in its being a science (indeed, a particular kind of science). This assumption in turn occurred because they accepted Descartes' rational anthropology which gave primacy to the theoretical and which required that philosophers choose between the subjective or objective posture as a starting point for knowledge. To Locke and Hobbes the subjective posture would have meant that the universe was real only as it existed in the mind of man. They preferred instead to identify the mind of man with the workings of the universe. In sum then, it must be remembered that the key to this developing expression of liberal humanism is Descartes' cogito ergo sum.

In the first chapter of this thesis it was stated that the central difficulty facing the American government in its attempt to
regulate biomedicine was to minimize the risks to individuals or to society as a whole, which suffers as its principles of freedom are denied, while maximizing benefits for each. Both "risks" and "benefits" were seen to be related to the American ideals of liberty, equality and opportunity. However, what could not be seen without an historical analysis of the ideals underlying the American tradition was that questions of risk related to those ideals differently than do questions of benefit: at the most general level what is at risk are those ideals as they declare the moral principles which provide "an emancipation of human nature"; what is to be benefitted are those ideals as they represent the many desires or interests of a determined human nature.

This third section will show then that two sets of images have become reality in the American tradition, Locke's rationalist and Hobbes' biologist image. Each set brings its own inherent problems as within each discussion taken separately - about risk, or about benefit - there are irresolvable issues. Together, when risk is to be related to benefit, there are further difficulties for consideration - in particular, how risk can be related to benefit at all in an intelligible way. This latter point along with the former will be developed in chapter III with specific reference to biomedical issues.

3. Liberty and Order: dualism and American counterpoise

Is the state the maker and measure of man, or man the measure of the state? If we begin with a Cartesian anthropology, this question remains open. Common sense would suggest that there is some truth in both propositions but we are left without a methodology for reconciling
The makers of history, however, did not wait while philosophers had second thoughts about human nature but selected from the available images of man those which were able to make intelligible the difficulties and decisions of the times. Yet these images were more than rationalizations. Without the appropriate conditions they would have remained lifeless but with their appearance those principles took hold of them and reshaped them into a new world. The images were "true" because they became the reality that men have since been trying to live with.

The American Declaration of Independence was a paradigm of an image or ideal become reality. Gunnar Myrdal describes the roots of the American creed expressed in this Declaration, in these terms:

"The American is a humanistic liberalism developing out of the epoch of Enlightenment when America received its national consciousness and its political structure. The Revolution did not stop short of anything less than the heroic desire for the emancipation of human nature." 29

It may sound very strange to speak first of all about risk or benefits to ideals. However, for the American human welfare is protected most fundamentally when the principles which guarantee his freedom are protected. These principles are ideals on which his country is founded. If they are lost, so too, everything which they have achieved is lost. Thus pursuit of particular risks and benefits within biomedicine can only be comprehended in terms of this broader framework. What is a biomedical risk is only identified as such, if it is related to what is risk to human freedom and to the principles which protect that freedom. 30
This view of risk and benefit is compatible with the nature of a constructive moral process. In chapter one, it was seen that ultimately moral principles and the image of man which they expressed are tested in terms of their capacity to nurture the moral process of human emancipation itself. It has the merit of recognizing that what are particular risks and benefits are not immediately evident without some broader framework to give them intelligibility. However, it will be seen in this section and more particularly in chapter III that there are conflicting images of who man is operative in the American tradition, that is, two different and conflicting ways of making risks and benefits intelligible. Further, it will be seen that each of these alone is an inadequate expression of liberal humanism because human development cannot be represented as a self-constructive process, and also that when taken together they cannot be reconciled.

Justification for the American revolution lay in Locke's political theory of natural law and human rights. For this was not an appeal to the British government to restore rights which they should have had as British subjects. This argument would have conceded at the outset that authority did lie within government itself, within history and with the tradition of the ruling power.
Rather, the Declaration was precisely that—a declaration, or manifesto in universal terms, proclaiming that a higher law, applicable to all men, made independence from Britain morally justifiable. Rational man was to stand as judge, as he was able to know what was the nature of man and thus the nature of good government—that is government by mutual consent of the governed.31

Written into the Declaration (as in the Bill of Rights and the Preamble to the Constitution) were creedal statements about the fundamental dignity of each human being and the equality and freedom of all men:

"We hold these truths to be self-evident, that all men are created equal, that they are endowed by their creator with certain inalienable rights; that among these are life, liberty and the pursuit of happiness; that to secure these rights governments are instituted among men, deriving their just powers from the consent of the governed; that whenever any form of government becomes destructive of these ends, it is the right of the people to alter or abolish it, and to institute new government, laying its foundation on such principles and organizing its powers in such form, as to them, shall seem most likely to affect their safety and happiness."32

Thomas Jefferson, the author of the Declaration, and his contemporaries found these "truths" to be sufficiently "self evident" to ground in them a national faith because they expressed the perception of man most dominant in their time, one which happily underlay both the works of influential philosophers such as Locke, and popular opinion. In Jefferson's words, "it was intended to be an expression of the American mind."33 It explained a mode of society which (apart from their specific difficulties with George III and British Parliament) they were already living. The vast physical frontiers, and the opportunities for all regardless of social class and culture confirmed Locke's belief
that men could live as equals in a cooperative harmony, and independent in health, liberty and possessions.

These ideals identified the individualistic principles of liberal humanism with the destiny of America. First of all, self mastery of every individual meant freedom to examine one's own life and society, to know the moral law and to apply it, and to formulate goals worthy of oneself and thereby constructive for the country. This careful preservation of individual liberties gave high importance to freedom of the mind and the entailed right to consent as one of the governed, but also to dissent.

Secondly, tied to the idea that self mastery depended upon freedom of the mind, was the view that man was indefinitely perfectible. In a land of limitless opportunity, rational development meant cooperative growth. Good government needed only to oil the wheels and smooth the roads for commerce to mushroom, all to profit and the country to flourish.

The tone of the American Constitution, however, provides a sharp contrast to the confidence in man expressed in the Declaration. Once the revolution had been accomplished, the task for the leaders of the country was now quite different: they had to provide a positive and constructive document which would safeguard the freedom which had been achieved.

Arthur O. Lovejoy contrasts the perspectives of the Continental Congress of 1776 and the Congress of Philadelphia of 1787:

"The ablest members of the Constitutional Convention were well aware that their task - unlike that of the Continental Congress of 1776 - was not to lay down abstract principles of political philosophy,
not to rest the system they were constructing simply upon theories about the 'natural rights' of men or of States, though they postulated such rights. Their problem was not chiefly one of political ethics but of practical psychology, a need not so much to preach to Americans about what they ought to do, as to predict successfully what they would do, supposing certain governmental mechanisms were (or were not) established. 36

To base the Constitution on what men would be likely to do was also to begin with a theory about human nature, but one this time reflecting men as they are. This was far more negative, choosing for its bottom line men as they are, often irrational, passionate and self interested, because good government must also cope with them.

Yet how should the government deal with this reality? To the Jeffersonians, man despite his present imperfections was still rational, malleable and thus educable. To those who were the conservative, well-to-do and highly educated, the right to revolution entailed by natural law philosophy not only put any new government in a precarious position but seemed to give far too much power to the fickle and passionate masses. This view, represented by Jefferson's antagonist, Alexander Hamilton, expressed fear of the people rather than a faith in them. It reflected the belief that men were basically irrational and intractable, and called for government legislation to control human relations. 37 Because human actions were equally self interested, to appeal to a "higher moral law" was in theory meaningless and in practice pointless. Thus the law was understood to be constitutive of civil liberties rather than the reverse. Justification of the laws and controls would rest in their practical consequences - i.e. in the peace, order and safety achieved for the American people.

The outcome of the Philadelphia Congress was a compromise
achieved very brilliantly by James Madison (a Hamiltonian) and Benjamin Franklin (a Jeffersonian). It is extremely important to understand how this compromise was brought about because the combination of elements achieved - both in what they were and in how they were combined - provides the keys to the present problems in regulation.

We have seen above that liberal humanism would establish on the one hand human dignity and freedom rooted in rationality, and on the other meaningful and defensible moral prescriptions both for men as individuals and for society. Yet it appears insofar as Locke and Hobbes provide the only alternatives that it is not possible to have both individual dignity and social order. The Jeffersonians espoused liberty at the expense of enforceable social prescriptions and stability, while the Hamiltonians chose the reverse. The compromise Madison achieved maintained both government by the consent of the governed and social stability but not by theoretical resolution of the antithetical positions. Rather he chose a mechanical means, Lovejoy calls "the method of counterpoise."38

The method of counterpoise is a system of checks and balances patterned according to the popular conception of Newton's celestial mechanics. It was thought that just as the course of the planets was determined by centrifugal and centripetal forces in a constructive counterbalance, so in general a desirable outcome can be achieved by balancing things thought harmful in themselves, one against the other. Applied in the political sphere, this meant separating all the powers and interests into separate groups which would act as effective checks on each other - whether the powers were the states versus the federal
government, the legislative, executive and judicial branches of the government, or competing groups of citizens.

Behind this method lies an image of man which draws upon the Hamiltonian perspective. It gives specific formulation to the liberal humanist concern for the dignity of every individual and for social justice:

a) Madison did recognize that "liberty" of all citizens as they are governed by consent is of prime importance. They have the right "to express and to seek to realize their own opinions and wishes with respect to the policies and acts of government." But this right is entailed by the achieved reality of popular government. It is a civil right.

b) Further, man is not clear thinking, for, Madison says, "as long as the connection subsists between his reason and his self-love, his opinions and his passions will have a reciprocal influence upon each other...." Inevitably the country will be divided into competing interests.

These divisions, Madison calls "factions." To attempt to mould them into a Hobbesian "leviathan" would be to destroy liberty. To permit them to flourish without control in a Lockean spirit of rational dissent would be to destroy the state. However to allow them to survive as they ought but pitted against one another would be to achieve a controlled expression of all without a single faction becoming dominant. In this way the best approximation of the general good would be achieved.

But what is this "general good?" The implication of the
counterpoise method is that all factions are equally "irrational" and "interested", and all arise out of human desire and selfishness. If, in fact, some interests did have a more justifiable ground for government attention - perhaps they were concerned with the good of the whole people - this would be irrelevant to the outcome or solution to a particular conflict. In fact, resolution of interests was not its aim at all. Rather all the interests (and the more the better) must necessarily remain vital in order to keep each other in check.

It is an important point to realize also that Madison was concerned not so much with what issues the "factions" represented but with the fact that they were power groups. His method was to balance groups of people against each other. Given a materialistic and mechanistic view of man, this was the only relevant consideration.

Further, such a system if completely successful achieves order and peace, to be sure - but also a static society. The law defines its limits, and the parts within it simply follow the established rules of play.

Lovejoy points out that the method of counterpoise can really have only negative effects:

"It was simply a way of preventing new proposals from being adopted. If it ever became completely effective (which, of course, it never quite did), it could result only in a deadlock, an equilibrium of forces in which no movement in any direction would be possible. It therefore tended to crystallize the status quo and was naturally favored by those who wished to keep the existing political and economic order unchanged - or as little changed as possible."41

In other words "the general good" was a calculation of the status quo. The interests which ought to exist were the interests which did exist; no differentiation was to be made between the way men
were and the way they ought to be. Madison avoided the problem of resolving the philosophical differences between the two groups by giving them equal powers rather than by coming to a logical solution to Cartesian dualism. But because his solution was mechanistic rather than rational in form, it, in effect, implied a biological anthropology in any case. Thus the lesser (utilitarian rather than totalitarian) reading of Hobbes' politics becomes a reality here; the sovereign is ideal for he is an unprejudiced source of order, safety, and peace. He is in fact the counterpoise machine.

The American constitution provides a specific answer to the question, how is it possible to defend moral individualism while at the same time to ascribe to the state a moral function. Madison's compromise still recognizes that individual liberty is a necessary component of society — that government must be by consent of the governed, but it also qualifies that liberty by placing it within the constitution, which is its source and guarantee. As long as moral and civil virtue are identical the practical problems are few. However, under some circumstances, this will create a tension between what are liberties for the process of individual self emancipation, and what are the civil rights which the individual enjoys within the state — in other words, between individual liberty and state order.

If the requirement of liberal humanism, that society as a closed institution serve an open human community (see Chapter I) were met, there would still be a certain tension between individual liberty and social order. But such a tension would be a constructive one where there could be intelligible interplay and resolution of issues, and a
consequent revision of social principles. Madison's solution recognizes both principles of liberalism, and places them in a kind of tension, but the development of man as a constructive process is precluded by the fact that human liberties are treated in their specific expression as interests or factions which must keep each other in check for the sake of order. Thus, insofar as American regulation of the biomedical sciences imitates this initial solution, it too will provide an inadequate assessment of their implications for human emancipation.

The practical difference between the two images of man - the rational and the biological - became evident in the years immediately following the drafting of the Constitution, when slavery became a constitutional issue. The "natural rights" of the Declaration were seen to be an intuitionist projection of moral norms because men disagreed about their applicability. However, if slave owners had argued for a competing system of rights and obligations (e.g. the right to own slaves as part of the right to property) they would have achieved only stalemate - neither intuition being verifiable. What they required was a different concept of nature and of rights which would defend both the precious liberties of American citizens and the American social system as it depended upon slavery. To this end the Hobbesian acceptance of men as they are, their appearance and social circumstances, not some underlying ideal, became represented as "nature", - indeed, a nature which God allowed and therefore approved of. 42

With the development of Darwinian biology, Hobbes' materialism, which reduced human consciousness to a space filled with atoms in motion, was replaced by the equally reductionist evolutionary model
which explained human mental processes in terms of biology and "life forces". History was understood to be a natural process within which life forms were developing in a positive progression of struggle and interplay. "Rights" which were guaranteed by the Constitution were, like the Constitution itself, a product of developing freedom; to interfere with this process would be to interfere in human progress. Equality then was not the guarantee of freedom but belonged to men as they were already free citizens within the society into which they were born. In this way, natural law was identified with positive law. 43

A shift from the Lockean to the Hobbesian perspective is also a shift from an appeal to original moral principles to a utilitarian consciousness of consequences. Government remains dependent upon consent of the governed but that consent in turn depends upon its satisfying human needs and desires.

Here then are two very different images of man in society, of the value and dignity that he has, of the limits to his freedom, and of the possibility for his self-determination. The idealism of the Declaration of Independence has never been denied. In fact the victory of the North over the South in the Civil War has been regarded as a victory for the intuitionists (often referred to as "absolutists"). Yet, emancipation of the negroes has been only gradual in American society and the developing legal protection of their rights very slow. Those who identify natural law with developing positive law also have grounds for arguing that their position has been vindicated.

The outcome of the Madison compromise is that both images are operative in American society today. This dualism can be seen even
within the Supreme Court itself. Sidney Hooke has analyzed this problem in his book *The Paradoxes of Freedom*:

"But now a strange thing is observable. The great continuing principle of the American Revolution declares that all governments derive their just powers from the uncoerced consent of the governed. What makes these powers just is that they secure certain rights of man. At the very time when the principle is no longer in dispute anywhere - when even dictatorships must forge a claim that somehow they too rest on consent - in our own country the very concept of human rights, in relation to which legitimate government is defined, has become ambiguous in both formulation and interpretation. The most dramatic expression of the ambiguity and conflict in current interpretations of the nature of human rights is to be found in the opinions of the United States Supreme Court, whose five-to-four decisions exhibit a rapid pendular swing between two incompatible points of view, both of which claim to be rooted in the traditions of the American past."\(^44\)

Hooke goes on to describe each of the antithetical viewpoints. He identifies an absolutist position which espouses the natural rights philosophy that human rights precede government, and gives example of this from the writings of Mr. Justice Black who was arguing against the courts adopting a "balancing approach" to conflict of rights. Hooke states, quoting Justice Black:

"This main contention of absolutists is that the rights enumerated in the Bill of Rights and other articles of the Constitution are 'so absolute a command that Congress is wholly without authority to violate it, however great this nation's emergency and peril may be.'\(^45\)

Hooke makes a very good case against the opinion that Jefferson held such an absolutist (i.e. intuitionist) view himself. However, regardless of Jefferson's view, this position has carried a cultural sway in much of American history, and the point is, it is now part of the American creed expressing liberal humanism. It expresses a *prima facie* notion of rights that they provide a standard of autonomy which cannot be qualified for the sake of efficiency or some other practical
goal. It states that ultimately the individual has value and dignity in himself and nothing can compromise it.

Those who use, instead of the eighteenth century natural law philosophy, "the purposes and ideals of the Constitution" and "the legitimate needs of contemporary democratic society", Hooker says, argue that it is government which determines and guarantees rights:

"The point is that the Constitution itself recognizes explicitly not only that circumstances may make all constitutional guarantees irrelevant but implicitly that there are potential conflicts among the ideals, rights, and privileges it enumerates, and that therefore none is absolute and all must be intelligently interpreted — in the one instance of extreme danger to national survival, and in every instance when they seriously conflict."

This view also expresses a common place notion — one not about the possession of rights, but about their exercise. That is, it implies that rights to freedom, and equality mean nothing except in specific situations where freedom means freedom for something — for property, goods etc. available in a society. Such freedom then immediately implies prior conflict (since all want whatever they can get) and the necessity for compromise.

In American society these two contrasting strains have produced very paradoxical attitudes towards moral issues. American law, and the rights and obligations of citizens. First the American belief that there is a "higher law" standing beyond and behind the laws of the country has certainly fostered a moralistic attitude which strengthens its force. Belief in God and in universal human rights is hardly distinguishable from American patriotism and worship of "Law" and "Justice" as sacred institutions. In fact much legislation is prefaced with a written text describing its purpose in terms related to the higher moral
aims of government and American society. The Lockean rationalistic idea is producing then, as predicted, a merging of moral and civic virtue. Yet because of this, two rather contradictory consequences occur. The common citizen thinks himself to be as able as anyone (the "higher law" being self-evident) to be critical of existing laws as they fall short of the ideal. Where unjust activities go unchecked, he expects the law to do something about it. On the other hand where particular laws seem to him to be unjust, he feels quite vindicated in ignoring them. In other words natural rights philosophy taken idealistically is highly susceptible to legal formalism in both senses — obedience of the law is sufficient; disobedience of the law is excusable.

Secondly, the American practice of balancing rights and interests as a counterpoise of powers necessitates a regrettable gap between ideology and implementation. This of course encourages the legal formalism produced by the creed itself. Administrative bureaucracies are suspect by nature, and lawyers noted for their cleverness. The American citizen does not identify personally with the social institutions which are constructed to keep peace and order on his behalf, but if he is caught breaking the law, he can do well for himself by "hiding in the thicket of the law". As civil rights protect the status quo, they protect the institutions and interests which while falling short of the American ideal have produced the society.

This general attitude resulting from the Lockean character of the American creed itself explains in kernel form the symptoms of breakdown noted in the first section of chapter I. If researchers
tend to regard the requirements of peer review as bothersome controls on an activity to which they have a certain moral commitment they are in some respects heroes for the American ideal.

Taken separately the two images of man would result, on the part of American citizens, in an extreme individualism, and on the part of government, in a strong utilitarianism. However, these two factors do not exist separately from one another. Superficially, there appears to be a kind of regrettable tension between the two.

Myrdal comments:

"Sometimes one even gets the impression that there is a relation between the intense apprehension of high and uncompromising ideals and the spotly reality. One feels that it is, perhaps, the difficulty of giving reality to the ethos in this young and still somewhat unorganized nation - that it is the prevalence of 'wrongs' in America, "wrongs" judged by the high standards of the national Creed which helps make the ideals stand out so clearly. America is continuously struggling for its soul."49

However, the two images must still be reconciled as one political system when the government is forced to decide whether to permit, restrict or even support activities whose consequences are social and have implications for the ideals on which the American way of life depends. For abandonment of either position in favor of the other would once again force a choice between a leviathan where the state would shape individual desires and needs to its own ends, and an ideal state where men would suppress their desires in favor of completely rational association. Neither, of course, would be entirely realizable, but the image of each would be powerful enough to head the course of the society towards personal fragmentation.

The method which policy makers use in resolving conflicts of
goals and ethical differences, I have called the "risk/benefit" calculus. To some, this title might carry a strictly utilitarian connotation but it is a broader method than counterpoise, which is only part of it. For the steps of this calculus involve both moral reasoning and utilitarian weighing of interests. They take into account, in the most general sense, the ideals of liberal humanism as they are at risk, and the desires and goals of individuals as well as society as they are to be benefitted.

In the first chapter, I made reference to this calculus by giving an example of its application in human experimentation. The discussion in this second chapter has been an analysis of the assumptions which together have formed the American expression of liberal humanism and which now play a particular role in this calculus. The next chapter will describe the risk/benefit calculus more precisely and show its application to the biomedical sciences, especially to the area concerning the reproductive technologies. There, it will be seen that the outcome of its application (described as a problem in chapter I, and given more specific detail in chapter III) has a direct relationship to the assumptions underlying its historical roots.
Chapter II: footnotes

2. Bronowski and Mazlish, pages 218-220.
3. Ibid., p. 224.
5. Landmann, p. 149.
7. Ibid., p. 102.
8. Ibid., p. 104.
9. Ibid., p. 130.
10. It has been brought to my attention by Professor Hitchcock that there are some who argue that Descartes' philosophy permits a hypothetic – deductive approach, where axioms of a rational system are postulated for purposes of constructing a systematic scientific explanation of experience which will then be tested by experiment for its validity. Thus it might be argued that a constructive morality is possible also within the Cartesian framework.
   If such an interpretation is permissible it would then call for a third pair of alternatives to be added to my diagram. However, in my view this still does not, in any case, achieve a truly constructive morality for reason is still not given a synthetic or formal function as Bohm has described. Selection of an hypothesis would still be, however judicious, a selection among what has been given to man. I see image making as a creative human action on the given and one which then determines which selection would in fact be considered "judicious."
11. My presentation of the philosophies of Hobbes and Locke are particularly dependent upon Bronowski and Mazlish, Chapter II, and on Becker, Chapter 2.
12. Einstein and Infeld, p. 54.
13. Ibid.
15. Bronowski and Mazlish, p. 203.
17. Bronowski and Mazlish, p. 196.
21. Ibid., p. 197.
22. Ibid.
24. Ibid., p. 12.
25. Quotation from Locke's "Of Civil Government", Book II, sec. 6, 8, 11, in Becker, p. 64.
27. Becker, p. 51.
30. I heard a chaplain from the American army declare at the Conference on Personhood held by the Institute for Bioethics, in Montreal, in May 1979, that in the end what must be realized was that you could not put a solvent in a container which would dissolve it. He meant that the limits on American pursuit of biomedicine were the ideals which constituted the United States in the first place.
32. Quoted in Becker, p. 8.
34. Bronowski and Mazlish pages 390-391.
35. Matson, p. 140.
36. Lovejoy, p. 46.
37. Matson, p. 146; Lovejoy, p. 51.
38. Lovejoy, p. 39.
39. Ibid., p. 48.
40. Ibid.
41. Ibid., p. 60.
42. Becker, pages 247-8.
43. Ibid., p. 254.
44. Hooke, p. 3.
46. Ibid., p. 27.
47. See Myrdal, Chapter I for a defense of the following assessment.
49. Ibid., p. 1.
III

AMERICAN LIBERAL HUMANISM: REGULATION OF BIOMEDICINE

The preceding historical analysis of the origins of the American regulative tradition has shown that the United States has committed itself to a very powerful creed. It is not my intention to deny that this creed has achieved a way of life which is outstanding in comparison to most countries in the rest of the world for the degree to which it has realized the values of liberal humanism - of human freedom and wellbeing. Nor is it, in my view, a good reason to reject it because the ideals are not verifiable. No purely objective test is possible for any philosophy, for whatever it is, it emerges out of the personal engagement of man with the world and it reflects who he is as well as what he sees. It shows where his commitment lies and why.

R.O. Johann, in his book "Building the Human", expresses very well the value of philosophy:

"As the French philosopher Blondel once observed, philosophy is not to explain life but to help constitute it. By making man aware of the implications of his actions, of the range and scope of his life, it lifts that life to a level that cannot be otherwise reached. It is a level on which man is faced not with the disposition of things or the mastery of the world that surrounds him, but with the disposition of himself and the decisions that determine his own meaning. If on this level he finds no ready-made answers that can be grasped independently of his personal commitments and the experience to which they give rise, it is nevertheless no slight service of philosophy to make him aware even of that."

The test of the validity of any philosophy is its capacity to give to man a meaning which is comprehensive enough to account for his diverse experiences of himself, of other men and of his natural environment. While a philosophy does lift man beyond the "disposition of
things" to a "disposition of himself", it is the adequacy of his image of himself expressed by that philosophy which in turn permits adequate mastery of the world, for mastery comes only when he knows what the world is to him, and what he is, necessarily part of that world. In chapter II, I pointed out that this was precisely the importance of Locke's philosophy to the fathers of America. It brought together in a coherent fashion their experiences of man in the new world and made possible the disposition of men and government and new mastery of geographic, economic and social frontiers.

But the test of a philosophy is ongoing because human action does not leave the world unchanged, either in a physical sense or in the way it is understood. Such action discovers new knowledge and creates new factors which must also be integrated by the philosophy. My criticism of the American expression of liberal humanism then is rather that it is gradually falling behind this inevitable advance. Because the new factors (in particular, those revealed in our growing mastery of human biology) require a fundamental change in the concepts of human nature which formed that expression, no attempt at further explanation or precision will be sufficient to permit the American version of liberal humanism to incorporate this advance. Rather there must be a reassessment faithful to the original principles of liberal humanism, of who man is, and what are his capacities and limits in his self-creative project.

Comparative study of some of the American documents directed towards regulation of biomedical research shows that a need for such a change has not been recognized. Rather, the public bodies responsible
for regulation are attempting to cope with the issues of an "Einsteinian universe" by refining "Newtonian" technologies. In fact, it seems that some of the more important issues are hardly being recognized, for the self-image assumed in American liberal humanism is acting as a selective tool in defining in the first place what are the pertinent moral issues. The old world philosophy is highlighting, in many respects, only old world concerns. This, of course, is the negative side of man's power to give philosophic intelligibility to his life.

This view of philosophy, one which I have been gradually developing from the very beginning, in my critical comments, is not entailed by the Cartesian philosophical tradition. Within that framework, as was seen in Chapter II, an intuitionist view of morality was not acceptable to the liberal humanist position because it could not provide verification for moral judgements, and thus could not show (given the limits of its own ground, i.e. rationalism) both how man could be free and moral judgements meaningful.

This tradition will be critized, then, not only within the Cartesian framework itself - that is, for the limitations of an intuitionist position - but further because it is inadequate. It cannot, represent moral issues as part of constructive process, or society in the service of the development of human community. These two requirements we saw in Chapter I were necessary in order to maintain philosophical coherence among the principles of liberal humanism. Because the tradition is not able to meet these requirements, it also gives a very inadequate accounting of the elements of human experience relevant to the biomedical project. It will show then that there is need for a
more comprehensive interpretation of the nature of man.

"Risk/benefit calculus" is the phrase I have chosen to represent the total process which decision makers go through in order to determine what guidelines ought to regulate the biomedical sciences (or any other activity which has an impact on American society.) This process contains two stages where there are discussed in turn the ethical and the constitutional phases. Taken together, they attempt to forge a constructive resolution of the two incompatible images of man and the antithetical theories of human rights, while at the same time maintaining the essentials of American liberal humanism. In application to a specific action they try to answer the practical question raised in chapter I about man's making of himself his own project: how is it possible for him to be beneficiary rather than victim of his own genius?

Because of the assumptions brought to the calculus - assumptions about what is at risk, and what is beneficial - those responsible for formulating public policy are finding it very difficult to provide an answer to this question. The result seems to be a gradual abdication from the ideals brought to the calculus, first in the ethical phase and then in the constitutional phase. The outcome, one which at present is still my own projection from this trend, appears to be a third stage, a pragmatic phase. Here the value judgments made about the biomedical agenda become a statistical relativism - that is, a sacrifice of freedom in favor of justifiable prescriptions, and a compromise of individual dignity for social order.

The risk/benefit calculus is a very complex one, and the
following account cannot possibly provide a faithful reflection of the massive amount of research which takes place before guidelines formally become law. The guidelines must be completely comprehensive of man in American society – including his needs, desires and goals, his moral commitments and the laws he must live by – as well as of the realities of scientific method and technological application. The purpose of this chapter is, however, to describe and analyze the logic of this process and to show that the problems with the effectiveness of American regulation observed at the outset of this thesis are entailed by that logic and the assumptions in which it is rooted.

Because my own interest is moral philosophy and the relation of moral issues to social structures, I give little attention to a very large aspect of bioethics, the legal issues. Rather, I make the perhaps simplistic assumption that the legal issues really are subordinate to constitutional issues and will be resolved within that framework. If, for instance, it is found that the law of the courts has yet little to say about the parentage of a child carried by a surrogate mother, obviously it would be foolhardy to permit such an application of in vitro fertilization until this ambiguity is resolved. However, this resolution could be effected with ultimate reference to the Constitution and the legal problem per se would not have any separate relevance to the question whether within American society such a practice was justifiable.

The documents listed in the preface provide the primary sources for my discussion. I will not analyze any of them completely, but will draw upon them for illustration of the application of the risk/benefit
calculus.

1. Internal Limits for Biomedicine: the ethical phase of the risk/benefit calculus

The first phase of the risk/benefit calculus is ethical discussion. The concept of a "higher court" bequeathed by Locke's philosophy of "government by the consent of the governed" brings to American liberal humanism the requisite distinction between what people do or would like to do, and what they ought to do. In the beginning at least, the demand of liberal humanism that moral judgements be recognized as significant is met.

This concept stands out with clarity in the various American documents, in two ways. First of all, the government itself sees its contribution to the improved health and welfare as expressive of a moral commitment to the people on whose behalf it is acting. A revealing comparison can be made for example between the opening paragraphs of the DH&H provisional policy drafted in 1973 to protect special research subjects ("...minors, fetuses, abortuses, prisogers, and the institutionalized mentally disabled...") and the Declaration of Helsinki. The Declaration of Helsinki as was seen in chapter I, begins with the following statements:

"It is the mission of the doctor to safeguard the health of the people. His knowledge and conscience are dedicated to the fulfillment of this mission."2

With a very similar moral tone the DH&H document states:

"The mission of the Department of Health Education and Welfare includes the improvement of the health of the nation's people through
biomedical research."

In other words, social justice is to serve the welfare of the people.

The second way that the concept of a "higher court" functions is also expressed by the DHEW document:

"This mission requires the establishment of policy and procedures for the protection of subjects on whose participation that research depends. In the DHEW policy, as well as in ethical codes pertaining to research in human subjects, the keystone of protection is informed consent."  

This "court" acts as a safeguard against violations of the Lockean moral ideals which express the value and dignity of human beings.

Similarly, the National Research Act which called for the creation of the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research gave it the mandate to identify the basic ethical principles which should underlie the conduct of biomedical and behavioral research involving human subjects.

In the opening paragraphs, the commission states Congress' reason for examination of issues regarding fetal research:

"The priority assigned by Congress to research involving the fetus indicates the concern that unconscionable acts involving the fetus may have been performed in the name of scientific inquiry, with only proxy consent on behalf of the fetus."

However the ethical issues of central concern to policy makers are conceived within a certain framework which predetermines what concerns are addressed and what tend to be either overlooked or left aside because they are beyond the capacity of that framework to deal with them. This framework is the "natural rights" philosophy of Locke.

In the second chapter we have seen that Locke characterized
man as a rational, naturally cooperative being who is able with the proper education to assume responsibility for his own destiny. His premise was that all men are created morally equal ("common equity") and he concludes they all have the identical right to protection from harm in "life, health, liberty and possessions." There is great merit in this philosophy for it has provided the desired shift from external authority to personal sovereignty; man himself becomes the ground of his own claims to what is right or wrong in relationships where he must bear the consequences. Further, what man is, has tended to determine what have become recognized as natural rights - that is, those things which not only permit survival - for example, the rights to food, shelter etc. - but also those things which are uniquely characteristic of human beings - for example, the right to religious and moral freedom, to free inquiry, expression, and dissent.

As a philosophy of rights informs the laws of the state it has also provided for man a guarantee against the lack of virtue of others, and he is able to claim at will what those rights protect because as rights they entail a corresponding duty on the part of others to fulfill those claims. In sum they protect man as an autonomous being, and therefore a being with dignity and value, in himself. Even if God is not, man remains morally unchanged.

However, there are two implications when the philosophy of natural rights is taken to be the framework for ethical discussion. First of all, it implies (though it doesn't follow necessarily) that the total sphere of moral concern is man himself; that is, moral agents are the only recipients of moral action. In relation to this it implies
that they are all to be recipients equally. Men in the state of nature are all morally identical. Secondly, ethical issues tend to arise only when human autonomy is threatened, when an action (especially one which seems desirable) interferes with a human being's capacity to be self-determinative, in the sense implied by the natural rights philosophy - that is, when his natural progression towards human perfection is placed at risk. On the other hand, the ethical problems are resolved when that autonomy is protected. Such protection is achieved through a deference to human rationality and the corresponding right to dissent - even when an individual's intuition of the higher court is at odds with the majority in the state. Thus any action by another which puts his health, liberty or life at risk, but to which he has given knowledgeable consent, is treated as ethically justified.

Both of these implications are operative assumptions in the delineation of issues, not only by policy-makers who might (despite the American recognition of separate moral concerns) be forgiven for sliding into a legalistic interpretation of rights, but also by moralists whose responsibility is to advise the government about relevant moral issues. This problem will be described in a general way, first, in order to show the root difficulty with the risk/benefit calculus, and then with reference to a more particular issue so that the limits of the moral framework in its application can be seen.

A. Classification of issues: an ethical dilemma

There is a general classification of bioethical issues which seems to be implicit in much of bioethical literature and certainly in policy-making concerns. If the central ethical problem is one of
protection of human autonomy, then moral discussion needs to occur when this is threatened, and will focus on how to best ensure protection of the individuals who (it is assumed) must necessarily be involved. In general, ethical issues tend to become matters of risk - risk to Lockeian human values both when they are taken as rights for individuals and when they represent the ideals on which the spirit of American democracy depends.

The areas of concern then are roughly divisible into these groups:

A) **Medical practice.** The intent of medical practice is to secure the health of patients when this serves broader goals which the patient holds. In cases where the patient is not able to decide for himself what are his goals, a physician usually consults the patient's closest relative for direction in this matter. Thus, in theory at least, there is a coincidence between the interest of the patient and the physician and the points for concern are the following:

i) there must be good communication and confidentiality between the physician and patient to ensure that the autonomy of both are being realized. Here such issues arise as those concerning the doctors obligation to provide care which interferes with his moral code as professional and individual, and concerning groups of patients who must be cared for although they are unable to assume the responsibility of giving informed consent.

ii) The medical care which is possible must be distributed in a fairly equitable way. Because of the nature of society, and because the costs of different kinds of care vary enormously, the central
concern is to find a defensible standard of health care provided as a right to all.

B) Pure Research: Here the focus is primarily on the interests of society as a whole, both as it exists now and as it will be in the future. The issues perceived concern then not matters of individual autonomy but of the safety and reliability of techniques (for example, recombinant D.N.A. research).

The issues of the first two groups become more complex, however, as they verge on the third group, clinical research. In relation to medical practice, an instance where human autonomy is threatened occurs when equality of treatment is put at risk. But in this case bioethicists are faced with a dilemma; what provides optimum care for some people (e.g. organ transplants, care of premature infants, care of burn patients) exceeds in cost by far what would represent an equitable sharing of available health care resources. To simply equalize health care, however, would overlook the beneficial fact that such extreme forms of therapy often result eventually, through information gained, in an increased standard of care available to all. In relation to pure research, human autonomy seems threatened when it is seen that scientific investigation, because of cost or because of the nature of the discoveries, may affect the options for future generations. Already, for instance, as I pointed out in chapter I, the fact that we are able to save the lives of those afflicted with genetic disease, even to the point that they may reproduce, has increased the cost of health care tremendously. In both cases the pressure to compromise ethical principles increases radically because of the promise of
consequent health benefits. This issue constitutes the core problem in the third classification.

C) Clinical Research: This area represents a mix of therapeutic and non-therapeutic interests. The focus of benefits moves beyond the patient where patient interests, though very much at stake, are nevertheless only part of the calculus. Human experimentation most obviously is the model for this area but it also includes such things as behaviour control, genetic screening, selective abortion and sterilization because they are thought to serve the general good. In each of these situations it is seen that a risk to the bodily integrity of a person without his consent constitutes a risk to his moral autonomy and thus an injury to his personal dignity.

Here a number of issues arise, all in consequence of the primary concern to protect individual autonomy while pursuing the desired activity. The following are representative of this list:

- What is freely informed consent?
- Is it possible to obtain freely informed consent from lay people about a procedure which is scientific in nature?
- Who is best able to obtain such freely given consent?
- Should human beings who are unable to give consent themselves even be involved in procedures not for their benefit?
- Is any non-therapeutic procedure ever free of risk?
- What constitutes a minimal amount of risk?
- Is the distinction between "therapeutic" (a characteristic which justifies intervention when consent is not possible) and "non-therapeutic" a real one?
- Should there be compensation in the form of a reward for those (e.g. prisoners) who participate in clinical research?
- Should there be required an insurance plan which will provide compensation for possible injury?

Much effort is spent on the resolution of these problems but their intelligibility as issues is dependent upon the initial issue, that of the protection of human autonomy.
Because the major difficulties in bioethics tend to converge in this third area, where there occurs a direct threat to human autonomy in the pursuit of biomedical benefits, clinical research itself becomes the normative issue in terms of which all others are defined. (It is precisely this area, of course, which has been the focus of national concern in the United States, and the raison d'être for the National Commission). The central dilemma for clinical research has been well identified by bioethicists and policy-makers alike. David Wikler gives a concise summary of this problem in his essay, *The Central Ethical Problem in Human Experimentation and Three Solutions*:

"Still there is a single issue which might reasonably be regarded as being of central importance: the possibility of subjects being injured or hurt. The other issues involved are far from negligible; but I believe that if this one were not a factor, human experimentation would not be the moral issue of the same order as it is now. It is almost always of moral concern when people suffer injury or hurt. But risk of injury in experimentation is of special interest because it is undertaken for the benefit of others. Moral evaluation of experimentation in this dimension consists of determining whether the benefits of the experiment (to future patients or beneficiaries of scientific knowledge, to the experimenter, to his or her sponsors, and to the subject) justify the risks involved."  

With this focus on ethical risk come corresponding questions about scientific benefit. The answers to those latter issues contribute to the final ethical justification of a proposed experiment:

- Is the proposed experiment necessary to achieve the desired information?
- Has sufficient experimentation been tried on animals first, so that the risks of the technique have been reduced as much as possible?
- Is the experiment sound, scientifically, so that the results obtained will be reliable?

These questions because of their technicality are necessarily addressed by researchers who give scientific review of all research
proposals. Just as the ethics' assessment tends to represent the risk involved in the experiment, the science assessment tends to represent the beneficial outcome of the research.

The central ethical judgement about the acceptability of proposed research is a relating in a rational way of the conclusions about the risk and benefit so that it can be known whether the experiment will, overall, provide more benefits than risk.⁹ In each particular sub-group of clinical research, and in each of the other two areas of bioethical concern where there is a tension between risk to the autonomy of individuals and medical benefits for them and for society, this is also therefore the judgement to be made. For example, with regard to fetal research, Stephen Toulmin, in his essay summarizing the ethical debate presented to the National Commission, regarding fetal research describes the Commission's own terms of reference in the same mode:

"1) Which of the alternative particularized descriptions of the fetal research situation properly balances up all the values and benefits that constitute authentically relevant moral features of the situation;

and 2) what conditions the categorical present claims, benefits and interests of individuals may be properly set aside in favor of hypothetical future benefits to "science" or "mankind" in general."¹⁰

On May 1, 1969, the initial and definitive policy guideline for human experimentation was completed. This guideline shows that the above issues and judgements are precisely those with which it is concerned:

"The policy required that a review committee within each institution be concerned mainly with: 1) the rights and welfare of the individual, 2) the appropriateness and adequacy of methods used to obtain informed consent from the subject, and 3) the risks and potential
benefits of the investigation. The most significant change from the criteria enumerated in prior policy statements was in criterion (3), which recognized that benefits other than medical could result and that knowledge of these benefits should justify a review committee in permitting an informed subject to accept possible risks even though there was no direct benefit to him. The policy also provides a more detailed description of what constituted 'consent'.

This policy recognized that at the most general level the right of the individual to be autonomous in matters concerning his pursuit of life, liberty and happiness was being placed at risk by his very participation in experimentation whose end was to achieve benefits for society. This they sought to safeguard by requiring that he give informed consent to the procedure. More particularly it recognized the social concern that his autonomy was jeopardized by risk to his health, and it thus required that the risk to his own health not outweigh the health benefits to be achieved for others. This was met by ensuring that the experiment be scientifically sound and necessary. In sum, risk to individual autonomy was acceptable, if it was acceptable to him and if it was outweighed by the overall benefits to be achieved for society of which he is a part. In sum, "these guidelines reflect society's concern for protecting the individual research subject against possible injury or abuse while simultaneously seeking to maximize the freedom of scientific inquiry."

However, even when the proposed experiment has been shown to be scientifically sound, and necessary to obtain the desired information, the central dilemma raised above is still not resolved. Still, it can be asked whether it is ever morally justifiable to place a human being at risk, even with his consent, for biomedical benefits for other people, and if so, why.
David Rutstein points out an underlying assumption of the "benefit" side of the calculus (which he doesn't question) in his essay *The Ethical Design of Human Experiments* which shows that the "why" question tends to be overlooked:

"This analysis of the ethical consideration governing human experimentation is based on the assumption that it is ethical under carefully controlled conditions to study on human beings mechanisms of health and disease and to test new drugs, biological products, procedures, methods and instruments that give promise of improving the health of human beings, of preventing or treating their diseases, or postponing their intemely deaths. Without such an assumption, there can be no systematic method of medical advance. Progress would have to depend on the surreptitious, illegal or unsupervised research and testing of new modes of prevention and treatment of disease. The ethical standards of such irregular activities would certainly be at a far lower level than can be guaranteed when the testing of new methods is openly practised."

Pursuit of medical benefits is accepted at face value, as something desirable — a good thing because it is what most people want — but this does not show why it is morally justifiable to place human beings at risk to achieve them. It shows only why it might be justifiable within a society which valued order and harmony over moral liberty (the lesser Hobbesian view).

What policy makers are attempting to balance are "risks" as conceived in a Lockean framework against "benefits" conceived in the Hobbesian one. Because of this there remains a gap between them, and thus between ethics and science, and policy makers are still wondering in each situation how they can show that benefits do outweigh risks, and whether (or how far) it is justifiable to place at risk individual well being for the good of society.

One solution, which Wikler suggests is to forbid any research which might hurt people. This, he says, is not acceptable because
"experiments which would be banned might have contributed enough to scientific and clinical knowledge to lead to benefits for others in the future." However, his argument is merely a rhetorical affirmation of the other side of the dilemma.

Other writers in looking at this dilemma simply concede that the very act of placing people in the laboratory requires a certain compromise of ethical standards. McDermott, for instance argues that there is a "built-in contradiction" in the Declaration of Helsinki. He says that,

"While the physician is trained to weigh the probabilities of danger from off-setting risks, he is also trained to refuse to place his patient at any known risk no matter how small the probability of danger in the absence of a positive reason for doing so. Expressed differently, the fact that the probability of the occurrence of a known danger is extremely low is not in itself an ethical justification for placing the patient at risk."

In other words, the experimental situation contradicts the human values which the physician prizes in a normal therapeutic relationship. Those who take this view try to make the best of the dilemma by requiring the researcher to imitate the therapeutic relationship as much as possible. But still, in the end, some compromise of human autonomy and dignity seems necessary if biomedical advance is to be made. Human beings must necessarily be used as means for ends which appear to offer no promise of benefit to them.

What then is the outcome? Committees for scientific review assess the benefits of proposed research in terms of biological facts and the exigencies of research. Ethics committees continue to stress the dignity of human life and the autonomy of individuals. Somehow, it is supposed that the principles derived from the ethics committee
will restrain the proposals from the science committee. In summing up
the role of the moralists for the National Commission with regard to
fetal experimentation Stephen Toulmin for instance describes it in this
very way:

"The question is not whether our medical knowledge about pre-
gnancy and fetal development ought to be improved by all legitimate
means at our disposal, but rather how far this is to be done without
lapsing into morally unacceptable procedures."16

Yet there remains an unbridgeable hiatus between the two as
they try to balance concepts about human dignity against ones project-
ing human benefits. As a result "ethics" is regarded as a trouble-
some but necessary limit to activities which otherwise would bring man
one step closer to Utopia, but there is no real unity of principles
and action. Progress in biomedicine seems irrelevant to human auto-
nomy, and vice-versa. How then can transgressions of ethical limits
appear anything but tempting and indeed almost excusable as new fron-
tiers are fenced and tilled for man's greater good?

All of the issues which the ethics and science committees do
raise are extremely important. In fact, while the studies mentioned
at the beginning of this thesis show an indifference to ethical con-
siderations on the part of researchers in general, yet the medical
literature has in the past ten years shown a remarkable increase in
the general sensitivity to matters bearing on human autonomy, pre-
cisely because these questions have been well articulated by concerned
ethicists, and others. Nevertheless, as I said at the beginning of
this chapter, the moral perspective which gives rise to these issues
is both old world and narrow and is responsible for the dilemma. For
before we can protect the autonomy and dignity of human beings, we must have an adequate understanding of what it is that we are protecting.

In other words, these questions are secondary to some other ones which are, because of the old world perspective, being overlooked.

What questions, then, need be asked first? The clue to this lies in the difficulty which occurs when we do try to relate the risks and benefits in some kind of rational judgement. For the dilemma has an underlying one: how does one estimate whether certain benefits are justified by risk where both risks and benefits are not quantitatively measurable but relate in a qualitative way — and indeed, in ways differing from person to person — to human well being? The answer to this question is that if qualitative terms are to be related intelligibly, they must both be subsumed under a single image of human nature — for the society this is a cultural image, for an individual, though the image is culturally conditioned, it is a personal image.

What I mean by this can best be explained by illustrating how an individual relates risks and benefits. To do this I return to my discussion in Chapter I about what must be the nature of moral judgements (for the liberal humanist) for the characteristics of this are being overlooked by those who within a supposedly liberal humanist tradition are trying to make ethical judgements about human experimentation.

The liberal humanist characterizes man (as described in chapter I) as both autonomous and the measure of human good. In order for him to hold this position consistently it was seen that he must root his moral judgements in an estimation of the limits and capacities of
the human being to remain autonomous in the activities he pursues. They will be about what necessarily must contribute to these, and what is detrimental to them. For an individual to make a moral judgement – one in answer to the question "What difference does it make" – he must ask this question thus: "What difference does it make to me?" (This is not to say that all moral judgements are self-interested in the sense of being selfish. Rather it concerns how a person makes moral judgements). In order to answer it, he must bring to the available alternatives an appreciation of himself, his values and abilities, which can comprehend them and relate them in a rational way. I have called this prior unity of personal factors, his self-image. It originates in past experience and is comparable to a philosophy in the requirement that it be continually tested for its adequacy and perhaps even totally reworked in a moral conversion.

This feature of moral experience shows why informed consent is a safeguard for human autonomy and what it is safeguarding.

Consider the following situation which was brought to my attention recently: A young Laotian family recently arrived from a refugee camp in Thailand. A month after their arrival the husband told his sponsor that his wife was pregnant and they both wanted her to have an abortion. The reason he gave for this was that he did not like children and did not want the kind of family in which he grew up where the older children were required to work in order to help support the others. Further, he was afraid that achieving economic self-sufficiency for himself, his wife, and the one son he did have would be difficult enough without adding
any more members to his family.

The sponsors, who were sensitive to their own ethical responsibilities, believed that the abortion was wrong not only in itself but also because they were confident, knowing this family well, that another child would not be the problem that the husband perceived, especially because he was showing every sign that he would soon be very comfortably self-sufficient. They did not doubt that he was being honest in his explanation but they sensed that the wife, who could speak to them only through him, was not completely convinced that she wanted the abortion. However, they also believed that their responsibility to the family was to make sure that they knew what options were available to them in Canada and then to let them make the decision themselves.

Accordingly the sponsors presented to them other alternatives including their own support for a longer period and also the following: there was, they told the family, a gynecologist who would care for the wife for free, and who would once the baby was born find for it another family which was eager to have children but unable to do so. They explained that in Canada it was not unusual for a woman to choose this alternative and indeed there were more families wanting to adopt children than there were children available. The husband listened very carefully to this proposal, and presumably discussed it with his wife. However, ultimately, in further discussion it seemed evident that while he understood what was being said, he could not comprehend it as an alternative. For him such a decision would be extremely dishonorable - a shirking of his responsibilities and occasion for losing face. His
own image of who he was, one which he brought from Laos, prevented him from being as free in the situation as, for instance, would perhaps be a Canadian family who could see a broader range of possibilities. In sum, he was autonomous only in so far as real, comprehensible alternatives were presented to him. What these meant to him was partly a function of what they meant to the persons who presented them and then of what he himself was able to make of them. It was his own self-image which permitted him to make sense of the alternatives and to choose one of them.

This element of moral experience - the interpretation and examination of choices within a single self-image (in order to answer the question, "What difference does it make to me?") - also is evident in an individual's approach to decision-making in the biomedical field, where, for instance, he may be considering whether or not he should participate in a procedure which is nontherapeutic for him. The calculation of risks and benefits and the consequent decision whether or not to accept a risk filled procedure is not a problem for him. If he is able to bring to both aspects a single image of what he considers to be of greatest value to his way of life, it is the image itself which identifies what in fact are risks and benefits for him, and further, it is because both the risks and benefits are made evident by that image that they can be related intelligibly.

For instance, suppose a man were asked to provide a bone marrow transplant for his brother who was dying from leukemia. If there were a risk that he might himself suffer partial disablement from this procedure, it would probably weigh much more heavily on him if he were an
Olympic skier than if he were a teacher or lawyer. However both the skier and the teacher might come to the same conclusion if the affection they held for their brother mattered more than the profession they have chosen. For an individual, a moral dilemma occurs when he has competing values which answer to distinct and incompatible answers to the question, "what difference will it make to me." In extreme cases, if he is pressed to make some decision, he may even experience a personal breakdown where other simpler decisions then become insurmountable difficulties for him. On the other hand, he is able to cope with this difference by looking behind both of the factors for a more fundamental perspective which would be able to give them an intelligible relationship. For instance, the man who could not reconcile his desire to ski with his desire to help his brother might conclude his dilemma satisfactorily by realizing that his skiing career and his brother had, as things stood, about the same life expectancy, and that what he really prided himself on was his ability to cope quickly, courageously and effectively with unforeseen obstacles whether on the slopes or in personal relationships. Thus he would help his brother knowing that in the long run his self-image, which makes possible both the freedom to act and his experience of personal worth, would be enhanced by that decision: in the long run a decision in favor of his brother especially if he did survive would require a more matured expression of these things which make his own life morally significant. It should be noted of course, that a different unifying principle might give rise to the opposite conclusion.

The historical analysis of the origins of the American tradition
however, has shown that a unified image of human nature at the cultural level is precisely what is missing from the deliberations. The protective concepts reflect an image of man which values freedom and autonomy as qualities which depend upon his capacity to be rational, (which is in itself an inadequate explanation) while the scientific concept of benefit implies that in some tangible way, man's utopia is a paradise at the end of a fortuitous manipulation of biochemical molecules. It is known because it satisfies what men desire, but moral discrimination among those desires is irrelevant.

It is clear, to return to the critical problem, that the theoretical dualism which originated in Descartes' "cogito ergo sum" has produced difficult social consequences. This dualism, which could not explain how the human body relates to mind, nor how what we happen to desire can even be related to principles about what is desirable, has given birth to two competing images of man, and to two sets of issues, represented by protective ethics and beneficial science, which cannot be related rationally. Ethics and science indeed appear as a mutual antagonism. The outcome of the ethical stage of the risk/benefit calculus is that "ethics" becomes identified with the protective issues only rather than with the final calculus or justification of the scientific activity itself. It has nothing to say positively, despite the fact that the original purpose of these ideals, which are at risk was the positive emancipation of man.

The question which the natural rights perspective fails to raise is: What is the moral significance of health benefits? What does it mean to say that human experimentation is a mission? What
contribution can biomedicine make to the self creative process wherein man is gradually becoming free? To answer this, policy-makers must be able to say more than biomedical advance is desirable. In other words, in what way does human health relate to human autonomy and well being? By classifying the issues within the traditional American framework, these questions about the implications of biomedicine not only are not answered, they are not even raised. Yet, in Chapter I where the biomedical project was considered in the light of liberal humanistic principles per se which give rationale to biomedicine as well as moral direction, it was seen that these questions are pertinent. There it was asked, in sum, whether we are parents wanting genetic screening, whether we are society wanting to improve the standard of fetal health, whether we are researchers wanting to perfect embryo transfer, how can we know whether we will be beneficiaries or victims of biomedicine? The issues on which policy-makers are focusing, and the way they are attempting to resolve them give a very incomplete answer.

B. Inadequacy of Natural Law Philosophy: external and internal relations

The moralist may perhaps regard this inadequacy as a putdown of science - an echo of Hans Jonas' comments about health as a public good:

"There is no question about the good served nor about the evil fought - disease and premature death. But a good to whom and an evil to whom? Indeed I have found health called a national resource, which of course it is, but surely not in the first place." 17

But the question about the significance of health is also one about the nature of human well being. The moralist working within the
natural rights framework must be able to explain what are the conditions for human autonomy and dignity. He must be able to make sense of the biological as part of the process of human emancipation. That is, he must be able to show how man's biology is a necessary but insufficient condition for his personal development, and when questions of his physical health, of his capacity to reproduce for instance, are highly pertinent to that process and when, perhaps, they are irrelevant. This, it will be seen is something that he cannot do for the natural rights framework, being rooted in a rationalist anthropology tends to treat matters of biology as irrelevant to moral decision-making.

The second part of this analysis of the ethical phase of the risk/benefit calculus then will describe the moral debate which constitutes the "risk" side of the calculus. It will show first of all, even when the framework for the moral issues is taken on its own, that discussion breaks down among moralists for there is no resolution possible for competing intuitionist views. Secondly, it will show that, even if there were a resolution possible, it could not provide adequate regulation of biomedicine because the framework presupposes an objectively rational universe.

Protection of human beings in clinical research, we have seen, is given by policy-makers precisely because they are human beings. Their moral status (following Locke's lead) has entailed their rights to autonomy. A new issue arises as it appears that a human being is being deprived of his rights by someone in order to achieve some other end. The ethical problem is to show that this is the case and the moralist must prove first that the human being in question is in fact
entitled to protection.

In most situations, this does not appear to be a problem because it is obvious who are protectable. No one doubts that he usually knows when he faces a normal rational and autonomous human being. What is not so clear are those situations where human beings apparently are a little different from this self-evident norm—and whether they too qualify for the same protection. In order then for any other entity to qualify for moral protection, it must establish a moral identity with human beings in general. To use the moral (as well as legal) term for such an identity, it must be a "person".

For Locke, it was quite self-evident who were persons. His problem instead was to show what were the natural laws of social intercourse among human beings, and therefore what ought to be the laws of a society which respected natural law and thus human rights. For him a natural definition of human being would have been identical to a moral definition of personhood. However, today there is no clear line of demarcation between personal and non-personal life, for the human life available to biomedical manipulation and control represents a graduated series of biological forms ranging from the point of artificial support at conception to artificial support at death. Only a certain segment coincides with what seems to most people to be rational, personal existence. "Human being" or "human life" is a much broader category than "personhood."

The moral issue for policy-makers then, secondary to the one concerning what is the ethical protection owing persons (given the competing value of promised biomedical benefits), is the question,
what human subjects qualify as persons? In other words, who qualifies for the protection which is owed to human persons? The formulation of this issue is also a consequence of assuming a Lockean framework.

American law identifies "personhood" as a status achieved at the time of birth, but for the moralist (and for the American tradition as we have seen) moral status and legal status are not necessarily identical. Thus where human beings who are not obviously persons are desired subjects for experimentation, there is the risk that they may be given less protection than their moral status (whatever it is) warrants. This would constitute not only a moral wrong to them but also a risk that individual researchers would be less protective to other human beings, and society's founding ideals would be eroded. What would be included in this category would be such groups as embryos, fetuses, newborn infants, children, the mentally retarded, prisoners and the comatose. The documents which consider what moral obligations are owing to such groups (some of which are listed in my introduction to this chapter) thus begin with the implied (if not explicitly stated) question, "what is the moral status" of the group in question, and seek to prove, having determined what that status is, either that a certain amount of protection is owing, or alternatively, that the fear that experimentation on such a group constitutes risk to persons in general and to society is unfounded.

Yet to answer this question is very difficult, even once other red herrings such as its legal and health status are removed, for it requires answering first of all a third and even more fundamental one: what is a person? But both of these must be answered (following the
logic of Locke's moral framework) in order to determine the place which
the group of human beings occupies in the moral order governed by natu-
ral law, and thus to be imitated by a good government which will pro-
tect it accordingly:

"Put another way, the bioethical problem that requires policy
clarification is that of determining where the boundaries of the con-
cept of a human being, or more narrowly, that of a person are to be
drawn. This distinction would enable one to say that a given act of
abortion or euthanasia was or was not an unjustified act of killing."

Yet how does one decide what is a person? The Lockean moral
framework, which has determined the origin and nature of these ques-
ton, dictates also the form which the answer must take. As Locke
took the questionable step in his atomistic political philosophy from
the assumption that human beings are in nature identical to the con-
clusion that they are morally equal (and thus all possessing the right
not to be interfered with in their health, life, liberty and possessions)
so to answer these questions, the reverse step must be taken: in
order to prove that fetuses, embryos, the comatose or whomever, are
morally equal with persons and deserving of protection - that they are
persons - it must be shown that they are naturally identical with per-
sons. In other words, regardless of the scientific characterization
of the fetus in biological terms, the relevant aspect is that they can
and do participate in the Lockean class, rational, cooperative and
potentially self-determinative man - even though the fetus is only yet
a fetus and in fact will in some instances never be anything else.

This step returns us to the particular intuitionist principles
which hold Locke's philosophy of natural rights together. In tune with
these assumptions, various arguments are offered, in order to establish
moral equality. For instance, in the DHEW document reporting the deliberations of the Ethics Advisory Board about the ethical questions surrounding "In Vitro Fertilization and Embryo Transfer", it is stated that three distinguishable answers to the embryonic-status question in the research context have been proposed:

1. There is continuity in embryonic and fetal development and the human embryo is potentially viable.

2. Truly human life occurs after the point of implantation.

3. Sentience (not the potential for sentience) marks the transition from non protected to protected status.  

Any of these characterizations are to be used to establish that the fetus ought to be protected. The argument takes the following form:

1. Protect the life of all persons. (Persons are, e.g. sentient human beings).

2. The embryo is a person. (The embryo is a sentient human being).

3. Protect the life of embryos.

In fact, in the 1979 document, the three different positions do not claim that the embryo is a person but rather that it is a partial or potential person, having therefore a moral status requiring at least some partial protection (if only "respect" in some sense). However, the logic of the argument remains the same: the appropriate obligation is to be derived from its established moral status, and the moral status derived, following the Lockean model, from its natural status.

Each would claim that a partial natural identity with persons proves an intrinsic worth deserving a partial protection or respect.
And as each of these answers represents an intuitive moral commitment to what particular characterization is relevant, none is more justifiable than any other. They remain all possibilities, and finally separate alternatives. It is not possible for the moralist to provide policy makers with a rational resolution of the moral debate, or therefore to show what precisely is at risk and to be considered in the calculus.

However, at the beginning of this chapter, I stated that a moral expression of ideals is not to be rejected because no purely objective test of its validity can be given it. Rather the test is its adequacy in being able to make sense of all the factors of human experience related to the situation, and within its framework to make an intelligible choice. As a matter of fact the 1979 report reveals an awareness of this view:

"A possible reason for the multiplicity of viewpoints on the status of the human embryo is suggested by Gorovitz. In his view, questions like embryonic status or the appropriate criteria of death are not matters of fact which can be clarified through appropriate research programs. Rather, these questions provide the occasion for individuals to make decisions and for societies to establish policies."²⁰

While it recognized that the conflicts among the intuitionist views could not be resolved, this report still permitted a role for such a view (if there were one which could be agreed upon) in decision-making - that is, as an "occasion" for decision-making.

To stress that an intuitionist view is an "occasion" for decision-making is to give it a logical status in moral experience akin to the one which I give to "image". Within the Cartesian tradition, morality must be presented as an axiomatic system, where its first
principles, which may be derived in any of the four ways described in Chapter II, are used as fixed norms from which may be derived conclusions for human action. It was this model of decision-making which the ethical debate about embryo status was taking, a model which the 1979 document does recognize is inadequate for resolving the ethical debate.

In chapter I, I argued that a consistent liberal humanism required not a deductive but a constructive morality because absolutist principles ultimately placed man in a rational order which denied his freedom. On this ground, I would reject the form which the ethical phase is taking in American regulation. A constructive morality which presents an intuition or image as an occasion for decision making, on the other hand, does not set up the image as a first principle. Rather, it is a perspective which claims to reveal what are the factors of human experience relevant to the particular situation, and how they relate to one another. Hence the image which will perform this function cannot be equivalent to one of the factors within the situation; that is the organizing perspective must be one more fundamental than a characterization of the fetus. It must be fundamental enough to give coherent interpretation of who the fetus is in relation to the mother and society, both in biological and personal terms. (Just so, the skier could not have decided whether he should undergo a transplant simply by asking "What is a brother?" This information certainly is relevant, but hardly sufficient.) Further, it must be fundamental enough either to serve eventually as an image for other varieties of human relationship or at least to be subsumable in an intelligible way under one which has this more fundamental capacity.
The value of this approach to decision-making lies in the fact that cultural and personal images are always at various stages of articulation. Instead of pluralism being a problem, (as it is from the point of view of the intuitionist) it is a valuable resource. Some images are implied by human activities while others may be institutionalized as a rationale for law making or articulated in literature, or even worshipped in religion. Thus moral judgements demand not only an analytical estimation of the overall coherence of expressed images but also an examination of those which are implied. If it is the case that a particular image (e.g. the right to privacy of one's own body) leads to a decision (abortion of an unwanted fetus) which places in tension other kinds of decisions and images (e.g. high percentage of health care budget spent on protection of premature infants) the nature of the moral process itself demands two things:

1. That we make an attempt to relate the competing images in an intelligible way.

2. That we ask why it is that a particular activity which implies a contradictory image is so pressing. That is, it demands that we look more deeply into the causes of the situation, and perhaps alter those so that the outcome is not contradictory within the larger framework.

Neither of these requirements are demanded by an intuitionist position, for it is to be taken at face value. It does not generate that telling element of the moral process described in Chapter I—that is, the continuing sense of the "not yet."

The question I would raise here then, is what kind of occasion does the Lockean image of man provide for making decisions about what
biomedical activities are morally defensible?

The natural rights tradition not only is inadequate because it cannot provide verifiable moral judgements (necessary for a deductive morality) but also taken in itself as a framework for constituting individual judgements and social decisions. This inadequacy is evident as soon as we suppose that in fact all moralists do agree on the characterization of the moral status of the embryo, - for instance, if all were to subscribe to the view that protectable human life begins at the point where the human being exhibits the capacity for sentience.

Exactly what was sought for, the step from natural to moral status, then defeats the liberal humanist requirement that man be self-creatively free. The atoms of the social universe are now characterized as sentient human beings and subject to the natural law which prescribes equal rights and protection for these identical units. Because the natural law is taken to be the moral law this also reduces what has been the scientific endeavour to free human beings from their biological limits (or even to change human nature), for instance by funding ways to support the embryo and fetus from the point of conception, to the moral imperative, "promote the health of sentient human beings" - and this, regardless of whatever other biological limitations they may have.

This is, then, a scientific humanism, for there is a unity of principles and empirical data in a single cosmological order. The consequence for man is (as was explained in Chapter II) the loss of his freedom to determine his own moral destiny. This instead is measured by the causal processes of nature, and once more human action serves contemplation of a fixed order in the universe.
Here then is the crisis of the personal in practical form: it is not possible though criteria of personhood have been advanced, to resolve the question what is a person, and even if it were, it would not then be possible to maintain the liberal humanistic principle that man is essentially free. In sum, a number of arguments are put forward which attempt to point to a particular biological condition—whether conception, implantation, sentience, or viability—which can be identified "human being" or "person" or at least "partial person". They seek to characterize that "substance" or "material" which makes the human being a fully formed atom in the social universe and subject to the natural laws of human intercourse—and therefore, also to the natural rights belonging to it. But these different arguments amount to a stalemate, for whether one chooses one or another depends not on a final rational reduction to a single characteristic but, once that reduction is made, on identifying it with what has already been assumed as the norm. This norm imprisons man in a predetermined moral end. 23

But, as I said in the introduction, Macmurray points out that the theoretical question which needs to be answered, is not "what is the self" but what is its form? He asks, "What is the form of the personal?" What philosophical logic can replace both the mathematical and the dialectical logics and thereby make sense not only of science but of all human experience—including scientific experience, and the experience of the self as a free, rational and autonomous being, able to make decisions and act on them? The practical side of this question is the one which needs to be faced here. If a person's actions are free, if they cannot be reduced to a natural moral order, what makes
this possible? In other words, what are the conditions for a biological human being to become a person?

What natural law philosophy with its attempt to deduce moral obligation from the identity of moral and natural status (whether regarded as substance or organism) overlooks is that the causal development of the embryo or fetus depends upon human choice and personal support. That is, persons do not start out as ready made "atoms" of the social universe. There are, even in the adult world, differences among people which suggest that some have become more fully developed as persons than have others. The causal development of the fetus depends upon its being given the necessary biological conditions as an embryo and fetus; and later, its personhood depends upon its being given the necessary nutritive and social conditions. But these "efficient causes" acting on a "material cause" are not intelligible, and in fact, do not even occur, unless a deliberate and purposeful choice is made to see that they do occur. Such a choice might be made merely in terms of its being "wanted", and in this sense those who argue that a child should not be brought into the world unless it is wanted are quite correct. But simple wanting, or desire, is not enough if it does not arise out of a well measured evaluation of the many other conditions necessary for its support. There are many teenage girls on mother's allowance who bear children simply because they want them. On the other hand, a simple not-wanting (whatever has produced it) may short cut an evaluation of what can be the outcome of bringing an embryo to term. This was the case of the Eastran family.

It is for this reason that the concept of "viability", for
example, cannot be used as a definition of the moral status of a fetus, for although there certainly is at present a black and white biological distinction to be made between the fetus which is viable and one which is not (its capacity to breathe) it is expected that in the near future this distinction will disappear with the development of an artificial placenta. In other words (and indeed this is really the case with all forms of human life to a certain degree) the fetus' capacity to be a person is dependent upon the personal choice (including what that person is able to do) of others.

Furthermore, a particular biological status is a necessary but not a sufficient condition for personhood. A fetus, become infant, and child, and given all the required physical support for his proper biological development will, if he is held at arm's length, hardly exhibit characteristics which we recognize as normally personal. To begin with, language learning will not occur. On the other hand, what personal capacities a human being will have, cannot, except in very broad terms be predicted from his biological status. It seems that the kind of personal support given to him has a very significant effect on what kind of person he will become. And what this will be cannot be predicted, at least as yet, except in very generalized terms, from an assessment of the biology he starts with or the support that he is given - or even by assessing them both. Rather what that human being will become can only be discovered by engaging the one factor with the other in a kind of mutually responsive interplay where each response is not simply "reaction" (biological or psychological) but the result of a rational assessment (as much as each is capable) of the nature of the
relationship between the two, of who each is in that relationship, and
then of what each can become.

Moral status of a human being is the capacity he has to be a
moral agent - a capacity not in potential, but one achieved. Human
beings then are not all morally equal, they are only identical in the
sense that they all have the same biological origins. Further, what
is a moral response, an establishing of a personal relationship with
any human being (or anything else), will be determined certainly, by an
estimation to a limited degree of what is the biological (and also
social) capacity of another but it will also be determined by what the
person is able to give, because of what he is, and the alternatives he
sees. It will express who he is as a moral being. It will also make
a difference to who he is as well as to the other person and this
accounts for his motivation to respond. In so far as he wants to be-
come more fully emancipated, he will act like the skier, in a way
which confirms this.

Thus, definition of the biological characteristics of a human
being is not enough for making a decision about what protection is
owing it. Indeed, in the light of this perception of personhood, the
notion of "protection" itself seems highly simplistic because it im-
plies that all that is required is a nice safe environment and a
chance for that human being to be whatever he is going to be - to
make his own world, and to define his own salvation. This is not true
of fetuses and children, and, as I will argue in the next section, it
is not true of anyone.

The condition for personhood, then, is first and foremost, at
least one other person, already freed beyond his biological origins.

In some sense, personhood is given to a human being by the human community — not simply in an honorific sense but very practically. The human community provides some of the conditions necessary for a human being to become a person by telling him not only that he is a person but even what kind of person he is.

This seems to be verified by the fact that what kind of people children become and how people behave is significantly shaped by the expectations of others towards them. The image a parent holds of his child has a creative effect. The child sees himself and what options are available to him in terms of that image. The power of the image of course is tempered by the child’s biological limits and also by the kind of relationship which the parent has established with him, but if he does not live within the image which his parent gives him, he will be given another by those who are closest to him. As in the case of the Laotian father, this image will define his choices, and it will determine to what extent he will be free.

I am arguing, in formal terms, that Locke’s atomic view of human nature is inadequate because it can only represent men in society as a set of external relationships. The logic of his view is comparable to Russells: regardless of the connectives placed between atomic propositions, those propositions remain unchanged. However, this is not the case in nature or in society. René Dubos in his book *Man Medicine and Environment*, states that it is misleading to think of evolution in terms of the linear development of separate species. All of life, including human life in biological and sociological terms
(and the latter still requiring the former) is a web of interdependencies. An alteration in one part has repercussions eventually throughout the whole as each species adjusts accordingly. (Perhaps, it can be thought of as a fluid jigsaw puzzle.) Thus evolutionary changes have occurred in each of the species in relationship to one another as a feedback process. Thus, Dubos says, "life is historical."

Dubos quotes Tennyson's poem "Ulysses" - "I am part of all that I have met," and this applies to man not only as a biological being but also a social animal. Environmental influences (including the whole range from climate and geography to personal relationships, culture and country) bestow personhood and give it a particular shape in two ways:

"On the one hand, they determine certain patterns of response affecting all manifestations of behaviour... On the other hand, environmental influences contribute to the shaping of the personality by interfering with the acquisition of new experiences... Human beings thus, perceive the world, and respond to it, not through the whole spectrum of their genetic potentialities but only through the areas of this spectrum not blocked by inhibitory mechanisms and made functional by environmental influences, especially the early ones. The word potentiality here denotes the whole range of the organism's endowment, whether the characteristics it controls are physical or mental in nature. Life experiences determine what parts of this endowment become expressed in the form of functional attributes." 26

What is required then for any tradition which would give adequate expression to liberal humanism, is a new image of man in society which can account for the continuity of this feedback process which runs from the simplest biological centre outwards through genes, cells, organs, organisms, persons, families (whatever internal form they take) to the most complex form of community, and back again. It must be able to show how each aspect has its own internal stimulus/response (or
stimulus/decision) dynamic which is in one way an independent or autonomous cycle, but also never separate from the encompassing cycle. For each simpler cycle as a whole is material cause for the next more complex outer level which envelops it and becomes its formal cause, a level which shapes it, and is then reshaped. This image then which captures the reality of life processes - of the fact that life is essentially communication in every sense - will express a logic of internal relations which do not deny but embrace Locke's logic of external relations. That is it will recognize that a given cross section of this continuous play and replay which runs from the centre outward and back again, does taken in itself have a certain autonomy - an atomic existence - and such a recognition is useful for understanding what is the separate interest of that level of life. Yet, left as an autonomous entity, that life cycle, whether genetic, organic or personal, will die.

The emphasis which the American tradition places on persons as autonomous beings is useful for revealing what persons do need for their existence. Rights to food, shelter, health care etc. recognize these facts. The view that persons are in a process of expectation and capable of perfection is important because it shows that freedom is not a given. The view that persons are naturally cooperative and exist only in society also is important because it shows that achievement of that perfection is ordered by others and by society as a whole. However, because the original image of man in society inherited from Locke permits only a logic of external relations, how these different aspects are related to one another remains unresolved. The process of
self-emancipation, for instance, appears to be teleological for it implies that all the help a man needs to achieve perfection is negative - his education is a removing of roadblocks and a minimizing of friction. And the attempt to maintain these elements as liberties, rights and state interests, without integrating them, tends not only to reduce the process of human development to a status quo but, as will be seen in the constitutional phase, to militate against it, for the separate concerns become adversarial.

What I am advocating, in sum, is a change in our way of thinking about human relations, the meaning of moral experience and the nature of personhood. Until this occurs, little progress will be made in resolving bioethical issues, much less in identifying the matters which are truly important. But I am not speaking alone in this. Recently I read a sensitive critique about human rights and health care which shows that some at least are attempting to break out of the pattern of thinking intended by natural law philosophy:

"A fundamental premise of nursing practice is that the individual has the right to receive acknowledgement and affirmation as a human being - a human being whose experience is so unique and complex that each individual transcends the categories and quantifications of science. The recipient of health care thus has a right to more than superbly scientific and technically perfect treatment; the right to humanistic care.

This right is addressed by the humanities within the health care professions. The humanities are concerned not only with understanding as fully as possible the depth and scope of human experience, which they share with the sciences, but they are also concerned with creating or uncovering more human meanings for experience. Thus the humanities are ultimately engaged in formulating ideals. By 'ideal' or 'more human meaning' is meant a way of understanding an experience that enhances the value of the experience for an individual and enables that person to formulate a meaning that uniquely expresses his or her relation to the experience. The right to humanistic health care is accordingly the right to receive assistance from health professionals.
in determining the personal value and meaning of one's illness or disability.\textsuperscript{28}

The question implied here is one which is raised in a constructive morality: what is the significance of this experience (whether an individual one such as illness, or a collective one such as particular experiments with human subjects) for human freedom.

A natural law philosophy by contrast tends to deny the creative aspect of personal relationships. The "atoms" may cooperate, and they may even be educated in the habits proper to the dignity of human beings, by those who are governed more by reason than by passion, but the malleability which Locke envisioned still implies the capacity for each to achieve his perfection is self-completes and removes roadblocks such as bad habits so his better nature express itself. Such a philosophy still keeps human beings isolated from one another. They cannot touch each other in a way that will be recreative for them both. They cannot take each other beyond the limits of the nature which each has been given.

This isolationist individualism provides the boundaries for ethical concern about individual autonomy. It is implied by the idea that human perfection - a self-emancipation - will be achieved within the society where there is minimum interference - where rational consent establishes the means to this end. Informed consent may permit a patient to exercise his autonomy but it is a mistake to think that his freedom is achieved, even given all the facts, by isolating him from all possible influences. Some influences are his support - both as they give him life and as they make his choices meaningful. The former
is obvious in the case of the fetus, and the latter, in the case of children or the mentally incompetent, but they both are there for us all. It is only in a human community where a deliberate choice is made for a person in favor of his moral status that the autonomy of a human being is not just protected (to the extent that it exists) but achieved.

The moral question which should be raised with regard to the status of any group of human beings then is not the material one, "what are the biological characteristics of personhood", but the practical one, "what are the conditions or prerequisites for personhood?" This question is the counterpart to the theoretical question, "what is the form of the personal", which we saw was raised by John Macmurray as the central problem for modern philosophy. Just as any new philosophy will be tested against the Cartesian tradition for its adequacy in being able to answer this question, so too will a social philosophy which must regulate the biomedical sciences be tested by its capacity to answer the practical one. In its answer to that, it will be able to show how biological health is necessary for and contributive to human autonomy, and decisions about what the risks and benefits are will be made within a single framework.

The ethical guidelines which the American tradition defended then are very important, for they do at least seek to protect human autonomy, but their potency is lost because they show little comprehension of what it is that they are protecting. Within them the creative aspect of personal relationships have no place. And as they are not working (as the studies cited in chapter one suggest) policy makers in a well intentioned effort to prevent unethical use of human
subjects are digging the hole deeper by more and more systematically isolating the subject and his decision from all the influences which also happen to give his life personal meaning.

Without an adequate philosophy of human nature, American liberal humanism cannot show what are the internal limits to the self-creative process, (that is, how man can know what is happening when he acts on the world in which he lives, and what difference it makes to him). Similarly, within the biomedical context it cannot answer the question how man can be beneficiary rather than victim of his own genius.

To show that the natural rights philosophy is not adequate for giving moral direction to biomedicine is not to establish that it should therefore be rejected. The alternative would be, once the former is maintained in a completely consistent way, to reject the goals of biomedicine as completely irrelevant to human autonomy and once again to seek a complete denial of the body and its needs and desires. No one however disputes the view that biomedicine provides much good for man, and, neither do I. However, a highly self-conscious discrimination is needed about these values for in totality they represent without critique the sum of all human desires for biological achievements. This aspect will be pursued in the next section.

C. **Outcome of the ethical phase: intersection of ideals**

In this first phase of the risk/benefit calculus, a discussion of ethical issues, policy makers are left with a number of competing intuitionist views within the natural rights tradition about what is the moral status of whatever group of human beings is in question and
thus what risk there is to their autonomy as well as to the ideals of American liberal humanism. Contributions called for from moralists and interested members of the public compound this plurality by appeal to other intuitionist (from the point of view of government) commitments in their arguments by adding to the plurality of the views already expressed. For instance, those who are sensitive to the fact that the natural rights tradition in history has finally and inevitably made the God behind nature's laws entirely redundant, appeal to the older Judeo Christian tradition with its affirmation of the sacredness of life.29 Some further attempt to make this acceptable to the public temper by translating this into the secularized and vague "respect" for life. Indeed this latter terminology is often used in the public documents, perhaps as an attempt to bolster the faltering ethical tradition with a generally acceptable value.30 However, none of these can present anything stronger than the other intuitionist claims and it is evident from the detailed reporting by the DHSS and the Commission that all have a fair and open hearing.

But what then is the outcome of these hearings? While policy makers do not question the adequacy of the Lockean framework as an occasion for decision-making they are nevertheless burdened by the fact that resolution of competing intuitions is not possible. The gap between ethical principles, and the image of man which they represent, and biomedical advance is taken advantage of for the natural law philosophy and other intuitionist views are eventually left behind.

Stephen Toulmin in his essay summing up the ethical contributions for the National Commission gives classic illustration of what
can be the only outcome. In a country where the principle is govern-
ment by the consent of the governed, the method is to search for some
kind of consensus in the conclusions, despite competing premises.

The reasons for handling the issues in this way are not merely
pragmatic. They reflect also the fact that the doctrinal commitments
and philosophical standpoints of the different participants in this dis-
cussion turn out, in the event, to have had less influence than may have
been expected on the practical recommendations they are prepared to
support. To be sure, the recommendations actually offered cover the
whole spectrum from an outright ban on nontherapeutic fetal experimen-
tation to a policy of complete freedom for biomedical research on fetal
material. But a substantial moderate consensus emerges, which stops
short of an outright ban, and advocates a system of social controls
carefully designed to limit the scope, and prevent the abuse, of fetal
experimentation. This consensus cuts sharply across doctrinal lines.
(It proves compatible, for instance, both with support of the thesis
that a fetus is a "person," and with rejection of that thesis.) While
analyzing the main lines of difference between the various positions
advanced in the course of the debate, accordingly, the present paper
will concentrate on exploring the nature, basis and implications of
this moderate position, and on carrying further the questions it rai-
ses into some additional areas that seem to me have been neglected in
the discussion to date.31

In being concerned to formulate guidelines acceptable to ethi-
cists, as well as the general public, the Commission or the DHEW would
find it a happy circumstance that differing approaches could neverthe-
less produce similar guidelines.

Yet, if Toulmin or the government boards concluded from the
fact that there is a certain agreement about the practical recommenda-
tions with regard to fetal experimentation that therefore the philoso-
phical commitments underlying the guidelines are less important than
the regulations themselves which they propose, I would object. Just
as bullets shot from different positions at different times and under
different conditions may describe separate trajectories which do happen
to intersect at a certain point, so here, too, the question of the
origin of the guidelines and the social conditions within which they will be enforced will make a difference to the outcome of those guidelines both as they are implemented immediately and as they are a step which in the specific situation confirms or questions past judgements and postulates the likely outcome of future activities. For instance, the view that all human life is sacred and that human beings have a natural right to life and protection, which governments ought to recognize, and the view that human life and its protection is of great value to the society for its survival, may intersect at the point where laws regarding infanticide are being formulated. Both would give rise to the same practical principles. However, as we are seeing now, changing circumstances in our culture (e.g. role of women, biomedical advance, economic pressures and scarcity of resources) are showing that the directions of these two philosophical paths are gradually diverging. The cost of caring for children with Down's syndrome, for instance, looks very different when placed within the one perspective and then in the other.

The significance of a guideline for the freedom of men cannot be understood apart from the nature of the whole trajectory itself and its original framework which conditions the track it takes. This we have seen has been the story of American regulation: the Newtonian perception of the society and the development of the natural law tradition has produced a narrow discussion of moral issues. What the outcome of the ethical phase, that is, looking to a consensus of conclusions is tending to be, will be the subject of the second section of this chapter.
2. External Limits for Biomedicine: the constitutional phase of the risk/benefit calculus

The first part of this chapter described the ethical phase of the risk/benefit calculus. There it was shown that moral reflection about bioethics was determined by the natural law philosophy and for this reason concentrates on a too narrow selection of issues and reduces the biomedical situation to an isolationist interpretation of man. Thus it can not address the practical issue relevant to liberal humanism, how can man be beneficiary rather than victim of his self-creative activities. It was argued that the reason it can not do this is because it overlooks the significance of personal relationships for human autonomy. This in effect produces an unbridgeable gap between the moral principles which the American tradition would defend and the activity which it would pursue - that is, between ethics and science. Further, it was seen that the outcome within the ethical phase, due to the fact that contributions to the debate represent irreconcilable intuitionist arguments, could only be a search for a central core of consensus which would stand as acceptable to the majority.

The second stage of the risk/benefit calculus is the constitutional phase. The purpose of the ethical phase was to define the outer limits of human activity which were to act as a safeguard against the moral transgression of human autonomy. The constitutional phase also defines certain limits but these reflect the facts that men live in a society where all are not equally rational and cooperative and that the state must therefore compromise particular liberties for the sake
of social order and stability - and ultimately for autonomy too, as much as is possible for individuals in a society. Just as the moral ideals are at risk in the biomedical enterprise so also are the constitutional principles which must be maintained for the sake of all concerned.

It should be noted that while I make a distinction between these two phases, the guidelines which incorporate constitutional issues into the calculation of the limits to biomedical activity still speak in a more comprehensive fashion of the "ethical" principles which must be adhered to.

A general reading of the various documents listed above seems to indicate that policy makers considered the kinds of experimentation from a number of different perspectives - ethical, legal or constitutional, that of public opinion and matters of safety - in order to achieve some well measured judgement which would take into account all of these different aspects. It would seem sensible then to describe the risk/benefit calculus as a sum of all these particular judgements, and a gradual narrowing of the limits on biomedicine as the conditions of each were applied. In particular it would appear to be the next stage of analysis to explain what were the constitutional limits to research.

Yet this is not the case for beneath these topics, which tend to be presented in succession in the documents, there seems to be a different way of decision-making which is gathering momentum precisely because the ethical framework is unable to deal effectively with the issues surrounding biomedical research. The outcome of this logic
appears to be an exchange of the faltering Lockean moral framework which has been the occasion for decision-making with not a more adequate moral one, but with the constitutional one instead.

At face value, such an exchange might appear relatively innoxious. In one sense it is - and unfortunately so, for the constitutional framework like the natural law framework also presupposes an atomistic political science. As was described in Chapter II, both Locke and Hobbes (whose view of human nature underlies the constitutional view of rights) used Newtonian science. Thus the problems which were identified in the ethical phase arising from an inadequate view of personhood reappear within the constitutional phase. This will be shown when this phase is judged for its adequacy in providing an intelligible liberal humanistic framework for state regulation of biomedicine.

On the other hand, this exchange will become quite radical as biomedicine gains greater control over different forms of human life.

The difference between natural rights philosophy with the entailed right to rational dissent, and civil rights with the entailed right to moral expression, (described at the end of Chapter II) showed that once it was admitted that the factor permitting freedom was not equality but government, the "nature" or "status" of a human being became a function of his historical circumstances. This difference is not practically significant for the normative case described above, that is, for the autonomous person in the clinical research situation, for there, there is an identity of moral and civic virtue. Both protect the equality and freedom of persons. However, their
respective assessments of the experimental situations which diverge from the norm are very different. For the Lockean, as was seen, equality of human beings entails human autonomy whereas for the Hobbesian, the reverse is true; human freedom entails equality. Thus such an exchange may over a period of time describe a trajectory of decisions very different from ones given the rationalist moral framework. What rights are ascribed to the forms of human life which don't coincide with the normative definition of person will be subject to the constitutional perspective on rights, natural law, and historical circumstance.

A. Abdication from the ethical phase: the court of the people

Before describing the constitutional phase itself, I will first explain with confirming illustrations from the documents, why this exchange of frameworks is occurring. The decisive step is brought about by the kind of resolution proposed by Toulmin, (see the last chapter where abdication from ethical reflection was described) a reduction of the various ethical recommendations to a single core statement apart from the philosophical commitments that produced them. For this solution, 32 effected to suit the practical demands of policy making suggests that within the governmental framework the higher court of appeal has, or is assuming, a different ground or "court" to replace the Lockean deductive moral system, and that gradually it is taking a different view of the nature of moral statements and their function with regard to policy making. However, this change is not the requisite one, from a deductive to a constructive morality. Instead, it
would follow from the fact that ethical review boards are faced with a multiplicity of moral commitments, and that their solution lies in finding the best compromise which will satisfy those commitments, that a gradual emphasis will fall not on the rightness or wrongness of any single view but on the fact that a particular view is held by a large number of people and is generally acceptable to American society. Responsibility for resolving moral issues would be placed on the shoulders of the populace who would be encouraged to enter the debate and to define what view would best represent the American moral perspective. In other words the moral court would be the court of the people.

Richard McCormick articulates the pressure which is present upon policy-makers where resolution of moral issues appears impossible in terms of "feasibility". He says,

"Feasibility is 'that quality whereby a proposed course of action is not merely possible but practicable, adaptable, depending on the circumstances, cultural ways, attitudes, traditions of a people...'. ... I make this point in discussing fetal experimentation because the feasibility test is particularly difficult in our society and will profoundly affect the Commission's policy proposals. Ultimately, public policy must find a basis in the deepest moral perceptions of the majority or, if not, at least in principles the majority is reluctant to modify."33

Examination of the various documents shows that this is the case. For instance, the 1973 document which has been noted for its emphasis on ethical obligations with regard to fetal experimentation despite the decision by the Supreme Court regarding abortion, seems to validate this view because of the kind of membership and the role it ascribes to the Ethical Review Board:

"Members of the Board, which shall number 15, shall be drawn
from the general public, and shall include, for example, research scientists (including social scientists), physicians, lawyers, clergy, or ethicists, and other representatives of the public, none of whom shall be employees of the agency establishing the Board."

The function of this Board is described as follows:

"Agency 'Ethical Review Boards' are to be established to provide rigorous review of the ethical issues in research, development, and demonstration activities involving human subjects in order to make judgements regarding social acceptability in relation to scientific value."34

These two factors in themselves do not preclude a rational morality nor reduce ethical debate to a seeking of consensus of public needs and wants, but further to place the people themselves in this higher court in the stead of a rational morality effects a radical change in the perception of moral issues and the status of moral principles. This step by implication rejects the possibility of a rational moral system either deductive or constructive. It recognizes that in some sense, the meaning and force of principles are tied to the fact that they are believed by someone - that they are socially acceptable - rather than by having some external rational existence apart from men.

From the point of view of policy members, of prime importance is that the guidelines be comprehensible and reasonable for those who were to be affected by them. But this "reasonableness" is dependent not on their relating to a rational moral system but to whatever the people think they need or want. In other words, it is the fact that the guidelines would recognize these desires which would make them reasonable.

The 1979 document is illustrative of the fact that this view entailed by the change in courts of appeal is also gaining in importance.
In order for the Ethical Advisory Board to establish that in vitro fertilization was "clearly ethically right" within the moral framework of the American tradition, it would have had to be able to effect a rational resolution of the competing views about the moral status of the embryo, which had been presented to it in the ethical phase within the limits of a deductive morality. This the Board found was simply not possible. The positions it considered (described in section one) were equally defensible and the Board could not choose among them in order to establish an intelligible "occasion" for decision-making. For this reason it made a useful distinction between a (deductive) moral court of appeal which can justify rationally the rightness of a particular course of action, and the court of the people which shows an action to be defensible in terms of its acceptability, but yet open to a broader and more comprehensive moral assessment:

"The board is required by the DHHEW regulations to review research proposals involving human in vitro fertilization and advise the Secretary as to their 'acceptability from an ethical standpoint'. This phrase is broad enough to include at least two interpretations: (1) 'clearly ethically right' or (2) 'ethically defensible but still legitimately controverted.'"

Thus, it continues in the same paragraph with its reservations about the justifiability of in vitro fertilization and embryo transfer:

"In finding that research involving human in vitro fertilization is 'acceptable from an ethical standpoint' the Board is using the phrase in the second sense: the Board wishes to emphasize that it is not finding that the ethical considerations against such research are insubstantial. Indeed, concerns regarding the moral status of the embryo and the potential long-range consequences of this research were among the most difficult that confronted the Board."
philosophy, for the moral principles constructed in a dialectical encounter of people and issues would be able to provide the requisite intelligible unity of belief and action - a unity between ethics and science, which could not be achieved in the ethical phase.

Yet no further moral analysis is given concerning the competing viewpoints. What they regarded as "ethically defensible" and as "legitimately controversial" were opinions put forward by the public - opinions which they had to acknowledge but couldn't resolve.

Without a confidence in the traditional moral framework, the Ethical Advisory Board, like Toulmin, established a core of principles which it regarded as acceptable regarding in vitro fertilization and embryo transfer. It sought a common point of intersection among the different positions put forward in order to satisfy the majority - and this apart from the differing kinds of justification given for the positions. In all practical respects these coincided with the minimal core already established as the definitive norm:

"A. If the research involves human in vitro fertilization without embryo transfer, the following conditions are satisfied:

1. The research complies with all appropriate provisions of the regulation governing research with human subjects (45 CFR 46).

2. The Research is designed primarily: (A) To establish the safety and efficacy of embryo transfer and (B) to obtain important scientific information toward that end not reasonably attainable by other means.

3. Human gametes used in such research will be obtained exclusively from persons who have been informed of the nature and purpose of the research in which such materials will be used and have specifically consented to such use.

4. No embryos will be sustained in vitro beyond the stage normally associated with the completion of implantation (14 days after...
fertilization); and

5. All interested parties and the general public will be advised if evidence begins to show that the procedure entails risks of abnormal offspring higher than those associated with natural human reproduction.

B. In addition, if the research involves embryo transfer following human in vitro fertilization, embryo transfer will be attempted only with gametes obtained from lawfully married couples.38

While provision number 4 appears to suggest that the Board has deferred to the argument that production of embryos without the intention of implantation is an affront to the moral status of the embryo (an argument perhaps dependent on the rational moral framework), this is unlikely. The Board makes a separate comment about the possible ethical acceptability of Departmental support of such research, stating that it lacks the resources needed to render meaningful advice with respect to such decisions. It also did not give an ethical assessment of embryo research without transfer.39

To this point then it has been seen that in principle, the step which the DHHS is taking in removing moral debate from the sphere of a deductive system of principles, is laudable insofar as it thus permits a dialectic of principles and experience, and an intelligible relationship between belief and action. However, the fact that the Board further abdicates from the ethical phase altogether in the face of the multiplicity of opinions about what is the best moral characterization of this research, creates a serious problem. An ethical unity which is achieved by simple interaction of opinions produces a non-directed evolution of principles which bend and sway according to the fashion of the times or according to what people think to be the norm. Such a
process cannot show how the society is beneficiary rather than victim of any activity, for the principles amount to a statistical description of individual responses. (For example, most people think surrogate motherhood is a bad thing whereas other don't). What is required by the policy makers is a means for intelligible synthesis of those responses - a synthesis which in some way can reveal the implications of various possibilities in biomedicine for human well being.

This was, in fact, the proper function of the natural law philosophy, as the 1979 document pointed out. That philosophy itself was such a means: it was the occasion for decision making. Its gradual rejection is occurring not because it is not objectively defensible (this, for instance, didn't bother Jefferson) but because it is no longer able to provide an intelligible unity of principles and action. What is needed are new principles of moral intelligibility founded in a more adequate image of man (one which can for instance relate the biological with the personal) but as yet none have emerged to take the place of the old ones.

The fact that a beginning has not been made in this direction by the "experimental" National Commission in its deliberations has rendered its contribution with regard to fetal research so disappointing. Because it was created as an autonomous body, separate from political pressures and scientific interests; and further, with the power to enact the principles which it established, in prospect it seemed uniquely able to do precisely that. Even the ten ethicists who had opportunity to break through the traditional pattern of thinking did not do so. Indeed I have seen only one comment - that by Charles Fried in
his address to the Forum of the National Academy of Sciences in February 1975, who saw fetal experimentation as a real "puzzle" - indicating that a new framework is necessary, but it was very pessimistic as it stated with depressing accuracy,

"that whatever you come up with, whether it is in four months or four years, you are going to proceed on the analogy of the existing concepts that we use. In dealing with psycho-surgery, you are going to take something like informed consent and move on from it, because frankly, I don't know how else you can proceed." 41

Some contributors presented opinions there in related articles which came close to identifying the problem. Richard McCormick in his contribution (as well as in the celebrated series of articles between himself and Paul Ramsey) attempts to establish a moral relationship between the fetus and the human community of which he is a part and thereby to impute to it by analogy, consent to the sort of research (i.e. with minimal risk) acceptable to those who do consent when fully informed. Yet we are left with the question, what are the necessary conditions for personhood and autonomy. 42 Sissela Bok puts her finger on one of those conditions, that is, the emotional investment of others in the wellbeing of the fetus but does not distinguish between moral judgement and simple desire. 43

Without a new moral framework to provide occasion for decision-making, there is no alternative but to abdicate as the Ethical Advisory Board did. 44 But to achieve such a framework, we must ask such questions as what is the relationship of health to human wellbeing (or more particularly, the physical capacity to reproduce), and in what way can biomedicine contribute to human emancipation. Otherwise risks and benefits will remain morally indistinguishable.
What then is the outcome for moral discussion given this abdication? Further analysis shows that with this loss of intelligibility there is also a loss of ethical force. For while those who contribute to the NEW ethical debate might continue to make a distinction between what they themselves believed ought to be done and what they might desire given the possibilities in biomedicine, such a distinction becomes irrelevant once the Board identifies the moral court per se with public acceptability. For the content of moral opinion is then subordinated to the fact that it is held by some (or the majority) of people. Moral judgements and estimates of benefits, as we have already seen, become indistinguishable at the ethical phase and thus assume the status of "interest".

The following remarks by the Honorable Caspar W. Weinberger, Secretary of Health, Education and Welfare, illustrates this outcome:

"A major goal of the Department is to improve health through research; and another is to protect the rights of those who participate in that research as subjects. Some feel that this is an irreconcilable conflict. To us it represents only the necessity for achieving a reasonable balance of all the interests. In searching out this balance, we cannot forget that no matter what various perspectives we bring to this task, there is one common interest that we all share: the absolute necessity of continuing all forms of research and in such a way that the basic human rights of all concerned are protected. If we forget either part of that equation there will be very serious difficulty for us all, and for mankind in general." 45

The government then is faced with the primary task of ensuring equitable opportunity for expression of those interests as a civil right. It is true that balancing of the risks represented by public acceptability and benefits represented by scientific progress can now be achieved but only because they now also represent factional rather than
issues. That is, by representing each moral position as an "interest" the question of the validity of the interest (whether, for instance, it arises out of concern for human welfare, or for getting tenure at a teaching hospital) becomes irrelevant, and the interests cannot be related as intelligible issues. The Ethical Review Board, it was stated above, quoting the 1973 document, is "to make judgements regarding social acceptability in relation to scientific value."

B. Constitutional principles: description and critique

With this abdication, risks and benefits are both equated to interests. They have force only as they are expressed by various groups of people. However, the risk/benefit calculus, though gradually being divested of a moral framework, nevertheless has the constitutional phase to give regulation of these interests intelligibility. What A.M. Capron states with regard to research with non viable human fetuses applies to any activity:

"The question whether research of this type ought to be permitted is not a legal question, however, but a policy judgment to be reached on the basis of one's perception of the relative importance of the interest of the fetus, parents and society." 46

"One's perception" as a government body, is of course, the justification of that body, the American constitution. This second sort of limit on biomedical activities protects not moral freedom (however poorly expressed) but the freedom and equality of citizens (their interests) as their constitutionally defined rights. That is, it protects not a person's capacity to develop morally in relation to others in a human community but his rights to move about according to the rules
of society. (cf. Ch. I) The motivating factor for any researcher who abides by the regulations formulated within this framework is not moral but legal. He is bound by the limits of the state in which he lives and his obligation rests in his being able to justify his actions, not to some higher court but to the state and within that to the public. Where there is a gap between how he sees the moral significance of his research and the demands placed on it by society he will typify Myrdal's paradoxical American who expects the law to prescribe virtue but sees himself as his own legislator.

The central ideal of this limit, it must be realized, is the principle of minimum regulation. This principle is entailed by the Lockean view of government which demands that government be by the consent of the governed, that it be applied at all only when it can be shown rationally that government is necessary for social order, and that individuals be free to pursue as much as possible, their own interests. Debate about biomedical regulation then becomes debate not about what guidelines are morally justifiable, but rather what regulation is needed. The responsibility falls on the government to show that a certain amount of interference is necessary.

There are two kinds of consideration which indicate that such a need does exist, and therefore that state action is not unconstitutional. First of all, the state may interfere in order to protect the fundamental right of individuals. Secondly, it may also protect, under certain circumstances, the interests of society. In the latter case if it can demonstrate a "compelling state interest" - that is in regard to the peace, order and safety of the state - it may interfere
or sometimes even override a fundamental individual right. Where such a right is not at stake, the state may also interfere by simply showing "that its action is related to a constitutionally permissible purpose." That is, it may support an interest which is recognized by the constitution to be contributive to society's interests.

A further form of state influence is taken also in situations where it may, for reasons of social stability, refuse to act. Where, for instance, an individual or group would like to pursue an activity which falls within the limits of the constitution but which the state judges to be a threat to the wellbeing of society, it can refuse to support it (e.g. with grants) without placing a ban on it.

With regard to biomedical activities, then, the government may take three possible lines of action. It may restrict the activity because it is unconstitutional, it may permit the activity because it has no grounds for interfering but no reason to support it, or it may actively support it because the activity answers a recognizable social need. The government's decision regarding the outside limits it will place on the activity depends finally on finding a defensible balance of rights which needs to be protected.

To find such a balance is not an easy task. The natural rights philosophy represents a rational system of rights which in theory do not compete with or contradict one another. In the American system of civil rights, in contrast, such conflicts are inevitable because the fundamental rights which are recognized are derived from the natural rights tradition which represents them as option rights, but they also are guaranteed by the civil rights tradition which protects
them as "welfare" rights. That is, on the one hand man is seen to be capable of determining his own goals and emancipation, and the rights which express this are rights to this end: for example, the right to research, the right to marry and to procreate, the right to refuse medical assistance, the right to rational dissent, the right to privacy. On the other, man is seen to be sometimes incapable of pursuing these goals without support and protection and thus as a social being can to a certain extent expect the aid of society. The rights which express this are rights which further his ability to be self-determinative: for example, the right to education, the right to a minimum standard of living, the right to adequate health care. Because the state cannot provide the means for fulfillment of these rights without a certain infringement on the option rights of individuals, there is also a growing body of state rights which serve its interest (indeed raison d'être) in the welfare of individuals to be self-determining. There are in conflict then rights which imply that man is the maker of himself and of society, and rights which imply the reverse, that society is the maker of man. This conflict is the outcome of Madison's compromise. The dualism representing the incompatible views of man which he bound together by his method of counterpoise bring what these entail, both views of rights and both views of the relationship of individuals and the state into play in the public arena where some regulation must be imposed.

Further, the many rights relevant to a given situation can perhaps be related through rational debate but finally there will be left a residue of competing rights, representative of individual and
state interests which must still in some way be related. Yet once again it appears that the gap existing between individual autonomy (though guaranteed by the state, still originating in the Lockean tradition) and social order and harmony (reflecting the Hobbesian view of man) is not rationally resolvable. In other words the Constitutional phase, where the risk/benefit calculus is a balancing of interests within the rights framework, also is inadequate.--that it too, like the ethical phase, is, as an occasion for decision making, also breaking down.

This breakdown is yet in its initial stage, and my defense of this view depends upon analysis of the documents listed above, which along with Frankel's initial assessment represent only ten years of biomedical regulation. Yet, because developments in this area are proceeding so rapidly, to wait for experience to prove it indisputable seems foolish. For I regard the trend or direction of the apparent trajectory disturbing, especially as bioethical debate is focused primarily on its inner coherence rather than on its overall direction.

To develop and defend this view it seems best to give illustration of how the constitutional phase describes the limits of the various interests for a specific issue. This I will do by defining the issue, and describing the relevant interests and the constitutional limits which are placed on them, the residue of conflict, and the apparent trend which seems to be emerging as an answer to this residue. It will in sum show how the policy makers must gradually abdicate from the constitutional phase too, in favor of what is hardly consciously defined yet, a pragmatic resolution. If I am correct that this
resolution is the description of the trajectory in its final stages, it will be true also that the original rational anthropology has produced, in the face of the biomedical project, a biological anthropology where nothing can be offered in answer to the practical problem, how can man be beneficiary rather than victim, except the second (totalitarian) Hobbesian view of the state: the leviathan must shape the citizens into a single body where all are as biologically healthy as possible, and all physical needs and desires indistinguishable.

The particular issue I would use for illustration is the following: should non-therapeutic experimentation be permitted with human fetuses which are to be aborted? To take this issue as my example (or any other) is to enter into an extremely complex area where lines are still being drawn and where much controversy still exists, for just as the ethical phase is receding, so is the constitutional one. In the face of new situations, still developing. This illustration then is given to show a trend, not to establish what are in fact the exact constitutional limits to the activity.

What then are the interests relevant to this issue and to what degree are they permitted or protected by the limits of the constitution? It is the first step of the constitutional phase to separate each of these out from one another in order to clarify precisely what individuals and groups within the society have at stake, and what then either may not be interfered with or indeed, what, if necessary, must be protected. Such a step is far from reprehensible, for it is often necessary to put oneself in the place of another and to see the world with his perspective in order to understand what are his needs.
and what difference he makes to the way of life of which all are a part.

Yet to define this perspective as if it exists as an isolated unit is to give it a highly artificial and even misleading characterization. Once an understanding is achieved, it must be reintegrated with the whole fabric of human relationships and reassessed, otherwise the mutually modifying effect of personal relationships which makes possible human autonomy will be lost.

In the constitutional phase, the separation of interests is made to identify, and then to limit or protect them, as is needed, in order to maintain the principles of democracy which the constitution expresses. However, because this separation is made to serve the order of the state, a coincidence of interests, identified separately and taken at face value, becomes the dominant form for the state. Where there is a conflict of interests, they are placed in tension, as checks on one another, with the implication being not that they can have an intelligible and constructive resolution, but that they will continue to exist inevitably as adversaries — and even as a good check on each other. Despite the fact that the rights idiom, which expresses and regulates social relationships, originated with Locke's positive view of liberty within the constitutional context, it is coming more and more to represent men in opposition to one another.

And with each appeal to rights there occurs not a cooperative venture where those concerned develop personal autonomy, but a withdrawal of factions into their respective camps. This change in the function of rights is indicating that the root image of man in society which gave
coherence to the political science of both Locke and Hobbes - that of a mechanical interaction of human atoms - is becoming self fulfilled. Ultimately, to be able to give direction to our own self creative project, in particular within biomedicine, we are going to have to break out of this image.

The following identification of the interests in the fetal experimentation example is given to show how they are given intelligibility within constitutional limits. It includes a critique of these as they are represented as isolated factions. The aspects which I point out are overlooked, are finally lost when the method of balancing constitutional risks and benefits is applied to the competing interests.

1. The Research Interest:

Research using human fetuses in utero which is not only not beneficial to them but may perhaps place them at significant risk (for experiencing pain, or for suffering disablement or death as a result of accidental or intentional interference with their biological processes) can provide a great deal of knowledge about the normal development of fetuses in general. Such knowledge is necessary for researchers then to be able to identify abnormal states, and the causes of these, and ultimately (if abortion is not regarded as the best solution) to develop therapy to treat fetuses in utero suffering from an abnormality. Secondly, such research is also necessary in order to know how to provide better prenatal care for women without damaging the fetuses which they hope to carry to term. For instance, for a variety of reasons, a woman may need to take a drug to treat some disorder of her own. Before she can do this, it must be known whether the drug
given to her will cross the placental barrier, and so whether it will be damaging to her fetus in some way. A third area of research where fetuses are involved concerns the methods of abortion and delivery. It is important to learn what effects different analgesics and anesthetics have on the fetus, for instance, so that the mother can be cared for in a way most protective of the fetus and her own health. In sum, then general goals represent a large variety of questions, which biomedical researchers wish to pursue, and if achieved place the human reproductive process in terms of both the timing of reproduction, and the quality of the offspring, under greater control.\textsuperscript{49}

Since it is likely that much of this research would cause some harm to the fetal subjects, it would seem sensible to use fetuses which are not going to survive to infancy as the subjects for such non-therapeutic research—in particular, those fetuses which are scheduled for abortion. The question, "should non-therapeutic experimentation be permitted with human fetuses which are to be aborted," in its formulation, reflects the American approach, for it concerns not the wisdom of the research activity itself or the implications of making human beings experimental subjects for development and improvement, but only what principles which constitute American society are at stake in the means for pursuing it. At the outset, the research interest as such is recognized as a right to the freedom of inquiry:

"... The state may not interfere with the researcher's choice of the end or topic of research, but it may regulate only the methods used in the research, in order to protect interests in health, order and safety with which unrestricted research might conflict. Such restrictions are valid if they are reasonably related to protection of non-speech interests and are not so vague and over broad that
they dull the exercise of protected speech. 

It is, in fact, highly unlikely that the state could even prohibit publication of research fundings achieved with methods which according to the guidelines imposed were unethical. Given this right to the freedom of inquiry, the question is simply whether or to what degree is it permissible to pursue such research with fetuses which are to be aborted.

Yet while this distinction between aims and method is made, it is my view that, insofar as the method is approved, so also are the aims of research, for the method, by using fetuses which are to be aborted, affirms the value which they represent — that is, they already have been the object for the kind of reproductive control at which the research itself aims. In other words, it is not possible to separate the research interests or goals from the fabric of values held by the society. What research proposes to do makes sense because already these more general values have also made sense both to the research community and to society as a whole. This research proposal is the step beyond in the trajectory which has first made possible the abortion. The act of isolating the right to inquiry and definition of goals as a separate good in itself denies the reality of this fabric. It overlooks both the origin of its goals and the affirmative effect they have.

2. Parental Interest

From the above description of the research interest it is already evident that there is a certain coincidence of research and parental interests. Parents would like to be able to have children who are healthy, and to have them at a time in their lives which is most
suitable for their rearing of them. Because this time, and indeed what a parent is willing to call "healthy" or "normal", is relative to the particular life style of the parents, no generalization about what most people will do with regard to procreation can be made. Because, as I said in chapter I, procreation makes in some way a fundamental difference to a person's well being, no prescription about what they ought to do in this matter can be made without infringing upon their autonomy.

The fourteenth amendment to the United States' Constitution protects the privacy of individuals, with regard to those matters bearing on their life and liberty, from the interference of the state. It was on this ground that it was judged by the Supreme Court in Roe vs. Wade that women must be permitted to have an abortion if they so choose at least in the first two trimesters of their pregnancy. The core argument was in effect that because the fetus acts as an invasion of a woman's bodily privacy the state cannot interfere with her decision to protect her privacy by removing the fetus. That the fetus was harmed or even died as a consequence of the exercise of this right is an unfortunate outcome but not to be identified as her intent in having the abortion.

However, this separation of the interest of the parents from other interests in order to identify and protect it denies the interdependency of human beings - this time those existing among parents, and children in the human reproductive process. The artificiality of this judgement is obvious once a few personal situations are examined. For instance, the doctor who performs the abortion by a hysterotomy,
and who even perhaps is interested in using a non-viable but living fetus as an experimental subject in developing an artificial support system, is faced with a dilemma. Should he respect the wishes of the mother implied by the abortion situation or attempt to support the fetus? The Supreme Court ruling permits a woman to have an abortion, imputing to her the intent of preserving her own privacy. If this were her intent, she would perhaps be willing to choose a less destructive means of abortion (given adequate protection to her own health) which might be more protective of the fetus. However, it is arguable that it is as likely that she has chosen the abortion because she does not want to have a biological offspring, as it is that she is concerned about her own privacy. Joseph Fletcher, whether or not his views are philosophically consistent,\(^52\) nevertheless, does voice this reality when he equates any government acting in favor of protecting fetal life as "compulsory pregnancy or motherhood."\(^53\) But is having an existent biological offspring somewhere in the world "motherhood"? Does having such an offspring affect a person's capacity for emancipation? Our society has in the past been significantly shaped by the value which is placed on family blood ties. The whole purpose of reproductive technology affirms this. (Otherwise, why not simply let those who are able, have healthy normal children for us all). A question which needs to be probed very deeply is what is the nature of parenthood. No answer will be adequate to this question unless it can unify the biological and personal elements in a way which accounts both for the original identity of parents and child and the subsequent uniqueness and individuality of both. Protection of the mother's
privacy is merely a marker pointing to the fact that in some way or another reproduction is related to personal emancipation. However, simply to separate it from other interests, and, as we will see, to place it in an adversarial situation - in tension with other interests - not only ignores this question but tends to militate against its ever being answered.

3. Society's Interest

Again there is an identity of interests with regard to the goals of research now to be seen among researchers, parents and society. It is in the interests of a well-ordered and smoothly functioning society that its citizens be healthy and self-sufficient as much as is possible. It is also, obviously, in the interests of society that the majority of individuals continue to reproduce. Thus the society has two kinds of action which it may take in this situation. First, it may not only not interfere with research goals in order to protect the fetal subjects in the first two trimesters but in a positive way, it may give research support through generous funding. Secondly, it may (at the level of state law) also declare an overriding interest in the welfare of fetuses in the third trimester. In other words, according to the Roe vs. Wade decision, it may prohibit a woman's exercise of her right to privacy (except where her life or health are in jeopardy), at the point where the fetus will live, existing apart from its mother's body. This decision has both a positive element in that it encourages reproduction for the sake of preserving the society, and a negative one in that it discourages attempts at abortion at a time when the issue might be a living but disabled fetus.
Further, in relation to its positive interest in self-preservation, society has also a distinctive interest in the living fetus once it is separate from the mother's body, because it is now recognized legally as a person. For society to permit experimentation which, although begun while the fetus is in utero, has a concluding step ex utero while the fetus is still living, would be to risking brutalization of the principle of human dignity, also essential to the survival of American society.

In the light of this identification of the interests of society, the issue for discussion, "should non therapeutic experimentation be permitted on fetuses who are to be aborted", is divided into two: a difference is perceived between the question as it is raised about fetuses who are previable (unable to live even with support ex utero) and those who have developed past this stage. In the former case, the interest of society is considerably weaker. Thus it may not limit either the research or the parental interest in using fetuses to-be-aborted for improving the capacity to control reproduction, where it is beyond question that the fetus will die anyway.

This difference is the product of the method in the constitutional phase of separating and defending each particular interest, and once again this method contradicts the nature of human interdependencies. It ignores the fact that, as long as the fetus remains in utero, it also remains (barring other unforseen problems) viable. In other words it ignores the fact that the state has an interest in the mother's not aborting at all. If, then, this interest is not regarded as overriding in the case of a woman aborting before the third
trimester, on what grounds is it overriding in the case where the fetus is viable \textit{ex utero}? The answer to this is that in the latter situation, the state is able to, and in fact must, do something for the fetus in the absence of the mother. Just as state interest in children and the consequent increased recognition of their rights has developed as it has been able to ensure that those rights are protectable (through welfare services, children's institutions and compulsory education) so too will the state's interest in fetuses and the ascription of rights to them grow as it also is able to protect them.

Given the direction of biomedical technology, it is likely that in the near future the state will be able to support the fetus artificially from the time of fertilization. The gap between our present capacity to sustain embryo's \textit{in vitro}, and our ability to support premature infants who are barely able to breathe (about twenty-four weeks gestation) will suddenly be closed when the test-tube conditions are developed sufficiently to support the embryo in an "artificial uterus."

State interest in the fetus then is really a function of technology - technology which can support it to a healthy independent existence. Yet thousands of fetuses lined up in artificial tanks is cold victory for the state (or for "right to lifers") for in fact as I argued in the first part of this chapter viability is determined by something far more fundamental than the capacities of scientific technology. Technology is not in itself an objective standard determining the difference between life and death of the fetus. Rather it is tied first of all to the biological capacity of the fetus to respond to
whatever support is given to it but then also to the intention of people who are able to do so, to give it that support. Technology is merely the tool. And the kind of support which is given determines certainly whether the fetus will live and contribute to the society, but more importantly, it determines how it will contribute—that is, what kind of persons these fetuses, protected to adult viability and for the possibility of self-determination, will become.

In some way human reproduction shapes qualitatively the way of life of a society, its understanding of human well being, and the capacity of its members to be self-determined. It may be for instance that the uniquely human capacity to formulate goals, and to make distinctions between what is the case and what ought to be, depends in part on the way people understand reproduction, both as it makes intelligible their own origins and as it defines for them a concrete destiny.

To isolate societal interest in fetal survival as a healthy individual by implication demands then the further development of technology as the measure of viability for personhood. This development acts as the means to further affirmation of societal interest but at the expense of other factors which ensure that the fetuses protected become persons contributive to and fully integrated with the society in which they live. What is required instead is an answer to a question which follows from the one about the nature of parenthood: how is the parent-child relationship constitutive of society? How does it make possible human development as a collective and cultural experience?
4. Fetal Interest

At the outset, it might be said that fetuses too have an interest in being born alive and unharmed, and thus in the best health care possible for them. Indeed this is the rationale of the DHHS which funds fetal research:

"Nevertheless, to preclude research on all such subjects \( \sqrt{children} \), the fetus, the mentally infirm, prisoners \( \sqrt{simply because existing protections are inadequate, would be to deny them potential benefits, and is, therefore, inequitable.}^{54} \)

Similarly, the National Commission emphasized the importance of fetal research as a benefit to fetuses as a class, deserving improved health care. However, further analysis of the status of fetal interests shows that the expression of fetal interests here is a projection of the interests of others on the fetus.

First of all, the American constitution does not recognize the fetus as a person and any interests which might be attributed to it, are immediately subordinate to interests of persons, particularly if those interests are identified as fundamental human rights. This distinction between persons and non-persons within the constitutional phase is a direct outcome of the same distinction within the ethical phase. The Declaration of Independence was a declaration on behalf of persons, and the Constitution, an ordering of American society for those same persons. The implication of the original Lockean image of an atomistic society that moral obligations are owing only to persons is thus institutionalized by the constitution. The strategic question with regard to the preivable fetus \( ex \ utero \) is whether, legally, certain interests of persons can be attributed to it, and whether then it
can be shown that within the constitution a certain amount of protection is owing to it.

In this regard, the first point to be made relates to the supreme court decision in Roe vs Wade referred to above:

"It is a decision about the rights of the mother vis-à-vis the fetus in the context of abortion. Because the fetus may be killed in abortion, it does not necessarily follow that it has no rights in other contexts where the mother's right to privacy is non-existent or less compelling. The right to abort does not infer a right to experiment any more than a state's right to execute a felon confers a right to inflict cruel and unusual punishment."55

John Wilson, who is making this point in his essay A Report on Legal Issues Involved in Research on the Fetus, is presenting an argument in this context similar to my own in the ethical phase: to show that a human being is not a person does not entail the conclusion that there is no protection or concern appropriate at all.

However, it was seen in the ethical phase that the Lockean image of society with its atomistic social philosophy cannot account for this continuum of the personal into the non personal world, and of the human reality that the human beings who are persons are such only because they have been drawn out of the impersonal world by others who have provided the conditions necessary for this to occur. A further analysis of the American approach to fetal interests shows this to be true also in the constitutional phase.

Where the Constitution does not specifically define terms such as "personhood" it is the prerogative of each of the states to do so in its stead. In order for the state to give particular definition to any term, because it cannot turn to the constitution itself, it will look to the cumulative decisions in common law for an indication of
what has been its meaning. Wilson makes this point with regard to the status of fetal interests:

"In the absence of a definition of personhood, or in the event that a being is declared not to be a person by the Supreme Court, state legislative enactments or court decisions would be controlling in terms of defining fetal rights, unless Congress preempted the field, although a person protected by the Fourteenth Amendment - the mother, perhaps - might assert a constitutionally protected property interest in it." 56

Wilson gives two examples in which the courts apart from the abortion situation appear to have protected the rights of the fetus. These are highly controversial, and it is still open for discussion as to what precisely is the reasoning behind the various decisions taken. He points out, for instance, that in property law the rights of the fetus have been recognized from the moment of conception with regard to inheritance, as long as the fetus is born alive. However, it may be that it is the court's wish simply to carry out the intent of the testator who has died before all of his offspring are born. Similarly, the courts have permitted a newborn to recover for injuries suffered prenatally. However, in themselves these can be rejected as significant comments about fetal rights. Capron, discussing this same area of law comments:

"Yet the fact that culpability does not attach if the fetus dies - naturally or otherwise - in utero seems to suggest that the law's real concern is that no one be born with a serious injury; this is a recognition, in other words, not of fetal interests but of the interests of human beings, often both, not to suffer and be at risk of dying because of the culpable acts of another person." 57

There are other cases which argue that the courts may recognize the rights of a previable fetus in utero but the line still tends to fall at the point of viability where the fetus may then be born alive.
and qualify as a person with full rights. It seems evident that the law is protecting only persons, in the full legal sense, either as the fetus achieves the status of legal personhood, or as it is of interest to others who are persons. Thus the continuum between the personal and the non personal, where human beings who already have become persons are the means collectively for the continued emancipation of other human beings (whether fetuses or the terminally ill) beyond the biological is denied by an attempt to classify categories of human being and the rights and interests belonging or not belonging to them.

C. Outcome of the Constitutional Phase: intersection of interests

What then is the answer to the questions whether non-therapeutic research should be permitted on fetuses to-be-aborted? Because fetal interests are recognized only as they coincide with the interests of the other groups - of parents, of research, and of society - the answer depends really on balancing the interests of these three groups. Where fetal interests coincide with any of them, they will be included in that balance. The problem will arise not where fetal interests can be represented as in conflict with other interests, but where competing groups have an interest in the fetus in question.

The separation and identification of the extent and limits of each interest has shown an area of compatibility and an area of conflict. The area of compatibility is due to the fact that all interest groups are defined within the context of the research goals; all interests (even that of fetuses taken as a class) are served by the pursuit of those interests. None raises any question about the wisdom
of those goals and the guiding image of human reproduction implied there. The residual area of conflict exists between the aborting mother who may have an interest in allowing her fetus to be used for risk-laden experimental purposes (perhaps to rescue some good from an unhappy situation) or, on the other hand, in protecting it from further harm; and society, which has an interest in having fetuses which do survive to viability, do so without being harmed, but also, on the other hand, in permitting the research with fetuses to proceed in order to improve the general quality of newborn infants. Both the mother and society each have alternative interests which are not necessarily compatible, and it is important to emphasize that the conflict between the mother and society (now focused on the fetus) is not one of specific interests in the fetus, but one of prerogatives. It is a conflict of individual civil liberties and societal interests – or as it is gradually being expressed, of individual rights versus societal rights.

This conflict produces two consequences for the resolution of the problem of experimentation with fetuses to-be-aborted. The first concerns the immediate attempt to deal with the conflict within the constitutional phase by making use of the counterpoise method. The second is a longer term implication emerging because the counterpoise method provides not an intelligible resolution of the conflict but a balance of forces. This implication is comparable to that in the ethical phase where abdication produces constitutional legalism. Here the inevitable abdication from the constitutional phase will gradually produce the final step of the risk/benefit calculus; a pragmatic phase. I will describe this progressive reduction of issues and conclude with
a projection about the outcome of the fetal experimentation problem.

Within the constitutional and subsequent pragmatic phases, there are two corresponding questions related to fetal experimentation which illustrate why the risk/benefit calculus is tending to pass from the one to the other. These questions arise because of the fact that whether one holds the view that the fetus in utero is a piece of property belonging to the mother, or the view that it is a person with full rights regardless of the mother's desires, there is no dispute that it must be protected within the research setting. As was described above, the parents and society both have an interest of some sort in it. The two questions are the following: how is such protection to be achieved, and once more, to what degree must this protection be maintained despite the promise of research benefits?

To ask how is such protection to be achieved presupposes that one already knows what protection is owing the fetus. However, we have already seen that no answer has been given to this prior question within the ethical phase and the outcome has been an identification of fetal interests as a projection of each interested group of persons. To decide, then, how protection is to be given is to decide who owns the fetus, the mother or society, and who may therefore consent to its being used for research.

However, this decision cannot be achieved within the constitutional framework, because it faces a dilemma. Both the mother and society have a conflict of interest which questions the credibility of each as protector of the fetus, as being the best one for deciding its fate.
The mother who consents to the abortion will have difficulty in establishing the fact that if she permits it to be used by research, that she is interested in the welfare of the fetus as understood by society - that is, in protecting it from injury in case it does happen to survive the abortion. Society which has an interest in the research goals, has difficulty in establishing that it will protect the fetus' welfare as it may be understood by the mother - that is, in its respectful treatment despite its imminent death.

Within the constitutional phase only two limiting rights can be discerned and these stand as the two incompatible images of rights, and of the individual/society relationship welded together by the fathers of the constitution. The mother does have the right to an abortion; this belongs to her as a civil liberty. Society does have the right to protect fetuses which may survive to infancy; this is its overriding interest in protecting civil rights.

If regulative policy were to remove the right of consent from the mother, this would undermine her constitutional right to abortion. It would bring with her exercise of this right a penalty (the loss of her power of decision), which in effect would undermine abortion as a right. (It cannot be morally or legally wrong from the constitutional view point to exercise a right so that such exercise cannot entail a penalty.) Capron explains this point in the following:

"... since the Supreme Court has declared that women have a constitutional right to abortion, basing maternal disqualification on the exercise of that right smack of an unconstitutional penalty or burden. It would appear likely that automatic revocation of parental decision - making authority would chill the exercise of the abortion option because it would face women with the prospect of an infant to
whom they are psychologically attached and whom they have an obligation (morally if not legally) to support without the concomitant power of decision which usually accompanies such obligations. 58

Similarly, if society were to insist that if the mother wishes to have the fetus participate in non-therapeutic research, she must agree to have an abortion (by implication an effective one), this would also chill her exercise of the right to abortion. In this case, the abortion would no longer be a right to be exercised at her discretion, but a legal obligation - and one based not on the principle of privacy but on a qualitative decision about what kinds of human beings are acceptable to society. Thus public regulation must concede that maternal consent is necessary before experimentation with a fetus in the abortion situation is to be permitted.

But this still does not deal with the fact that her decisions may counter the overriding societal interest in healthy new borns. The state may not conclude that a mother will have no protective interest in a fetus which might survive the abortion, but it is still concerned to draw up legislation which takes account of what she is likely to do. The solution to this dilemma is to place a check on the mother's consent, by requiring separate review of proposed experiments. In other words the civil liberties of the mother would be placed in counterpoise with the overriding interests of the state so that a safe and harmonious outcome will be achieved - that is, experimentation with fetuses in the abortion situation may be performed at the discretion of the mother as long as there is an assurance that no injured fetus will survive to infancy. This step then concedes that the constitutional occasion for decision-making is inadequate and that it cannot give
intelligibility to all the factors.

Finally, after all of the competing interests are related within the constitutional framework, there remains beyond its reach a conflict between two positions, one which represents the Lockean view of liberty and the other which represents the Hobbesian view of state interests. This conflict, one seen to be between individual and societal interests can only be dealt with by placing them in counterpoise. Thus the counterpoise method is applied because finally, policy-makers must abdicate on this final but core issue from the constitutional phase, and attempt to find an intersection of interests apart from their origins. It should be noted that this abdication occurs (as in the ethical phase) precisely at the point where issues about the internal aspect of human relationships arise.

The National Commission despite its apparent experimental nature itself formulated guidelines which satisfied the criterion that a safe and harmonious balance be achieved. Despite the reassuring references to the fetus "as a human subject... deserving of care and respect," the ambiguity in those words permitted separate guidelines depending upon the context and the likelihood of its survival. In particular it made a distinction not only between non-therapeutic research on fetuses in utero to be carried to term and those in the abortion situation, but also between "non-therapeutic research directed toward the fetus in anticipation of abortion" which was prohibited, and non-therapeutic research directed toward the fetus during the abortion procedure and non-therapeutic research directed toward the nonviable fetus ex utero, which were permitted. This distinction
could rest only on the fact that the Commission could not be sure (despite the fact that it had a paper presented entitled The Stability of the Decision to Seek Induced Abortion)\textsuperscript{60} that a woman would not change her mind about having the abortion, even though the fetus was part of a non-therapeutic experiment. Further, the Commission limited the latter to fetuses "less than 20 weeks gestational age" and would not permit such research (ostensibly with respect to the fetus as a dying subject) which "alters the duration of life".\textsuperscript{61} For such research it requires both maternal consent (also the father's, if available) and also societal review:

"In such cases, the Commission considers current review procedures insufficient. It recommends these categories be reviewed by a national body to determine whether the proposed research could be conducted within the spirit of the commission's recommendations. It would interpret these recommendations and apply them to the proposed research, and in addition, assess the scientific and public value of the anticipated results of the investigation.\textsuperscript{62}"

The recommendations of the Commission represent an admirable accounting of all of the factors which must be held in balance in this situation. They preserve the conflicting interests, in particular the civil liberties and state interests, in a mechanical tension which prevents neither from dominating. At the same time, this balance limits as little as possible the research agenda, or the particular interests involved.

Yet this solution also belies the fact that individuals in relationship develop and change and the nature of the community which they form also changes. The state which must regulate these relationships because they are not always harmonious should itself always be at risk for the moral revolution which smaller communities of individuals
demand of it. In fact it should nurture this risk by ensuring that its regulations serve or even foster individual reflection about the moral significance of their activities. In particular, what it should look for is a self-conscious analysis of the research project itself - of what personal control of reproduction can mean, when and why.

However, the separation and balancing of interests produces a status quo - an affirmation of what most people think is normal reproduction, of what society regards as health problems and unacceptable biological forms, of what research should be achieving and what goals are "progress". Instead of pressing for moral revolution of the society, for a critique of the constitutional method of balancing rights and interests, people are afraid of the growing bureaucracy necessary to keep such interests both in play and in check. As a consequence they are translating any grievances they have into demands for recognition of rights, right to work, right to carry a gun, right to die. The demands in the area of human reproduction - the right to procreate, the right not to procreate, the right of the fetus to be wanted, the right of the fetus not to be born, the right of quality control of offspring - reify the original image of a fixed order of human atoms, and are completely blind to the agenda of biomedicine where man is his own self-creative project. Human rights and interests take an adversarial role, each withdrawing into a self-interested faction, never realizing that what makes sense of those interests, a normative definition of an acceptable infant, is to be shaped and redefined by the unquestioned imperative for biological control of human reproduction.

And how very different is the outcome of the constitutional
phase from what would have been a rigorous application of the natural rights philosophy (if that were desirable) in the ethical phase. It could not be better described than it is in the Dissenting Statement of Commissioner Davis W. Louisell included with the Report:

"I am compelled to disagree with the Commission's Recommendations (and the reasoning and definitions on which they are based) insofar as they succumb to the error of sacrificing the interests of innocent human life to a postulated social need... the good in much of the Report cannot blind me to its departure from our society's most basic moral commitment: the essential equality of all human beings. For me the lessons of history are too poignant, and those of this century too fresh, to ignore another violation of human integrity and autonomy by subjecting unconsenting human beings, whether or not viable, to harmful research even for laudable scientific purposes."

Louisell's statement measures the gap between the starting point of the risk/benefit calculus and the stages of reduction through which it has passed. This reduction, I have shown, has been inevitable because of the original rationalist anthropology, and its entailed dualism in the American tradition. In the ethical phase, this dualism emerged as an unbridgeable gap between ethics and science. In the constitutional phase a similar gap has appeared between individual and society. Just as the ethical phase has gradually reduced to the constitutional phase because no intelligible solution to this gap was forthcoming, so the constitutional phase will, as biomedicine advances without direction, gradually reduce to a pragmatic phase. This reduction if completed will express the antithesis of the image of man underlying the natural rights philosophy. It will rest in a competitive biological anthropology where individual and societal interests will be rendered compatible by a biological humanism.
3. Projections: the pragmatic phase of the risk/benefit calculus

The pragmatic phase of the risk/benefit calculus is not yet a reality but only a projection of the trend which has been as it now exists completely described. Policy makers are still reluctant to let go of the ethical ideals which have provided occasion for the writing of the Nuremberg Code, and the Declaration of Helsinki, and for the formation of the National Commission. In the discussion above, they were seen to be present, at best in a very self-conscious way, in the 1979 document. Yet there are hints that the constitutional phase will gradually give way also to the fully pragmatic assessment of the limits of biomedical research. That is, there are hints that while the state will continue to distinguish the personal element of human life, it will gradually see that this element can be best understood (given the continuing conflict between ethics and science, and between individual and society in the biomedical context) as instrumental to biological life. Biological excellence (whatever that might be) will become the guiding ideal for human welfare. 64

This final section will describe biological humanism in terms of the original principles of liberal humanism outlined in chapter I and illustrate these re-expressed principles with reference to present trends. It will be seen that biological humanism does make sense of these limits and is, because it can also unify both the gap between ethics and science, and the gap between individual and society (remaining in the ethical and constitutional phases respectively), likely to become the way of life in American society - the philosophy which can
make sense both of what things are, and what difference they make. In other words, just as the conditions of American life were appropriate to unification and re-expression by Locke's philosophy of man and theory of government, so too, I am arguing, are conditions gradually appearing which are ripe for unification and direction by a biological humanism.

A. Abdication from the Constitutional Phase: towards social interest

In the first chapter of this thesis it was seen that in order for the principles of liberal humanism to achieve systematic consistency they must be rooted in a single philosophical anthropology which could explain how it is possible both for man to be free and for moral judgements to be significant, and how it is possible in a society both for the individual to have an inherent dignity and for the state to act as a moral agent. These questions, it was seen, had a specific poignancy in the light of the biomedical agenda, for the very pursuit of some of its goals seemed to entail a contradiction or denial of the very principles which gave it its rationale. In the second chapter it was seen that the image of man which emerged historically as the one to give these principles unity was the identity of human being with reflective thinking. Man, Descartes said, was essentially a thinking being who could judge for himself the validity of any opinion and of any authority. For this reason, he was an individual with dignity and value in himself and he was free. However, with this characterization came also a reification of the worlds of subject and object, and a gap between them which could not be bridged except as object was reduced to subjective terms, or the reverse. The two views which became influential
in the thinking of the American fathers both subordinated man as sub-
ject to the objective world by treating him as a subject of Newtonian
science. However, the difference between them resulted from the fact
that one (Hobbes) emphasized the materialist aspect of science, and as
inductive generalization about the way men were, while the other (Locke)
emphasized the rationalist aspect, and the deductive principles about
what men could become. Thus the former sacrificed individual freedom
for the sake of order while the latter put order at risk in order to
protect individual autonomy.

Because of the historical circumstances in America, both views
had a determinative effect on the founding of American society and
tradition. The outcome of this interplay of theory and experience was
a welding of competing philosophies which represented incompatible
views of the nature of man and his place in society. Such a combina-
tion was possible because those philosophies were not treated as issues
but as interests or factions which could be kept in check by each
other. This was the counterpoise method, and for a separation of
powers it was very effective. However, in the face of issues it could
only affirm the status quo.

The third chapter which concerned American regulation of
issues—specifically those surrounding biomedicine—showed that when
the issues were treated intelligibly, the original dualism reappeared
and they could not be resolved. In the ethical phase this dualism was
a conflict between ethics and science where it was seen that a deductive
ethical system rooted in intuited axioms and constructed to protect
human freedom could not come to terms with the biomedical project for
human health. In the constitutional phase, this dualism appeared as a conflict between individual and society. It was seen that a protection of human liberty for self-defined reproductive goals could not be reconciled with state interest in the health of its citizens. Further, in both phases, neither approach met the requirements of liberal humanism. In the ethical phase, debate occurred within a framework of a deductive morality and thus could not account for the process of individual development as a moral being in relationship with others. Because there was no resolution possible for this debate, gradual abdication from the ethical phase in favor of a court of the people was occurring. What gave this court intelligibility was the constitutional phase. However, this phase too did not meet the challenge of liberal humanism because it could not permit an open self-constructive community. The reason for this lay in the fact that the issue, what is the relationship between human health and wellbeing, was being left aside in order to achieve a balancing of interests which would protect social order and harmony.

A deductive morality and a closed society are the earmarks of the statistical relativism described in Chapter II, for it permits objective statements about what difference a situation or activity makes in terms of societal norms, but at the expense of individual freedom. This position, it was also seen, was related to that of Hobbes, when the political philosophy of Hobbes was pressed, because of its metaphysical basis of mechanical materialism, for justification. The best principles of order which he could discover would be those which were identical with the desires and interests of the majority. Here
we have seen that the American regulatory tradition has implied both this kind of morality and this kind of society, and that it is attempt-
ing to cope without success with the concomitant dualism which entails them. What will bridge this dualism, and give a unifying intelligibility to the perceptions of social and individual interests, is exactly what maintained the unity of Hobbes' philosophy: an identification of that philosophy with science. That is, just as Hobbes' philosophy was a political science whose rationalist framework, mechanical material-
ism, itself made sense of and was confirmed by his observations of human beings in conflict, so a reconciliation between societal and individual interests in biomedicine can be effected, if American polit-
tical science is modelled on biology. In theory, then, a biological humanism (as a subcategory of scientific humanism) has the logical capacity to deal with issues in biomedicine, - that is, if the consti-
tutional phase is forced to abdicate.

In the last section, I argued that in effect the resolution of the individual/society conflict by seeking out an intersection of interests, regardless of their origin, and placing the rest in count-
terpoise was such an abdication, for it paralleled exactly what had occurred in the ethical phase. The question I need to raise here then, before describing what are the characteristics of a biological human-
ism, and showing some illustration, is whether there is already indi-
cation that such abdication is occurring.

An abdication from the constitutional phase will occur where it is unable to give further intelligibility to the issues which are raised, and to the interests which are in conflict - where it cannot
appeal to the present structures of society, and the recognized interests for direction. That this is occurring can be seen in the 1979 document also, this time in regard to research for application of IVF. The question which remains unresolved by the constitutional phase with regard to in vitro fertilization and embryo transfer, is whether the state is obliged to fund IVF in order to make available this technique to childless couples. This question arises, if not in terms of its threat to moral principles, at least in terms of the practical problem of allocating scarce resources in a way which would bring the best return on their investment, and thus the most satisfactory social order. But what is a good return depends first on deciding what are the goals of the society. In other words, the issue is not simply whether IVF is ethically acceptable but whether it is "civically" right. What is needed is a positive statement about IVF as either beneficial or having adverse consequences for American society, and in relation to this a constitutional guideline which would establish whether or not procreation was itself a fundamental human right which should be protected by giving means to its exercise.

Contributions from the public produced a number of views which were in fact quite contrary in nature, and in particular profound disagreement concerning what in fact were the risks and the benefits of this research and application. For instance, Kass, who contributed to the discussion, believed that there would be a very strong demand for extramarital use of the procedure which if recognized would "further compromise 'the virtues of family, lineage and heterosexuality' or weaken 'the taboos against adultery and even incest.'"65 On the other
hand another contributor, S. Leiman, denied that surrogate motherhood is necessarily detrimental to the family.

Similarly there were differences about the nature of the scientific consequences. Some listed the following as adverse:

"a) The development of commercial ovum and embryo banks.
b) The genetic selection or manipulation of early embryos. c) The transfer of nuclei from adult individuals to early embryos or cloning.
d) Extracorporeal gestation, or bringing an embryo all the way to viability in the laboratory."66

Yet others saw at least the second and fourth as benefits.

Further, there was disagreement whether such a procedure with regard to the wise allocation of resources was a relatively high or low priority for human wellbeing. It could not be shown that an incapacity to reproduce was a health problem requiring therapy, and that the government ought to fund "therapeutic conception" just as it did "therapeutic abortion", or that this problem deserved more attention than other suggestions made, such as causes for tubal occlusion, fertility control, prevention and treatment of birth defects and genetic abnormalities. Some in fact recommended that society had a greater responsibility towards children who already were in existence but mistreated or abandoned, and should encourage adoption instead of IVF.

Nor was it established that procreation was a fundamental human right. Constitutional liberties express positively the rights to life, liberty and the pursuit of happiness but they do not define the means to them. Instead they protect the individual from undue state interference in the pursuit of these things. The document speculates about how this could be established:

"The argument for a constitutional right to reproduce by means
of in vitro fertilization would rest on the right to privacy as related to procreation, the marital relationship, and contraception. In 1942, in a decision striking down Oklahoma's compulsory sterilization law, the Supreme Court held that individuals have a right to be free from unwarranted governmental interference with procreative capabilities. (Skinner v. Oklahoma) This might be termed "the right to procreation." A second constitutionally-protected area is the privacy of the marital relationship. This was recognized in a 1965 decision (Griswold v. Connecticut) invalidating a Connecticut statute forbidding the use of contraceptives by married couples.67

However, to argue that a person is free from state interference in reproductive decision-making does not establish that the state is then obligated to ensure that every possible means is provided for that person to procreate.

Without a perception of the relationship of reproduction to individual and state welfare, many interests are expressed but there is no resolution for the ones which remain in conflict. What then can be the outcome for this problem? The Ethical Advisory Board (which actually did not separate moral and social issues clearly) made no attempt finally to advise the government whether it should take a positive role by funding research of IVF with embryo transfer:

"The question of Federal support of research involving human in vitro fertilization and embryo transfer was troublesome for the Board in view of the uncertain risks, the dangers of abuse and because funding the procedure is morally objectionable to many. In weighing these considerations, the Board noted that the procedures may soon be in use in the private sector and that Departmental involvement might help to resolve questions of risk and avoid abuse by encouraging well-designed research by qualified scientists. Such involvement might also help to shape the use of procedures through regulation and by example. The Board concluded that it should not advise the Department on the level of Federal support, if any, of such research, but it concluded that Federal support, if decided upon after due consideration of all that is at issue, would be acceptable from an ethical standpoint.68

Yet its parenthetical observation that "Departmental involve-
ment might help to resolve questions of risk and avoid abuse...
to shape the use of procedures through regulation and by example", is obvious recognition that state order is best maintained where the principles of the state reflect the majority interests. If such a procedure were going to be developed by the private sector in any case, the state would maintain better management of interests if it identified with them. At least then the private sector might follow regulations which it set for its own research. This reasoning in my view is indicative that abdication from the constitutional phase will occur when there are new concerns being generated which range far beyond the status quo. Such concerns are exactly what biomedicine is producing.

B. Hints of the Pragmatic: towards biological excellence

If there is this abdication what then will give intelligibility to resolution of competing interests? The above suggests that it will simply be the interest which is dominant. In my analysis of the constitutional phase, I pointed out that the separation of the interests which was made for the sake of identifying what interests needed to be kept in check, also showed which interests, apart from their rational origins, were compatible. There it was seen that the parents, research, society and even the fetus had a stake, though for different reasons, in the control and improvement of human reproduction. The biomedical agenda itself was the unquestioned and dominant interest. It would seem then that biomedical "progress" in unhampered a form as possible is able to answer all interests to a certain degree, and in fact close the gap between individual and social conflict, as well as between ethics and science. It can, because it is already an expressed interest,
fulfill the theoretical role described above, as a unifying scientific humanism. Biological humanism like any way of life will make intelligible what it is that we see, what difference it makes, and thus what we do about what we see. It will give a specific expression to the four principles of humanism and to the two principles of liberalism described in chapter I, because it provides a particular philosophy of man—a biological anthropology—which conditions those principles. Michael Landman characterizes a biological anthropology as the following:

"Therefore rational anthropology and biological anthropology also differ in respect to their determination of the relation between man and animal. Rational anthropology lets the same dividing line that cuts across man also pass between man and animal. As reason is the highest thing in man, it also discriminates him from all other living things, whose intelligence cannot be compared with his.

Biological anthropology, however, has no reason to split the realm of the living and in principle contrast man with the animal kingdom, since man himself is not divided. Man is but one link in the continuous chain of organisms. Nor does his intelligence place him above the natural any more than, according to rational anthropology, the intelligence of animals places them higher than nature. Biological anthropology leads to the great counterattack against all dichotomies of both rational and religious anthropology, which are therefore classified together and historically were able to amalgamate easily because they both elevate man above nature by a trait belonging only to him."

I will describe the six principles in the light of this characterization showing what it means for both humanism, and liberal humanism. I will also point to some indications in the public policy debate of the fact that they are gaining such significance:

1. **Man has value and dignity in himself:**

   Human value will be totally expressible in terms of biological excellence. Physical characteristics of a human being, either as they presently exist or as they are likely to be in the future, will define
what is to be protected as a person. This will, of course, depend
upon the situation or environment of that person because his biological
health is relative to it. If it can be altered scientifically (for
example, the diet of an infant suffering from phenylketonuria) so that
the human being otherwise unfit can approach normality, and this is
desired, it will be justifiable to do so.

The change from the 1973 document which called for protection
of all human fetuses in research, "the decision of the Supreme Court
not withstanding", to the 1974 document which redefined the protection
which was owing the fetus in the abortion situation shows that there
is a trend in this direction. Risk to the fetus was not "unconsented
touching" but the likelihood that it would survive to become a harmed
infant. Death to the fetus, on the otherhand, dispelled the risk.

Similarly, the 1979 document in attempting to identify what
truly is a risk in IVF stated the following:

"The technical and ethical issues surrounding in vitro ferti-
lization using human gametes depend, to some extent, on whether or not
the procedure is performed with the intent of transferring the result-
ing embryos to women for further development?"70

And also this comment:

"The question of embryonic status in the clinical context
differs to some extent from the same question in the laboratory re-
search context. Perhaps the most obvious difference is that in the
clinical context there is at least a possibility that each embryo
'created' will be transferred to the uterus, will implant, and will
develop to the point of viability."71

Presumably it would be entirely unethical to transfer an embryo
which had been injured in IVF but would by implication not be unethical
to experiment and perhaps harm them if transfer were not the goal.

The value of reading this principle in terms of a biological
anthropology is that it is able, in a way that natural law philosophy was not, to include as relevant to decision making the situation of the human being in question, and its particular biological needs. However, just as it was not possible for the intuitionist to show which selection of biological facts was relevant to the definition of personhood, the relativist cannot show how his definition of biological excellence makes a difference to ethical judgements. That is, ethical judgements become nothing more than a factual estimation of biological consequences.

2. Man is essentially active:

Biological science becomes the actor. It is its prerogative to shape and change the world to its ends.

The implications of the National Commission's decision regarding non-therapeutic research on fetuses to-be-aborted for the research suggest that the counterpoise method itself placed in the researcher's hands the determination of fetal status as a protectable human being. It made him the actual creator of persons in the research setting where viability is in question. Consideration of what was established clarifies what I mean by this. Immediately upon the achievement of the counterpoise between individual and societal interests in the fetus, the point of intersection was identified as endorsement of fetal experimentation where it was clear that there would be no live, injured issue — when the mother could no longer change her mind; and when the fetus (less than 20 weeks) in any case certainly could not survive ex utero. Careless consent given by a mother, or by an over eager review committee could have no undesirable outcome for society. At the same time both could exercise a veto if either held any overriding ethical
view. Yet this compromise exercises a limit on research which for
instance prevents a number of experiments with fetuses close to the
age of viability aimed at developing better care for premature infants
and for an artificial support system which would permit a control of
fetal gestation from the point of conception. Protection of the fetus
in the way prescribed by the Commission precludes the pursuit of these
goals - goals which in fact serve, as was seen above, the interests of
researchers, parents, society, and, if one agrees with the D.H.E.W.
projection, fetuses.

What, however, was achieved for the fetus was not protection
from harm, or from "unconsented touching", but ironically from life
itself. It is akin to the argument that a fetus which is defective in
some way, or unwanted, has a right not to be born. This rather contra-
dictory position (occurring because other interests are being projected
on the fetus) is actually not a protection of the fetus, but of the
mother and of society, neither of whom wish to have fetal subjects sur-
vive at all. Societal interest is rooted in the fact that, once born,
a fetus is a person, and can claim the rights belonging to persons
including suit for injury suffered in utero and support from the state,
if necessary, for its continued existence. The researcher then,
cognisant of the grounds for protection of the fetus, and of what in
fact is being protected, is then put under pressure in the abortion
situation to make sure that the fetus aborted is really dead, and that
in research involving non-viable living fetuses ex utero, once the
experiment (for example, to develop a support system) has begun to
prove itself successful, that the fetuses he has been using do not
survive - in other words that they be allowed to die before he is legally culpable. The reason for the death of the fetus, furthermore, is not the one sanctioned by the Supreme Court. It is not occasioned by the woman's exercise of her right to privacy but by the interest in research itself which may flourish as long as societal and parental interests in the fetus are also met. Thus as ethics was reduced to legalism, so too the counterpoise method seems to require that the law (that fetuses which survived to viability in an injured state may sue for damages) be reduced to pragmatism so that research goals be met.

3. Man is free:

Humanism calls for man to free himself from the authority of tradition, to become educated to his own self-worth and abilities. Within the biological ideal it is emancipation for biological perfection. It calls for man to breed for a generation of joggers, for in that generation there will be the end to the physical suffering and disease which enslaves him. At one time health was a metaphor for salvation; now salvation is the metaphor for health. The limit to his freedom is the limits to his science.

Fetal research is gradually identifying more and more of the genetic diseases, and is able to show which fetuses have been affected by them. However, because most of these diseases cannot be treated, the therapy for fetuses which have been screened "positive", is abortion. In other words, freedom for the affected fetus can be achieved only by medical progress.
4. **Man is the measure of human good:**

Those people who are the most biologically self-sufficient stand as the norm for human excellence. The difference between "is" and "ought" is the difference between disease and health, and by implication the difference between a biological state which is of high cost to society and one which is not. Thus the research projects which ought to be funded will be those which can show that they are cost-effective for society.

The imperative of biomedical science is to give human lives some serviceable length and to make them as biologically self-sufficient as possible. In regard to the human reproductive technologies it has been seen that this goal is already operative as the prime concern of fetal research. The state has affirmed its interest in the fetus when it is viable, but is unwilling to support any research which might possibly sustain it to infancy in a harmed state, particularly when it is not wanted by its parents in the first place. The cost of the support of these infants to society would outweigh its interest in developing therapeutic techniques for fetuses which would otherwise be screened and aborted in any case.

The two principles of liberalism which emphasize, on the one hand, maximization of individual potential, and, on the other, a moral role for government in establishing social justice, are, in the light of a biological anthropology, unified by the goals of biomedical research. Individual potential can be maximized best by such things as a state-controlled genetic screening program, and a positive eugenic reproductive program through monitored use of germ cell donors. In other words,
the possible consequences of the funding of IVF mentioned above would all be regarded as benefits. Social justice would be realized with a healthy gene pool and a high level standard of health care.

Perhaps the ultimate irony of the fetal experimentation debate illustrates that such an image of society is not remote. The paradoxical representation of the loss of life as less harmful than protection of the fetus in an injured state has a correspondent absurdity at the social level. The society which has stated in the D.H.E.W. documents that its mission is to provide equitable health care for those classes of human beings which have in the past been neglected because they have been unable to give informed consent for non-therapeutic research, also permits, in order to serve that "mission", an inequitable use of individual fetuses, which are to be used as a sacrifice to this whole class which it has been claimed deserves to be treated equitably. If this claim were not made in the first place, there would be no justification for doing the research unless of course it were admitted that the research is really serving other interests, and the fetus as protectable as it too serves those interests.

A biological anthropology places a society which would espouse the principles of liberal humanism in a very harsh light. It might be objected that my whole description of the reduction of the American tradition to a pragmatic scientific humanism is simply a more complicated reexpression of the wedge argument - an argument which cannot hold up under the rational judgements of scientists, policy makers et al., who know very well the difference between persons and fetuses or embryos. It might be said that just because fetuses are treated
pragmatically—and so they should be since they are, after all, only in biological terms protectable,—this does not mean that other groups of human beings recognized as persons will gradually be treated otherwise.

Those who argue against the wedge argument are correct in this one respect. Someone who does not see the fetus as a person in the first place will not begin treating persons like fetuses. To do so requires an initial identification, one which has not occurred. However, the problem runs much deeper than this.

First of all, it was seen in the first section that abdication from the ethical phase occurred because it could not be defined what were persons. If, for instance, the increasing cost of health care and institutionalization for the mentally ill forces society to draw a line between those patients for whom there is still some hope that some semblance of mental balance can be restored, and those which should be given only custodial care, what moral argument is there that the latter group should not then be used for research purposes for the sake of the former? There is none, for despite the fact that the latter are protected by law as persons (as are living fetuses ex utero) the discussion about the reproductive technologies has shown that as a society we do not know what persons are.

Secondly, society will not slide down the "slippery slope" as it gradually equates other biologically subnormal groups with fetuses and embryos. This equation will be an effect rather than a cause.

What initiated the problem in the first place was the lack of integrity between the perception of what are moral issues and what is the good
for man. This gap exists in the definitive situation, experimentation with consenting normal adults. There it does not appear bothersome because there is an identity between the principles defended by the state and those regarded as the essential core of the moral court.

There is also an unquestioned single interest on all sides - the state, the majority of the public, and research - in biomedical progress.

But this unity is precisely what makes a scientific humanism possible. It is what will permit a conceptual coherence for ethics and science, and for individual and society in the cases of the fetus and embryo, and it will also permit the same coherence at this first definitive level. It will make sense of what it is we are doing in biomedicine and what difference it will make to us. Within that framework human reproduction will not be open to personal direction and the means to human emancipation. It will serve the biological ideal. In sum, it may then be or not be the case that other human beings will be equated with the group 'non person' but it won't really matter. Human personhood will be biological excellence.

I have presented this third phase as a projection based on two things. First of all, I have seen that the theoretical framework has limited our choice to two alternative images of man, one which presents him as primarily reason, and the other, as primarily biology. Because the first image cannot produce moral principles which can make sense of man as self-creator in biomedicine we are left with the second. This second image at least can recognize that man has biological desires and needs which make a fundamental difference to human wellbeing. Nevertheless, it is the assumption of biomedical science that human biology,
inclusive of needs and desires is not fixed, that perhaps if they cannot be met (e.g. - genetic therapy) they can be changed (e.g. genetic engineering). Without any new more comprehensive image of man, this leaves human biology in the service of the goals of biomedical science - goals which are still subservient to the environment and to the evolution of the biological world. This is the complete antithesis to what human evolution has been to this time.

Secondly, I have seen that breakdown in the decision-making process is occurring at those points which range beyond the reach of a rational anthropology with its limited logic of external relations. Biomedicine itself is requiring that we answer such questions as what are the conditions for personhood, and what relation does biological reproduction and the parent-child relationship have to personal well-being and the cohesion of human community, but within the framework of American regulation this is not possible. Despite the detailed discussion at the ethical and constitutional phases there remains a telling core of conflicts in this area which because of the lack of any further means for intelligible resolution becomes susceptible to resolution by the biomedical agenda itself. I have identified a few hints in the documents which suggest that this pragmatic approach is beginning to occur, and thus argue that unless there is a theoretical and social revolution of images and concepts the theoretical dualism under the pressure of biomedicine itself is going to give way to the practical realm to biological pragmatism.

I doubt very much that such a revolution is going to occur for some time. Our society is still captured by the "rights" idiom
and, despite the fact that its limits are already appearing particularly in our economy, it will probably exploit this concept (like a technological fix) to its extreme. The human reproductive technologies for example, will continue to be developed and in the face of them, our fear of the loss of autonomy—of the rights of individuals, whether parents or offspring—will produce a multitude of legal principles and finely constructed counterpoise machines which will circumscribe but never direct the whole process. The principles will be negative—so that the child will not be able to sue the doctor for unintentional injury, so that the husband will not be able to declare him illegitimate, so that the wife will agree to abort if the fetus appears to be developing abnormally, so that the doctor will preserve their privacy, so that society may screen donors of germ cells, and so on. Instead, in my view, the hope for conceptual revolution lies, ironically, with the biological sciences themselves. It will be when scientists meet the need there for a new scientific image to comprehend the logic of internal relations (perhaps, that life is communication) among genes, cells, organs, and biological systems, that we will have available the concept necessary to better express the moral process of personal and communal emancipation.
CONCLUSION

It has been the central premise of this thesis that liberal humanism is the philosophical core of western society. It is a way of life which is not to be rejected but clarified and unified. The first chapter presented some theoretical requirements of liberal humanism—in particular the requirement that any tradition which would be faithful to its principles express human development as a constructive process both as a moral and as a social philosophy. It has been shown, however, that the American tradition of liberal humanism is not able to do this because the original Cartesian rational anthropology which has produced it is an inadequate interpretation of man. This inadequacy is being made particularly evident now that the American tradition is being applied as regulator of the biomedical sciences.

I have raised a number of questions within this analysis as issues which must be pursued before we can achieve a coherent liberal humanism which can embrace and make sense of our sciences. In conclusion, however, I would simply draw attention to one which I believe must be addressed first: that is, "who is man?" Before we can provide moral principles or social guidelines for the regulation of biomedicine we must first envision a new image of man from all that we are given which can unify his two questions "what is it?" and "what difference does it make?" For now as he asks these two questions he knows, to a certain degree at least, that the answers to both depend upon his own expectations, and upon who he is. His reason is synthetic before it is analytic. The world which he constructs in reason, further, becomes
shaped accordingly in reality. Because of the power of his sciences, what appears to be intractible reality and to be the "other" beyond "self" is receding little by little.

The answer to this question, then, because it calls for an image, will not provide a definition in any material sense. It is like Macmurray's question, "what is the form of the personal?", and it sees all that is, as material for the image. It will express who man is first in terms of what he does but it will also recognize that in his very doing, what he is, will change, develop and grow to the limits of his own vision.

Chapter III: footnotes

2. DHEW Research on the Fetus: Appendix, 18.
4. Charles Lowe, Executive Director of the National Commission made the following comment about the role of the Commission: "... traditionally we have, I believe in this country avoided legislating moral issues... We are now, for better or worse, committed to a process that in fact may eventuate in regulating ethics. .../we/ in fact have initiated a major national experiment." "Regulatory, Judicial and Legislative Processes", Experiments with Humans: Values in Conflict, p. 188.
6. Nevertheless, it will be seen in the constitutional phase that ethical argument will lose its force in policy making because it cannot be concluded, from the fact that an individual (or society) finds something acceptable, that it is therefore ethically or morally right. What places the human capacity for self-emancipation at risk and what nurtures it positively may be something quite separate from what is acceptable. In any case, the fact that many intuitions are presented to policy makers shows that moral argument is much more than a system of deduction from self evident axiomatic principles.
9. It was complete disregard of this ethical question by a number of German physicians during the Second World War, which prompted the United States Military Tribunal to formulate the Nuremberg Code of Ethics in Medical Research.

There are two major considerations underlying the ten statements in the code which guide the investigator's assessment of the ethical implications of an experiment. The first has to do with the experiment itself as being scientifically sound, necessary and of sufficient promise to justify placing human beings at risk. The second concerns the research subject who must be able at all times "to exercise free power of choice" in a knowledgeable way, cognisant, as much as is reasonable, of the risks he is assuming in agreeing to become an experimental subject. Details such as the required prior animal studies the willingness of the researcher to terminate the experiment, proper preparation of facilities and so on, ensure the effectiveness of the protective function of these two principles. Throughout the code, the prevention of suffering or harm is imperative and by implication determines that the balancing of risks and benefits favour the welfare of the research subject.

11. Frankel, p. 53.
12. Ibid., p. 46.
14. Wikler, p. 381.
18. Bioethics and Human Rights, p. 3.

It might be noted that the tendency to restrict moral concern to moral agents, which I said was implied by the natural law philosophy, is certainly operative here. One cannot conclude from the fact that the fetus is not a person, that abortion is not an unjustified act of killing. Within this framework, however, having established that persons do have a moral claim for protection, it seems that one has completed all necessary moral investigation. The question which remains within the risk/benefit calculus is simply, is such killing desired (including issues of brutalization, social consequences etc.).

20. Ibid., p. 35041.
21. Our emphasis on pluralism and the diversity of views which have to be acknowledged individually in our anxiety not to be sectarian tends to obscure the fact which serious analysis of our images will point to, of how much alike we think and behave. The real danger in genetic engineering is that we are going to breed for uniformity, and this, apart from the probable catastrophic
biological implications, will have also a deadening effect on human community.

22. I have called this a "scientific" rather than a "religious" humanism because Locke's position was intended to be a political science with self-evident principles derived from experience, even though his view of natural law and human rights is now considered to be "absolutist".

23. Those who are more aware of the organic nature of biology and who stress that a person is the result of a developing process, and that no point can be chosen as the dividing line between person and non-person, at least recognize the fallacy of trying to think about biological life forms as "substance". Yet to understand the process of becoming a person, as an organic one, - one whose end is contained as potential in the fertilized egg - still cannot account for the fact that personal experience, and human action where it is free (and thus precisely what is to be protected), is not (according to the liberal humanist assumptions) reducible to these biological origins. It cannot explain (as Macmurray notes) what makes possible the creative synthesis in human decision-making -- in other words, what is the self, which we identify with personhood.

26. Ibid., p. 41.
27. This idea was suggested to me by Dr. David Roy, Director of the Centre for Bioethics, Montreal.
29. See Seymour Siegel, "Experimentation on Fetuses which are Judged to be Nonviable" in DHew Research on the Fetus: Appendix, 7-1.
30. For example, DHew (1973) 31742; DHew (1979) 35056: "The human embryo is entitled to profound respect".
32. See page 167.
34. DHew (1973), p. 31738 (my italics)
35. See page 150.
36. See note 19 and corresponding quotation in text.
38. Ibid., p. 35057.
39. Section B was a judgement which simply favored the status quo.
40. See note 4.
41. Experiments and Research with Humans; Values in Conflict, p. 205.
44. The National Commission also did not arrive at any opinion concerning the question of personhood, and of risk with regard to the fetus. As a result there remained a basic disagreement among members with regard to experimentation with fetuses in the abortion situation. See Research on the Fetus: Report, page 62 and page 66 & 67.

45. Experiments and Research with Humans: Values in Conflict, p. 173.


49. See this article for a summary of the value of fetal research: Maurice Mahoney, "The Nature and Extent of Research Involving Living Human Fetuses", Research on the Fetus: Appendix, I.


52. Toulmin, op. cit., 10-4.


55. Ibid., 14-8.

56. Ibid., 14-9.


58. Ibid., 13-18.


60. DH EW Research on the Fetus: Appendix, 16.


62. Ibid., p. 70.

63. Ibid., p. 77.

64. For pragmatism, the spirit is completely an out-growth of life and receives its directives from life. Even its most specific task, that of knowing, is performed only on assignment by life. This is far from limiting the mind in its activity; the mind strives for truth only because truth is vitally important, and therefore it also seeks only those truths which are vitally important. And whether these are truth in the strict sense does not concern the mind: it is enough if practice is satisfied by it (therefore 'pragmatism'). The older, classical sense of truth as a faithful rendering of the object is illusory. With the classical faith in truth the classical faith in man also falls. Homo sapiens becomes homo faber (man the maker), who uses his intelligence only to test things for their useful characteristics, and to produce useful things himself" — quoted from Landmann, p. 128.


66. Ibid.

67. Ibid., p. 35048.

68. Ibid., p. 35056.
69. Landmann, p. 150.
70. DH&L (1979), p. 35039.
71. Ibid., p. 35045.
72. This hope also lies with the church which has, despite its own institutional legalisms, concepts which can express these things. However, it is more likely that our society will await the good word of science. Only then will we be freed from the mechanical forces which govern our society.


Department of Health, Education and Welfare, Office of the Secretary, United States of America:


---------. Ethics at The Edges of Life: Medical and Legal Intersections, Yale University Press, 1978.


