Public attention to and interest in the artificial heart has been very much alive at least since the Barney Clark implant in 1982. But the idea had been there much longer. "The 6 Million Dollar Man" (Lee Majors) and "The Bionic Woman" (Lindsey Wagner) imaginatively portrayed the possibilities through the medium of television entertainment. Now we are witnessing the drama unfold in our very midst. Imaginative visions of the future are being pursued in dramatic experiments with innovative technology.

Along the way complex problems are being generated and our lives are being subtly but extensively changed. The problems are both technical and moral in nature—and the two are often related. The symbolic and ethical significance of this giant step in medical history is of tremendous interest. People disagree as to whether we are making progress or simply making history. At a minimum, however, the artificial heart program represents a significant step in the effort to conquer the diseases which shorten human temporal existence. For the unbridled optimist, this high-tech assault on the heart seems the last frontier to conquer before the dawn of the age of bionic persons.

At a symbolic level, the heart is a sign of the increased expectations on the part of the American public and of medical and scientific researchers. People are coming to expect a scientific fix for every malady or life-threatening disease. Exotic procedures seem demanded whether or not they are of demonstrated benefit.

It also represents a preoccupation with life and death in our society. Some herald the heart as a step in the direction of eliminating death (or at least making it optional) probably to be elected only by a miserable and unfortunate few. Others see it as a type of denial-of-death syndrome, a neurotic-compulsive effort to achieve immortality through science. At least it holds the promise of increased longevity, and perhaps of cheating death of its intended victim—at least until a later date.

The mystique of the heart causes all
this to have enormous symbolic power for society. The public debate reflects the tensions within us religiously, philosophically and morally about life, death and the future. It also captures our hopes and fears about technology and what it may do to and for us individually and collectively. The point is stated well by Stanley Reiser in *After Barney Clark*:

The artificial heart, apart from its capabilities, has become for our society the foremost symbol of the ambivalence we carry toward medical technology. The artificial heart is at once a metaphor of concern about unduly sustaining an aging population, the cost of medical care, plunging into technologic creation without adequate thought to consequences, and of an accumulation of means as an end in itself. It stands also as a metaphor of exhilaration about the wonders of our science and technology.¹

The artificial heart also poses significant ethical issues, as Reiser suggests. New technology often complicates and compounds the decisions that must be made with regard to patient care and medical therapy. These decisions pose moral dilemmas precisely because people are being affected both directly and indirectly. We are all patients with a vested interest in high tech medicine for both individual and social well-being are involved. We will all benefit and/or suffer together as decisions for research and application are made.

Several ethical issues have been raised about the artificial heart, all of which are important and deserve attention, but most of which cannot be dealt with in this paper.² They can be divided into two major categories of concern: (1) those directly involving the patient, and (2) those involving social policy. The two are inter-related, of course, but distinctions will aid discussing the issues.

I. Issues in Physician-Patient Relations

The Ethics of Informed Consent

The ethical issue of informed consent has probably received most attention in discussions about xenographs and implants. The problem is that experimental medicine pushes at the frontiers of traditional moral formulations and established medical procedures. The research physician works in that ethical penumbra created by a commitment to developing innovative and more effective techniques and the risk of injuring patients by moving too quickly with unproven therapies. The researcher has a moral commitment to seeking new cures, new devices, new and more effective therapies — all of which are impossible without experimentation first on animals but, finally, on human subjects. It requires boldness and courage to push at the boundaries.

Resistance to change and fear of adverse outcome are often the primary factors in opposing the researcher’s work. Traditional moralists tend to err on the side of caution thus delaying or preventing more effective therapies from being developed. The researcher is tempted to err on the side of innovation, frustrated by the constraints of bureaucracy or dogmatic moral formulations.

The first problem in seeking informed consent, therefore, is that of keeping the role of researcher distinct from that of the clinician. Care of and for the patient is and should remain the primary commitment of the physician. The ambition to achieve a “medical breakthrough” or make “medical history” is also a motivation at work, making the temptation to shift priorities terribly strong. The special role of the physician toward the patient adds to the dilemma. The physician is seen as strong, wise, caring and the source of hope and healing for and by the patient who is weak, dying, frustrated and afraid. The physician has a special type of authority in such cases and is easily able to manipulate the highly vulnerable patient.

The patient is convinced he has only hours or days to live at most. They are
"grasping at straws," or to use Christiaan Barnard's metaphor, they are between the lion and the crocodile. The immanence of death is a coercive factor in patient decision-making. Physicians certainly cannot entirely control how much anxiety will be produced by informing the patient of a terminal condition. But they can stop short of exploiting the situation as simply an expeditious way of furthering the cause of the experiment. The researchers should live by the moral constraint stated so well by Paul Ramsey:

the *sine que non* of any morality at all is the realization that there are some things we can do that we ought not do. There are some things we cannot morally get to know.4

A further complication arises from the different expectations held by patient and physician, respectively. The patient tends to think “therapy” and believe the experiment holds greater prospect for extended health and longevity than the evidence will support. A part of this may be the euphoria created by early and extensive media hype. Some of it is an exaggerated expectation toward medical science in general. Undoubtedly anxiety about death also contributes to a denial syndrome that makes realistic assessments difficult, if not impossible. When Jack Burcham declared that he did not see the procedure as a risk, he manifested some of these dynamics. His death ten days after the implant was a startling reminder of the fledgling nature of the program and his unrealistic optimism was laid bare.

Physicians, on the other hand, know the program is experimental. At the same time, they hope for a positive and beneficial outcome for the patient and believe strongly in the possibilities for therapy with further research and development. The danger is that the researcher’s excitement about the program will get translated as “promise of therapy” to the hopeful and anxious patient. As every interviewer knows, the way in which a question is posed has a great deal to do with the answer given. The ethical dilemma is especially acute for the physician researcher who is committed to the development of new medical technology. Keeping the role and goals of the researcher distinct from that of the clinician is vital to insure the integrity of the informed consent process.

All this makes the process of procuring informed consent of even greater importance than the consent document.5 Few people have the intellectual stamina, the physical energy or the mental discipline to digest the details of a lengthy consent form, much less a patient medicated and dying from end-stage heart disease. The dynamics between doctor and patient, the innuendoes and suggestions, the body-language and rhetorical questions, all play a part in giving or withholding consent. Again, the special role of physician as authority figure, providing aid, comfort and hope to the dying, is all-important. That is why, if the patient has faith in the physician, he will sign.

The moral basis of the physician-patient relationship is here strongly underscored. The special vulnerability of the patient requires special trustworthiness of the physician. Different expectations on the part of researcher and subject are both predictable and unavoidable. The health care team bears particular responsibility for minimizing those differences to the point that the patient can honestly assess probable consequences to himself. Care should be taken to avoid raising false hopes and stress should be laid on the fact that “there is absolutely no guarantee about longevity or quality of life” either expressed or implied.6 The problem is so to confront the patient with the risk factors involved as to be assured that consent is given in a realistic frame of mind.

Furthermore, the consent process needs to include members of the immediate family. They should also be consid-
ered patients since their life and well-being will also be dramatically affected by the experiment. A strong and supportive family is necessary, but their need for realism about the program is also now more clearly understood. The impact upon family health resources needs to be assessed and included in judging the moral and medical acceptability of the implant. Refusing treatment will be morally awkward for family members since there are strong social pressures and religious commitments that make consent practically normative or morally obligatory. That the health of other family members may also be “on the line,” however, needs to be openly and honestly discussed.

The helping professions — ministers, chaplains, social workers, and others — can be crucial in this aspect of the process. The task will be to enable and support all those involved to reach a decision that reflects concern for their common well-being, openly and honestly exploring feelings and options, without undue coercion or manipulation. Appeals to “the only alternative available” or “doing all we can” (for the patient) are morally problematic in that they exploit the grief process and family love for the patient. The moral principle is that the good of the many should not be compromised for a highly risky procedure whose benefits are difficult to calculate.

Assessing Benefits and Risks

The experimental nature of the program is often obscured by references to “therapy” and discussions of benefit to the patient. Criticism has been generated by the confusion that surrounds the ethical issues involved in assessing benefits and risks for those who receive the artificial heart. Several things should be noted.

First, the FDA waived the need to show therapeutic benefit for patients in the artificial heart program at Humana.* The two reasons that prompted that procedural decision were (1) the lack of a sufficient data base from prior research with human subjects, and (2) the recipients were in fact dying from end-stage heart disease and were not candidates for other types of therapy. Thus, no burden of proof for therapeutic benefit was borne by the implant team. The heart was not approved as a device capable of achieving therapeutic benefit. The underlying assumption was that the patient could certainly be “no worse off” with an artificial heart since death was imminent.

As The Working Group said, the procedures involve “innovative” practices and “investigational” devices. The program is designed for the purposes of evaluating the “safety and efficacy” of using MCSSs and “to acquire information” useful to improving the devices. In a word, the program is experimental.

That in no way relieves the ethical necessity of evaluating the implant program on grounds of therapeutic benefit, however. The Working Group went on to say that “such studies should be conducted in a fashion that does not undermine the primarily therapeutic objectives.” The ambiguous language in the document reflects one of the concerns in discussions about ethical issues. References to “therapy” or to the device as “innovative therapy” have tended to obscure the highly experimental nature of the heart. Understandably, criticisms were heard to the effect that such language promised more to the patient than could reasonably be expected and thus tended to undermine the moral framework of the informed consent process.

Certainly there is the hope that the patient will benefit from receiving the heart. Anything less would be unethical.

* Humana Heart Institute International, Louisville, KY.
manipulation of vulnerable patients to serve ends or goals other than patient interests. It is not enough to treat this patient as a means to perfecting devices not intended for his benefit. Thus, references to patient benefit are unavoidable and understandable. Assessing what the heart does to this patient is a moral prerequisite. As The Working Group said, "a favorable balance of risks and anticipated benefits is required."

Concern for the patient will also require respect for one’s attitudes toward life and death. The assumption must not be made that just anything can be done to a patient who would otherwise be dead. Nor can we accept morally the assumption that just any condition of "living" (being alive) is preferable to death. We may and will disagree as to the terms under which one might be preferable to another, but that death is a preferrable option under certain circumstances can find widespread agreement. Death has a proper, necessary, and vital role in the scheme of life and should not be regarded as an ultimate evil against which all the weapons of medical technology should be marshalled. How this religious and philosophical belief should affect heart implants is not clear. Certainly it yields no absolute prohibition to developing or implanting the device. There are times it is right to intervene aggressively to prolong living. However, there are times it is better to allow the patient to die.

No amount of rationalization or enthusiasm can justify by-passing patient consent. The person with acute cardiac failure, as well as the conscious candidate must be given the respect and dignity of granting permission for the implant. Patient rights can be violated as much by imposing as by withholding treatment.

A second concern has been raised by critics who question whether the implants should be done at all. The objection is based on the belief that little assurance of a positive outcome can be given the implant recipient. The argument centers on quality-of-life concerns which focus the same issues that would count morally for or against any procedure in medicine. Surgery is morally justifiable that (1) holds the prospect for meaningful patient recovery or the advance of medical knowledge with the knowledge and consent of the patient, and (2) that does not extend suffering unnecessarily or without compensatory factors such as the prolongation of meaningful living. Simply extending the number of days one has before being declared dead is not necessarily a moral use of science. As a New York Times editorial put it, "the purpose of medicine is to improve life’s quality . . . To prolong life beyond its natural span is no favor unless reasonable quality is also provided. Without it, the physician has only succeeded in prolonging death."

Restoring, improving or extending the patient’s functioning as a responsive, creative, capable, independent and productive person able to resume normal routines and pursue meaningful goals is the aim and purpose of therapeutic medicine.

It is also the hope of the artificial heart program. Admittedly in its early stages of development, the heart is hardly able to hold out the promise of reasonable recovery to the patient. The goal pursued is that of a totally implantable artificial heart that enables patients to function normally and pursue vocational goals and personal interests much as heart transplant patients are often able to do.

The problem is that the artificial heart is crude and incomplete when measured by the vision of a sophisticated bio-medical device that is totally implantable and reliably therapeutic. The tether and console constitute enormous restrictions totally unacceptable in the finished product. Further, it contributes to other life-threatening problems. The "beneficial" or "therapeutic" value for the patient is
clearly ambiguous. Some of the complications have left patients severely impaired. Barney Clark was rarely lucid; he suffered severe depression, wanting and requesting to die but unable to use the key to turn off his console. Strokes have also complicated the recovery of all other heart recipients.

Some critics have argued that such complications are sufficient reason to terminate the implant program. The argument goes something like this: "If measured by reasonable standards of patient recovery, the record is rather dismal. On ethical grounds, the procedures should not be permitted at all because of what they do to the patient."

If the focus is on Barney Clark and Jack Burcham, that conclusion is difficult to avoid. However, if one focuses on William Schroeder and Leif Stenberg, the calculation is quite different. While I hold considerable sympathy for quality-of-life concerns, I do not find the results sufficiently dismal to warrant terminating the artificial heart program. Enough patient benefit has been realized to justify the belief that an artificial heart can be developed that will qualify as a therapeutic device. I concur with The Working Group's recommendation that "research on mechanical circulatory support systems (MCSSs) should continue."\(^{10}\)

The most persuasive rationale for proceeding is found in the benefit that countless numbers of heart patients will experience in the future. Two considerations give support to the hope that that goal is reasonable to pursue: (1) patient consent for experimentation and (2) the need for further technical research.

As to further research, the Working Group anticipates that it will require at least two to three years to develop a mechanical heart that will provide at least two years of reasonably good quality of life.\(^{11}\) Many of the moral issues about the program are related to the technical problems with the artificial heart. At present, the device can be used morally only \textit{in extremis} since patient benefit is likely to be marginal, at best.

As to patient consent, I basically agree with Robert Frost's dictum that it is a person's right to go to hell in his own way. Or, as Anthony Lewis put it, "If, in the process of averting death, a patient chooses to become a human guinea pig or to marry a bulky machine, he should be permitted to do so." Their commitment is more noble than that, to be sure. The subject is a volunteer, accepting risks to himself knowing that benefits may accrue primarily to others. The research patient is a necessary stage in developing new technology between experiments with animals and its useful development for human subjects. Without such volunteers, the acceptable device will never be developed.

The human community both benefits from such sacrificial commitments and lends support and approval to those who volunteer. Such pioneers enrich our society, add depth to moral ideals and give perspective to what is worthwhile about living. Permitting people to volunteer for experimental procedures while protecting their autonomy and informing them of the risks to be anticipated has long-standing support in both medical and religious communities.

**Terminating the Experiment**

Perhaps the most difficult ethical quandary is confronted in making decisions about terminating the experiment. Severe neurological complications leaving the patient comatose, with loss of communicative skills or without cognition are certainly possibilities that must reasonably be anticipated. The greatest problem with the consent form signed by
Barney Clark was that it assumed either he would be able to make decisions about treatment or that he would die. It made no provision for the possibility that he might survive but with "severe confusion, mental incompetence or coma."12

That oversight was not fully corrected in subsequent consent forms, which in fact, do designate a surrogate to act for the patient, but only in matters pertaining to additional corrective surgery. What is needed is an explicit anticipation of patient wishes in the event of adverse outcome in which the question of terminating the experiment altogether becomes an issue. This can be dealt with in the consent form, through attaching a Living Will or by designating a person with the durable power of attorney.13

There are people who object to any talk of terminating an experiment which is "life sustaining." However, that the patient has both a legal and personal right to have treatment refused on their behalf was clarified in the Quinlan case. The court ruled that it was precisely "because if they were competent, they would have that right, and to deny it to them because they could no longer personally exercise it would devalue their lives."14

The case of the competent patient who desires to terminate the experiment presents an even thornier dilemma. The problem was touched upon but not fully resolved by The Working Group on Mechanical Circulatory Support of the National Heart, Lung and Blood Institute (May, 1985). The study actually sidestepped the touchy issue of whether the patient had a right either to order the machine turned off or to do so himself. It acknowledged that "gratuitous" activities "not designed to serve his health interests" could certainly be discontinued at patient discretion. Included, however, were those tests that serve only "the interests of research." The statement hedges, however, where discontinuing "medical therapy" or "withdrawing from the protocol," is concerned. Strong and significant qualifiers are introduced: first, the decision is not the patient's acting alone, but would involve "discussion" with health professionals and the patient's family, and second, some "other suitable therapy" might have to be substituted.

The net result of this logic is to place the patient in a frightening "Catch-22." Yes, the document says, you may freely volunteer for the experiment and you are free to withdraw from it. But, no, once you have received the implant, it is no longer your choice acting alone to opt out of the program. The statement makes it clear that the patient is not simply to be handed a key to the device and left to do as one chooses. The reason given for this significant constraint is that such a patient decision would "create considerable disturbance."

A generous interpretation of this document is that such "discussions" are necessary to prevent precipitous and premature actions on the part of the patient. The health care team is responsible for patient well-being and that includes at times protecting patients from themselves. It is well not to be cavalier about such serious decisions. They are and should be the result of deliberations in a community context of caring and love.

Another reading of the document yields a portrait of the implant patient as a ward of the intensive care unit (ICU) with whom mental games are being played, assuring him of "freedom to discontinue" while all the time intending quite the opposite. The document hints at this saying that the decision-making process would be "similar to that of choosing to disconnect a patient from the ventilator." This is an appropriate procedure in the case of the comatose or brain dead patient. However, if it is
intended to apply to the competent, conscious patient, the procedure is morally problematic. The tragic story of William Bartling, for instance, makes this requirement terribly discomforting. He was not only denied the right of having a respirator turned off but his hands were tied in order to prevent his removing the tubes; he became, in effect, a “Prisoner in the I.C.U.” If one of the “disturbances” to which the study refers is the social controversy over the right to die, focus on patient rights in experimental medicine become negotiable if not expendable. The moral rule that should be protected against all assault is that of patient autonomy and the freedom to decide the course of action acceptable to them. Where the patient is competent to decide, his decision and not someone else’s should prevail. The sentence most to be emphasized in the study document is that which says “... the patient may choose to discontinue the device, knowing that his act will result promptly and certainly in his or her death.”

The key given to Barney Clark continues to have enormous symbolic significance on the moral use of this innovative device. The “key” must remain in the hands of the patient. The right to refuse treatment is an important moral corollary to the basic principle of medical ethics, namely, to treat the patient as a person, a free moral agent. As the Saikewicz case showed, the value of life is enhanced by liberty. It is “lessened not by a decision to refuse treatment, but by the failure to allow a competent human being the right of choice.”

Denying patient rights to refuse treatment in the post-implant stage raises questions of the agreements entered during the informed consent process. The patient has no way of knowing the full impact psychologically, physically and spiritually of being attached to an MCSS. The tether and the ever-present console will place considerable strain on a person’s capacity to endure the frustration of constraint and limitation of mobility. The noise of the drive mechanism may place an intolerable burden on one’s nervous system far beyond what might have been reasonably anticipated. The result can be virtually disastrous for one’s mental state driving the patient into acute claustrophobic or other anxiety reactions. Should that happen, the very invention designed to aid the patient becomes the device that destroys the ego strength of the patient. Then to use the patient’s mental state as the basis for declaring him “incompetent to decide” would be to undermine the moral basis for the experiment itself.

The consent document therefore needs to provide a clearly worded “escape clause” that anticipates various negative outcomes and assures the patient that he will not have “to bear the unbearable and tolerate the intolerable.” We are again dealing with the problem of differing expectations. The patient enters the agreement expecting certain beneficial outcomes and even willing to bear discomforts for the sake of the experiment. But there are outcomes the patient has no way of reasonably expecting since he has no experience upon which to base his imaginative projection into the post-implant phase. He may even be “denying” such possibilities.

In any case, there are outcomes to which reasonable people would certainly not agree and these can be discovered only in situ. Should that happen the
patient's consent for treatment is withdrawn in the form of a request to terminate the experiment. He has not and should not be thought to have agreed to any and everything that might happen by entering the experiment. Permission to do one thing or even to do many things is not the same as permission to do anything or to be maintained in any state. Plainly some conditions of "survival" are unacceptable in the value systems of most people and some circumstances of existence in a conscious state can be a horror too great to imagine. Imprisonment or coerced confinement is degrading to medicine and depersonalizing to patients. As Nelson puts it, "research which violates human freedom is not moral progress." It is a possible result of the artificial heart program that is to be avoided at all costs.

II. Social Policy: The Ethics of Cost

Some of the most vexing questions about the artificial heart are posed by the costs of developing and making available the artificial heart. Dr. Lewis Thomas says that the program is "insupportably expensive." The costs are enormous. The National Institute of Health (NIH) has already invested over $200 million in research, some of which is represented in the Jarvik-7. Barney Clark's implant and maintenance cost $250,000. The Report of the National Heart, Lung and Blood Institute Working Group on Mechanical Circulation recently estimated that the heart program would cost the nation approximately $3 billion. (Other estimates range up to $40 billion.)

By 1990, Federal costs for health will be increased by 10 percent from the heart program but will treat less than two percent of the patient population. Expenses for the heart are comparable to other exotic treatments or procedures such as liver transplants, bone marrow transplants, hemophilia treatments, renal dialysis, and pacemakers.

Estimates of cost are likely to be far too conservative. In 1972, Congress voted to pay for renal dialysis for every American who needed it thinking the bill would be about $140 million per year. The first year's cost was over $241 million and it now exceeds $2 billion and accounts for 10 percent of all Medicare payments for physicians. Over 80,000 patients are treated including octogenarians and those dying with terminal illness.

As many as 50,000 victims of heart disease stand to benefit from the artificial heart. If each costs only $150,000, the bill would be a staggering $7.5 billion. What is being purchased? One scenario was that without a heart implant, the patient would live perhaps six months at a cost of approximately $22,000. With an implant operating at maximum efficiency, one might expect a 54-month survival costing $150,000. At best, four years would be purchased for a cost of $38,000 per year. These would be persons totally dependent on others to provide the costs. To health care expenses must be added the costs of Social Security, housing and attendant costs for what will likely be debilitated persons. Taken all together costs may be more like $40 billion per year.

Funding

Several problems can be isolated. The first is the economic question: how many dependents can a productive society carry? Already health costs are 10.8 percent of the gross national product. More could certainly be borne but at what point does the younger generation become too taxed to tolerate the burden?

We are now moving toward 30 percent of the American population being dependent — counting those over 65 and those under 18. Thirty percent of all Medicare
costs occur in the last year of life. Only slowly do Americans realize they cannot afford everything they want. The staggering deficit is a financial burden for our children to pay. Where do we cut the budget?

"It's just too expensive," says Dr. Robert Wilson. "We just can't afford it. It will improve the health of comparatively few people. The costs will be astronomical to take care of a few older people whose lifestyle may have contributed to their health problems."

Wilson's alarm is echoed by certain sociologists who are predicting the makings of a major inter-generational conflict. As the population becomes older and exercises enormous political leverage, the productive members will begin to resent the economic burden.

Governor Richard Lamm's (D-Colo.) sage advice is hard to accept by people who have begun to believe that clinging to this life is all important, regardless of cost to society or family. Lamm reminded us all of "our duty to die and get out of the way with all our machines and artificial hearts, so that our kids can live a reasonable life. High tech medicine," he said, "is really the Faustian bargain, where for a few extra days of life, we have to pay the price that could bankrupt the country."22

The artificial heart is ushering in a new era in many ways. One question it will force upon us is that of the justifiable expense of extending life. Perhaps as David Blumenthal has suggested, this will be "the first instance in which . . . the price of preserving the myth that life is priceless may prove too high."23

Prioritizing:

A related problem is the fact that while exotic medical procedures have high media priority, 15 percent of Americans go without basic health care. What Alex Capron has called the "dirty little secret" is that we already have health care rationing in America. Access is by insurance, and insurance is related to income level. Thirty-four million Americans go without basic care while vast sums are lavished on a fortunate few. A man may die of a stab wound to the head — for which relatively inexpensive and therapeutic care is available — even though he has no other life-threatening diseases. Another man with end-stage heart disease has enormous sums of money, energy, and exotic technology lavished upon him — with little or no promise of cure.

The basic commitment to justice of any system must be questioned where exotic technology, not human need, is the primary criterion for allocating scarce resources. The momentum is even further in that direction, however much it may contradict the egalitarian ideal upon which this society is based.24 As the public burden grows, exotic medicine will be available only for those who can pay. Some will be able to buy an extension of life; others will not. (Already countries like Britain do this since renal dialysis is not available through Public Health Service for those over 55; however, it can be obtained privately.) This trend simply reflects what we already experience: Money is power and costs for needed goods and services must be provided. If the public sector cannot or will not, only those with private resources can obtain them.

A possible resolution of this problem may lie in allocating public funds primarily for preventive and health measures and allowing private funds to underwrite exotic (and optional) high tech research and development. In this way a great deal more longevity and health, for that matter, can be purchased with public funds while not burdening or breaking the back of the national bank to
provide costly care for a precious few. The Artificial Heart Program at Humana Hospital* is a step in that direction.

Allocating

A third ethical issue relates to the selection process that will be used to determine who receives scarce resources. The problem is created when more patients than resources appear on the scene. Pressure will increase for scarce artificial organs including the heart, eyes, pancreas, ear, skin tissue, etc.

The panel sponsored by the National Heart and Lung Institute recommended that availability not be based on one's ability to pay, but should be part of social financing of medical care in general. They also rejected making decisions based on social worth criteria, believing in the notion of the "equal worth" of all persons. The criteria favored were those of medical indicators (patients who have the best chance for recovery and do not qualify for other therapies) or that of random selection by lottery — a type of blind test that presumably institutionalizes the notion of equal dignity and equal access.

However, in light of the total complex of issues related to the future can the utilitarian calculus finally be avoided? The ethical question goes beyond the notion of equal dignity and worth and includes social well-being and survival.

Suppose one heart is available at a heart institute and two candidates appear. One is a drug addict, a street derelict afflicted with heart disease. The other is a prominent physician known for community service and caring, competent surgery (just to make the case easy!) who is suffering from the same disease. By now the heart is sophisticated and totally able to promise meaningful patient recovery. Who gets the device?

The way that question is answered reveals our moral and religious assumptions about equal worth and dignity of persons, distributive justice and the ethics of economic calculus. Joseph Fletcher says it would be stupid and immoral not to use social worth criteria in allocating scarce resources. The lottery is irresponsible for it runs the risk of wasting social investments and perpetuating dependency rather than supporting those who in turn support the social system. In purely economic terms, it is a return on a social investment. "To those in whom we have invested so much, let us invest more that they, in turn, can render service to the community."

This may shock ears accustomed to traditional moral approaches. But it is a shift that is being forced by the inevitable forces of advancing technology and the increasing complexity of society with all their attendant and consequent costs.

Conclusion

In short, the technology of exotic medical science is facing old moral questions that must be dealt with in new ways. There can be little question that humankind is playing God — acting out god-like powers through sophisticated technological gadgetry that manipulates life and death in ways unimaginable a generation ago. All these processes — whether intervening to sustain life or to shorten the dying process — are god-like decisions. We are playing God in new ways, for new stakes and with new possibilities for the future. Let us do so responsibly, with due regard for our corporate finitude, an unquestioning caring for each patient, and a stewardship of our resources that will assure a reasonable and desirable future for those who come after us.

* Louisville, KY
References

7. The Working Group, p. 21 (see reference 2).
8. The Working Group, p. 22 (see reference 2).
11. The Working Group, p. 25 (see reference 2).
15. The Working Group, p. 23 (see reference 2).
18. The Working Group, p. 27 (see reference 2).