

PROCEEDINGS OF THE WHIZIN INTERNATIONAL SYMPOSIUM

# TECHNOLOGY AND Ethics

Edited by E. A. Halevi and D. Kohn



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Proceedings of the Whizin International Symposium

# TECHNOLOGY AND ETHICS

Technion City, June 17-19, 1992

Edited by E. A. Halevi and D. Kohn

A collaboration of the Shirley and Arthur Whizin Center for the Jewish Future at the University of Judaism, The Shirley and Arthur Whizin Biotechnology Center - Technion, Israel Institute of Technology and the Samuel Neaman Institute for Advanced Studies in Science and Technology

The S. Neaman Institute Press

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WHIZIN INTERNATIONAL SYMPOSIUM ON  
TECHNOLOGY AND ETHICS

This publication summarizes the proceedings of the first in a projected series of International Symposia on Ethics and Technology, held at the Technion's Coler Center on Wednesday, June 17 and Thursday 18, 1992, as a cooperative venture of the Technion and the University of Judaism in Los Angeles. The impetus for organizing a series of annual symposia devoted to the exploration of the interface between ethics and technology was provided by the Whizin family, generous donors to both of the sponsoring institutions.

The Symposium was organised by the Samuel Neaman Institute for Advanced Studies in Science and Technology as an "in-house conference", designed primarily to familiarize the members of two such disparate academic institutions with the problems that have to be confronted jointly and to map out a common frame of reference for dealing with them.

This is the second occasion on which the Technion has concerned itself with the interrelation between Technology and Ethics. In December of 1974 an International Symposium entitled "Ethics in an Age of Pervasive Technology" was held to mark the Technion's 50th anniversary.

The present symposium is seen as a first of an annual series of events. The second is scheduled to be held between Monday, August 25, 1993 and Wednesday, August 27, 1993 at the University of Judaism.

E. Amitai Halevi  
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## OPENING SESSION



**Daniel Weihs:** It is my privilege to open this Symposium - the first International Symposium on Ethics and Technology sponsored jointly by the Whizin Foundation at the Technion-Israel Institute of Technology and the University of Judaism in Los Angeles, CA. This Symposium was organized by the Samuel Neaman Institute for Advanced Studies in Science and Technology.

This is an unusual meeting. The topic was suggested by the Whizin family, who are generous donors to both of the sponsoring Institutions, as a way of bringing together specialists in the technical sciences and the humanities and hopefully to form a whole which is greater than a sum of its parts.

The interaction of burgeoning technology and its influence on the way we live and the quality of life is becoming a significant factor in decision making on the personal, the community, the national and the global levels. Just last week a big international conference was held in Brazil on pollution and the environment, and that is one of the ethical problems of technology.

This is not the first occasion in which the Technion has concerned itself with this problem. Back in 1974, a conference was held within the framework of the Wunsch Lecture Series under the title "Ethics in an Age of Pervasive Technology." In other words, as we know from the Bible, there is nothing new under the sun. The participants included several prestigious Israeli and foreign figures, as well as a number of concerned members of the Technion faculty. Looking at the List of Participants, I found some very interesting notes of a personal nature for some of our participants here, because one of the key speakers there was Robert Gordis. His son David, and his grandson Daniel will be among the speakers in this meeting here, so I think this is a really nice touch. I was sorry to hear that Robert Gordis passed away early this year.

The conference then, in 1974, resulted in the Mount Carmel Declaration, which includes a new "Ten Commandments" for ethics and technology and some comments will be made on this in the following presentations here. The Declaration appears in Appendix A.

The Proceedings were published in the United States in book form, six years later, and there the matter was allowed to rest. This worried us when we were organizing this meeting here. We therefore decided that, since the developments in medicine, environment and military technology have raised the urgency and importance of these issues, we need to do something else; we need to do something that will not remain on shelves 18 years later. We decided to set up a series of conferences, of which this would be the first preparatory meeting, in which people of diverse backgrounds (engineers, medical doctors, people from the humanities, people of different religious backgrounds), would come together and define the issues. Hopefully, a year later and in the coming years, we will hold a series of further conferences in

which these issues will be further clarified and elaborated.

As I said, we first need to establish a common frame of reference. In the hope of fulfilling this limited but essential task, this first Whizin Symposium was deliberately planned as an in-house conference, to be mainly attended and presented by Faculty of the two Institutions, plus some guests whom we felt were essential, like, for example Judge Carmi, who describes a field which was not covered in either of the two institutions but was still too important to be left out. Once this meeting of the minds has been accomplished, it will be appropriate to cast our net wider and make subsequent Symposiums more truly international in scope and character.

We have set the present meeting in the form of major presentations and prepared discussions, alternating between representatives of the two institutions, with further discussion from the floor. Before starting the proceedings I would like to call on the Vice-President for Academic Affairs, Professor Alex Solan, to deliver his greetings.

**Alexander Solan:** Members of the Whizin Family, President Lieber and colleagues from the University of Judaism and colleagues from the Technion, and Professor Weihs, Director of the Neaman Institute, Ladies and Gentlemen: I am very pleased to bring the greetings of the Technion Management to this joint Binational Symposium on Technology and Ethics.

Technion is an institute of technology whose mission is to teach, conduct research, and generate and disseminate knowledge in the fields of engineering, physical sciences, architecture and medicine. This is not a self centered mission. Our constitution states that Technion should impart to its students a broad general education and furthermore, that Technion should serve the State of Israel and the People of Israel. Clearly, if we are to educate and serve the people, for the good of the people, such service must include and be based on considerations of ethics. Since the State and the People mentioned are the State and People of Israel, then if alternative interpretations of ethics arise, it may be appropriate to review questions of ethics in the perspective of Judaism. Therefore, we welcome this joint effort of the University of Judaism in the United States and the Israel Institute of Technology, to discuss, review and analyze jointly, questions on the interface of technology and ethics.

Technion appreciates the initiative and support of the Whizin Family in bringing together our two institutions and we commend the Samuel Neaman Institute for organizing and structuring this Symposium.

I wish you fruitful and enlightening discussions of this most important topic. We are all looking forward to hearing the ideas, the problems, the conclusions and the guidelines for further and future meetings. Thank you.

**Daniel Weihs:** We now have a slight change in the schedule. Dr. Lieber was supposed to make his academic presentation later in the day. We combine Prof. Lieber's two presentations now, and move on to the Technion Panel immediately afterwards.

*David Lieber*, who is a scholar and Distinguished Service Professor of Biblical Literature and Thought, is the President of the University of Judaism, and Vice-Chancellor of the Jewish Theological Seminary of America. He graduated from the City College of New York in 1944, was ordained Rabbi in 1948, and received his Ph.D. from the Jewish Theological Seminary in 1951. He has been with the University of Judaism since 1956 and President there since 1963. I have cut short a lot of very interesting and important things which I could have said about Dr. Lieber, because we all prefer having more time to hear Dr. Lieber. However I would just like to mention that he was awarded a degree, Dr. of Humane Letters, Honoris Causa, by Hebrew Union College in 1982 and a Torch of Learning Award, from Hebrew University in Jerusalem in 1984.

**David Lieber:** It is a great privilege for me and my colleagues from the University of Judaism to join in celebrating the establishment of the Shirley and Arthur Whizin Center for Biotechnology at the Technion, and to help inaugurate the Whizin International Symposium on Technology and Ethics. It is a special joy to share the occasion with the members of the Technion faculty and staff, who are world renowned for their contributions to scientific research and technology, and have done so much to keep the State of Israel on the cutting edge of scientific development.

During the first part of the century, the great philosopher/mathematician, Alfred North Whitehead, observed "unless we can make man, his culture and his ideals of central importance to the physical scientist in his own work, we are in serious danger of sinking to the level of technologically skillful barbarians."

He may have been thinking of the inhuman kind of experimentation conducted by Nazi scientists and the diabolical use to which some of their findings were put. He died too soon to join in the pronouncements of the Organization of Concerned Scientists against the direction that the nuclear age was taking. Undoubtedly, though, he would have shared Albert Einstein's view that "the release of atomic energy has not created a new problem, it has merely made more urgent the necessity of solving an existing one."

The question of the proper uses of science and technology is certainly not a new one. But it is only in recent decades that it has become a widely shared concern. This is not surprising since, from the sixteenth century, empirical knowledge has been viewed as the power to remake the world, to realize human purposes and ultimately eradicate the evils besetting human kind. Natural disasters, endemic diseases, food shortages, hostile environments all were gradually brought under control if not completely overcome, reinforcing Francis Bacon's assurance in 1621 that "the roads to human power and to human knowledge lie close together and are nearly the same."

No wonder that faith in progress, the conviction that in a world of directed change, tomorrow would be better than today took hold and reigned in the west virtually until the First World War. The War and the great devastation that came in its wake made thoughtful people question that faith, as is evidenced by the literature and philosophy of the period. It was at that time too, that voices began to be heard about the limits of the natural sciences and technology.

Not that anyone doubted their reliability, their effectiveness; their extraordinary success in a whole host of areas, could not seriously be questioned. What was at issue was their ability to deal adequately with a number of human problems they themselves had generated, which involved

value choices and moral decisions. Increasingly it appeared that these transcended the scientific domain. Some scientists argued that this was not their concern, that it was their responsibility to press their research wherever it might lead. Others recognized that they could not avoid dealing with the social and human consequences of their discoveries, but they too understood that the issues were much too complex to be left to scientists alone.

The frightful destructiveness unleashed by the explosion of the atom created great anxiety and ambivalence, even among those who had fashioned it. On the one hand, it did help shorten the war and brought with it the promise of tapping the power of the atom to provide energy for the planet. On the other hand, it was obvious that now that the genie was out of the bottle, it could destroy not only all of human kind, but all of the living creatures which had evolved over many hundreds of millions of years.

Then there was the beginning of the era of artificial intelligence with the capacity of expanding the limits of the mind beyond all comprehension. Here too the dark side of human invention was evident, as computer technology provided instruments for social control that had never existed before and threatened the very autonomy of the individual. Consider also the very remarkable developments in genetic research with its equally ambiguous consequences for human well-being, some of which we will hear about later this afternoon.

Beyond these specific areas, the spread of the technological culture has raised two very important general questions. The first, written about extensively by Jaques Ellul is its dehumanizing effect. Technology, to be effective, requires efficiency of organization and standardization of operation. The men and women who serve it tend to become servants of the organization they have created. There is little room for individuality in a smoothly functioning machine. Even creativity has to fit into the system if it is to contribute to its strength and expansion.

Then there is the personal dislocation involved, as families are uprooted to meet the needs of the organization and of the corporate world. This wreaks havoc, not only with children, but with communities which require stability and the development of long-term relationships in order to flourish. Paradoxically then, the very technology which is designed to expand human powers, frequently creates conditions which impede the individual's maturation as a human being and stunts the growth of the community he requires in order to realize his full human potential.

The second problem, with which we have begun to deal seriously only recently, is generated by the very success of scientific research and its technical applications, namely, over-population and the exhaustion of the earth's available resources. Of course one can take the position that this is not

a scientific problem, that in fact, solutions are readily available given the political will and appropriate investment of time, energy and money. But there is the rub. Thus far, the power generated by technology has far out run the capacity of the human race to harness it in its own best interests. Neither the wisdom nor the required consensus is available to do so, and in their absence, science and technology alone are incapable of dealing with the issues they have generated. It is here that moral suasion, effective education and a compelling vision of the future of the race are crucial. What is required is a basic understanding of what it means to be human, of what we can hope to achieve in terms of our personal growth, and what we owe our fellow inhabitants of the globe. These are essentially religious and moral questions, and must be dealt with, I submit, by poets, philosophers, theologians and ethicists, as well as scientists and educators. We must find a way to relate detail with principle, analysis with vision, and employ the resources of science and technology to illuminate the main realms of life and improve them.

That is why we at the University of Judaism believe that we have something of significance to contribute to these discussions, and why we are so interested in them. Our school was established some forty-five years ago, through a collaborative effort of the Jewish Theological Seminary and the Community Council of Los Angeles. The latter was concerned that we help meet the Jewish academic and educational needs of the burgeoning western communities of America - training teachers, rabbis and scholars, as well as offering higher Jewish education for college students and mature adults. The former, the Seminary, assured the quality of our instruction and set the educational philosophy as that of continuing the tradition of "Hochmat Israel," the historic and critical study of Jewish texts and the Jewish past initiated more than a century earlier in Germany.

Our Judaica faculty consists of scholars in the ancient Near East, Bible, Rabbinic Literature, Hebrew Language and Literature, Philosophy and, of course, History. Paraphrasing Terrence's famous dictum, we can say that nothing Jewish is alien to us. Studying the sources historically, we not only try to encompass all of them in their wide diversity, but trace the development of Jewish values and norms in their historical context, relating them to the conditions under which they arose. This can be especially helpful in seeking to apply them to contemporary issues, since we have an appreciation of the different nuances which developed as a result of their various applications within the tradition. Our work in this area furthermore is not restricted to teaching or the study of the past. We also engage in research into the contemporary Jewish condition as well as in curricular research in an attempt better to understand ongoing trends in Jewish life and how to effect them. Some of our faculty specialize in bio-ethics, allowing us to offer an undergraduate major in that field. Two of our faculty also sit on the Law Committee of the Rabbinical Assembly, writing responsa and participating in

deliberations on issues of moral concern. The same individuals also teach comparative Jewish law on the faculty of two eminent law schools in Southern California, where they show how the Halacha deals with current social problems. Our undergraduate Liberal Arts College as well as our Graduate Program in Management both require attendance at seminars on social and practical ethics, in conformance with our view that no Jewishly educated layman or professional is adequately prepared to take his place in American society or in the Jewish community, without some grounding in these areas.

That is why we welcome the establishment of the Whizin International Symposia on Technology and Ethics, and are proud to be one of their sponsoring institutions. The issues they will discuss will be of great moment and we hope that the illustrious scholars and thinkers invited to participate in them will shed some additional light on the perplexing problems they will raise. In doing so, we will be adding to the age-old dialectical process initiated by our sages more than 2,000 years ago, designed not to foreclose any issue, but to keep it open, examining every facet of it in the light of changing conditions and the verities which have stood the test of time.

Ogden Nash, the American humorist once observed, "Progress might have been all right once, but has gone on far too long." But a wiser ancient sage remarked more than two millennia ago, "Don't ask why the good old days were better than today, because not from wisdom have you asked that question."

Despite the problems and dislocations science and technology have brought in their wake, no one of us would really be happy to turn the clock back to a mythic age which, by definition, never existed. We do however have to recognize that all change, particularly the kind of revolutionary change we have witnessed in this century, requires new thinking and the courage to question all of our earlier assumptions. To the extent that these seminars will contribute to the process, we will be making a notable contribution to some of the most urgent issues of our time and living up to the highest traditions of our people. Thank you very much.

*Daniel Weihs: Having heard from the representatives of our two institutions, I would like to invite a representative of the Whizin Family, who started it all, Bruce Whizin.*



**Bruce Whizin:** Throughout human history each technological advance has changed life on earth. The change may have improved an aspect of our existence, but frequently this has been achieved at considerable cost. There has always been a tension between the creation and use of technology and ethical/moral considerations.

In the coming century, we stand on the verge of new technological frontiers. We are developing the ability to manipulate the very blueprints of life itself. Never in history have we humans had the power to both create and alter the structures of life in our laboratories. Yet, we are approaching that paradigm shift now. What limits will we place on genetic experimentation and manipulation?...And, what frame of reference will we use to establish those limits?

At the inaugural ceremony of the 5th Conference on Bioethics in April of 1988, Francesco Cossiga, the President of the Italian Republic said, "Our common hope is that the new frontiers in the field of genetics can contribute to the discovery of new methods of diagnosis and new types of therapy which lead to a permanent defeat of diseases hitherto incurable, to the overcoming of the causes of hereditary defects and to the solution of problems which continue to cause suffering amongst the populations of the Third World."

"However, the journey towards these deep mysteries, towards these unexplored regions of life is not without risks. There are innumerable unsolved problems, and with them, many unanswered questions of an ethical nature, questions connected to the obligatory respect due to human life. We must always keep in mind that in this, as well as in all other fields of scientific research and, indeed, in every human activity, it is Man himself that must be considered the measure of all progress, in accordance with the dignity of the individual."

President Cossiga's words set a tone worth remembering. Recent technological achievements which have created new ethical challenges include issues concerning the termination of life: when limited resources are available, how will critical triage choices be made? Does one encourage widespread intrauterine diagnosis when the results may raise questions about prolonging the lives of humans whose genetic properties threaten the human genetic pool? Other critical areas need to be explored: How are choices between technological advancement and human needs to be made, how do we set priorities between the protection of the environment and alleviating social pathologies?

In a variety of ways we stand at the edge of a new technological frontier. This new frontier demands an organized cooperative inquiry, on a level heretofore not attempted, into the ethical considerations of these new technologies. We need to approach these edges with a new spirit lest they

become the chasm of our self-destruction as a viable species. We need to cross political, economic, religious and cultural boundaries. We need to commit ourselves to an effort that will enhance all life.

The Whizin International Symposium on Technology and Ethics is a joint project of the Shirley and Arthur Whizin Center for Biotechnology and the Samuel Neaman Institute for Advanced Studies in Science and Technology, both at the Technion - Israel Institute of Technology; and the Shirley and Arthur Whizin Center for the Jewish Future at the University of Judaism in Los Angeles. The Symposia will utilize the broad range of philosophical views and analytical sources in its work. In addition, The Whizin Centers have a special interest in exploring the application and relevance of the Jewish experience and Jewish tradition to the analysis and solution of the ethical problems generated by technology.

The goal of the Symposia is to foster deliberation on the highest academic level at the intersection of technological advances with applied ethics. Towards that end, the Symposium will sponsor an annual academic conference on technology and ethics, alternately at the Technion campus in Haifa, Israel and at the University of Judaism campus in Los Angeles. It will publish the proceedings of these conferences in an annual volume that will aim to address ethical issues at the forefront of technology. In addition, it may look to develop strategies for educating the public about the ethics of modern technology. The symposia will explore these issues using all relevant ethical materials and scholarly methodologies.

Some three years ago, Gary Leo, the Executive Director of the Western region of the American Technion Society, approached me with the long range development plan for the Technion and I was immediately struck by the excitement of a biotechnology research center. This was an opportunity to help provide the Technion, and thereby Israel, with the potential to create a center of excellence capable of a world scientific impact. To me, it was as powerful as discovering oil, what I began to think of as "brain oil." I am not telling you anything new when I state that Israel may not have oil beneath the ground but it has "brain oil" above the ground in abundance - much of it at the Technion.

The thought of being part of something that could help provide Israel with the potential of harnessing biology and technology was thrilling. I saw it as a means of providing the space for useful research and technological applications, bettering the quality of life, while creating marketable, patentable processes that could aid the economic future of Israel.

I began discussing the idea of creating a biotechnology center with my father. During one of these discussions he asked me how we could bring the University of Judaism and the Technion together. That created one of

thesparks for this symposium. I confess to not being able to recall the exact flash of vision, but somehow all of sudden it was there.

Another spark was created some 30 years ago by a man who is not in attendance today, that man is Rabbi Doctor Max Vorspan. Max is the first person I can consciously remember that started me thinking about ethics and its symbiotic relationship with Judaism. Max was a visiting Rabbi during High Holy days at Temple Adat Ari El, in Los Angeles, for some 25 years. The issues he talked about in his sermons had a profound effect on my life. And, while he may not be physically present, as he is traveling in Europe, his n'shema will be with us during these proceedings.

When the Torah was given to the world it was intended to enhance the quality of life. It was, and is, a template by which we can choose to bring *Tikun Olam* to the world. *Tikun Olam* requires partnership. Perhaps G-d could have created a perfect world but G-d chose to involve us in that process. The key word here is chose. We, who are created in the image of G-d, the greatest technologist and ethicist everknown, can choose partnership with G-d. Choice is what differentiates us from the other species with whom we co-habit the world.

We, the staff and friends, of the University of Judaism come to you from Los Angeles, six short weeks from a violent eruption in our city. A violence that has laid below the surface of our consciousness for some time. It exploded, and made us all painfully aware of the race hatred that envelopes many cities and countries throughout the world. We as Jews, are painfully aware of what race hatred can do.

What has this to do with why we are here today. Race hatred is not the only reason for the kind of violence we have felt in Los Angeles and you have been living with here in Israel. Poverty and even more importantly the perceived differences people feel between the opportunities they have to better themselves and the opportunities, the wealth, the way governmental systems either take care of needs or do not take care of needs creates conflicts and the breeding ground for race or class hatred.

A few moments ago I spoke of Torah, choice and our partnership with G-d. I believe we have the opportunity today to choose to perceive this symposium, and the ones to follow, as a partnership between our two universities and a partnership between ethics and technology.

I believe this partnership has the potential to use science, ethics and vision in bettering humankind in an orderly, deliberate fashion. When science and engineering is harnessed with the desire to create an ethical just application of technologies, partnership has the power to influence public policy.

This partnership can also provide the means to create new technological systems with a different purpose, that of cleaning up the mess we have made in our environment, both our physical environment and our social environment. The Whizin symposia will provide an orderly consistent inquiry into gaining the knowledge and cooperation necessary, enabling us to make a significant impact in bringing about *Tikun Olam*.

At the 1988 Bioethics conference in Italy, Professor Gordon Dunstan's topic was "Experience and Methodology for ethical committees." Initially he described the committee structures in the United Kingdom. Then he reflected on, "the ethical issues as seen by those who devised and use the committee structures in the United Kingdom."

Professor Dunstan stated, "I follow the scholastic philosophers and theologians of the 13th century, chiefly Albertus Magnus, the great Dominican who wrote that the duty of the natural man is inquire, to study. Albertus Magnus said, "The aim of natural science is not simply to accept the statement of others but to investigate the causes that are at work in nature." Professor Dunstan added, and I quote, "This duty man owes to God as part of his *amor intellectus Dei*, the duty to love God with all the mind: a response of man's rational nature to God, because he is made in God's image. Since that same created human nature is social and benevolent as well as rational, ...man is under the duty to use his knowledge, when he can, to free his neighbor and his kind from ills, so far as he can. So the primary ethical obligation is positive, to inquire, to study, to act beneficially."

Professor Dunstan went on to say, "So ethical safeguards and restrictions have to be devised. But the first duty is to assert the validity of disciplined curiosity and pursuit, of formulating knowledge, and of the beneficent application of that knowledge in technology aimed at the human good."

I think it is important to examine, and remember, what Albertus Magnus and Professor Dunstan are saying. If the goal of scientific inquiry is to benefit others, then there is no science without ethics. This presents ethics as an integral part of science not as a discrete...separate inquiry. This means technology and ethics is already an established partnership merely waiting to be activated as such.

I want again to refer to Professor Dunstan. At the close of his address he stated, "In the United Kingdom experience, lay people are being drawn increasingly into the ethical committees governing all areas of medical research and practice, including the local biological safety committee as well as the national governmental ones."

He went on to say, and here his remarks contain what I believe is the

basis for the kind of partnership we are establishing today, and I quote, "By learning with practical problems, together, they" (the committee) "will be spared the philosophical aridity or word play which so often now distorts the discussion of bioethics. The ethics are for practice, not for word play. They must therefore be wrought or worked out together by practitioners in collaboration with people of reason and good will working with them."

Both the Technion and the University of Judaism as individual institutions already have lay and professional partnership at the highest levels, what we are establishing here today is a natural extension of cooperative efforts already in place.

Some questions I have regarding the formation of this partnership are: How can partnership be utilized to improve the quality of life?. Not just for the individuals that can afford the coming technologies but also for the very societal structures that govern the health and welfare of all individuals; whether they live in cities or rural areas; whether those individuals inhabit industrial civilizations or what we call the third world.

My knowledge of the Technion has been second hand up until now. I know of its importance to the state of Israel and the Jewish people. Yet, I have had an image in my mind, an image of an institution that is a combination of the Massachusetts Institute of Technology or Cal Tech and the Johns Hopkins Medical Center. But truthfully that image pales before the reality of the Technion, because those United States institutions do not provide the majority of scientists, engineers, researchers and industrial leaders that the Technion provides for Israel.

The University of Judaism provides an academic environment of free and open inquiry, the University attracts faculty, scholars and students of the highest caliber from around the world. The diversity of their ideas, scholarly interests and perspectives creates a richly stimulating educational setting.

I have been directly associated with the University of Judaism for only three and a half years. I look now with amazement at the friendships that my wife, Shelley, and I have formed during this short time. You, our friends from the University who are here, have taken us into your hearts as well as into your University. All I can say is, it seems to us that our whole lives were in preparation to do this work with you.

Your presence here today is a wonderful statement of how you feel about my mother Shirley, of blessed memory and my father Art. Your presence is also a great gift to Shelley and me. The fact that twenty-eight of you planned your summer, and others of you changed plans, to be here with us is something we will never forget. We can only hope that in the coming years we will be

able to express our gratitude to you with our actions and our love; and to those of you who represent the Technion, I can only hope that we will build a similar relationship during the coming years.

I would like to say something here about my parents. My mother and father knew they wanted to do something for the Jewish future. They did not have a vision of what that "something" was to be, only the desire to somehow do what they could to perpetuate Judaism. I feel blessed to be able to make their dreams come true. I know my mother must be smiling from ear to ear. Sometimes, I can feel my mothers n'shema around me, I can even feel it now, she is so very pleased at what has happened during these past three and one half years.

My father is not well enough to truly understand how wonderful the programs are doing at the University of Judaism; what an impact the Whizin Institute is having on Jewish Families and Jewish Institutions; what we have done here today with the dedication of the biotechnology center for the Technion and therefore for Israel, and what the potential impact of this symposium can be. This makes me very sad. Were he here with us today, with all of his faculties intact, I know he would be feeling as full as I am now.

What are we leaving as our legacy for the future? This is a topic of conversation and controversy. Science and technology have given us a window, through which we can see into the future. Genetic Engineering will give us the tools to shape our future in a way never truly envisioned by our ancestors. The question is, what criteria will we use to frame that future? Will it be the apparent whatever works is good, or will it be some more thoughtful, orderly and cogent process that lets us use historical perspective, that lets us put into action what we can learn from the past. A partnership that can change scientific and social systems? Perhaps it is naivete , perhaps it is my idealism, perhaps it is just the euphoria of the moment, but I feel something wonderful is about to happen.

The phrase something wonderful is about to happen reminds me of the movie "2010." I am reminded of the emotions that I, and others, felt when we were sitting in that darkened movie theater. "2010," as you may remember was a science fiction film about a voyage in space to the planet Jupiter. The words "something wonderful is about to happen" kept flashing on a computer screen. The crew did not know what was about to happen. They had been traveling to one of Jupiter's moons because of a strange phenomenon that was occurring. When they arrived, a mysterious obelisk descended into "the red spot" on the planet Jupiter's surface and a nuclear reaction was initiated.

The "something wonderful" was the result of that chain reaction. The planet Jupiter had laid dormant for billions of years. While its chemical composition was the same as any star, it did not have enough mass necessary to

initiate its own birth. The "something wonderful" was a another sun our solar system, lighting the outermost planets and beginning anew the cycle of life.

Something wonderful is about to happen, that is what I feel. That is what I feel about this partnership. That is what I feel after these past fourteen days, my first in Israel; Fourteen days with my people, my friends; fourteen days with my heritage, my history; fourteen days in the land of Abraham, Isaac, and Jacob; fourteen days in the land of Sarah, Rebecca, Rachel, and Leah. Something wonderful is about to happen right now. I hope that two days from now we are all left with new friends, new colleagues, renewed hope and renewed vision.

Just as science is a product of vision and method, hard work and diligence, a partnership between ethics and technology takes vision and method, diligence and hard work. I think it also takes something else, hope and faith. Hope, that we, as a species, can somehow rise above what our history of conflict shows us we have been; and faith, that by working together in a task that starts here in the holy land of Israel, we can make a difference. That we truly have a partnership between our two institutions and that *Tikun Olam* is a possible dream; it is my dream that that partnership begins here.

TECHNOLOGY AND ETHICS:  
OUTLINING THE ISSUES



## INTRODUCTION OF SPEAKERS

**Daniel Weihs:** We are starting now with the proceedings of the meeting. We will be starting off with a panel of Technion speakers.

The reason we have chosen this method of starting with a Panel, is that having decided to start from the Scientific-Technological perspective, we felt that this was too wide a field to cover from a single viewpoint. Thus we have, in alphabetical order:

*Professor Ori Better*, Professor of Medicine, born in Israel and educated in Haifa. He received his M.D. in Jerusalem in 1957, has been at the Technion School of Medicine since its founding and was Dean at the School in 1984-1985. His specialties are kidney physiology, artificial kidneys, treatment of high blood pressure and perhaps most relevant to our Symposium, the management of shock and trauma in mass disasters. He has many innovations in the treatment of blast and earthquake casualties to his credit and he will present the medical view point of this panel.

*Professor Harriet Gershon*: Born in New York, got her B.A. in Zoology at Cornell University and a Ph.D. in immunology at the Weizmann Institute in Rehovot. She is currently Chairperson of the Department of Immunology at the Rappaport Faculty of Medicine of the Technion. Her professional interests are the study of various functions of the immune system and biomedical aspects of aging, especially of the immune and hematological systems. She will represent the life sciences perspective.

*Professor Shmuel Merhav*: Stephen Berger Professor of Aerospace Engineering, born in Germany, got his B.Sc. in Electrical Engineering from the Technion and his Ph.D. from Cambridge University, UK. Spent a large part of his career at Rafael, which is the armaments development authority of Israel. His last position there before coming to Technion was Deputy Director General in Charge of Research and Development. He joined Department of Aerospace Engineering at the Technion and was Dean of Aerospace Engineering during 1981-1982. His specialties are control of aerospace systems, such as aircraft and missiles, and he will represent the engineering aspects.

# Ethics in Technology and Science

Shmuel Merhav

## 1. INTRODUCTORY REMARKS

This discussion takes place just in the wake of the United Nations international summit conference in Rio de Janeiro on the environment and the rescue of Planet Earth from the severe dangers of its damage by the human species. The misguided and uncontrolled over-exploitation of its natural resources and the irreversible damage to its biosphere through disruption of the balance of nature, pollution of the air, and contamination of water and soil has become an issue of grave concern to mankind.

It also takes place eighteen years after the Mount Carmel Declaration on Technology and Moral Responsibility which was drafted during an international symposium in the framework of the Annual Wunsch Lectures at the Technion in celebration of its 50th anniversary and formally proclaimed in Jerusalem at the residence of the President of the State of Israel in 1974. In this conference some prominent scholars in science and technology, philosophy and humanities participated and contributed to the Declaration. Rereading the ten proclamations, or perhaps '*commandments*' of the declaration, and some of the lectures held on that occasion, we have to admit that there is but little to add, except, maybe that many issues raised at the time, have grown more severe and compelling. This is especially true in regard to the implementation of some of the ideas brought forward, in the face of growing threats to the environment and the intensified needs for legislation and the enforcement of laws and regulations and the investment in new technologies for the protection of the biosphere.

Therefore, much of what I can say is no more than further elaboration of recognized dilemmas and man-made threats. Yet, we have to believe that continuing discussion and exposure eventually will create a consensus on priorities for the improvement of the quality of life for generations to come.

### The Proclamations

Rephrased in the style of commandments, they would read something like:

1. Technology is for your benefit, yet restrain your greed in its over-exploitation. Too much of it, is a curse in disguise, not a blessing.

2. Think not only of your own yard. Do not do unto your neighbor what you do not want him to do unto you. Agree on rules of do's and don'ts. If you don't, you will both be losers.
3. It is the Application of your technological inventions which is not morally neutral. Yet, the technology per se, is not necessarily neutral. You must judge it morally, socially, politically, and ecologically..
4. You are individually or collectively, responsible if the technological jinn is released from the bottle. Once it is, can you stop it?.
5. In the age of pervasive technology, new moral codes are urgently needed. (Perhaps an Archimedic Oath for technologists, similar to the Hippocratic Oath for physicians.)
6. Do not allow technological invention to suppress your creative spirit. Machines should be your slaves, not vice versa. (Chaplin, in Modern times)
7. For the rich and satisfied, restrain the ever multiplying desires and greed for more 'things'. For the hungry and the deprived, do not over-reproduce yourself. ("Bear your fruits and multiply and fill the earth"... is an ancient, probably obsolete, dictum).
8. Combat the threats of technology by better technology hand in hand with guardian disciplines. (Technological fixes and Social fixes).
9. Find institutional and social frameworks to transform the appropriate ethical norms into an accepted way of life.
10. Work hard for 'guardian principles', for the confluence of varying moral codes and for the creation of improved educational and social institutions.

### **The Scientific Era, Invention and Ethics**

The advent of the scientific era, attributed to Kepler, who dissociated cosmology from theology and associated it with mathematics and critical scientific observation, has been the prelude to the evolution of the exact sciences and medicine which led to the ensuing 19th and 20th century revolutionary technological breakthroughs and major inventions. Their immense social and economic impact led philosophers, scientists and technologists to become aware of the reality that science and technology cannot continue to proceed along their traditional paths, isolated from ethical issues. In addressing this topic, we need first to define what we mean by technological invention and what we imply by ethics.

We can then try to enquire if, how and when, the two may be in conflict. We then review some ideological attitudes for dealing with such conflicts. In attempting this, we have to bear in mind the primary psychological driving forces of the human mind and the socio-economic pressures and constraints.

From the outset modern technology is concerned with three primary areas: Conversion, production and distribution of:

1. Materials.
2. Energy.
3. Information and communication.

Invention, contrary to common belief, in its modern sense, is hardly ever the direct result of the spark of genius or an 'act of God' beyond the reach of human conscience and responsibility. In its formal and legal sense, it is defined as the conception of an idea and the means and apparatus by which results are obtained. However, in a broader sense, by results, we imply technological achievements which bring about major and lasting changes in the way of life or in social attitudes and human cultural values. The process of the invention, often carried out by a concerted collective effort of expert teams, is aimed at bridging the gap between the desired guiding idea and the required product. This is typically achieved by a disciplined and sustained struggle with technical obstacles and invariably requires substantial economical resources to keep up the costly and sustained effort.

Ethos is the fundamental spirit of a culture which shapes the beliefs, the morals, and the customs and practices of a society. The inherent inventive and creative human mind and its fundamental ethical sentiment, both fruits of the human spirit are intensely intertwined and inseparable.

## 2. SURVIVAL TECHNOLOGIES FOR ENERGY

In his lecture Alvin Weinberg, during the 1974 Wunsch Lecture, addresses the responsibility of the technologist alongside the humanist in dealing with potential benefits and global harm inherent to the primary issue of energy production. He raises the three questions:

1. Can we survive, yet avoid gambling with survival?
2. Are social fixes safer than technological fixes?
3. Who will guard the guardians (of ethics)?

Whether population increases or not, a substitute for fossil oil will become inevitable sooner or later. (Wells, Darwin).

Our entire technology is based on the rare CH<sub>x</sub>. It constitutes only 25 ppm in the earth's crust. Oil and gas constitute only 2 ppm. Alternatives are geothermal, solar, fusion, and fission based on breeder reactors. Practical, are only solar and breeder fission. Solar is a capricious and expensive solution.

Fission should not be envisioned as the mushroom cloud. The dilemma is that the only feasible, breeder fission technology assuring long term survival is the one that is considered by many as **THE THREAT** to human survival.

But on the other hand, if as much as 20% of the earth's fossil fuel is burned, the CO<sub>2</sub> concentration in the atmosphere will be catastrophic(!) We have to choose from two evils! Do we know enough to make the choice? The alternative, solar energy, about 3 times more costly could not be afforded by Malthusian countries. Even if the CO<sub>2</sub> catastrophe is not real and solar energy is not that expensive, rejecting fission is just as well gambling with survival. Would avoidance of DDT not have been a gamble with survival? Yet, many of our technologies of survival are a threat to survival. How can we resolve this puzzling dilemma? One way is to apply "social fixes", e.g., severe birth restriction. This could remove the technological threat by relapsing to primitive agriculture where no energy problem exists. Social fixes can be equally dangerous.

### **The Ethical Burden of the Technologist**

An important aspect of professional ethics is opinions voiced by experts in nonprofessional forums which deal with high pressure controversial issues such as survival technologies and their technological or social fixes. The professional bears a heavy burden of responsibility to society. How can he be guarded against nonprofessional biases? How can the professional community guard against unwarranted scares prophesying doomsday either way, nuclear or CO<sub>2</sub> (Gaia). The Ozone hole and the scare of deodorant spray. Heating of the globe, the greenhouse effect? Prophecies of global damage to the atmosphere because of the 600 burning oil wells in Kuwait? On the other hand, Lovelock's Gaia theory on the fantastic robustness of the biosphere. Which is true?

Progress of civilization has always involved risks. What to do? Reject the invention and technological progress because of potential side effects or threats from such side effects? This applies equally well to medicine. Should we assume that a bad side effect will inevitably destroy us because we cannot prove the opposite?

## **Decisions**

Making a decision is really not a matter of choosing between right and wrong. This would be a trivial matter and does not deserve the term decision. The problem is to know what is right and wrong. In matters such as low dose contamination of the environment which implies cumulative effects, scientific evidence is scarce or nonexistent.

## **Transscience**

We deal with the grey area of transscience. In well established technological areas, expert opinion is based on established experience and it can, and should, direct decisions on policy with confidence and without conflicting sentiments of the consultant. However, in the grey area of transscience expert knowledge does not really exist. It is in this area where important issues of ethics of the technologist and scientist are particularly important. The expert does not respond on the basis of established and proven knowledge. He is rather called upon to give advice, or he volunteers opinions based on prophesy and unestablished experimental evidence. At any given time, the transscientific state breeds presumptive theories and speculation by individuals and ideological movements. Under given socio-political circumstances they can cause more damage by halting progress than the alleged harm of its implementation. The technologist bears a serious responsibility to carry out environmental research in order to expand the realm of scientific evidence and knowledge and to transform transscience and speculation into science. This kind of research, involving the biosphere, is very difficult because of the long time constants of the process dynamics of the complex, and often unknown interaction of variables and parameters. It is doubtful whether present scientific methodology, including modeling and simulation is sufficient to meet the challenge.

## **3. SURVIVAL TECHNOLOGY FOR DEFENSE**

As a professor of Aerospace Engineering at the Technion and in my previous capacity at the defense research institute Rafael, I was never explicitly confronted with the obvious and simplistic conflicting issues of ethics and destructive technology. As part of the national defense establishment the guiding sentiment has been, and continues to be, the fundamental dictum of self defense which lies in the very foundation of any national or personal ethos. Yet, one cannot quite avoid the questions if the "end" justifies the means without exception.

Energy production, especially nuclear technology, is, in part, analogous to survival technologies for defense. It is similar in the sense that it seeks the assurance of survival of a nation or an alliance at the risk of inflicting a major regional, or even global catastrophe. It is different in the sense that it does not

involve a purposeful threat to anyone. At most, it is not sufficiently aware or attentive to such threats.

Why is it that the so called conventional weapons are treated by moralists with, at most, reluctant forgiveness, while everyone shudders at the thought of "the Bomb"? More than 40 million people perished in world war II by conventional means against some 100.000 who perished in Hiroshima and Nagasaki. Is it a matter of ethics or moral principle which is violated? Is it rather because of the tremendous sudden concentrated impact which evokes the fear that the primeval forces of nature are unleashed threatening the very existence of the planet? The fear of the unknown? The lasting damage to the biosphere? The emergence of unfamiliar phenomena in Nature and the appearance of unknown diseases?

On the other hand, it may be a blessing in disguise by inhibiting the outbreak of major conventional military conflicts which, in terms of casualties and destruction are often equally, or more severe and which eventually may escalate to nuclear warfare. It is fairly common belief that the past fifty years have not witnessed major global wars because of the nuclear threat.

### **The Gulf War**

On a smaller scale, in the recent Gulf war, there is speculation that Saddam's relative self restraint and avoidance of nonconventional warheads in his Scud attacks on Israel had nothing to do with an overdose of Iraqi ethics but was rather the result of his fear of severe retaliation by Israel. Fire is often fought by fire. Perhaps the nuclear demon is, at least for the time being, a necessary evil, a savage watch dog relentlessly to be guarded until its ultimate elimination by universal consent. Paradoxically, it is a survival technology at the global level never to be used. The present hesitant steps of disarmament pacts are perhaps a prelude to the emergence of global ethics concerning lethal technologies.

## **4. TECHNOLOGY, THE MARKET AND THE WORK FORCE**

The principal yearnings shaping human behavior, irrespective of intellectual level or social status, as seen by psychologists, are:

1. The avoidance of pain;
2. The possession of an identity;
3. The longing for recognition and respect;
4. The pursuit of pleasure and contentment.

Protracted deprivation of the satisfaction of any of these intrinsic needs is at odds with human nature and aspiration and can therefore be considered as unethical. It is not relevant whether such deprivation is caused by deed or negligence of government, corporative management, academia, voluntary societies, or whether it is caused by the rapid changes in the way of life and cultural values caused by modern pervasive technology and its seductive and often addictive products.

### **Obsolescence**

The continuing technological innovations in materials, devices and consumer products accelerates obsolescence and frequently throws the market off balance causing discontinuation of production, massive shutdowns and layoffs and professional obsolescence of masses of people subjected to humiliation and misery. One major harm due to the frequent technological upheavals is the loss of identity of the individual, his feeling of security, the stability, of his family and social fabric, and his sense of belonging. Professions used to be handed down from generation to generation. The name and the professional skill were one and the same. Thus, Mr. Baker, Mr. Smith, Mr. Carpenter Mr. Mason, etc. were making their living accordingly. It is interesting that this kind of identity hardly has a parallel in non technological areas. There is no Mr. Poet, Mr. Pianist or Mr. Writer.

This identity has vanished and the servants of innovative technology often become its own victims. What shall we call the hi-tech worker? Mr. Chip? Mr. Terminal? It is the responsibility of the industrial leadership to provide continuing education, retraining and the development of the necessary mentality for adaptation to changing conditions. This social responsibility must be the coordinated effort of industry, the educational system and government.

### **5. SUMMARY**

We live in an era in which large man-made forces affect nature and the environment. The rapid ensuing changes cause instability, insecurity and fear of the unknown. Cause and effect is not sufficiently understood to provide responsible counsel to decision makers at the national and global level. The question of moral responsibility of the technologist has taken on new unprecedented awesome proportions. Does society and the educational system do enough to educate the new generation of scientists and engineers to meet the challenges?



# Ethics in Life Sciences

Harriet Gershon

When I was first asked to speak at this Symposium I was in a dilemma as to what to say. I have thought about the subject of ethics and research in the life sciences and I would like to share some of those thoughts with you. Because I want this to be a sharing experience, I would like you to be able to also hear me and also read some of these thoughts. I have therefore prepared some overhead slides for us to read through together.

Prior to discussing Biotechnology and Ethics which is the theme of today's talks, I would like to raise some basic questions that will have bearing on how we think about our main theme.

## BASIC QUESTIONS:

1. What is the social responsibility of the scientific community?
2. Is and should science be neutral?
3. Can knowledge be ethically dangerous?
4. Do we have the right and/or responsibility to limit our search for knowledge?
5. What is potentially more dangerous: knowledge or ignorance?

First of all: What is the social responsibility of the entire scientific community and what is my own personal social responsibility? Do I ever think about this in my every day work? I must confess, rarely. When I began to think a little bit further, the questions that I started to ask were: Is and should science be neutral? Should I do my work and not consider what social or ethical consequences might be, or should I be concerned about this every time I try to think of a new experiment or a new field of study? Do I have an obligation to think about it before I start? Can any knowledge that I generate be ethically dangerous? The corollary would be: Do we have the right or perhaps, do we have the responsibility, to limit our search for knowledge? And the last question that I thought of when I was thinking about this is: What is potentially more dangerous: Knowledge or ignorance, and what is my responsibility in all of this?

As you were told before, my major research interest is immunology. However, I am not going to speak about immunology today because I have deferred that to my colleague Ori Better who will talk about transplantation in his talk, so I will not mention that. What I would like to talk to you about

today are some of the new studies and new findings that have been generated in genetics over the past ten years and how they affect our moral/ethical approach. What kind of problems have arisen. I would like to talk on a somewhat more practical level than Prof. Merhav. In the past five, maybe seven years, we have become able to test individuals for certain genetic traits. We do not just observe these traits after an individual is born and after he/she has developed, but rather, we can delve down to the genetic level and determine what kind of genes individuals are carrying. As you all know there is a major project now going on world wide, but primarily financed by the National Institutes of Health in the United States, to uncover the secrets of the human genome, so that within a very few years we will really be able to study genetic traits in every sample of human DNA.

## GENETIC TESTING

- Should testing be done for diseases without a known cure?
  - or only for those diseases with a known cure?
  - How do we decide for whom this is an option/requirement?
    - for a presymptomatic disease
      - e.g. Huntington's Chorea
    - carrier screening
    - prenatal screening
- What are the benefits to be considered?
  - to the individual?
  - to the family?
  - to society?
  - to some organization such as:
    - employer,
    - insurance company etc?
- Why should genetic screening be performed?
  - research?
  - information?
    - for the patient; family; state; company.
  - diagnosis?
    - to reduce illness?
    - to reduce cost?
  - exclusion?
    - work place testing?
      - limited to work place related disease?
    - for insurance purposes to determine premium?
      - we now consider:
        - age
        - occupation
        - classic medically determined risks
      - should we also consider
        - Genetic Risk?

## Should genetic screening be voluntary or compulsory?

The question then becomes: Should testing be done for diseases without a known cure? Is there any sense in that? Or only for those diseases for which we can intervene with a cure? How do we decide for whom this is an option - or perhaps it should be a requirement? Are we going to be testing for presymptomatic diseases such as Huntington's Chorea which is a terrible disease the symptoms of which develop in middle age and which I will not describe. It is a genetically dominant disease the symptoms of which do not develop until after reproductive age. Carriers of the disease would want to know at an early age if they have the disease so that they can make a decision whether to have children or not. Do we want to screen individuals, to ask if they are carriers of certain genes in the population, genes that we may deem either detrimental or beneficial? Do we want to screen for carriers? Do we want to do prenatal screening (and we will talk later on about what the results of that kind of screening might be)? If we are going to do this kind of screening what kind of benefits are to be considered and to whom? Are the major benefits to the individual, the family group, the society as a whole. As Professor Merhav mentioned before, perhaps industry and various super-structures with financial interests might want to know about genetic screening. An employer might want to know. Insurance companies will most certainly want to know.

Why should we perform genetic screening? For research and information purposes? If for information, then who gets the information? Is it the patient's right to have that information secret? Perhaps the family should know, perhaps it is society's or the state's obligation to know. Is it information that the employer should have, and so forth?

Why does one do diagnosis, i.e. genetic screening? To reduce illness, or perhaps to reduce cost? Do we do genetic screening in order to exclude individuals from certain activities? Should we have genetic screening at the work place to limit people who have a genetic predisposition to a certain disease which may or may not be affected by the work environment? I have already mentioned insurance but we should consider that again. Should genetic screening be done for insurance purposes i.e. to determine a premium? We already do certain kinds of screening for premium adjustment. Our premiums change according to our age, our occupation, other medical conditions that we have and can be diagnosed by classical medical procedures. We are even given different premiums according to our habits or hobbies. Therefore, should insurance companies also consider genetic risk? Of course, we must also ask if genetic screening should be voluntary or compulsory under any of the above?

## GENETIC MANIPULATION AND EUGENICS

Should procreation be limited on the basis of genetic knowledge?  
by the individual?  
by society?  
restrictive marriage?  
sterilization?  
abortion?  
voluntary?  
compulsory?

Do we have the right to knowingly allow (prevent) the birth of defective individuals who may:  
suffer?  
cause suffering?  
cost family and society great sums in support and treatment?

Should we modulate human characteristics which are not related to disease?  
Sex ratios; intelligence; body size?  
Which traits are to be altered?  
Which individuals should undergo alteration?  
of the soma?  
of the germ line?

How do we determine the long range benefits and dangers of genetic manipulation?  
Who decides to alter somatic or genetic traits?  
the individual?  
the family?  
society?

If we are going to do genetic screening, what about genetic manipulation or eugenics? Should procreation be limited on the basis of genetic knowledge? Who should limit this kind of procreation - the individual or society? If it should be limited, how? By restrictive marriage? We already have restrictive marriage - it is part of our Jewish ethic. We do not marry our brothers, sisters, first cousins - and there are other various restrictive rules. Why? Exactly for this reason. Because there are certain genetic traits that we do not want to pass on to our children. We do not know what they are because we have never been able to test before - now we can test. Or perhaps we should go further. Perhaps certain individuals should be sterilized? I am raising questions. I am not saying that these are answers, but these are the questions that we have to ask. We have to face the knowledge that we are accruing and decide what kind of use we are going to make of it.

If we do prenatal testing, what do we do with the information? It could lead to abortions - it does lead to abortion in certain societies now. Who decides on these abortions? Are they voluntary. It is certainly not the fetus that is making this decision - it is the parent. Is it the mother or both parents? Perhaps, abortion is not to be voluntary at all but rather compulsory. In that case, society has to decide. Once again, in the framework of this talk, I have no answers - I am just asking questions.

Corollary questions along this line are: Do we have the right to knowingly allow, or perhaps prevent, the birth of defective individuals? Why? Because these individuals may themselves suffer; because they may cause suffering; and lastly, because they may cost families and society great sums in support and maintenance.

Should the use of formerly unavailable natural products that have long term (short term?) effects be controlled?

If so, how?

e.g, growth hormone?

anabolic hormones?

erythropoietin?

Should we modulate human characteristics which are not related to disease? Now here we are getting into the field of technology that is really becoming a reality and has started to be a reality in the past two to three years. We can influence human genetic characteristics. We can make DNA and we can implant genes. We do not do it very well yet, but we are learning how to do it. Should we modulate human characteristics which are not related to disease? Some of the questions are: Should we change sex ratios? We can do prenatal testing and know whether a fetus is a male or a female. There are many societies that would definitely like to know this. Whether they are right or wrong is another question. Do we want to alter human intelligence? Do we want to have a super-race of all intelligent individuals or perhaps we want to have certain segments of the population that are suited for menial work because their intellect is not sufficient to do anything else? How about body size? Major athletes for most sports should be big strapping individuals, etc. Which traits should be altered? Which individual should undergo alteration and should we alter just the soma, which means the body of that one individual, or do we have the right to alter the germ line, in which case these alterations will pass on from generation to generation. How do we determine the long range benefits and dangers of genetic manipulation? If you don't do the manipulation how will you know what the long range effects are. If you don't know the long range effects, how can you possibly do the manipulation? Who decides to alter somatic or genetic traits - the individual? the individual's family? society?

Another subject is Sports Medicine. Sports Medicine today is seeing headlines because various athletes have been using all kinds of steroid or anabolic drugs. The use of these natural products as drugs raises another question. Now I am not talking about genes, I am talking about natural products that have long-term or short-term effects, such as hormones, which were formerly unavailable and that we now know how to purify or synthesize. Should the use of formerly unavailable natural products be controlled. We are controlling them now - in sports we are not allowing our athletes to use them. If they should be controlled - how? Three examples of such products are growth hormone, steroid hormones, and erythropoietin. The former contribute to body size and muscle mass, while the latter effects the production of red cells and allows athletes higher oxygen consumption and, therefore, an advantage over those who don't have as many red cells.

## **ANIMAL RIGHTS, HUMAN RIGHTS AND SCIENTIFIC PROGRESS**

What should our policy be on research on an animal models?  
abolition?  
no restriction?  
ethics and moderation?  
How are these defined?

How does one study a disease for which there is no adequate animal model?

Another subject that I would like to touch on is that of human rights, animal rights and scientific progress. What should our policy be in our research on animal models? Should we abolish all use of animals in research? Many people say we should, others are of the opinion that we should not. Should there be no restriction at all as to what we can or can not do with animal models? Or, perhaps the way to go is ethics and moderation. That of course brings us back to our basis question of how ethics and moderation are defined. The last question I would like to ask in this line is: How does one study a disease for which there is no adequate animal model?

What I have tried to do in the short time allotted in this introductory session was to raise questions with you. I have not proposed answers to these questions. For some of them I may think I have "the right answer" while for others, I certainly don't have the answers. I would like to bring a quote to you from a book by Sir Peter Medawar who was a Nobel Prize Laureate in Immunology. In his book *The Future of Man*, he states "One of the lessons of history is that almost everything one can imagine possible will in fact be done if it is thought desirable; what we cannot predict is what people are going to think desirable."

# Ethics in Medicine

Ori Better

It is the end of the day and I am the last speaker. It is a difficult task. I will be very personal. We were touched by the words from our California counterparts. There should be more dialogue between us in Israel and you in the U.S.A. because I am afraid that our communities are drifting apart for many reasons. You are affluent and established, we are struggling and emerging. Some 80% of your children will ultimately graduate from college or university compared with only 20% of our children. Somehow things just do not click, and this is why it is so important for you to come to Israel, so that we can talk together on a personal and on an institutional level. Another important reason for our drifting apart is that at least 80% of American Jews have never visited Israel and are unfamiliar with Israeli ambiance. You should come here, you should come more often, and you should send your children - we are ready to receive them; something needs to be done on the national level - for example, every Jewish boy in the USA should come to Israel for his Bar Mitzvah. The Jewish Agency or our Government should subsidize such worthy causes.

Of all of the people who have spoken here, I am the only one that must deal, on a daily level, with these monumental problems, terrible questions without answer in ethics in Medicine. I will share with you two major fields that I deal with and how I coped with them.

The first field is that of nephrology, which includes the subjects of artificial organs and organ transplants. The other field deals with mass disasters, the casualties of which we encounter fairly often in Haifa, since Rambam Hospital and the Faculty of Medicine are very near the Lebanese border; unfortunately we had to treat casualties trapped under collapse of buildings following hostilities by Muslim fundamentalists who specialize in demolishing buildings (and will continue to do so since, from their point of view it is a very successful technique). You will recall how the USA was forced to withdraw from Lebanon because the marine headquarters was leveled in Beirut in October 1983, killing 241 marines. This was your greatest loss of lives since Iwo Jima 1945. Because this attack was so successful, president Reagan withdrew all US forces from Lebanon. Because this method was so effective we were certain that it would be used again, and it was.

The Lebanese "theater" produced many "waves" of disasters, survivors from which came to Rambam Hospital. This placed a heavy responsibility on us but gave us a unique opportunity to diagnose the survivors of such catastrophes. The management of casualties of this kind, may be important to you in California, even if wars are eliminated. The San Andreas fault will be seismically active; remember that in Armenia in December 1988, 60,000

people died in a few seconds, as many in the entire Korean or Viet Nam war. Such disasters may occur in the future and we must be prepared for them. So I will share with you the lessons from our mini-disasters near here.

Now to the specific problems that I stumbled into. Twenty-five years ago in 1965, with Prof. Erlich, the founder of our Faculty, the first successful cadaver kidney transplant in Israel, was performed here. As a result, many questions arose. One interesting question was, what is the definition of death, since the death of the donor must be established before removing the kidney. We never had a good answer. At that time, our good colleague, Judge Carmi who is here today, gave us penetrating and balanced discussions on how to define death. Not only did we need Amnon Carmi, we also required a rabbi. While the definition of death today is becoming more and more scientific, we do not yet have a good definition of death and the laws are different from country to country. Most countries will allow removal of kidneys from "heart-beating cadavers", and some other countries do not.

I want to remind you - as Jews, you know it very well - that to us Jews and to some other ethnic segments in the Middle East, the dead may be more important than the living. Several religions require one to have special permission to touch a dead body, while, conversely, surgery on a living person is permitted without difficulty. There are numerous obstacles to dealing with the dead here. As some of you know, Israel had to release convicted murderers in order to get back the bodies of our soldiers who were killed in action beyond our borders. The fathers of these dead soldiers came to me and said, "Now we can sleep in peace because our child was brought to a Jewish grave." It is an irrational feeling but an extremely important one, that we have to respect and accept.

Progress has been made in the determination of the moment of death, hence of the moment of "harvesting". In 1965 the kidney was removed within an hour of death; now we can do it within minutes of death under ECG monitoring, showing the last fading heartbeats of the "donor".

What about live transplantation? You can judge the ethics of a center that does transplantations by their proportion of "dead" to "live" transplants. Those who are "permissive" have many live transplants, but those who are truly ethical will have 80-90% cadaver transplants. I believe it is approximately 10-15% live transplants at Rambam, and we are very proud of this percentage. In this respect, I think we have the best percentage in Israel. However, taking a kidney from a live donor is very difficult for us as physicians. Since you exposed healthy person, to anesthesia and subjected him to major surgery that he does not need. This is against the Hippocratic oath. In fact, like the Soviet Encyclopedia, we have to change the Hippocratic oath as we go along! (Yesterday even Gorbachev during his visit here changed it before our eyes when he described current events here in the crumbling ex-



Soviet Union).

A person must be anesthetized and exposed to a definite though small risk, - this may be acceptable if he is the father or mother of the child - but what if the person is a spouse? We had an Arab with two wives - Arabs sometimes can have four wives - who needed a kidney. He said "My wife will give it." And he orders his elder wife to donate the kidney. Is this ethical? We were not happy at all with this decision and left it to others; sometimes we leave the decision to the court, sometimes to the Director General of the Ministry of Health. Yet even in judging the ethics of these situations there can be differences of opinion between a Court of Law and the hospital or the doctors involved.

There was a famous case in Israel 20 years ago of a retarded girl in a mental institution; she was the best donor for a brother who was on dialysis but well otherwise. The family approached me and asked if it was permissible to take a kidney from the retarded sister? I said "No way. You can not do it, as she can not give an informed consent."

At that time there were very few transplant centers in Israel, and we had a dominant position in the country. I thought that my verdict would end the matter. but the family went to the Supreme Court and to my great surprise and consternation the Supreme Court here ruled that it is permissible to remove a kidney from a retarded child for transplantation to her brother. I personally cannot envisage how the retarded donor was anesthetized for the operation. The wisdom of the court and my intuition were diametrically opposed. So you see that there can be stark differences among physicians, as well as between certain physicians and the Supreme Court.

What about selling a kidney? It is now becoming very complicated. Many Arabs from Northern Israel used to go to Egypt and buy a kidney there until the whole issue became publicized and the Egyptian government forbade it. They now search elsewhere and, for example, buy a kidney from a non-Egyptian donors - (Sudanese, Iranians, Indians, etc). We are unhappy with this procedure on ethical and medical grounds because tropical diseases can sometimes be transmitted through such kidneys. A rare resistant strain of Indian malaria erupted in an Israeli Arab as a result of one such transplant. Talk about exotic diseases and exotic problems - we have them all here.

Transplantation gives great hope. Dialysis is a life supporting, safe procedure but it is an emotional dead end. If patients on dialysis know that they have the option of a transplant, it gives them hope. However, I want to further elaborate the ethics of dialysis.

When dialysis started in 1965, there were only a few machines relative to the many patients who required the treatment. To whom do you give the

available artificial kidney to? Who is entitled to dialysis? How do you deal with this terrible dilemma, which we cannot solve even now. All are good patients - they pay taxes, they also pay dues to the Sick Fund (our trade union medical insurance), but this government and the Sick Fund cannot provide dialysis for everyone who needs it. Suppose a patient with kidney failure is brought into my hospital, then there are not enough machines, and because of that the patient dies. Who is to be blamed? Is it me, the physician? If so, most probably I would be the one in jail, not those who collect the taxes. These issues have not been adequately resolved or even addressed to the present day.

On another level, how much of the entire truth should be told to a patient before surgery? American medicine has been transformed for the worse by the problem of litigation. Therefore, today in the U.S.A. everything is explained to the patient because otherwise litigation would be initiated against the physician and or the medical institution. My personal view is not to tell the whole truth. In America this is different and I believe that American patients suffer from it. The doctor should take it upon himself to withhold information about the cruelest outcome of disease. I am sure that this is to the good of the patient. If you are to fly from here to LA you do not want to read the catalogue of all crashes and mid-air explosions that occurred in the last decade. That will not help you, although it is the truth. Yet your physicians in the USA will give you a catalogue of all of the possible disasters as legal proof that you have been warned. You will therefore be sleepless the night before the operation. The physician will sleep better because he had increased his immunity against litigation.

The final issue I would like to discuss is that of Military Medicine and the medical relief of Mass Disaster. Here we are in the horns of dilemma. Once I become aware of my uniform, and all of us here wore our uniforms for active and reserve duty, I was faced with a problem: What happens to my Hippocratic oath once I am in uniform? In civilian life it is simple. My entire devotion is to my patient and *only* to him - I don't care about anything else while I treat him. He is *my* patient and I am his physician, I fight for him. Once I am in uniform I am in ethical trouble. First, I am part of an outfit that prepares for war, and even the exercises of the army in Israel are dangerous and gruelling. We lose people in military exercises. Just a month ago two young boys died because the heat and water deprivation were too much for them. Every year there are sudden deaths of young adults during military exercises. We demand a lot from ourselves, and from our children; there is a terrible price to pay. What should the regimental doctor's attitude be to such dangerous exposure of healthy young recruits? The judiciary, the legislators and the Rabbis do not give us a clear answer.

For example, a young soldier comes to you and says "Doctor, I think it is too much for me, I don't want to jump from an airplane, I don't want to dive, I suffer from back-ache". The reply would be "You must do it," and the only

way you can convince him is by doing it yourself and setting an example. Yet you never feel comfortable about your decision, sending your comrades into such danger in peacetime endurance exercises, or in war. Maybe there should be a supplementary Military Hippocratic oath. At present my civilian Hippocratic oath is inadequate for the army needs of the country, even in times of peace (which are rare here).

The same dilemma is faced in the aftermath of a mass disaster, and we have lived through many of them. Under extreme conditions there are not enough resources to treat everyone, so you are forced concentrate on those who are salvageable. It is not a matter of "do not", but a matter of "cannot". You cannot treat those whom you consider hopeless if this jeopardises the others. In civilian life you will never do that. Even a hopelessly crushed person is always treated as though he was salvageable. In a mass disaster you are compelled to use a method that almost has criminal connotations, termed triage. Triage is a horrible word, which I hate, but we have to practice it. It means giving medical aid to those who will most benefit and leaving to last those whom we consider to be almost a total loss - they are literally set aside. There is no ethical solution for this practice, and we ask the public and the legislators, for guidelines - in vain.

Today Professor Shmuel Merhav and his friends have talked a lot about warfare. They have devoted a lot of time to develop missiles, which means sending long-range death. How is this justified? The huge red mass of Moslems in the Middle East threatens us from all sides and has a potential stranglehold on our sea links with the outside world. This demographic and geographic asymmetry justifies alertness and suspicion almost verging on paranoia. Jewish existence has always been precarious and our history dictates that "we carry a big stick" (to use Theodore Roosevelt's metaphor) to survive. We should also learn how to speak softly and how to take risks for peace similar to the calculated risks we take in war. It is our long precarious history and the futility of millenia of Jewish unilateral disarmament that justifies resorting to force and, occasionally, to the reformulation of the Hippocratic oath.

## DISCUSSION

**Elliot Dorff:** *I was wondering whether these questions ever arise in the classes that you teach at the Technion itself; if they do arise, what do you do with them?*

**Harriet Gershon:** *I can not talk about the Engineering Faculties, but I think I can talk for the Medical School in saying that first of all Judge Carmi has for years been giving a course Biomedical Ethics. So, yes, our medical students get a direct and focused course, not to mention that the Medical School thinks it is important and obviously we do have this kind of a course. The fact is that much of their medical education is what we call a "clerkship", which means that they are working under close supervision of physicians who are staff members in the medical school, so that at every interaction with the patient they are given advice and example. These kinds of questions are brought up in all clinical studies and I very much hope that all of our colleagues deal with these questions because they are definitely important.*

**Daniel Weihs:** *I would like to add one more comment here. About 25 years ago or so there was a story which is now almost apocryphal, about an engineering professor who asked the question of his students: Design a pipeline that will transfer, say, 50,000 gallons of blood per hour from Tel Aviv to Eilat. Design the pipe. They designed it; no one asked where this question came from. So before we move to the next question would you like to add something or, Judge Carmi, as a teacher of ethics to students?*

**Judge Amnon Carmi:** *I would like to tell you a true story which occurred in the Medical School of the Technion. I think Professor Better also attended this meeting. It was a small international meeting dealing with the same matters as we are dealing with here. There were people attending from all over the world. After a few lectures, one of the audience stood up and told the following story:*

*"Look Judge," he said to me, "I served as an Officer in the Yom Kippur War and I worked in the Hospital of Zefat in the north part of the country. Many dozens of hundreds of wounded soldiers were reported to us. We were only a few doctors so we worked 24 hrs to 24 hrs in a row - it was just terrible. After I finished one operation someone knocked on the door. I opened the door of the operating room, and there were two wounded people just lying there. Both of them were very severely wounded. One of them was an Israeli soldier and the other a Syrian soldier. After checking them very quickly. (I was the only free surgeon there), my conclusion was that if I dealt with the one on the right, the one on the left would die, without a doubt. It took me a few seconds of deliberations, and finally I decided to take the Israeli soldier, although both of them arrived together. I operated on him and saved his life, and I told*

*the nurse to give some first-aid to the other, but he died. The war was over, but not my thoughts about it. I felt very bad about it. So, after the war I took a leave and went to Jerusalem. There I made an appointment with the Chief Rabbi of Israel, at that time, Rabbi Goren.*

*I came to his chambers and I told him the story. I told him my hesitation about it. He sat there for a long time and took several books out and for one or two hours he explained to me that I had done the right thing. "Aniyei eercha Kodmim." "You should do as you did."*

*This is the story, and I asked all of our foreign doctors for their response, and who would have behaved differently. There was one Englishman who told us, "I hesitate, I do not know what I would do in such a case." All of the others indicated that they would have behaved the same.*

*I felt very proud that an Israeli soldier had such feelings. Thank you.*

**TECHNOLOGY AND ETHICS:  
PHILOSOPHICAL ASPECTS**

## INTRODUCTION OF SPEAKERS

**David Lieber:** Ladies and Gentlemen, yesterday we heard from three distinguished panelists about some problems they have encountered, social and ethical problems which they have encountered as practitioners in their field. Of course problems that are very easy for us to think of. We have also heard an explanation of the principles enunciated at the Carmel Conference, which might be very informative, but as we learned a long time ago, the problem is not so much the principles, the problem is the application. Two or three people came up yesterday evening and mentioned to me that, you know, problems are easy - what about answers?

I have been dealing with these problems for a long time. I am not sure that we have answers, but we do have an approach to the answers and what we are interested in, in this mornings sessions, are methodology of dealing with these problems. This first session will deal with general philosophical methodology and the next session, which will be introduced later on will deal with the methodology that we find in Rabbinic literature and Rabbinic sources which can be helpful in dealing with these problems.

Our distinguished panelists this morning include Professor Elliot Dorff and Professor Alexander Barzel. I am going to introduce them both so that we can move on very quickly with the discussion.

*Elliot Dorff* is the Dorff Professor of Philosophy at the University of Judaism and the Provost. He has been there for over 20 years. He is also a Professorial Lecturer in Law at the School of Law at UCLA. He serves on the National Law Committee of the Rabbinical Assembly. He also the Chairman of the International Association of Jewish Law, which by the way will be holding a Conference in Paris. The textbook that he has written on Jewish Law is widely used in American Law Schools and he has written a variety of articles and books on issues that deal with ethics. His specialty is the Philosophy of Ethics.

*Alexander Barzel* is a member of Kibbutz Kfar Hahores. He is former Head of the Department of Humanities and Social Sciences here at the Technion. He was at the Technion for 9 years; prior to that time he was at Haifa University. Professor Barzel received his Doctorate at the University of Frankfurt and studied with the well known philosopher Habermas. In the last years, his major interests have been Philosophy of Judaism and Philosophy of Technology, on which has published widely.

# We Can, But Should We?

## Philosophical Approaches to the Moral Issues Raised by Technology

Elliot N. Dorff

I am going to get serious in a few minutes. But on the way to here on the airplane I happened to listen to one of the songs that was on the audio, which I thought would be a wonderful introduction to what I was going to talk about. So I listened to it and quickly tried to write down the lyrics. From Rogers & Hammerstein's *The King and I*:

When I was a boy,  
World was better spot.  
what was so was so,  
what was not was not.  
Now I am a man,  
world have changed a lot,  
some things *nearly* so,  
others *nearly* not.

There are times I almost think  
I am not sure of what I absolutely know,  
Very often find confusion  
In conclusion I concluded long ago,  
In my head are many facts  
That as a student, I have studied to procure,  
In my head are many facts  
of which I wish I was more certain I was sure.

Is a puzzlement!....

There are times I almost think  
Nobody sure of what he absolutely know.  
Everybody find confusion  
In conclusion he concluded long ago,  
And it puzzles me to learn  
That though a man may be in doubt of what he know,  
Very quickly will he fight,  
He'll fight to prove that what he does not know is so!



## THE TASK AT HAND

Those involved in technology and medicine pursue the significant challenges of their fields with the good feeling that they are advancing human knowledge and control. It is thus understandable that they might become perplexed, anxious, and even defensive when a conference such as this focuses on the moral problems involved in what they do.

Let me say at the outset, then, that this paper is not intended to attack technological research or practice as such. It will not be a call to return to "the good old days" of the horse and wagon, when things were simpler and our relationship with nature was more accepting and respectful. Nostalgia aside, such days, after all, were often more disease-ridden, and our ability to shape our environment to our needs and desires was considerably more limited. I, for one, am deeply appreciative of the boons modern advances in medicine and technology have brought us -- including the computer on which I wrote this paper!

Our strides in these areas, however, have raised some important moral problems along the way. People in medicine are by now keenly aware of this dimension of their work, for our ability to sustain life -- which until recently was understood as an unmitigated good -- now sometimes raises serious questions as to whether we should. Moreover, our developing ability to map the genetic structure of the human genome and, in the not too distant future, to change its nature will put us in the thicket of the moral problems involved in eugenics. All of this comes in the midst of ever more critical moral problems in the distribution of medical care: skyrocketing costs for newly available medical procedures come simultaneously with the total unavailability of food, water, clothing, and shelter -- let alone medicine -- for vast numbers of human beings.

While advances in medicine have spawned the most public moral debates, other fields of technology are no longer immune to them and will increasingly become more involved in such discussions. The impact of technological advances on the environment is perhaps the most obvious area of current moral debate as we ponder the proper balance between conservation and human use of natural resources. The computer age has exacerbated questions of privacy as quite personal facts about an individual can be known by all sorts of people in an instant and without that person's knowledge or permission. And how, if at all, does artificial intelligence alter our understanding of what it means to be a human being? In the international environment in which technological research takes place, the rights of inventors to gain from the fruits of their efforts and to enjoy legal protection from those who would copy and market their work without payment have become increasingly difficult to define and to defend. The same questions involved in the manipulation of human genetics appear in a somewhat

different form with regard to plant and animal genetics, usually accompanied by environmental concerns. The search to satisfy our ever increasing appetite for energy has yet to produce a totally safe, clean, economical solution, and so we must balance our needs with the risks of the various forms we now have -- or, dare I say it, learn to live with less. The military setting and funding for much technological research raises real questions as to the role of society in setting proper social goals for technological projects. That is part of the more general, difficult question of setting priorities among various forms of research when many are very expensive and when, in any case, not everything can or should be funded.

These are only some examples of the many moral questions currently surrounding technological advances in medicine, engineering, and the other sciences. Life indeed has become a puzzlement; what was so before is now only nearly so -- if it is so any more at all -- and we all find increasing confusion in conclusions we concluded long ago, just as the song says. If that is already true now, in the future it will become even more difficult for those doing research in technology to ignore the larger social context in which their research occurs. Conversely, it will become all but impossible for ethicists to disregard the important moral questions which new technology raises, whether those questions be the old, familiar ones in new form or whether they be totally new in their meaning and impact.

This paper, then, is intended to introduce the field of ethics to those who do research in medicine and technology. Its aim is definitely not to criticize or malign those fields, but to make it possible for those involved in them to enter into the discussion of the moral implications of what they do. While I will focus on the way in which philosophers approach moral questions, Rabbi Daniel Gordis will explore the issues of applying a religious tradition like Judaism to contemporary moral concerns. Other presentations of this conference are intended to discuss the reverse side of the coin -- that is, to acquaint those who study the humanities with at least some of the current realities in medicine and technology so that they too can join in the discussion of the moral issues involved. Only when such a dialogue between scientists and humanists can take place can we all reasonably hope to resolve the problems we face now and in the future with true wisdom.

## MORALS AND ETHICS

The terms "morals" and "ethics" and their adjectival forms "moral" and "ethical" are often used synonymously by speakers of English. The roots of those words provide good grounds for this usage, for "morals" is based on the Latin word for manners or customs, and "ethics," which also has a Latin form, ultimately comes from the Greek and Indo-European word for character, custom, or essential quality. There are thus some nuances which divide the

roots of these words -- "morals" having a more social bent, while "ethics" seems more characterological and personal -- but the roots of both terms describe what is the usual behavior of a person or group.

Over time, that descriptive sense of "normal" takes on a prescriptive meaning. That is, what is moral or ethical is not just what the people of a given society generally do, but what they *expect* people to do, such that those who act differently are judged to have acted inappropriately. They have not done what we suppose all people (or at least all people of our group) will do. As examples of such social manners, one thinks of dressing inappropriately for a given type of occasion, or of setting the table with the fork on the left, rather than the right, side. In either case, if you violate the social norm, you will definitely hear about it!

As time goes on, the two terms take on an even heavier, normative component, such that they indicate more than what are proper "manners" or "custom," but rather important values of the culture -- or perhaps even of humanity as a whole. In this latter sense, those who act immorally or unethically are understood to have violated not just the usual pattern of behavior in a society, but some norm which is treasured, prized, and esteemed.

In this normative sense too, common parlance equates the meaning of "moral" and "ethical"-- so much so that people often use both terms together to emphasize their meaning. They might say, for example, that "Insulting a person in public violates all moral and ethical principles," or that "He is one of the most moral and ethical people I know."

Philosophers, however, have distinguished these terms. "Moral" and "immoral," in philosophical discourse, refer to the value judgments we make about specific acts or people. "Ethical" and "unethical," on the other hand, refer to the *theory* by which we understand and justify such judgments.

Thus if university catalogues were philosophically precise, a course in a Department of Philosophy or in a medical school dealing with the moral questions involved in medicine -- like the doctor-patient relationship, or the extent to which we should sustain life -- would be entitled something like "The Moral Norms of Medicine," and not, as is often the case, "Medical Ethics." Our responses to these questions, however, depend crucially on the way we conceive of the human being and human society in the first place. Courses which discuss one or more *theories* of the nature of the human individual and human society, the moral *implications* of such conceptions of human beings and societies, the consequent *grounds* (justifications) for moral judgments, and the *methods* for making such judgments are properly called courses in "Moral Theory" or "Ethics."

Similarly, correct philosophical usage would say things like "Abortion is moral in some circumstances and immoral in others," or "Not all forms of killing are immoral." On the other hand, one would say, for example, "Treating a human being like an inanimate object is not ethical" if one meant that such behavior does not correspond with one's theory of the nature of human beings, or "Doing what is best for the largest number of people is not ethically sufficient" -- presuming that one was arguing for an ethical theory other than utilitarianism.

The distinction in terminology is not all that important, especially since common parlance equates these words and, in any case, moral judgments are rooted in ethical conceptions. What is important, though, is that one understands that there are two different levels of discussion. On the concrete, moral level, one asks whether a given act is right or wrong, good or bad. (Those two pairs of words are not synonymous, but all four terms are used on the moral plane.) On this level, one might also discuss the circumstances in which the act is right or wrong and even the reasons why some find it right and others wrong.

On the other hand, when one asks, "What kind of reasons count in justifying judgments of right or wrong?" or "What do we mean by the terms 'right,' 'wrong,' 'good,' and 'bad' in the first place?" or "What conception of human beings and human society underlies a given judgment of the rightness or wrongness of a given act?" -- when one asks any or all of these questions, one is in the realm of ethics. One is no longer seeking to resolve a specific moral problem; one is rather trying to determine the grounds on which any moral judgment can be understood and justified. Thus ethics is on a "meta-level" to morals; that is, ethical questions are more abstract and general than moral questions are. Both of these levels of discourse are crucial to the understanding of the moral component of life, but they are different categories of question calling for different types of answers.

## **SOME ETHICAL THEORIES**

In a paper of this type, one certainly cannot survey and analyze all, nor even all the major ethical theories that have been proposed in the various civilizations of the East and West. It will be helpful, though, to get a sense of how at least some of them would see some typical moral problems so that one can get a sense of what kinds of considerations would count if one adopted one or another ethic. It will also be helpful to see how that question is ultimately linked to the particular theory's conception of human moral goals -- that is, the kind of person the theory aims to create. In this way, the reader will hopefully come to understand that individual judgments of right and wrong, good and bad, do not stand in isolation from a theory of human nature, but rather are directly dependent upon such an overarching theory.

We will take, as our examples, a relatively simple moral norm -- specifically, that one should return a lost object -- and a more controversial issue -- namely, capital punishment. I have deliberately not chosen questions in bioethics and technological ethics for two reasons: first, I want my colleagues in medicine and engineering to see the structure and role of ethics, and that will be easier if the examples do not make them fear that their world of research is automatically and immediately being attacked; and second, I recognize fully the complexity of moral concerns in bioethics and technological ethics and want therefore to leave them to our future discussions. As we shall see, capital punishment and even returning a lost object have complications of their own, and emotions can run extremely high in discussing a topic like capital punishment. Those examples should not, however, raise the emotional hackles which inevitably arise when one's professional activities are being called into question, and, in any case, they will not be the subjects to which our extensive, future deliberations will be devoted. Thus discussion of lost objects and capital punishment will hopefully set the stage for our projected deliberations in a constructive way rather than preclude them emotionally or prejudge them substantively.

For the moment, let us put aside all the complications which accompany even the simple moral imperative of returning lost property. That is, we shall not now worry about what happens if several people claim it, if nobody claims it, if one tries to find the owner but cannot, if one entails expenses in returning the object, if the object is not worth any expenditure of time or money to return it, etc. We shall just imagine that you found it and, out of moral compunction rather than some other motive, chose not to keep it or leave it where you found it, but rather to seek its owner. We shall also assume that everything went smoothly --i.e., that you announced it, that one and only one person showed up to claim it, that after some questioning you were satisfied that that person indeed was the owner, and that you then responded to the moral imperative to return it.

Similarly, in the case of capital punishment, we shall focus on the simplest of scenarios. That is, we shall assume that all due process has been followed in procuring the conviction of the person to be executed, including the normal appeals; that reasonably competent legal defense was mounted; that the jury was not biased or bribed; that the evidence against the defendant was relatively clear-cut; that there are not gross inequities in the application of capital punishment along racial, religious, ethnic, or gender lines; and that the execution itself is done as humanely as possible.

We shall consider both philosophic moral theories -- that is, those espoused by specific philosophers -- and religious moral theories -- that is, those incorporated in particular religions. Both philosophy and religion embody a view of the world and the human being's place in it, and both have

produced moral theories based on their broader theories of human nature. Philosophy, though, simply expounds and examines various theories, while religion embodies them in a rich context of a community committed to a specific view of life, a regimen of ritual and moral practices, a structure of beliefs and hopes, and often a history, art, music, and dance associated with the people and its religious convictions.

With all due apologies to each of the theories below for riding roughshod over the nuances contained in it, then, we shall ask why, according to each of them, should one return a lost object, what failure to do so represents, and how such failure is repaired. We shall also ask how each theory would handle the more difficult case of capital punishment. As we consider a selection of eight ethical theories, note the differing *concepts* of human beings and human societies embedded in each, the varying *methods* for making moral decisions which result from those assessments of human nature, and the specific *content* of the moral norms which we are considering. For reasons of clarity, we shall start in each case with the theory's directions regarding our concrete examples first and then expand briefly to describe the theory and methodology which lead to those directions. Here, then, is how some ethical theories would treat our two examples:

1) *Judaism*: You should return a lost object because that is what God commands you to do. You should do what God commands you to do for a host of reasons.<sup>1</sup> Among them are the following: God will reward you if you do and punish you if you do not; human courts will enforce this divine command by forcing you to give up the object to the owner; this is the wise thing to do; this is part of what you promised to do when you became part of your people's Covenant with God at Mount Sinai; this is part of what it means to be part of a holy people, serving as an example of God's norms to other societies; and this is what you should do out of love of other human beings and of God.

Failure to return the lost object is putting your will (presumably, to keep the object, or at least not to take the trouble to find the owner) above that of God's. As such, it is not primarily a deficiency of knowledge or wisdom, although it entails both of those, for it fails to perceive the proper relationship between a human being and God. The malfunction, however, is chiefly the result of the improper use of one's will, and so making up for this failure must come through a redirection of one's *will* by means of the process of return to God (*teshuvah*).

While the Torah prescribes capital punishment for a variety of offenses, Judaism is based not on the simple meaning of the text of the Torah, but on how it was interpreted and applied by the rabbis. The rabbis used evidentiary procedures to make it all but impossible to secure a capital conviction. Other difficult matters would similarly be treated through the methods of legal

interpretation, precedent, and custom. In some cases, the accepted norm may hew quite closely to what the Torah says, and in others, like capital punishment, it may deviate significantly from the plain meaning of the text of the Torah. Furthermore, rabbis may well differ in their interpretations, and since the demise of the Sanhedrin in the fourth century C.E., what ultimately becomes the law can only be determined by what Jews accept over a period of time.

Recognition of this historical development is crucial when one wants to apply Judaism to most issues, and capital punishment is a good example. Since the Torah prescribes capital punishment for many infractions of its rules, including what we would call ritual matters as well as moral ones, the Rabbis could not simply abrogate it. At the same time, they apparently did not like it. They thus left the law on the books, but they instituted evidentiary procedures which make it all but impossible to procure a capital conviction to the point that they themselves say that a court which decreed capital punishment once in seven years is called "a hanging court" (and Rabbi Elazar ben Azariah says, once in seventy years)!<sup>2</sup> Furthermore, in the later history of Jewish law, capital punishment was practiced only rarely. The upshot of this, it seems to me, is that Judaism would have us either leave capital punishment in the law but never -- or almost never -- use it, or else abandon it entirely.

What kind of person and what kind of society has resulted from the Jewish theory which underlies these responses to our sample questions? They are individuals and groups with characteristics which will seem obviously desirable to Jews, but which, as we shall see, are not nearly so obvious if one follows one of the many other modes of ethical thought which human beings have developed. Characteristics encouraged by the Jewish theory include the following: devotion to learning religious and, by extension, other matters, thus producing an emphasis on education; a deeply-rooted understanding of the human being as created in God's image and therefore endowed with sufficient status to argue even with God (so that learning God's ways is not at all a passive, docilely accepting act for Jews); a strong sense of right and wrong and a concomitant need to assure that justice prevails in society, thus spawning an extremely activist stance toward life with a stubborn sense that we can and must make it better; and a close, almost cliquish, sense of togetherness as a people, for Jews are covenanted not only to each other, but to God.

This theory is democratic in the sense that any Jew can and should learn God's ways; there is no esoteric tradition reserved for some elite chosen on the basis of lineage, property, popular election, or divine selection. Governance in this theocracy, though, is in the hands of those who master God's word and how to interpret it -- at least once Judaism emerged out of the biblical period into the religion of the rabbis.

2) *Plato*: You should return a lost object because that is what the person who knows all there is to know about the world (the philosopher-king) would have you do. That person would have you return the lost object because he (or she -- but Plato never says that, and it would run counter to his theory of the hierarchy of society) understands the place of such a norm in the general scheme of things. Similar remarks would apply to capital punishment: despite the greater complexity of the issue, the philosopher-king will know whether capital punishment is ever the right thing to do and, if so, when it is, based on his superior knowledge of the Forms which inhere in all of creation.

Those who fail to return lost objects are demonstrating a failure of *knowledge* of what ultimately fits the structure of the world. Similarly, those who disagree with the philosopher-king on capital punishment are demonstrating their ignorance. People with such moral failings need to learn more philosophy!

The ideal individual, for Plato, is the philosopher-king. That person is characterized first and foremost by his knowledge of all levels of human experience, including most especially the abstract realm of philosophy. Only such a person really knows what is and what ought to be; all others only see things as fleeting shadows on the wall of a dimly lit cave. Consequently, the republic which Plato would create is not really a republic at all, but a dictatorship governed by those who know philosophy -- and, particularly, by the one who knows it best. All others should know their place and take directions from him.<sup>3</sup>

3) *Aristotle*: You should return a lost object because that is what a good person would do. If you have any doubts about the matter, ask someone who is wise (that is, one who has had much experience in the world) and good (that is, one who is known for his or her ability to make appropriate decisions). Similarly, the issue of capital punishment should be decided by those who are experienced in life and recognized as morally good people.

Failure to return a lost object is a lack of wisdom and/or a lack of goodness of character. The remedy for such a failure is to apprentice oneself to a good person to see how he or she lives out his or her goodness. Similar remarks apply to disagreements about capital punishment, but there, presumably, there might be disputes even among a society's sages. In that case, Aristotle's approach would not supply a definitive answer but would simply assert that relevant factors in deciding the issue are what good people find to be the best way to express their goodness in practice.

Since, for Aristotle, every man (and presumably every woman) is a rational animal, each person has the ability to make moral decisions; one



need not defer to anyone like a philosopher-king. Aristotle, though, is not an individualist or a relativist in ethics: there is, for him, one right decision on any issue, and that is the one which enables the human individual and the human society to function well. Consequently, when confronted with a moral dilemma, an individual should consult people who have had a wealth of experience in life and who seem to have learned wisdom from that experience. One should ultimately return a lost object, then, and one should decide the matter of capital punishment on the basis of what life experience demonstrates to be the best path to enable society and the people in it to function well.<sup>4</sup>

4) *Roman Catholicism (one form of natural law theory):*<sup>5</sup> You should return the lost object because that is one of the mediated principles derived from the absolute natural law of doing good and avoiding evil. There is a clear tradition of such moral principles which should lead a person to return the object. The Church clarifies and reenforces such principles, but since they are based on laws of nature, they are shared with all human beings.

If the issue is less clear, the Church's distinctive, interpretive element becomes more prominent. Our second example is an instance of this, for the United States Catholic Bishops have issued a comprehensive statement on capital punishment. That statement recognizes the state's authority to impose the death sentence (since natural law provides for state power to achieve civil order, even when it does so by executing criminals), but the bishops argue that the state should not do so. Their stance is derived from their understanding of the discipleship of Jesus rather than directly from natural law, and the same would be true whenever natural law is not clear on a given issue. Even then, though, natural law continues to provide a framework within which discipleship of Jesus is interpreted; in cases like birth control, it plays a major role. Individual Catholics must ultimately follow their own consciences, even if that means being at odds with the Church on a given issue - - and, indeed, many American Catholics oppose the Church's stand on capital punishment (and even more oppose the Church's stand on birth control); but they must acknowledge that their own understanding is not the official Catholic position, which only the Church hierarchy has the right to define.

Failure to return the lost object is a sin against God, against Jesus, and against one's neighbor. It is also a demonstration of your lack of faith in Jesus' saving power, for in Catholicism you are saved in principle from the moment of your baptism but are only saved in actuality if you live out what a life of salvation should mean. Consequently, if you sin in this way, you must confess it and restore the object to the owner (or, if that is not possible, perform symbolic restitution by donating an equivalent amount of money to the poor). That is, the priest will require you not only to confess your sin, but also to return the lost object as part of your penance with the ultimate objectives of achieving justice in this matter and of repairing your relationship with Jesus.

The ideal society is one which follows natural law as delineated by the Church. That involves abiding by norms that flow directly from natural laws, as all human beings must, and also those norms which the Church decrees in order to act out Jesus' example. One *can* act morally, despite Original Sin, because of Jesus' saving power.

5) *Lutheranism*. Lutherans would consult Scripture and the statements of Luther and the Lutheran Church to get moral guidance, but the ultimate authority is the individual's conscience. This is in keeping with Luther himself who refused to recant his statements before Emperor Charles V on the grounds that he could not act against his conscience.

There are, however, Lutheran positions on our two issues which the individual Lutheran would generally take seriously, if not follow automatically. You should return a lost object because that is a moral duty derived from the command to love your neighbor. In Luther's Small Catechism, he extends the biblical prohibition not to covet to include the positive act of helping your neighbor with his or her property, "neighbor" being defined as anyone with whom you come into contact. Furthermore, returning lost objects to their owners is necessary for the good ordering of society, and Luther strongly endorsed that civil function of the law.

Similarly, Luther developed the doctrine of The Two-Fold Kingdom, according to which God acts through the Kingdom on the Right by working through the religious community (the church), and He acts through the Kingdom on the Left by acting through the political order. God, in other words, has endowed the state with the right to establish laws so that society may be ordered, and that would include capital punishment. Contemporary Lutherans often raise serious objections to capital punishment on the grounds that it is administered unfairly (e.g., proportionally far more people who kill whites than those who kill blacks are executed in the United States), but their theory granting the state authority to impose capital punishment remains substantially the same as Luther's.

In sum, then, in both the Catholic and Lutheran systems, individual conscience is ultimately authoritative. Natural law and official Church pronouncements, though, play a much greater role among Catholics than they do among Protestants, while Scripture, as interpreted by the individual, takes on greater significance in Protestant methodology. For "mainline" churches like Lutheranism communal traditions of interpretation have some weight in this process, but that diminishes considerably among fundamentalist Protestants, for whom Scripture is almost exclusively decisive and there is little awareness or acknowledgement that it is only specific verses which are being chosen and that even those are being interpreted in one of many possible ways.

Failure to return a lost object to its owner in Lutheranism is an offense against both God and one's neighbor. The offender must therefore confess and ask forgiveness of God and return the object to the neighbor.

The society which both Catholicism and Lutheranism would create would, on the one hand, embody great respect for the authority of the state with few, if any, restrictions on its powers. On the other hand, responsibility for moral decisions in both these Christian theories rests ultimately on the conscience of each person. There is some irony in these radically opposite assertions concerning political and moral authority, with political authority being all but absolutely in the hands of the communal institution of government while moral authority is entrusted to each individual; but both Catholicism and Protestantism address this apparent discrepancy, each in its own way. In Catholicism, while the individual's conscience holds ultimate moral authority, each Catholic, in exercising his or her conscience, is supposed to be guided in substantial measure by the decrees and advisory letters of the Church, and so Catholic theory, at any rate, would create a society which is strongly communitarian, with general similarity in communal moral practice.

Lutherans and other Protestants, in contrast, would create a society in which the emphasis on a person's conscience is much less fettered. One's conscience should be shaped by the individual's reading of the Bible and, to some degree, by the particular denomination's statements on given issues, but ultimately it is the individual who must determine what is right and wrong, good and bad. Similarly, the authority of the state, while certainly sufficient to impose capital punishment if it desires, is grounded on the consent of the individuals governed. Thus in both politics and morals, Catholics tend to take a more strongly communitarian line in contrast to Protestantism's greater emphasis on individualism.

6) *Immanuel Kant*. I should return a lost object, for Kant, because it is the right thing to do. That is, I should do it on principle. I know best that I have done a moral act when it is in my best interests not to return the lost object and I do so anyway out of a sense of moral obligation. Neither utility nor sentiment nor human or divine authority is a properly moral motive to return the object; only acknowledgement of moral duty is.

Failure to return the lost object indicates that I am not principled. The human being, for Kant, is half sensual, half rational. Sensuous impulses are the determining factor in many human actions, and in those, as Hume said, reason is simply the slave of the passions. But human beings are not only part of the natural world; they are also part of the intelligible world, the world of thinking and concepts. As a result, there is for human beings a class of actions, namely, moral actions, in which reason does not follow, but rather leads the sensual self. Therefore, if I fail to return the lost object, it is because my sensual self has gotten the better of me; I need to think hard about my actions,

perhaps with some help, so that my reasoning power can get me to see the rational necessity of abiding by the moral principle which requires return of the lost object. Once I see that, Kant is convinced, I will will to act accordingly. (In this he is remarkably like Plato: both believe that knowledge will lead to action.)

As for capital punishment, Kant maintains that punishment of crime is right in itself, that it is fitting that the guilty should suffer, and that the moral principle of justice, and indeed the moral order as a whole, require the institution of punishment. Punishment, in other words, does not need justification; it is right on principle. As for the measure of punishment, Kant claims that retribution, and retribution alone, is just, since it is the crime itself and nothing else that is relevant. Kant, in other words, is among the most thoroughgoing of the retributivists. Even Kant recognizes that sometimes "eye for an eye" may be absurd or impossible to effect; but no such doubt exists for him in our case, for Kant is a staunch advocate of capital punishment for murder. Whether he would endorse that penalty for other crimes like rape is more questionable.

Kant locates morality in a person's will rather than in the ends one achieves because results are not the product of the actor alone; they depend upon other people and upon circumstances beyond the actor's control. Therefore, for Kant, I cannot be properly praised or blamed *morally* for producing a good result; that may be an apt criterion for a *pragmatic* assessment of what I have done, but not a moral one. The only appropriate moral standard is what I intend to do; the good will is the only thing in the world "or even out of it, which can be taken as good without qualification."<sup>6</sup>

Kant's theory of society is, in some ways, quite liberal, but in other ways quite conservative. He holds that legal obligations are subspecies of moral obligation; thus the rational will, and neither force nor the commands of God, is the basis of the law. He grounds the authority of the state partly in terms of the general will, similar to Rousseau, and partly in terms of the original social contract. When he speaks of the latter, he advocates a version of political liberalism with emphasis on the rule of law; when he invokes the general will of the people, however, he champions measures which are downright reactionary. Thus he admired the French Revolution, and the mixed constitution he favors is one in which citizens can make their voices heard through their representatives; but he is for confining the franchise to persons who possess "independence or self-sufficiency," thus excluding from "active" citizenship apprentices, servants, woodcutters, plowmen, resident tutors, and "all women."<sup>7</sup> The kind of society which Kant would create, then, would in theory be based on reason and moral principle, but in fact would be quite authoritarian in its nature.

7) *Utilitarianism*. I should return the lost object either because that will produce the best results in this case ("act utilitarianism"), or because as a general rule that will engender the best consequences ("rule utilitarianism"). Both kinds of utilitarianism need to be further differentiated into their egoistic and universalistic versions. That is, are the consequences of a particular act or of a class of acts to be judged by their effect on the actor alone ("egoistic utilitarianism") or by their impact on all sentient beings ("universalistic utilitarianism")? Since what is best for me is not always best for everyone, there is not only a theoretical, but a practical incompatibility between egoistic and universalistic utilitarianism. So, in our example, if the lost object is valuable, returning it may not be the best result for me, but it may be for the owner and for society as a whole.<sup>8</sup>

A similar analysis applies to capital punishment. While retributivists like Kant claim that the punishment must fit the crime, utilitarians relate the penalty to the general aims of the legal system, in particular the goal of preventing crime so that security and order can prevail. Relevant factors in determining punishment, then, are the extent to which society needs to be protected from this criminal, the impact of the punishment on reforming the criminal, and, especially, the effect of a particular punishment imposed on this criminal in deterring others from committing crimes. Reactions like "He deserved it," though, would not be considered relevant, for that would be to talk in the principled language of just desserts for crimes committed. Put another way, for retributivists like Kant only serious crimes *deserve* severe penalties; for utilitarians, only serious crimes are *worth averting* at the cost of severe penalties.

Failure to return the object to its owner is the result of my inability to recognize that returning this object (or a policy of returning lost objects) will produce the greatest good for the greatest number. I need, therefore, to be shown this practical calculus. Once that happens, I will (or should) automatically want to return the object. (The utilitarians, like Plato and Kant, thus believe that intellectual awareness of some truth will stimulate the person to act accordingly. The commonly experienced gap between knowledge and action is consequently a problem for all three of these theories.)

The society which utilitarians would create would be one governed by pragmatics. That is, its policies would be determined on the basis of what is best for the largest number. That might even include protections for minority rights if such a practice would ultimately benefit most people. Depending upon how one defines "good," a utilitarian society might value not only sensual pleasure, but also knowledge, beauty, community, and so forth, and its programs would be shaped accordingly. Although John Stuart Mill, one of the early, central utilitarian thinkers, wrote *On Liberty*, a passionate argument on

behalf of individual liberty, and *Considerations on Representative Government*, a discussion and defense of that system of rule, there is nothing inherent in the utilitarian position which would necessitate Mill's stance; even tyranny might be defended on utilitarian grounds if it could be shown that it works best for the largest number.

8) *Friedrich Nietzsche*. Finally, for Nietzsche, I should return a lost object only if someone else is forcing me to do so or if I want to do so. Failure to return the lost object is either an exercise of my choice not to do so or a challenge to the ruling powers to force me to do so. If it is the latter, I may get away with violating the sovereign's laws if the ruler considers this rule to be too trivial to spend time and effort to enforce or if somehow I am not caught; but if neither of those is the case, I will learn that I should have returned the lost object -- and that I had better do so in the future -- through the punishment the sovereign imposes on me. Similarly, capital punishment should be practiced only if the ruler wants to do so, either as a means to reenforce his or her sovereignty or simply on whim.

As one can see immediately, Nietzsche's approach to moral problems is radically different from any we have considered so far. In fact, Nietzsche is the man who probably did more than any other to force us to ask why we value what we do -- although there are precursors of his approach to life in the stances of Thrasymachus in Book One of Plato's *Republic*, Callicles in Plato's *Gorgias*, and Niccolo Machiavelli in Chapters 15-19 of his book, *The Prince*. In his book, *On the Genealogy of Morals*, Nietzsche argues that the qualities we normally consider to be moral -- compassion, responsibility, honesty, and the like -- are actually based on the reactions of slaves to masters. In an attempt to get back at their masters in some way, slaves do the only thing they can do, they call them names. The slaves say that the masters are bad people, manifesting characteristics which we slaves do not like and which we therefore call immoral. It was the Jews, in fact, who have perpetrated this reversal of healthy values on civilization ever since they were slaves in Egypt.

What instead should happen, says Nietzsche, is that people should use their power as effectively as they can. They should not aim to be good; they should aim to be noble. If they are able to suppress others (whether by physical force, threats, or even persuasion), they should do so, using their power in any way they choose, taking care, though, that they do not do anything which will make it impossible to retain the reins of rule. If they are not able to rule, they should seek to use whatever power they have to effectuate whichever of their desires they can. That may, at times, include open revolt. Put simply, might makes right.

## MAKING CONCRETE MORAL DECISIONS IN OUR DAY

This review of some of the central ethical theories in the Western world (the Orient has still more!) will hopefully make it clear that moral problems do not stand alone. They must be understood in the context of what people value and what they are trying to achieve in the first place. That, in turn, depends on their whole approach to life, their philosophy, or, perhaps, their theology. Differing perspectives on life and differing goals for it will yield differing decisions on concrete moral issues.

How, then, can a modern person, especially one involved in medicine or technology, make a decision? And how can we as a society do so? Is this plethora of views ultimately an obstacle to being able to make any clear decision? Put even more strongly, if so many varying views exist on what we should do, does it make sense to ask what we should do with regard to any specific issue in the first place?

Despite the plethora of moral values and ethical views, I think we can say with reasonable certainty that the realm of moral concerns and moral values is real and that it is deserving of our careful concern. It is just that we human beings do not know for a certainty what is right and wrong, good and bad. That does not mean that we are totally bereft of moral knowledge; we do, after all, have the benefit of the moral thought and experience of all human beings in the past and present. It is just that we are not omniscient as God is, and so we must be satisfied with knowing that our knowledge of these matters, like our knowledge of science itself, is partial and flawed. It is not that every person or every society just states what it likes and dislikes when it formulates its moral code and ethical views. Moral relativism is not the right position, in my estimation; relativity is. That is, there probably is some absolutely valid way of thinking about human life and the values that should inhere in it; we human beings, however, do not know what that is. We therefore create moral systems as well as we can to capture what we do know. Pluralism, then, is the only position that makes sense epistemologically.<sup>9</sup>

How, then, do we rise above our varying views of life to come to some kind of social policy on concrete issues which face us all? In some societies, of course, the decision is made by decree of a tyrant or tribal leader, and that is the end of the matter. In others, a high degree of ethnic homogeneity enables a nation to use its heritage to make moral decisions with little, if any, regard for alternative views.

The hard contexts for this question, however, are those like Israel and the United States. The methodological problems in those two countries, though, are different, and they serve as models for other nations of the two sorts that they represent. In Israel, avowedly a Jewish state but also a democratic one,

Israeli Jews must find a method to apply the Jewish heritage to contemporary concerns in a way which leaves room for the pluralism which inheres in Judaism and in the Jewish community and for the varying views of Muslims, Christians, and secularists who are citizens of the Jewish state. Similarly structured states include France, Italy, and Ireland, with Catholicism, of course, being the dominant (and in some ways official) religion rather than Judaism.

In the United States the context is even more complicated. An overwhelmingly Christian country which nevertheless by constitution separates church and state and which includes citizens of virtually every world religion and view, the United States must find a way to engender social discourse and decision making in a thoroughly multi-cultural format. England, Canada, and some other former colonies of Great Britain face similar problems, although not necessarily with constitutional support.

How can moral decisions be made in such contexts? Frankly, only with tolerance for varying points of view, respect for those who hold them, sufficient flexibility to see and seize areas of agreement, and, perhaps first and foremost, willingness to discuss issues in a multi-cultural setting where your own view of things will be challenged and not necessarily adopted. That is clearly not easy, but if the new technology in medicine and engineering has done nothing else, it has brought us together as a global village with the need to get to know each other and to make decisions together on the many issues which transcend borders and affect every one of us. May we have the moral power to match our new technological power so that we can make such decisions with good will, foresight, cooperation, and wisdom.

## NOTES

1. I differentiate and discuss these at some length in my book, *Mitzvah Means Commandment* (New York: United Synagogue of America, 1989), chapters 1-5.
2. M. *Makkot* 1:10.
3. I have here followed the vision Plato describes in *The Republic*. It does not coincide with the society he portrays in the *Laws*, but that book was probably written as a political platform for Dionysius the Younger and was never intended as an exposition of his philosophy at all. (So contends Gilbert Ryle in his essay, "Plato," *The Encyclopedia of Philosophy* 6:332.) In any case, *Laws* may be to the *Republic* as the American Constitution is to the American Declaration of Independence; that is, the latter documents may express the authors' ideals, while the former represent their best efforts to embody those ideals in practice, with all the difficulties of dealing with the limitations of reality.
4. The central place in which Aristotle articulates his ethical theory is his *Nicomachean Ethics*.



5. For Sections 4 and 5, I did not rely exclusively on my own reading of Christian sources, but rather asked a Roman Catholic priest (Father Robert Rivers) and a Lutheran minister (Reverend Kapp Johnson) how they would use the resources of their faith to respond to moral questions. I have participated in dialogues with them and know them both to be theologically very thoughtful. What follows is a summary of their answers.
6. Immanuel Kant, *Critique of Practical Reason and Other Writings*. L. W. Beck, trans. (Chicago: University of Chicago Press, 1949), p. 247.
7. Immanuel Kant, *Metaphysic of Morals*. Section 46. Kant expounds his ethical views in his *Groundwork of the Metaphysic of Morals* (1785); his *Critique of Practical Reason* (1788); and, finally, his *Metaphysic of Morals* (1797).
8. Other distinctions which should be kept in mind are those between hedonistic and ideal utilitarianism, and between normative and descriptive utilitarianism. In hedonistic utilitarianism, the only factor which counts is the pleasantness or unpleasantness of the consequences; as Jeremy Bentham put this view, if the quantity of pleasure is equal, pushpin is as good as poetry. In ideal utilitarianism, by contrast, other characteristics of the consequences also count in measuring an act's utility, such as its epistemological or aesthetic qualities. For the ideal utilitarian, then, the pleasures of poetry may well be counted as higher than those of pushpin.

Normative utilitarianism is a proposal of how we ought to think about conduct, while descriptive utilitarianism intends to be a depiction of how we do think about conduct. Objections to descriptive utilitarianism on the empirical grounds that people do not think or act that way (e.g., they do not return lost objects or think that one should) are not automatically strikes against normative utilitarianism, for it is possible that even though we do not think or act in a given way, we should.

9. I talk about this at some length in my essays, "Pluralism," in *Frontiers of Jewish Thought*. Steven T. Katz, ed. (Washington, D.C.: B'nai Brith Books, 1992), pp. 213-234; and in "The Covenant as the Key: A Jewish Theology of Jewish-Christian Relations," in *Toward a Theological Encounter: Jewish Understandings of Christianity*, Leon Klenicki, ed. (New York: Paulist Press, 1991), pp. 43-66.

## DISCUSSION

**Question:** What happens when the person to whom you impart this knowledge refuses to accept it and refuses to abide by what wise philosophers tell them?

**Elliot Dorff:** Plato discusses that in two different dialogues, one in the "Gorgias" and one in the "Timeas". In the Gorgias in particular, Socrates actually, goes wild. He does not know how to handle disobedience because Plato's assumption throughout is that, because human beings have a mind, they know the real structure of the world and so, for Plato, anybody in his or her right mind would do that which is built into the structure of the universe. When confronted with the notion that somebody might not do it after all, he does not know how to handle it. Plato is wonderful with the art form of dialogue, and so at most you have a paragraph, maybe two of discussion and then you have the next person asking a question, not like some of the dialogues that happen later with Halevi from Book Two and so on, where it is one long speech of the author really. But in the Gorgias, at the end of it, you get a very long harangue by Socrates as to why this is terrible, for he simply cannot cope with the thought that people would not do the good once they recognize it.

**Question:** Aren't you overstating the notion in Plato when you talk about captivity. Isn't the very notion that in general, even informed people are not going to be on the level of philosophizing; but involving them to the extent that they are capable of understanding the nature of reality brings about their following certain norms? Isn't that different from talking about obeying those norms because the philosophizing simply imposes those norms on them?

**Elliot Dorff:** Yes, I did overstate. Plato is not saying that you should follow the Philosopher King simply out of a matter of trust, although for the vast majority of people that will be the case. But you have the dialogue, "Meno" in which Plato specifically takes the slave and tries to show the slave how we come to know things. That is another matter, but the point that we are after is that Plato assumes that even slaves can be taught and ought to be taught, because after all, all human beings have reasoning power and therefore all human beings should be brought into this process. Consequently, if we are talking about, say, the doctor-patient relationship, what a doctor who is really following Plato would do is to explain as much as he or she could to the patient. But, in the end, if the patient does not understand or disagrees with the doctor's analysis or prescription, the doctor would say, "It is unfortunate that you do not agree with me, but you had better do what I say, because that is what right." In other words, yes, there would be a process of bringing the person into it, but after it is all said and done the patient does not have ultimate decision making power in a Platonic way of looking at things; it is the expert that does.

**Question:** *For Nietzsche, why do you go to the doctor?*

**Elliot Dorff:** *That is a good question. As a matter of fact you ought not to have to go to a doctor in the first place. In the Nietzschean view, you are the consumer and should control your own health care. There should be no rules about what is prescription medicine and what is not; you should have the ability to choose what kind of medicines you want to take. Why should the doctor have any control over that? The only reason you might go to a doctor and might use the doctor is because the doctor might be pretty good at doing certain things. But, in this case you are in control to the very end. You decide what is going to happen. The doctor might tell you, "I think this will happen or that will happen if you do this, that, or the other thing," and you can say, "OK" if you want to, out of a decision of your own power, or you can say "Forget it, I am going to do this." It is sort of like my father: he played squash, and then at age 40 the doctor told him he should not play squash any more, and so he changed doctors and he played until he was 65. Now that was a very Nietzschean move. That is basically what you do.*

*On the other hand, if you are a Nietzschean physician, what do you do? Whatever you want, when you want, if you want. The only reason you might do something for others is not out of a sense of compassion and certainly not out of a sense of duty or anything like that, - but for power. Either it adds to your power in very concrete ways, like financially, or it adds to your sense of power. "Look I have power over this person. I can determine this person's life or death". And, by the way, if you think there is none of that in medicine - you are wrong. That is one of the things that medical education has to deal with. There is an awful lot of compassion in medicine, but there also is the reverse side of this, and that has to be dealt with in a course like "Doctoring", where future physicians learn why and how to involve the patient in making medical decisions.*

# Response to Elliot Dorff: We can, but Should We?

Alexander Barzel

After Rabbi Dorff's mapping the field of our topic, I intend to point to some concrete problems.

First, let us look on our "historical watch": one week after the World Congress for Ecology in Rio de Janeiro, which was considered a turning point in the history of mankind, but came out as the shocking exemplification of the failure to cope with the crucial problems of this thoroughly new epoch, both in the natural and human history. At the beginning of our discussion we should realize the meaning of this failure, because it has to do also with our specific question here. We are living in a *new universal* culture: the technological culture, which although on the path of continuity, is a totally different spiritual environment. Consequently, we have to reformulate our ethics, since we cannot follow simply any of the traditional ethics while the foundations of culture change. The main problem is if the current ethos of growth and development and consumption can co-exist with ethics at all. Seemingly, after Rio de Janeiro, they cannot. Hence, we should be pessimistic indeed.

First, a few conceptual remarks. Pure science searches for truth itself, without the interest in any possible application of it in reality. Applied science is a distinct realm: it searches for truths in actual contexts, in which its laws may work. On the foreground of the discussion in this Institute dwells engineering, or as called in its name: technology. This seeks maximal efficiency of procedures, for the sake of achieving concrete objects, using the laws elaborated in applied science. Pure science asks for absolute truth, as far as it is possible; applied science asks for full truth within the intended field of functioning; technique asks for maximal regulatorial validity in some concrete performance. The 80% success of *in vitro* fertilization program, or of a low-cholesterol diet is a satisfactory proof of maximal efficiency and of the validity of the method implied.

Ethics is about human activity, it is concerned with the quality of the acts on the ground of their consequences. Hence, ethics does not claim moral obligations from pure science (except within the limits of eventual experimentation). Ethics demands moral obligation from applied science, and all the more so from engineering.

In current philosophical treatments the use of the term "technology" is considered misleading. The routine way of speaking about "new technologies" in aviation, in communication, in medicine, and so on, points evidently to "new techniques". Techno-*logy* is the LOGOS of technique, it is the comprehension

and the interpretation of technique's meaning in regard to culture. Technical equipment for the prolongation of life requires a new way of thinking, a new culture and society, which is prepared to face the new perspectives of ageing. Changing implements of contraception are *technique*, while *techno-logy* is the new understanding of the relationships between the sexes without the former worry of undesired pregnancy. Similarly in all fields of technique. Where to locate medicine? The term "technique" may have a low reputation, and medicine would not agree to be classified by it, despite the fact that medicine is an activity which seeks maximal efficiency of procedures for the sake of achieving objects in concrete reality: the prevention of suffering and the correction of nature's defects in the human body. As such, as a technical activity for the achievement of objectives, medicine is called to meet the challenges of ethics. In fact, sections of medicine bear names in which the nomenclature that hints of the technique does not sound humiliating: biotechnology (or correctly: bio-technique), genetic engineering. Entire sections of medicine, now of high esteem, preventative and environmental medicine, are closely related to technical, economical and socio-political spheres.

The distinguishing ethical characteristic of the technological culture is man's immense capacity to cause consequences, which exceed any dimensions ever created by human deeds. Man is now aware of his ability to shape the conditions. This ability is bound to a new relation to nature: the given is not assumed to be the determining factor of reality. Nature is in our consciousness now but a raw present, only a primordial foundation (Matzah" מצה); man does not accept any limitations of his own capacity to develop and to construct the state ("Matzav" מצב) of preferred circumstances. Contemporary man also does not recognize even the limits posed by laws of nature, known actually but not finally. In ecological thought there is at this time a vehement controversy about the assumption that "nature knows best". Man has in fact always transgressed nature's own functioning and never accepted the given. Intervention into nature's course *is* the culture. In our context: there is no essential difference between the gnawing of a plant selected by our ancient predecessors after accumulated experience, and between modern chemotherapy. Even the so-called "natural medicine" brings selected means from nature into faulty processes. However, the quantitative difference seems to be thoroughly significant. Changes in the dimensions of man's capacity give new meaning to intervention, resulting in a new world-view: the technological culture. New practice raises new problems in ethics, such as the responsibility for the consequences of intervention and the provision of limits on possible intervention. The expansion of the field of consequences calls also for a new consideration of ethical duties. Ethics is the theory that examines human deeds according to their outcomes for the fellow-man and for the community. Because of the huge dimensions of capacity to bring about consequences, the principles that satisfied the former cultures are not sufficient for the challenges of the technological one. (This is not a meeting of philosophers only, so I discharge myself from referring to ethical conceptions which

consider intentions rather than consequences, as the decisive criterions of ethics.)

Action is necessarily conditioned by motive of decision to act. The motive is not simply a psychological inclination, but is rooted in reasoning concerning the consequences, and, hence, the limits of the prohibited and the permissible. The necessary motive, the ethical precondition of acting, is the consciousness of responsibility. After the deed is accomplished, it exceeds the area of the agent and enters into the area of the Other. Hence, the moral person has to "respond" to the state of the Other. (This is the meaning of *Kant's* categorical imperative: the Other should not be considered as a means for the agent's own objectives; and is also the meaning of the maxim of *Hillel the Sage*: "What you dislike to be done to yourself, you should not do to your fellow-man"). The most profound changes in technological ethics have to be expected in the conception of responsibility for the consequences, that is, in the motives of acts. One of the main problems of ethics at this time - in the practice of this Institute and of the others like it - is: which are the limits of research and of implications. We do not accept any limitations of research in the pure sciences but we have no good reasons to "transplant" this principle of freedom of the pure sciences into the realms of applied sciences and of technique. In fact, no one dares to argue in the Technion, MIT, Caltech, and the like, that something is not allowed to be experienced for production. Nobody is willing to discuss eventual limitations, since this very Institute and all its "twins" consider unlimited "development" as their top-ideal and task. The same with medical research and practice: no one is prepared to ask the questions: for what to prolong life? what is the difference between life and existence? One can exist and not live - but nobody is willing to formulate the definitions, since the School of Medicine may be limited in its "progress" because of the raising philosophical questions. This is a problem for the religious thought too, since even if God is the master of existence (correctly, in the Jewish formulation: God and the father and the mother), *man* is the master of life while choosing to do and choosing between different qualities of deeds and while judging the outcomes. As long as ethics' conceptual and historical roots were in religion, in the belief that superior power or fate determines acting and judges the deeds, the concern for human responsibility was limited indeed. Exceptional was the Jewish view, especially in its prophetic expression, emphasizing free human choice, rather than Divine determination; man is called, but not forced, to follow Divine commandments.

Prior ethics dealt with transparent acting: the area of deliberations was calculable, the consequences could be observed in the mostly immediate distance. The new capacity to bring about consequences transgresses the transparent horizon. By going beyond nature's own course, it is now thoroughly uncertain what the chain of consequences and the byproducts may be. Even less transparent is the social horizon of the consequences, since the moral partner of the technical capacity is not only the immediately present person. The lack of social transparency is combined with a lack of historical transparency. The

consequences of acts performed here-and-now may reemerge in future phenomena, in the reality of coming generations, which even the most self-confident scientific outlook cannot foresee. The ethical precept says that the moral agent should not be responsible for the outcomes of his deed if he can know them. Man is now lacking the knowledge of the conditions of the circumstances in which the consequences will appear. As a result, a dangerous argument (in Institutes like the ours and in treatises), emerges: "I cannot know the consequences of my act, neither can I know what future generations will be able to repair if my deeds may have harmful consequences. Hence, I am allowed to relieve myself of my responsibility for decisions with serious but temporary consequences. As we found solutions for our problems so will and should our offspring find solutions for their problems, including the ones we have passed over to them." This is, in my opinion, the main ethical problem of the age. Man does not feel responsible for what may happen in the future as the result of his own activity here and now: "I can do whatever I will, on the best way possible in this scientific and technical situation, for the benefit of my own contemporaries". The extension of possibilities in contemporary man's thought is the core of the "ethos of progress" which is held the Good, without the need of examination of the consequences, and of reasoning of responsibility for them. Even if the examination would find negative results, the drive to progress overwhelms, and the consciousness of responsibility can be comforted by expectation of further unlimited extension of possibilities, which will correct the faulty results. "To stop progress" is considered an evil in itself, as it contradicts the direction of culture. "Progress for what?" does not seem to be a relevant question.

Another, extremely difficult ethical problem is that the conditions of the laboratory are void of relationships. The assumption that the transfer from laboratory to reality - that is, into highly complex web of relations - is a continuous act, is but a misconception, which may weaken the consciousness of responsibility for the related consequences.

Ethics rooted in the view that existence in itself is good - since it is given by the supreme sovereign of Being - held that sanctity and value of existence is the *summum bonum*, no matter what the quality of its actualization may be. The imperative to preserve the "sanctity of life" is now shaken not only because of the reopened question of "sanctity", but as a result of the awareness that the given is not the decisive factor for being, man himself can shape it according to his requests. The fundamental ethical problem faced by medicine is now: "*what is life?*" and "*what is existence?*" (In the last weeks the Zadok-case - one of the many when somebody is in a comatose state - exemplified the problem). The ethical imperative is not the preservation of existence as such, but the responsibility for the preservation of the *quality of life*, related to human and natural surroundings, in the present and in the future. The responsibility for the prevention and reduction of suffering immediately is indubitably the first duty, but it does not encompass the whole context for

choosing an act in the entire social and historical dimension. The dilemma emerges from the evidence, that the reduction of suffering when it occurs, may cause continuing and aggravated suffering of the person himself and of those related to him, in the narrow and the broad circle. The medical (including the bio-technical) act cannot be considered pinpointed in an actual case, without reasoning the conditions of the whole field of responsibility. The "success" in the prolongation of the almost vegetative existence of a gravely injured semi-person, or an aged person in advanced degeneration of life-conditions, suppresses the awareness of *comprehensive-relational responsibility*. The gratification of success in giving existence to a tiny, premature fetus too, lets one easily forget the comprehensive-relational responsibility for expectable developments of the future being in his surroundings. Prolongation of existence is not the "absolute good" which sustains its own justification without the proof of the wide range of relationships. Medical act is yet focused in the suffering person, not in the circumstances, not in his family, not in the society which keeps the responsibility for him. This is the consequence of the yet valid Hippocratic oath. Nevertheless, it is not baseless to argue, that one who prolongs existence by all the means available, is less responsible than the one who weighs the conditions and decides not to prolong it. The time has now come to give legal validity to man's free decision to end his existence in dignity and security, actively assisted by responsible medical procedure. The right of man to an end of dignity is not less than his right to exist. It is not the same to cease to exist as to die as a living person. If we do not make this distinction, we do not understand the essence of the new ethics. Arguments against it raise a pseudo-objection even in the religious context. *All* religions authorized man to be sovereign on life and death: some institutionalized the sacrifice of human beings, others the burying of the wife with the husband, others erected fires to burn heretics; some urged life-vengeance, killing for family's honor; faithful people also approve killing for material, social, national and political reasons, beyond Divine providence. In the case-story of the Talmud man was questioned when two people in the desert remained with one single cup of water necessary for survival (the solution of Rabbi Akiva was psychologistic); when either the mother or the embryo had to be saved in birth-crisis (the solution prefers life, not existence); men had to decide whether the mortally injured (the "trephah") should be saved, or should be helped to die, and the like. In fact, no ethical and legal regulations in any social system, including the religiously tainted ones, considered Divine providence as the motive of action; this emerged only post factum in theodicy. In the Talmud men had to decide who and when should live and die. In the whole of the Maimonidean medical literature, as also of other Jewish healers, nowhere can be found the argument, that God has to decide. (Halachah has the advantage that there is no "the Halachah", since it is but a *method*, which can be implied in the new human situation as was in the previous ones).



Similar is the question concerning the *initiation of existence* by medical assistance. Technique has made it possible to bring into the world and to keep in *existence* a fetus lacking the potential for *life*, even on an almost pre-human level. On the other hand, technical means also enable us to know in advance that very absence of potential. Comprehensive-relational responsibility does not approve the decision to let such a fetus be born, since the circumstances of its existence might multiply the suffering of itself and of its caretakers, particularly when the loving persons will die. "We are now not forced to take part in 'the roulette-game of nature'" - as *Joseph Fletcher* (a Harvard theologian) put it. In many, if not all, faith-directed universities genetic engineering is researched and taught, including the cloning of new species, not created on the fifth and sixth day.

The negation of human sovereignty on man's natural drives is similarly baseless. There has never existed any culture and society which allowed nature's own "logic" to be carried out by aggression, sexual hyperactivity, madness, and the like. All confronted the phenomena in the dimensions of social responsibility, and all used whatever means available at the actual stage of scientific and technical ability. As the use of natural drugs to change behavior in "natural" cultures was acceptable, so now, psychiatric and neurophysiological intervention are legally permitted as the preferred alternative to damage. Here too, nature is not considered to "know best"; society and its deputy, the medical doctor, are given sovereignty over the person of "evil character".

In prior ethical reasoning the commensurability of act and consequences was taken for granted, that is the moral agent was held to be able to bear the consequences of his deed, since those were not beyond his capacity. In the technological culture the act of a person can, and mostly does, bring about consequences for which the agent himself cannot bear responsibility; the burden falls on society and its institutions, often societies and institutions far remote from the act performed. The agent is well aware, already while deliberating before the decision, that he lays upon the anonymous "society" the responsibility for the outcomes of his own deed. Hence his own consciousness of responsibility weakens, even disappears.

The expansion of consequences and their dimensions bring about tight attachment-relations between fields of activity which in the past were not combined together in the moral agents' responsibility. In the new culture, in no field of activity is it possible to concentrate the outlook on the particular act itself, without considering the possible social, economic, political, ecological consequences. In our context: a medical act cannot be delimited within the single person's life and suffering; It involves the meaning of the act in a broad field of relationships, although those may be latent. Prior medical ethics did not encounter a similar situation; public-social medicare, with its political, economic, and social implications is a new phenomenon, preceded in a narrow

measure by the charity-medicine of the churches. Here too, the move from the prophetic ethics, which warned the agent from deeds causing remote historical and social consequences, to Western personalistic ethics is apparent. (The trends of commercialization of medical care are offsprings of Western personalistic ethics.)

As a result of rapid development, the interval between the elaboration of laws in the applied sciences and between their embodiment in technical procedures has grown significantly short. Combined also with the dominant attitude of professional and also commercial competition, intensified by the rapidity of information in the open world, this immediate transition seriously challenges the consciousness of responsibility. "To come as first" has economic advantages, which in the current trend of the ethos of consumption are considered as the decisive ethical factor. The more the established public system fails to bear responsibility for everybody who may need the care, so more the temptation - and, in the spirit of commercialization in all fields of activity at this time, also the trend - emerges to transfer the problems over to the market, whose laws are exempt from the burden of moral responsibility and of the obligation to consider the future, since the future does not take part in the actual "game of the market". Health and suffering becomes embroiled with the struggle between unequal potentials of persons, as well in their initial conditions as in their sequel circumstances.

The technological culture in general, and medicine within it, increases socio-economic polarization. Equipment is expensive and the costs of its use exceed the financial capacity of a growing majority of the population. The necessity to make preferences of investment of the limited resources poses ethical and political questions for the actualization of responsibility. The dilemma of selecting the candidates to receive the needed care, emerges. Who should be chosen: the young? the old? those more healthy and likely to prosper, or the more suffering? Those with family? Those that are lonely and lack support? Any preference and selection of one brings about consequences for another.

Summing up the few exemplary problems mentioned, can be concluded that *the crucial problem of contemporary medical ethics seems to be the shift from case-centered to comprehensive-relational responsibility*. It may be difficult for doctors to adapt the conclusions, because they face the suffering of a concrete present person and are forced now to consider the person in his familial, social and even worldly relationships.

The question is yet open: to whom, or what, is man called to account for moral responsibility? This question turns our treatment back to the two concepts: foundation and state (Matza u'matzav' מצב ומצב ). Is man's life that very foundation, as given with the rush from the womb (or according to new observations also in the womb), or is the human being the state of

relations he created while living in the world? The point is not the ontological priority and a normative priority derived from it - in the sense that, since the taking of a stand on existence precedes life, the normative validity of the first is the stronger one. The existential foundation itself has no ethical status, and hence, cannot evoke the duty of responsibility. Divine, or natural-evolutional origin of existence cannot be the source of the consciousness of responsibility. Life we did not *get* - we *create* it, within the world of human activity. Hence, our responsibility refers to the conditions of the world.

Since a characteristic of the technological culture is the intensification of multidimensional interdependence, the new formulation of a categorical imperative must be: "*Act so that your deeds strengthen the quality of life of the individual and the social Other, and preserve the relationship-ties.*" Since the human being is related, the quality of life can and should be weighed according to the quality of relations. This bond between responsibility and relationship-ties has even greater significance now that the consequences people bring about by their actions often exceed their capacity to be responsible for them. Hence, a new formulation of the principle of free choice is needed, too:

"The individual is free to choose insofar as he is able to bear responsibility for the consequences of his decision. He should be prepared to accept the limitation of his freedom if the consequences of his choice will prospectively be laden on the individual or the social Other, in the present and in the future. Society has the right to limit the freedom of the individual if the consequences (whole or part) might be laden on the individual or the social Other."

Obviously, any norm and law limits the freedom of a person to choose that which *he* considers as good. The formulation suggested above limits the individual's free choice if the responsibility for the act is conveyed on the Other. In our context: it is fully justifiable to prohibit the act of giving existence to a fetus condemned to remain in non-human conditions all its "life"; especially since society's institutions - now and in the future - rather than the progenitors, will bear the social and the financial costs of maintaining its existence, thereby diverting much needed resources from the improvement the lives of many others. Law can prevent the prolongation of existence of hopelessly terminal cases (no longer *persons*), that is, to give the right and the duty for medical intervention. Many states and religions already established normative and legislative regulations for family planning, as the result of the awareness that even society and state cannot be responsible for an overcrowded world. (A known Columbia-theologian - Roger Shinn - raised an interesting argument for birth-control: The commandment "Pru v'rbu vemilu et ha'eret" "

פרו ורבו ומלאו את הארץ" - "be fruitful and multiply, and replenish the earth" - is but a limited one: mankind already replenished the Earth, hence the commandment does not oblige anymore).

Technological culture summons a relational ethics, which turns the responsible reasoning of the moral agent toward the socially and historically open area of ties and toward the courageous and rational use of science and technique for the sake of survival of man and nature, and for the sake of a life of quality and dignity.

## DISCUSSION

**David Lieber:** We have heard two very stimulating papers and I know that you have many questions. We have a little time for some discussion. Just to our American brethren, the last comment, "Prou ur'vou" obviously means be fruitful and multiply and the verse says, "And fill the earth." Since we have filled the earth already there is no longer a need to carry out that commandment.

**Amitai Halevi:** I want to thank the participants from my Institution.

In response to Prof. Barzel, I know that theology is an attempt to comprehend the nature of God; cosmology is no longer quite reflection on the cosmos, but its study; biology is certainly not the comprehension and interpretation of life's meaning, but the study of living beings, so I think technology is properly called the study of techniques. Therefore, I do not think we have to change the name of the Technion to Technical Institute.

A second comment is that, being a pure scientist, I find it extremely difficult to make a sharp distinction between pure and applied science. It is easy to say, as Dr. Barzel does, that we cannot limit pure research but we have to stop at the borderline between applied research and technological development. As a pure scientist I think that one of the main problems is: where is the dividing line? It is not at all obvious where it should be drawn - or by what criteria. I do not want to go into it now, but this is certainly something that might be taken up at future symposia.

Finally, about the "pru ur'vou" ("1271 179 ") question, the Halachic tradition is that you are not allowed to make rules based on the Bible itself. You have to go through the development of the Halacha, from the Bible, to the Mishna, to the Talmud, to the Poskim, and unless you can convince the Poskim that the world is full, you are not going to get a Halachic decision in favor of birth control.

**David Lieber:** Thank you. Any other comments?

**Daniel Gordis:** Just to Dr. Halevi on that last point. I relate your last comment to Prof. Barzel's last point, that what you were talking about is The Halacha, but I think his response is that is not what he was talking about getting a Halachic decision by a certain Poskim. I don't think that is what he was referring to in terms of the Halachic process.

I had a brief question to Elliot and Prof. Barzel: Elliot, I wanted to ask whether perhaps you might want to draw a somewhat sharper distinction between questions of ethics and questions of politics. Let me suggest what I mean in two instances. For example, in the discussion of Plato it seems to me that when you are talking about ethical theory in Plato, what you are talking

about is ethical norms and principles derived from a certain rational quality of the world. The issue of why an individual ought to obey is a political question but the source of ethics in Plato is not the fact that any Philosopher King can impose the will on the individual but it is the nature of the world, the rationality of the world which, to some extent or another, is accessible by one or another inquirer. Though none to the extent of perfection of the Philosopher King. So it is essentially a political issue, the notion of obedience. But the ethical theory implied is one of the rational nature of existence. I say that also in terms of the conclusion of the paper where you move from a discussion of the implications of the pluralism of ethical theory to a specifically political questions: how a state, how Israel vs the US negotiates the fact that there is a pluralism in views of ethical theory. But the fundamental question which ought to precede that and I think that you perhaps did not pay sufficient attention to, was not how one negotiates a variety of theory but how the individual who no longer is condition by a single ethical theory but who himself or herself draws on a variety of them, integrated into an approach. It is only a secondary question, of how that approach, once arrived at, is negotiated within the social context of competing theories.

Professor Barzel, I would like to ask just this question, and I guess I am looking for a little more optimism than I found. You came out of the experience of Buenos Aires being pessimistic and I understand why, but my question: Is your pessimism pragmatic or structural. In other words the disappointment with the lack of the prospective ethics emerging with a greater resonance in Buenos Aires is a disappointment of where we are but I would hope, and I would ask for your comment, that you are not suggesting, because that would negate the whole force of your comments, that for some structural reason, society may prove incapable, for some structural or theoretical reason, of including the prospective ethical perspective and in some way overcoming or at least mitigating the shorter term ethics of consumption, etc. Is there in fact not at least the beginning of a growing sensitivity that the unbridled exercise of the ethics of consumption is going to lead to an ultimate human tragedy and even if it were not successful and triumphant at Buenos Aires, is there at least not some glimmer of hope that there is a greater sensitivity to that reality that you described so well developing?

**A. Barzel:** Professor Gordis senior asked me if my pessimism after the Rio de Janeiro Conference of Ecology is "pragmatic or structural." Obviously, the answer can be based on actual impressions only: at this time, and until the day comes when mankind does not culturally and politically institutionalize a different conviction and world-view - that is, as long as the current attitude will rule decisions and actions - my pessimism points to the structural constitution of reality. In a society directed by the ethos of consumption and by the drive to increase maximum benefits on the open market, in the arena of "free competition" - that is the free struggle between unequal competitors - the

dangers will remain structural. The "pragmatic" itself is but a consequence of the structure of the consumers' and the competitors' society and ethics, as Rabbi Gordis correctly called "the shorter-term ethics of consumption". Possibly, he is experiencing in Los-Angeles "the beginning of a growing sensitivity, that ... the ethics of consumption is going to lead to an ultimate human tragedy" and hence he has "at least some glimmer of hope". I wish that I could too, but I am afraid, that we have here no indication for such a "growing sensitivity."

**David Lieber:** I would like to accept a few questions before they respond. Any other questions or comments?

**Miriam Cotler:** I will try to be brief and it is primarily for Prof. Barzel. I have read some very interesting contradiction and discussion about whether or not these are in fact new issues. For each age, the questions seem new and I would agree that our ability for destruction is new. But I think what it poses is an opportunity.

The comments I wanted to make are with respect to premature children. The first is, we do not always know what their quality of life will be. We do not know what their prognosis is, and we do not know what their level of impairment is. And so there is this tremendous pressure on physicians.

With respect to decisions to limit treatment choices for the individual and there I think we need to be real clear. Those have to be social policy decisions. Here, Dr. Gordis' question to Elliot is relevant. The physician says "I can not make those choices at the bedside," and I think he or she is correct - at the bedside, unless we do them on an individual case, unless we do them as a matter of social policy then we are in trouble and I think it is what this kind of conference is dedicated to look at.

**Avraham Berkovits:** Although we are supposed to be leaving Jewish sources to a later session, I cannot help but bring them up here, particularly after my friend Alex Barzel's comments on two points.

You mention the right of a human being to extend his life or shorten his own life. There is a similar discussion, a very heated discussion, in the USA today: the right of a woman to abort or not abort - these questions we have already brought up here too. These questions are moral questions and ethical questions in the Jewish sphere, which touch the basic understanding of what the human being is. I think our sources would say that there man has essentially three responsibilities on earth.

First, man was made, not the owner of the world but the trustee and steward, in the sense that he is responsible for the functioning of the world he lives in, every part of it, including himself. Even our own bodies, in Jewish

thought, do not belong to us. It is not to say "this is my body, I can do what I like with it," or "this is my life I can do what I like with it." I am a trustee for myself just as I am a trustee for animals, for everything else in life. This does not give us an answer, it gives us a question. It sharpens the problem.

The second responsibility of man is equality. The saying of Rabbi Akiva that "who says that your blood is redder than your neighbor's blood" negates the philosophy of strength, of the idea that I live for myself and what I can get for myself goes. We have as part of our responsibility the principle that we are no better than the next man. Nevertheless, Halacha says that each one of us is his own next-of-kin. Therefore, questions of who gets first treatment and who does not get treatment are Jewish questions just as much as any other.

The third point is that we are responsible not only for what is today but for what will be in future generations. Jewish medical ethics must be guided by these basic principles.

I will close with this comment: We have tools to deal with all of these modern problems, but the tools which we use must be tools which are both traditional and standard. If you put a new dish on the table which I have never seen before, it does not mean that I have to invent a new knife and fork. I can eat with the same tools that I had before. To say that Halacha is a changeable thing and that therefore we will change it to what we want as a solution is, in itself, highly unethical. That is parallel, I think, to the scientist who goes through a large and complicated research problem and then makes sure that at the end of his computer program there is a little procedure which says: PRINT X = 1; Y = 2; and so on; so that he is sure that he gets the right answer. That is unethical, and it is just as unethical to use Halacha in order to get the answer that you want.

**David Lieber:** I know that there are many other questions and comments but we are running short of time and I would like to give our respondents a chance.

**Elliot Dorff:** The difference between a static and a dynamic understanding of the nature of the world lead you to very different understandings of how you deal with ethical problems. The reason that I pointed out that Plato assumes a static understanding of the world is because it is so different from the way that we normally understand the world. Say you start out with the assumption of rationality. Even rationality and later, in light of 20th Century understanding of things, for that matter an early 20th Century understanding of things, people like Alfred North Whitehead, for example, has become a very dynamic notion. In other words, what is reasonable in one period of time might not be reasonable in another period of time. It depends upon your canons of rationality. So the whole thing is up for grabs and that makes everybody uneasy. Plato's world is a much more secure world. You may like it but at least



*you know what is coming and what is going. But in our world, in the late 20th Century, not only is the world itself changing but even our understanding of what is reasonable is changing. That is what makes it so difficult.*

*In terms of Platonic issues having to do with ethics and politics, we'll talk about it later, that is fine. He has trouble with politics and he changes his mind from *The Republic* to *The Laws*. The question of what you do with politics in terms of politics is a question of where you are during his career.*

*The other point made, which I want to stress and is indeed absolutely correct, when you find out that somebody else has... if you grow up in a culture where everybody thinks the way that you do, or at least you can assume that, then to think that somebody else thinks about things differently is a real shock. The first question is: How do you integrate the very fact that other people think differently into your own understanding of the world. You might say that all of those other people are just Barbarians, or you might say worse, that they are dangerous and they should be gotten rid of. Kill them, or something like that. That is one way in which you can understand that other people's views are different from yours. Hopefully, you do not do that. Hopefully you come to some understanding of how you can see that other people have views which might be valid, maybe even more valid than yours on some issues, at the least, views from which you can learn. That is the first step and it is a hard step. That is the first ideological step in order to be able to come to some kind of pluralism.*

*The next question which I looked at is, how do you negotiate differences of opinion. I would suggest that even if, this is where we disagree I think. Even if you do not believe that other people have valid views, you might negotiate a compromise on particular issues because you find that your views overlap in certain areas, even if you come to them in very different ways. We differ in that I do not think that you have to have ideological acceptance before you can get political compromise, but we will talk about that.*

*David Lieber: I want to thank Prof. Barzel and Prof. Dorff for a really exciting session.*

**PROBING CLASSICAL SOURCES  
FOR ETHICAL COMMITMENTS**

## INTRODUCTION OF SPEAKERS

**Ron Wolfson:** I am the Director of the Whizin Center at the University of Judaism and it is my pleasure to introduce the second session of the day. Since Torah has already been raised as an issue, this session will deal with Torah "m'mash". We will begin with *Prof. Daniel Gordis* who comes to us from the University of Judaism. Danny, as we know him, received his ordination from the Jewish Theological Seminary in America. He serves in several capacities at the University of Judaism, a lecturer in Rabbinics, he is our Dean of Students and an assistant to the President. Danny is completing his Ph.D. in the area of legal theory and ethics at the University of Southern California in Los Angeles. As those of us from the University know he is an outstanding teacher and thinker and we have asked him to probe the classical sources for ethical commitments.

Our respondent this morning is *Prof. Chanoch Jacobsen*, born in Germany and has been a resident of Israel since the founding of the State in 1948. He was educated at Hebrew University and the University of Wisconsin in Sociology. Professor Jacobsen has been with the Technion since 1969 on the Faculty of Industrial Engineering and Management and his research is in normative systems, social control and institutionalized evasions.

Rabbi Gordis will begin with our major presentation and Dr. Jacobsen will respond. We will then have time for discussions.

# Probing Classical Sources for Ethical Commitments: Towards a Methodology of Jewish Ethics for the Twenty-First Century

Daniel H. Gordis

The occasion of the First Annual Whizin Conference on Technology and Ethics is cause for genuine celebration for all of us who believe that dialogue between the sciences and humanities is vital. But it is an especially auspicious moment for those of us committed to two distinct propositions and their interaction. This first proposition is the claim that the ethical component of Jewish life is a vital dimension of the process of living as a Jew. The second is the assertion that the rapidity of technological advancement in the second half of the twentieth century confronts ethicists in general and Jewish ethicists in particular with tremendous methodological challenges. This new partnership between the University of Judaism and the Technion will provide all of us with opportunities not only to share the results of our research and writing, but to muse together about the interactions between these two propositions. If Jewish ethics remains vital, but technological advancement has exhausted our ethical vocabulary, what is the future of Jewish ethics? Ought we give up on the enterprise of uniquely Jewish ethics? Are there insights which those involved in developing the technology can share with those whose research is in the field of ethics? And can ethicists possibly contribute new methodologies which might respond to the impasse which technological advancement has created?

In the pages that follow, I would like to present a particularly legal dimension of the methodological problems faced by Jewish ethicists who are interested in issues of technology. I will first explain why ethicists face problems in legal methodology, and will then proceed to describe some of the responses that have been made to the problem thus far. Following that, I will discuss why I believe that the responses we have fashioned to date are not satisfactory, and I will argue that ironically, Jewish ethicists may have a tremendous amount to learn from secular scholars in the field of legal theory, or jurisprudence. Finally, I will attempt to demonstrate how one particular model borrowed from the secular jurisprudential academy might be applied to an actual Jewish ethical dilemma.

## A. INTRODUCTION

We all recognize that the rapidity of technological change in the latter part of the twentieth century has outstripped the ability of many other disciplines to speak thoughtfully about the ethical implications of these

developments. In numerous professions in our society, lawyers, physicians, scientists, journalists, ethicists and elected officials find themselves ill equipped to respond to situations of which they could scarcely have conceived a generation ago. Our ability to intervene in the process of conception, the availability of tremendous amounts of information about the fetus relative to what we had twenty years ago, our techniques for forestalling death and our new criteria for even defining death have all confounded physicians, other health providers, ethicists and lawyers. Novel social arrangements, such as the variety of contractual arrangements classified as "surrogate motherhood," illustrate how ill-prepared we are to define parenthood, progeny, family, rights and responsibility. Advances in information technology force us to reconsider previously held assumptions about privacy and disclosure. Across the map of human advancement, we find ourselves confronted by questions that we now recognize we are not fully equipped to address.

But this condition, which impacts secular ethicists, lawyers, physicians, as well as Jews in those professions, is in some ways even more crucial for Jews. For to many Jews, much of the discourse of modern Jewish life is predicated on the assumption that the classical texts of our tradition will provide much of the foundation for our modern conversations [1]. Yet at the same time, we cannot deny that while talmudic texts do speak of definitions of death, they do not address the issue of brain stem death; we know that although the legal codes of the Jewish tradition might speak of parental responsibilities vis-a-vis children, they never address issues like "surrogate mothers" and that in general, many of the questions that cause us the most agony today never even entered the minds of the scholars represented in our classical works. How then, we find ourselves asking, should we continue the project of Jewish ethical analysis? How ought our modern discourse continue when it is dependent on texts that could not imagine the situations which cause us to turn to them?

Critics of organized religion respond to this question by asserting that the project is effectively impossible. They claim that in our attachment to an ancient set of texts, we set up for ourselves an insurmountable obstacle, and that the most effective way to respond to these novel issues would be to dispense with the detritus of ancient civilizations and to forge brand new ways of thinking about these issues. But for those of us for whom Jewish life is a central defining factor in our sense of self [2] and for whom these texts often appear wise beyond any expectations, discarding them in favor of some new system seems spiritually self-destructive and intellectually short-sighted. For if we were to do so, what would make "Jewish ethics" uniquely Jewish? And if Judaism has nothing to say about these modern and novel situations which often force us to re-conceive our notions of personhood, fairness and equity, in what way is Judaism relevant to modernity?

The discussion that follows assumes, admittedly without "proving" in any sense, that it is our goal that the Jewish tradition retain - or recapture - its ability to speak with intelligence and sophistication about these issues. I will also assume, again without doing sufficient justice to competing claims, that the enterprise of Jewish ethics by definition requires a confrontation with classical Jewish texts. As a result, the operative question thus becomes a methodological one: how are modern Jewish ethicists and other scholars interested in a uniquely Jewish perspective on some of these issues to read these classical works? What hermeneutic - either classical or modern - will be required to allow these texts to speak to our modern concerns? As suggested above, I will argue in the sections that follow that because the Jewish ethical enterprise has always been effectively a legal enterprise, our search for a methodology for modern Jewish ethics should take into consideration the insights of modern legal theorists. Before doing so, however, we first need to establish the fundamental link between Jewish ethics and Jewish law, or *Halakha*.

## B. JEWISH ETHICS AS JEWISH LAW: THE ASSOCIATION'S PROBLEMATIC IMPLICATIONS

While it is true that, beginning in the nineteenth century, Jewish communities in Europe developed a movement known as Mussar which was particularly devoted to issues of ethical living, for most of Jewish history, the work of Jewish ethics has been carried out in the sphere of Jewish life; the poles of ethical/unethical have often been expressed in terms of permissible/forbidden, or mutar/assur. In a religion predicated so extensively on the notion of *mizvah* as a reflection of God's will, we can well understand how this association would develop. If one believes that the legal components of the Jewish tradition were revealed by God, then by definition, those legal demands must be ethical. And if those legal demands represent the very definition of morally appropriate behavior, then the natural way to determine whether or not some planned action is ethical is to determine whether or not it is permissible.

That the enterprise of Jewish ethics has been carried on in largely legal terms is almost beyond debate [3]. Jewish ethics, at least until the modern period [4], has effectively been what we might call "halakhic ethics." But beyond that claim, virtually nothing is beyond debate. There are those who would argue that this association is theologically mandated and that it functions well even today. Others might suggest that while it may not be theologically mandated, it still functions acceptably. Still others will insist that regardless of theological considerations, the association between ethics and law is so entrenched in Jewish life that any authentically Jewish ethical discourse will have to make use of legal terminology. Many writers in all three groups have argued that in its insistence upon law as the foundation of human action, Judaism is more realistic than other traditions about our

motivations and about what considerations are likely to be sufficiently powerful to actually have an impact on how we act.

But while the penultimate assertion above, namely that any authentic Jewish ethical conversation must be predicated on legal texts, may also be defensible, it raises a variety of problems of which I will mention only two. The first problem, which this paper does not address in any length, is the potential conflict between law and ethics. If one begins with the assertion that Jewish ethical questions will reach resolution by the application of legal texts and methods, how does one react to legal texts that seem unethical? After all, the very foundation of this methodology insists that the legal defines the ethical! Are these "extra-halakhic" ethical considerations considered invalid because they may stem from a source of ethical insight other than Jewish law? And if we are to give them credence, where will we draw the line? Will Jewish law simply become the manifestation of ethical commitments derived elsewhere? In what sense would these laws or ethical claims then really be Jewish?

Obviously, the talmudic corpus itself was not entirely oblivious to these problems, and in a variety of texts on topics such as *lifnim mi-shurat ha-din* [5], it seems to try to work out means of skirting unavoidable results [6]. In other well known texts, such as those dealing with capital punishment [7] in general and with *ben sorer u-moreh* [8] in particular, one sees the rabbis hard at work seeking to maintain their allegiance to the law while incorporating their ethical sensibilities into the outcome of the legal process. But significantly, because of obvious theological considerations, we do not find texts that explicitly confront the possibility of intrinsically immoral *mizvot*. At best, we get reassurance that a just God has a reason for all the commandments, and that our fallible intelligence cannot fathom the justice of everything that has been commanded.

And this inability to directly confront the possibility of an immoral law figures is also manifest in the work of many modern halakhic scholars [9]. In Chapter six of his book on *Morality, Halakhah and the Jewish Tradition*, which is the portion of the volume devoted to "Morality and Halakhah," Shubert Spero addresses the above-mentioned topics of *lifnim mi-shurat ha-din*, the tension between *din* and *rahamim* and supererogation. But never does the notion of an immoral halakhah surface. Similarly, in his now classic paper "Does Jewish Tradition Recognize an Ethic Independent of Halakhah?," [10] Aharon Lichtenstein addresses that tantalizing and powerful question only through an examination of whether or not *lifnim mi-shurat ha-din* is legally actionable. In fact, he fails to resolve even that more limited question, and concludes his paper with the now famous passage, "for those who prefer definitive answers, let me conclude by saying: Does the tradition recognize an ethic independent of Halakha? You define your terms

and take your choice." Even David Weiss Halivni, in his "Can a Jewish Law be Immoral," [11] can ultimately not make a definitive claim on this matter. For all these scholars, the overwhelmingly problematic nature of a claim that revealed law could possibly be immoral effectively precludes anything beyond a token discussion of this profound and crucially relevant issue.

But the second implication of the close nexus between law and morality in the Jewish tradition is more germane to the participants in this Conference. In this second implication, the problem we confront is not that the law might mandate some course of action that we find morally objectionable, but that it would not mandate anything at all! Many of us share the sense that the huge scientific undertaking commonly referred to as the "human genome project" will touch on areas that any religious civilization would consider of ultimate importance. But obviously, there are no halakhic texts about the human genome project. Does that then mean that Jewish ethics has nothing to say about the issue?! According to some conceptions of the legal process, that would indeed be the implication. But in the eyes of the theorists, the absence of some specifically stated law or rule about the subject does not mean that a legal system has nothing to say. In order to understand these various claims, and in order to begin to relate them to the halakhic enterprise and the process of Jewish ethics, we turn now to a brief excursus summarizing some of the major commitments of these respective schools of jurisprudential thought.

### C. SECULAR JURISPRUDENTIAL THEORY AND JEWISH ETHICS

The first school of jurisprudential thought we need to examine in light of the questions raised above is not only the oldest, but is also that most commonly associated with *halakhah*. This school, known as jurisprudential positivism, has strong adherents in both the secular as well as Jewish communities [12]. Legal positivism is named for its claim that the law obtains its authority from the fact that it is posited. Philosophers such as John Austin, Bentham, H.L.A. Hart and Joseph Raz have all promoted one version or another of this philosophical view, and claim that law becomes authoritative when a human being with the appropriate authority posits it [13]. Positivism, therefore, is a social thesis, which claims that what is law and what is not law is a matter of social fact. The various formulations of positivism, claims Rax, are all elaborations of this crude formulation [14].

This "social thesis," the claim that the existence of a law is a social reality, or in other words, that it is determined only by the processes and procedures legitimated by society, leads inevitably to a second and related thesis, commonly called the "separation thesis." This postulate, which is derivative of the first, claims that there must exist a complete separation between law and other schools of human discourse, including morality. Morality, says the separation thesis, never determines the content of the law. Because what is and what is not the law is purely a matter of social fact, the



moral caliber of the law is irrelevant to its authoritative status.

The combination of these two theses leads us to the final of these three characteristics of positivism that we shall examine, and the characteristic which is most important for our discussion. As we shall see, when we link the "social" and "separation" theses, we come to the conclusion that there must exist a large variety of cases and issues on which the law says nothing, and therefore, about which the law can give no guidance whatsoever. In cases without clear precedent, positivists like Hart therefore conclude, judges have virtually complete discretion to rule as they see fit.

Because this concept can be somewhat complicated to those not familiar with the quirks of jurisprudential theory, it is worth restating, this time in the words of Ronald Dworkin, a faculty member of Oxford and New York University and an opponent of positivism who has written extensive descriptions of that position. Dworkin claims that positivists essentially agree that (a) a community's rules can be identified not by their content, but by the manner in which they were created or accepted (a quality commonly referred to as their "pedigree"), and that (b) the set of rules which a given society calls law is the exhaustive set of restrictions which fall under the category of "the law," so that should a case arise that is not covered by any of the existing rules, that case cannot be resolved by "applying the law" [15]. As we noted above, there exists a necessary link between Dworkin's two observations. Since the pedigree of a rule is dependent only on the nature of the person or institution which promulgated it, the content of the rule is necessarily irrelevant to its pedigree. In the absence of some non-source-related standard for evaluating the pedigree of rules, the system of authoritative rules provides no indication of how a judge should rule if a case before the court has no relevant legislative or judicial history. In fact, both positivists and their opponents agree that positivism as a school argues that when an issue has no relevant precedent whatsoever (a phenomenon which Dworkin calls "hard cases" and to which Hart refers as cases in the "penumbra"), judges will not find any standard in the law to assist their adjudication. Indeed, these scholars insist that at such moments the judge has virtually unconstrained permission to use her own discretion. In hard cases, in other words, judges are effectively forced to legislate.

But if we return to the central focus of this Conference, it becomes immediately apparent that the claims of positivists like Hart suggest that we should all go home! For according to Hart's notion of "hard cases," if the law says nothing about the case, then the actors involved are presumably not governed by any legal standard. When we recall our earlier claim that Jewish tradition has typically associated the ethical with the legal, we would come to the surprising, disappointing and rather counter-intuitive conclusion that in a variety of cases, *halakhah* would claim that Jewish ethics places on limitations on the scientists, researchers, journalists, attorneys and physicians

involved in the cases we enumerated above.

But as is to be expected, many traditional scholars who associate *halakhah* with a positivist notion of jurisprudence have reached this same realization. They understand that positivism might well argue that many of these issues simply have no Jewish response, but they find that claim objectionable. In response, they subtly move to a position which many jurisprudential theorists call "legal formalism." According to formalism, it is the job of the judge to address new legal questions through the application of the model of a legal syllogism. In halakhic terms, a (somewhat controversial) halakhic syllogism might thus claim: [Major Premise]: adultery is forbidden behavior [Minor Premise]: because artificial insemination by a donor (AID) [16] involves a woman allowing semen from a man who is not her husband to enter her body, it is effectively adultery [Conclusion]: AID is not permissible according to halakhah. Obviously, the central role that the syllogistic model plays in legal formalism implies a degree of rigidity in the way that judges in such a system arrive at their holdings, and it suggests that conformity to (relatively straight-forward) rules is the essential component of what a judge does.

But in order for these authorities to construct the syllogisms necessary for legal formalism, they have to find some law or legal holding which they consider relevant to the case at hand. And because they, too, reject as absurd the conclusion that Jewish ethics would have nothing to say about artificial insemination, to name only one example, they search ever more assiduously for some halakhic ruling which is relevant to their case. That is why several authorities, when ruling on the permissibility of AID, actually made the above analogy between that procedure and adultery [17]. But such a methodology brings with it a host of problems [18], foremost among which is the fact that it tends to hide the crucial ethical issue at hand. Thus, when halakhic authorities find themselves daunted by new technological innovations but do not wish to say that *halakhah* has nothing to contribute to the ethical discussion, and when as a result, they stretch the issue to find some parallel, we find that the most interesting and important parts of the conversation never get considered. When we speak of AID as adultery, we not only diminish the force of traditional moral arguments against adultery, but also obfuscate the real ethical questions of parenthood, children's rights *mutatis mutandis* to be raised by their biological parents, etc.

There are, therefore, a variety of reasons for beginning to suspect that jurisprudential positivism may not be the most productive or even the most "correct" way to describe what is at play in the halakhic process [19]. But ultimately, in addition to all the reasons listed above, we as Jews have one over-arching reason to abandon positivism; simply put, we believe that the *halakhah* is about something. We see in it more than random limitations on our freedom, more than rules for their own sake. Our tradition itself makes the claim that *mizvot lav nitenu ella le-zaref bahen et ha-beriyot* [20], and seems to

encourage us to see the whole of *halakhah* as greater than the sum of the parts [21]. Even secular philosophers, for whom the *halakhah* is not a central determinant of how they view law, have raised the same objection to positivism. Lon Fuller's famous and oft-quoted words are appropriate here as well [22]:

[the] positivist philosophy asks of law not what it is or does, but whence it comes ... No modern positivist elevates to a central position in his thinking any limitations contained in "the law job" itself, to borrow a phrase that was a favorite of Karl Llewellyn's.

Were jurisprudential positivism the only defensible theory of law, those of us who wish both to maintain the nexus between law and ethics in Jewish law and to promote the notion that Jewish ethics has relevance even in a modern technological era would be hard pressed to argue for our case. But, secular legal academies, primarily in England and in the United States, have produced a variety of competing theories, all of which deny the all-encompassing reign which positivism gives to its social and separation theses.

Obviously, a space such as this does not permit a full discussion of any of these competing theories. But alternatives to positivism abound. One could refer, for example, to Lon Fuller's discussion of the eight criteria which a legal system must exhibit to be legitimate [23], which include the requirements of "knowability" and "performability" [24]. Robert Cover's work on the role of narrative in jurisprudence [25] and Michael Moore's conception of judging as the discovery of "moral realities" [26] provide other possible avenues for avoiding positivism. But perhaps more than any other scholar, it is Ronald Dworkin - discussed above - who has articulated two primary components of a theory of judging which students of *halakhah* might do well to begin studying earnest. As we will see, the potential value of Ronald Dworkin's work for specifically halakhic jurisprudence is that it allows the judge to take precedent seriously, without having to resort to the syllogistic model which lies at the root of legal formalism.

#### D. DWORKIN'S CHAIN-NOVEL AS A BASIS FOR HALAKHIC-ETHICS

Seeking to identify the role that judges ought to ascribe to precedent, Dworkin is committed to finding a means by which judges can incorporate moral principle [27] (as opposed to precedent alone) into their work. Dworkin thus makes clear that his theory is distinctly non-positivist. In one of the most crucial turns in his work, he analogizes the judge to an author writing a chapter in a chain-novel, in which previous chapters were each written by other authors. Just as the responsibility of the author is to write a chapter that "fits" into the context created by the previous material, so too, the judge must seek to issue rulings that show the previous materials in their best light.

Dworkin thus assumes a view of interpretation which sees the reading of a legal tradition as an "attempt to show which way of reading... the text reveals it as the best work of art" [28]. The judge is interested in the meaning of the work as a whole, not in hermeneutic arguments about specific passages. Dworkin describes the process in this way [29]:

Deciding hard cases [30] at law is rather like this strange literary exercise. The similarity is most evident when judges consider and decide common law cases; that is, when no statute figures centrally in the legal issue, and the argument turns on which rules or principle of law "underlie" the related decisions of other judges in the past. Each judge is then like a novelist in the chain. He or she must read through what other judges in the past have written not only to discover what these judges have said, or their state of mind when they said it, but to teach an opinion about what these judges have collectively done, in the way that each of our novelists forms an opinion about the collective novel so far written. Any judge forced to decide a lawsuit will find, if he looks in the appropriate books, records of many arguably similar cases decided over decades or even centuries past by many other judges of different styles and judicial and political philosophies, in periods of different orthodoxies or procedural and judicial convention. Each judge must regard himself, in deciding the new case before him, as a partner in a complex chain enterprise of which these innumerable decisions, structures, conventions, and practices are the history; it is his job to continue that history into the future through what he does on that day. He must interpret what has gone before because he has a responsibility to advance the enterprise in hand rather than strike out in some new direction of his own. So he must determine, according to his own judgement, what the earlier decisions come to, what the point or theme of the practice so far, taken as a whole, really is.

Dworkin notes that reasonable minds could differ as to whether his view of interpretation (portraying the prior material in the best possible light) is an appropriate one, but he remains committed to this position throughout his corpus on the chain-novel. He makes several distinct points about this issue of interpretation. First, he notes that the goal of the type of interpretation he advocates is unrelated to the author's original intention. Original intention on the part of the author, Dworkin insists, does not necessarily have bearing on seeing the material as the best possible work of art [31]. Interpretation, he argues, is inevitable, and the positivist notion [32] of the rather mechanical application of rules to cases in the core is both unrealistic and undesirable. In this latter respect, of course, Dworkin's model conforms nicely to that of some

rather well-known *sugyot*, in which amora'im seem to have had no concern for the "original intent" of the verses involved [33].

Second, and perhaps more importantly for our purposes, Dworkin asserts that the process of interpretation in legal matters is ultimately a matter of principle. While in literature, the notion of "showing material in its best light" might make some aesthetic sense, the notion is all but meaningless in jurisprudential discussions. Therefore, Dworkin offers what he believes is the parallel notion for legalists [34]:

Law is a political enterprise, whose general point, if it has one, lies in coordinating social and individual effort, or resolving social and individual disputes, or securing justice between citizens and between them and their government, or some combination of these.... So an interpretation of any body or division of law... must show the value of that body of law in political terms by demonstrating the best principle or policy it can be taken to serve.

In Jewish law, the claim might well be that "law is a moral enterprise," and that good halakhic adjudication involves showing the value of the halakhic tradition by demonstrating the best moral commitments it can be taken to serve. That claim certainly makes implicit sense given the centrality of the traditional claim that the system was somehow revealed by a just and moral God.

A crucial point here, and one which Dworkin does not articulate as specifically as one might have expected that he would, is that his definition of the judicial enterprise radically alters the classic distinction between hard and easy cases [35]. Whereas for H.L.A. Hart and other positivists, easy cases are those for which readily applicable precedent exists, for Dworkin, easy cases are those in which the judge's theory of "fit" as described above produces one, unique interpretation. For Hart, hard cases are those in which the judge cannot rely on precedent, and therefore, to Hart's mind, must legislate itself. But for Dworkin, hard cases are those in which more than one possible interpretation of the precedent achieves a reasonable degree of "fit." Thus, the number of cases described as "hard" in Dworkin's system has the potential to increase exponentially. And when that happens, Dworkin believes, the judge decides between the various competing interpretations by employing "substantive political theory" [36] (or for the halakhic system, perhaps substantive moral theory). The process of adjudication, therefore, is highly political, controversial and inexact. Positivists, for whom demonstrability is key, obviously find Dworkin unacceptable for this as well as a host of other reasons. Dworkin, for whom law is fundamentally about a community's underlying political and moral commitments, sees the lack of demonstrability as necessary. Rather matter-of-factly, he notes [37]:

Any judge's opinion about the best interpretation will therefore be the consequence of beliefs other judges need not share... If we insist on a high order of neutrality in our description of legal interpretation, therefore, we cannot make our description of the nature of legal interpretation much more concrete than I have.

We, as path-seekers in the Judeo-ethical enterprise, have no particular reason to insist on a higher degree of either neutrality or specificity in the project we have been calling halakhic ethics. But we certainly do need some greater understanding of how Dworkin's work might actually unfold in a halakhic context, and it is to a very preliminary description of that unfolding that the following section is devoted.

## E. POSSIBLE APPLICATIONS OF DWORKIN'S CHAIN-NOVEL

How, then, would an application of Dworkin's proposed methodology proceed? In order to venture a tentative answer to this question, we now introduce two different models. The first, in deference to our scientifically oriented colleagues, uses mathematics (albeit simple mathematics, in deference to the humanists in the group) to illustrate the kind of questions the "chain-novel" image will force us to ask. The second tentatively applies the model to the question of the status of surrogate motherhood in halakhic terms. In both cases, as we shall see, the real value of Dworkin's model stems from the questions it forces us to ask, rather than the answers it provides. The very notion of a legal philosophy which produces questions rather than rulings may seem strange, but it may well be in keeping with the traditional religious sense that the purpose of the law - or the "law job" to quote a phrase we cited earlier - is not only to command and direct, but to encourage us to constantly reassess the fundamental values to which we dedicate our lives.

Let us begin with the first of our two models, or the mathematical one [38]. Let us assume that the halakhic system has produced four previous rulings (or precedents), in cases which we will label A, B, C, and D. The actual rulings, or *piskei din*, we shall call 0, 2, 4 and 6. Now, case E needs a halakhic ruling. In Dworkin's chain-model analogy, we have to begin to ask what the previous chapters which produced 0, 2, 4 and 6 seem to require in this instance. But we quickly discover that the answer is not nearly as simple as it looks.

At first blush, of course, it appears that the ruling in case E should be "8." That is because the sequence we have looks like a string of even numbers in order, and 8 is the next in sequence. However, this claim has a weakness, obviously located in 0, which is not technically an even integer. As we contemplate this weakness and wonder whether 8 is really what the legal system calls for, we realize that 10 might also be justifiable, since each integer is also the sum of the two previous integers. But opponents of this ruling will

quickly argue that 10 is a highly problematic solution, since it really only accounts for 6, which is the sum of 2 and 4. But it does not account for cases A, B or C, and as such, is not a reading of the sequence which "shows it in its best light."

Dworkinian rabbis, now reaching a certain degree of frustration, are interrupted by a rabbi in support of the 10 ruling, who claims that the real rule "revealed" by the sequence of numbers is a sequence "of even numbers, rising by addition of the previous two integers in the series." Thus, the answers in A, B and C are 0, 2 and 4, because they begin the sequence of even numbers (though once again, 0 is somewhat problematic). The answer in C must be 4 (and not 2 as the sum of 0 and 2), the radical rabbi points out, because otherwise it would not satisfy the requirement that the sequence rise with each step. This infuriates the rabbis who want to rule "8" in case E, and the judge feels compelled to step in.

But the truth is that all the arguments have some compelling characteristics, and all have weaknesses. Zero poses a unique problem, and the *dayyan rash*i believes that further investigation of the halakhic status of 0 may be required. But the proponents of 8 and the halakhic-ethical outcome will not give up, and certainly do not wish to wait for the conclusion of the 0-investigation; therefore, they argue that yet another reading of the precedents argues for 8. They claim that the rule at hand is really "the sequence of odd numbers, plus 1." Advocates of the 10 policy quickly retort that 1 may not be a prime number, and that even the 8-advocates would have to admit that their rule does not account for case A. The other group emends its rule, and says that the rule is really "zero, followed by the odd prime numbers plus one." But the 10-group argue that this is an artificial reading of the novel which the authors of the previous chapters could never have envisioned, and that it is only concocted to lead to the result of 8.

Just when it seems that a *teiku* is the only viable solution, a rabbi new to town happens into the *beit midrash*. He suggests that the sequence is so problematic because one of the previous rulings was an error. True, he admits, the halakhah in Case D is 6, but that *dayyan* actually made a mistake, and the case should not be considered [39]. We therefore have a new sequence of A, B and C, and the precedents of 0, 2 and 4. The case before the *beit din* is now D, and the answer is 16, since the rule might well be a sequence of numbers in which the next is the square of the previous. When challenged about 0, he claims either that the ruling in case A was also an error, or that  $0^2 = 0$ , and since the square of 0 is 0, the result was not included. The integer 1 would also not have yielded a change, so the court in case B went on to 2, which, of course, yielded 4. But a long-time member of the community, resentful of the newcomer, quickly undermines him and suggests that if "6" was an error, the answer should really be 4, since the rule could also be "the sequence of all even numbers beginning with zero, followed by their square, unless the square is

equivalent to the original integer, in which case the square is not included." Therefore, the sequence should eventually appear as 0, 2, 4, 4, 16, 6, 36, 8, 64, etc.

The rabbis quickly conclude that there will never be a resolution to the case, and decide to leave mathematics to the Greeks. Unfortunately for them, however, the disposition of legal proceedings of the more classic sort is often no less confusing! To illustrate just how complicated less hypothetical cases might be, we turn to our second model, that of surrogate motherhood.

Some philosophic commitments are necessary in order to issue a halakhic statement on surrogacy, because it is clear that surrogate motherhood constitutes a "hard case" under both Hartian and Dworkinian definitions. For "Rabbi Hart," surrogate motherhood constitutes a halakhic "hard case" because there exists no precedent that yields a clear answer on the subject. For Dworkin, this issue is also a "hard case," though in this instance because the precedential history, as we shall see, supports a variety of possible readings of the chain novel, and therefore, a variety of possible conclusions. But since we are interested in Dworkin at this point, let us pursue his model further.

In this model, a Dworkinian analysis of the question of whether or not *halakfah* should permit surrogacy arrangements first raises the question of which rulings to include in the sequence of precedents. One group, whom we shall label the "socially conscious" rabbis, describes the lists of precedents broadly, and include in this list competing notions such as the right to bear children, the danger of commodifying children by associating a price with them, the implications of surrogate motherhood for the status of women in society and their concerns for what sociologists and ethicists call relative deprivation, in which one social stratum feels deprived because it sees that another, more affluent group can get something that it cannot - in this case, children.

For the sake of brevity, we shall not work through all of the arguments on each of these positions [40]. But based on our mathematical example above, it should be clear that none of these arguments will be invulnerable to objection. While it is true that *halakfah* places a premium on a couple's having children, it speaks of child-rearing as a responsibility, not as a right [41]. As for commodification, while it is true that the rabbis eventually made slavery so inefficient that it disappeared as a viable option in Jewish life, it was never expunged from the books and is still theoretically operative in Jewish law. While the traditional get was designed to protect women by ensuring that they could not simply be discarded if their husbands grew tired of them, the *ketubbah* does assign different financial values to different types of women, depending on their sexual histories, their religious backgrounds and their previous marriages. And it is not entirely clear what considering the halakhic history on the protection of women's status will yield. Even if we



were to admit (and this, too, is a controversial claim) that surrogacy is potentially very damaging to the status of women in society, can one genuinely argue that *halakhah* abhorred that? On one hand we have the *get*, leniency in testimony in the case of the *agunah* and a variety of rabbinic statements that attest to the dignity of women in an ideal society. But the halakhic tradition also never solved the problem of the *agunah*, never allowed women to serve as witnesses in the normal course of events, and excluded women from a wide variety of ritual roles. And so the argument goes... .

But at this point, someone else argues that the entire case is misconstrued. With all due respect to the socially conscious rabbi, she argues, this case is not about social conscience. The issues of the rights to bear children, commodification of children, the impact of this policy on women, relative deprivation and the like are interesting, but they are not ultimately germane. Rather, this scholar argues, the issue is simply whether a woman has a right to become impregnated with the sperm of a man who is not her husband. Does that constitute a violation of marital exclusivity? What, in fact, is meant by adultery? Is adultery a sexual violation of marital fidelity, or something broader? If it is "only" sexual, does AID violate this? And if it is broader, how broadly does the *halakhah* construe it? These questions, of course, lead us back to the issue of AID discussed earlier, and raise a variety of questions which are not intrinsically any less complicated than those we just abandoned.

And since we are, in a sense, back where we started, what has Dworkin afforded us that we did not have before? To my mind, Dworkin's system has two major elements to argue for it. The first, of course, is that we are no longer unable to say anything about surrogacy. According to Hart and other positivists, since the law does not actually speak to the question, *halakhah* and halakhic-ethics have no position on surrogacy. But this is surely counter-intuitive in a religiously based legal system! If Jewish tradition can say nothing about surrogacy, then those who argue that Jewish life is effectively irrelevant have a strong case. Dworkin aids us by providing a model in which even if the legal system is silent on the precise issue before us, there is much more we can discuss even without stretching the classic texts as we would probably have to were we committed to a formalist response of some sort. That alone is a major contribution.

But Dworkin's model is also effective in yet another fashion. To those who argue that Jewish legal-ethical discourse is so technical as to be irrelevant, his model encourages us to address not only the technicalities, but the broader questions which many of us believe are intrinsic to our conception of the "law-job" itself. For those who have felt excluded from the process because of the highly technical training usually needed for these discussions, Dworkin's "chain-novel" makes possible contributions to the larger conversation from people from a wide variety of perspectives and training. To

the extent that those trained in the sciences might read the tradition in radically different ways than those trained in the humanities, Dworkin's model suggests that dialogue of the sort on which we now embark is not only possible, but is actually necessary for pursuing these legal-ethical questions in the kind of depth that they demand.

In fairness to Dworkin, of course, it is important that we note that it is *we* who have argued that his methodology might not lead to an actual conclusion. He believes that in the vast majority of cases, an actual ruling will emerge. Perhaps he is correct. And if he is, that constitutes yet another distinct advantage of his model for our purposes.

## F. CONCLUSION

The occasion of the First Annual Whizin Conference on Ethics and Technology marks the opening of an exciting new chapter for all of us. This Conference, and those that will follow, have the potential to afford each of us new sources of insight as we continue the work which we have already begun and as we embark upon new projects and directions in our research. But as exciting as these new possibilities may be, for those of us in the field of ethics, the very prospect of this shared venture also highlights the degree to which we have exhausted some of the traditional methodologies for doing what I have called in this paper "halakhic ethics". I have sought to argue, nonetheless, that if we wish to continue to work in the field more broadly known as Jewish ethics, we shall need to continue to make use of halakhic sources.

The question then becomes precisely how to make use of such sources. Without some new methodology, I have argued, several unappealing possibilities present themselves. We might selectively cite those halakhic sources which support our desired conclusion, but then we have to ask ourselves to what extent the Jewish tradition is in any significant way a determinant of our views. We might opt for a method of Jewish ethics that does not make any significant use of these sources, but we would then be open to the legitimate charge that what we are doing is no longer an authentically Jewish enterprise. Or finally, we might take the road often taken by those intent on finding some classical source for our new issues, and thereby fall into the trap of legal formalism. That, too, I have argued, is hardly ideal.

One other solution, however, presents itself. Ironically, I have argued, that solution is to seek a new methodology in the work of secular, non-Jewish legal theorists. Jurisprudential scholars throughout the world have, of late, become very interested in precisely these same challenges in their own work, and have developed a number of competing models which enable the judge, *dayyan* or *posek* both to make use of traditional sources and to also steer clear of jurisprudential formalism.

Ronald Dworkin's philosophical model, presented briefly and inadequately here, is certainly not the only model available for our consideration. A productive conversation over the next several years should include analysis of competing descriptions of the legal process. But, I believe, Dworkin's "chain-novel" has much to argue for it, and I sought, in the latter portions of this paper, to give some preliminary suggestions as to how it might work. But, in truth, I began this paper assuming too much. I assumed that we would agree that Jewish ethics is a project worth continuing, that our classical sources need to be part of that continued process and that our current methodologies have become effectively exhausted. Perhaps we will not agree about even these basic assumptions. It is the prospect of embarking on these discussions with scholars of both similar and different backgrounds that make this meeting and those that will follow so potentially momentous.

## NOTES

1. We should note, however, that not all Jews make this claim. Some Jewish feminists, for example, argue that the corpus of Jewish texts is so overwhelmingly anthropocentric that real progress for feminists in Jewish life can be made only if we are willing to dispense with these texts. For reasons that cannot be fully articulated in this limited space, that position seems to me insightful to a degree but unnecessarily nihilistic.
2. Critics of religion frequently demand from their opponents some relatively non-subjective claim to defend the continued relevance of religious tradition in general, or Judaism in particular. Though many have taken up this challenge with enthusiasm, I am not certain that it can be met. It may well be that our attachments to religious tradition have more to do with soul than with mind, with pursuit of a context for life than with cerebral assertions. But that, of course, does not make the claims of religionists untrue; it merely makes them indefensible from a scientific point of view. Though this issue is certainly not the focus of this brief presentation, it is worth noting that one of the many areas that may arise in future Whizin Conferences - even without appearing on some formal agenda - is the competing senses of "truth" that motivate our respective disciplines.
3. It is true, of course, that the existence of aggadic works in the traditional Jewish corpus make this claim somewhat too simplistic. Nonetheless, to portray aggadah as the ethic and halakhah as the legal misses the point of both. Aggadah goes far beyond issues of ethics, as does halakhah. And furthermore, the dividing line between aggadah and halakhah is not nearly as neat as one would like. The issue is extraordinarily complicated, but not so complicated that one cannot make the assertion that the Jewish ethical and legal traditions are ultimately intrinsically connected.
4. It is not clear that the modern period is, in fact, any different. Even Reform Judaism's Solomon Freehoff makes extensive use of halakhic sources in his responsa on ethical matters, though it is clear that he uses them somewhat differently than classical authorities did. Nonetheless, it is instructive that even

Reform Judaism grounds its ethical discussions in halakhic sources.

5. Cf., e.g., Bava Kamma 99b, Baba Mezi'a 24b and 30b, Kettubot 971, Berakhot 7a and 45b and Avodah Zarah 4b. For a very thoughtful look at what the concept of lifnim mi-shurat ha-din has and has not accomplished in Jewish law, cf. Louis E. Newman, "Law, Virtue and Supererogation in the Halakha: The Problem of 'Lifnim Misurat Hadin' Reconsidered," *Journal of Jewish Studies* (Spring, 1989).
6. The newest work on the subject of how halakhic judges do manage to avoid results they consider distasteful is Aaron Kirschenbaum's two volume series entitled *Equity in Jewish Law - Beyond Equity: Halakhic Aspirationism in Jewish Civil Law* and *Equity in Jewish Law - Halakhic Perspectives in Law: Formalism and Flexibility in Jewish Civil Law* (New York: K'tav Publishing House, 1991).
7. A basic appreciation of what the rabbis accomplished here can be had without examining all relevant source material. Cf. the ruling in Deuteronomy 17:5-7 and in Tosefta Sanhedrin 11:1-4 for the basic turn their jurisprudence took.
8. The sources on this topic are numerous. For the most commonly cited primary sources, cf. Deuteronomy 21:18-21, Mishnah Sanhedrin 8:1 and the work of the Bavli on that mishnah in B.T. Sanhedrin 71a.
9. I have addressed this issue in much greater detail in a review essay to appear in *Conservative Judaism*, entitled "Precedent, Rules and Ethics in Halakhic Jurisprudence: A Review of Aaron Kirschenbaum's *Equity in Jewish Law*."
10. Ahron Lichtenstein, "Does Jewish Tradition Recognize an Ethic Independent of Halakhah?" in Menachem M. Kellner, ed., *Contemporary Jewish Ethics* (New York: Sanhedrin Press, 1978), pp. 102-123.
11. David W. Halivni, "Can a Religious Law be Immoral?," in Arthur A. Chiel, ed., *Perspectives on Jewish and Judaism* (New York: Rabbinical Assembly, 1978).
12. Raz and Hart, of course, are two primary exponents of this approach in the secular community. For examples of positivist halakhic orientations in the Jewish community, cf. Kirschenbaum's volumes cited in note 6 above, Joel Roth's *The Halakhic Process: A Systemic Analysis* (New York: JTSA, 1986) and Alan Yuter in "Is Halakhah Really Law," *The Jewish Law Annual*, Volume III, ed. Bernard Jackson (New York: Institute of Jewish Law, Boston University School of Law, 1990) and "Legal Positivism and contemporary Halakhic Discourse," in Volume VI (1987) of *The Jewish Law Annual*.
13. The human-actor component of the act of positing the law is not necessary for many of the other elements of positivism; indeed, many theorists of Jewish law describe halakhah as a positivist system, in which God - not human beings - has done the positing.
14. Joseph Raz, *The Authority of Law: Essays on Law on Morality* (Oxford: Clarendon Press, 1986), p. 37.

15. Dworkin, "Is Law a System of Rules," in *The Philosophy of Law*, ed. Ronald M. Dworkin (Oxford: Oxford University Press, 1988), p. 38. In this section, Dworkin actually makes additional claims which he believes are characteristic of a basic positivism, but they are not germane to the issues we will be addressing.
16. Biomedical ethicists commonly distinguish between AIH, or artificial insemination by the woman's husband, and AID, in which sperm from a donor is used. For a variety of obvious reasons, the crucial ethical issues arise in AID, and not in AIH.
17. Cf., e.g., Rabbi Yehudah Leib Zirelsome, *Teshuvot Ma'arkhei Lev*, no. 73, and Rabbi Ovadiah Hdaya, *Ng'am I* (5718), pp. 130-137. It is important to note, in fairness, that not all traditional authorities who have written on the subject of artificial insemination have accepted this analogy. For a fuller discussion of many of the relevant sources and opinions on the subject, cf. Fred Rosner, "Artificial Insemination in Jewish Law," in Fred Rosner and J. David Beleich, eds., *Jewish Bioethics* (New York: Hebrew Publishing Company, 1979).
18. I have argued elsewhere that among the problems that this methodology causes are (a) a tendency to obscure the salient ethical issues in a case, (b) an inordinate conservatism in the rulings that emerge and (c) an undeniable misreading of what the sources can legitimately be claimed to mean. Cf. my "Wanted - The Ethical in Jewish Bioethics," in *Judaism: A Quarterly Journal* (Vol. 37, no. 1, Winter 1989), esp. pp. 28-34.
19. Obviously, we have not presented enough material here to make this claim as cogently as its importance requires. I present the argument much more strongly and in much greater detail in my doctoral dissertation [Dialectic of Community, Continuity & Compassion: The Legal Writings of Rabbi David Zevi Hoffman and their philosophic foundations. School of Religion, University of Southern California, 1992].
20. "The commandments were given specifically for the purpose of purifying humanity." Cf. Vayira Rabbah 13:3.
21. Yeshayahu Leibowitz, of the Hebrew University, has made this point repeatedly, though not specifically with regard to legal theory, and is perhaps the best-known exponent of the position. Cf., e.g., his entries on "commandments" and "idolatry" in Cohen and Mendes-Flohr, *Contemporary Jewish Religious Thought* (New York: Charles Scribner's Sons, 1987).
22. Lon Fuller, *The Morality of Law* (New Haven: Yale University Press, 1969), pp. 191 ff.
23. *Ibid.*, pp. 39 ff.
24. This language is not Fuller's. It is taken from Margaret Jan Radin's "Reconsidering the Rule of Law," *Boston University Law Review*, Vol. 69, No. 4 (July, 1989), p. 787. Given the fact that Fuller considers his criteria a necessary moral component of law, it would be interesting to reflect on whether the requirement which Radin calls "performability" and to which Fuller refers as "compliance" would suggest that Roth's insistence upon abstinence for the constitutional

homosexual is morally illegitimate. Roth, of course, denies that, and within a positivist framework, such a denial might be defensible. Whether or not Fuller's conception of law would change that is not clear; but the mere question would make for productive and useful conversation.

25. The locus classicus for Cover's claim is in "Nomos and Narrative," in *Harvard Law Review*, Vol. 97, No. 4 (1983). Cf. also Cover's "The Folktales of Justice: Tales of Jurisdiction," in *Capital University Law Review*, Vol. 14, No. 2 (1985) and "Bringing the Messiah Through Law: A Case Study" in J. Roland Pennock and John W. Chapman, eds., *Nomos III: Religion, Morality and the Law* (New York, New York University Press, 1988). For an interesting discussion of what Cover means by the central image of "law as a bridge" in *Nomos and Narrative*, cf. also Ronald R. Garet, "Meaning and Ending," in *Yale Law Review*, Vol. 96 (1987).

Cover, though Jewish and extraordinarily conversant with rabbinic texts, does not seem to have done much work on the nature of Jewish jurisprudence. His "Obligation: A Jewish Jurisprudence of the Social Order" in *The Journal of Law and Religion* (Vol. 5, No. 1, 1987) is a beginning, but it does not explore any material not already discussed by Moshe Silberg's "Law and Morals in Jewish Jurisprudence" in *The Harvard Law Review* (1961). He does not appear to have discussed the theoretical role of narrative in halakhah at all, though had he not died unexpectedly and at a young age, he might well have done so. I have sought to begin the application of Cover's work on narrative to halakhah in Chapter Six of my doctoral dissertation, cited in note 19 above.

26. Michael Moore, "A Natural Law Theory of Interpretation" in *Southern California Law Review*, vol. 58 (1985). Particularly in a religious legal system predicated on some form of revelation, it is doubtful that Moore's theory would be entirely applicable. Nonetheless, it represents a thoughtful alternative to jurisprudential positivism that ought to be seriously considered, if for no other reasons than the productive questions that it raises.
27. Dworkin is actually not interested so much in moral principle as he is in political principle. Cf., inter alia, his discussion of rights as "trumps" in *Taking Rights Seriously* (Cambridge: Harvard University Press, 1978). But the point that Dworkin is ultimately making centers around the claim that the act of judging (or in halakhic terms, serving as a *poseik*) should concern itself with issues beyond precedent and policy, and should search for the deeper commitments of the legal system. He believes that those deeper commitments, in American law, are rights. One could make a sound argument, I believe, that in Jewish law those deeper commitments center around a sense of right and wrong, or morality.
28. Dworkin, *A Matter of Principle* (Cambridge: Harvard University Press, 1985), p. 149.
29. *Ibid.*, pp. 159.
30. It is true that Dworkin limits the following description to hard cases. But, as we shall see, his definition of "hard cases" is much more expansive than that of Hart. As a result, this description will apply even to cases in which readily apparent and relevant precedent exists.

31. In a fascinating digression, Dworkin cites John Fowles on the process of his having written *The French Lieutenant's Woman*, in which Fowles notes that his own intentions about that particular piece of literature changed as the characters seemed to take on a life of their own. Original intent, Dworkin argues, may therefore sometimes not even exist. For a fascinating discussion of the challenges of adjudicating in the obvious absence of any original intent, cf. *Ulane v. Eastern Airlines*, 581 F. Supp. 821 (1983) and 742 F.2d 1081 (1984).
32. In truth, it is formalism, and not positivism, which requires this mechanical application. But my own view is in accord with that school of thought which sees formalism as a likely, if not inevitable, outgrowth of the commitments of positivism.
33. I am consciously avoiding here the claim of some biblical scholars who argue that the *peshat* of *ayin tahat ayin* is *mamon*. That argument is complicated, and not immediately germane to this discussion. Even those biblical scholars would have to readily admit that the Talmud is filled with rabbinic midrash which is not concerned with the "original intent" of the verse.
34. Dworkin, *A Matter of Principle*, p. 160.
35. He alludes to this issue in *A Matter of Principle*, p. 161, but does not pursue it.
36. *Ibid.*, p. 161.
37. *Ibid.*, p. 162.
38. The idea and the opening applications for this model are taken from Ronald R. Garet, *Before the Law: An Accounting of Law's Moral Commitments* (unpublished manuscript for USC law students, 1991 edition), pp. 54.
39. This step should not be construed as pushing an already absurd analogy too far. Dworkin explicitly notes the possibility that a judge may examine a judicial history and determine that one or more cases are actually mistakes. Cf. especially his "'Natural' Law Revisited," *University of Florida Law Review* XXXIV:2 (Winter, 1982).
40. The intricacies of these arguments, and the various texts to support them are far too complex to enumerate and discuss here. I have begun this process in my "Give Me Progeny..." Jewish Ethics and Surrogate Motherhood" (University of Judaism, 1988), and will therefore not list all the relevant halakhic sources here. My analysis in the above mentioned paper, however, is preliminary at best and does not specifically address Dworkin; much more work on the application of Dworkin's methodology is needed.
41. In general, *halakhah* speaks of obligations and not of rights. Cf., inter alia, Ben Zion Bergman, "Torah and Torts: A Reply to Professor Kader" in *Law and Religion in the First Year Curriculum: Papers Presented at a Loyola Law School Symposium*, ed. by Edward McGlynn Gaffney, Jr. (Los Angeles: Loyola Law School, 1986, p. 174) and Moshe Silberg, "Laws and Morals in Jewish Jurisprudence," in 306 *Harvard Law Review* (1961).

# A Response to Daniel H. Gordis: Probing Classical Sources for Ethical Commitments: Towards a Methodology of Jewish Ethics for the Twenty-First Century

Chanoch Jacobsen

Let me begin by clearing up one very widespread misconception about the nature of authority. Authority is legitimate power, and by legitimate power we mean power that is both valid and justified. But who decides whether a power is valid and justified or not? Here is where the misconception lies. Not the power wielder himself, because that would be mere coercion. Nor any higher power, the state, the law or God, because that power, too, must first be validated and justified by someone. Only the putative subjects of authority can legitimize it, because unless they consider it valid and justified, it is not authority to them but raw power.

Legitimation of authority, therefore, is the acknowledgement of its validity and its propriety by those who are subject to its rule. Even divine authority exists only in so far as it is thus acknowledged. The so-called "delegation of authority" is therefore a contradiction in terms. There is no such thing. What we mean when we use the term is that the power of someone in authority is being delegated to someone else. This "someone else" then has permission to use the authority's power. That is authorization, but not necessarily authority.

Why is this distinction so important? Because in modern times people have come to question, if not to deny, the legitimacy of many authorities. Tradition, divine inspiration, or even rational-legal precedent are no longer held to be sufficient justifications for authority. To be sure, people may be coerced into compliance, but legitimacy is granted only to those rules that are based on the informal ethic of general consensus. The Halachah, too, remains unquestioned only for those who recognize the legitimacy of its authority, - and they are today a dwindling minority.

But in the Jewish tradition it is not only dayanim or poskim who have to make moral judgements. Every person is expected to choose between good and bad, between right and wrong, and to evaluate the impact of his or her actions accordingly. Today we not only take this for granted, but also assert the right to judge for ourselves by which norms such evaluations should be made, in other words, to define what is legitimate authority and what is not. In this



secularized age, Halachah as it is taught and practiced, based as it is on transcendental premises, tradition and legal precedent, has ceased to be an authoritative source for ethical decisions. To most Jews, it has become irrelevant as a guide to behavior.

On what basis can a modern Jew make ethical judgements that are recognizably Jewish, without relying on some authority that is exogenous to him/herself? I agree with Professor Gordis that the problem is essentially one of methodology, though not necessarily that of Halachic interpretation. I would suggest instead that the basis be the degree of consonance between the issue at hand and agreed and accepted Jewish values (Dworkin's "principles"), the "fit" of a particular decision to the framework of ethical consensus. That framework may not look particularly Jewish, yet much of it has a "Jewish pedigree", because the most widely accepted human ethics today are largely an outgrowth of traditional Jewish teaching.

Whatever that ethical framework is, we have to find solutions to today's ethical dilemmas that are the most consonant with it. Preferably, the solutions would also be consonant with the spirit of the Halachah. But even if not, they can be consonant at least with one Jewish tradition demonstrated repeatedly in the Talmud, namely, the interpretation of written texts in light of current ethical standards, whether they are specifically Jewish or not. Because the development of Halachah has been precisely that: a repeatedly updated re-interpretation of the sacred texts. The Halachah may not be inclusive enough to allow the derivation of solutions to modern-day ethical problems, but Jewish tradition enjoins us to re-interpret the classical texts to as to make them consonant with our moral commitments.

Those who are at the frontiers of technology cannot arrest the scientific enterprise while philosophers argue each case. They must and they will make decisions as best they can when ethical dilemmas confront them in their work. Are scientists then to do as they think fit? The answer is yes; they do that in any case, because no one can operate in a state of anomie. The philosophers' task is to explain what it is that we can reasonably think fit, and why. The Jewish philosopher has the additional task to show what our classical sources can contribute to the resolution of pressing moral dilemmas, over and above that which is already generally accepted ethical behavior. If they succeed in doing this, they may help Halachah regain some of its lost authority.

## DISCUSSION

**I. Brott:** *This question is directed to Danny Gordis. You spoke of the responsibility of a judge in cases of first impression, the hard cases. In the cases where you have the situation where you have legal formalism, or course, the job is that much easier. I am wondering why such things as custom, for instance would not be involved as a guideline. And why certain social imperatives or economics or politics or so many things that impact so much upon our daily lives, would not really be the true guidelines for a judge who is faced with a case of first impression. It is not where he can just reach out and give way to his own wings. So I wonder whether or not these considerations are employed in the decision of cases of first impression.*

**Amitai Halevi:** *I would like to make several comments in response to Rabbi Gordis' interesting presentation, with specific reference to "Dworkinism".*

*Dworkin's position, implying that "law is fundamentally about a community's underlying ... commitments" is at odds with the basic tenet that Halacha is of divine origin. Decisions are made by majority rule, but are then taken implicitly to be the expression of the Torah's original intent. A well known statement that is repeated several times with slightly different wording (Midrash Rabba on Leviticus 22,1; Jerusalem Talmud, Peah 2,6; and elsewhere) runs: "anything that an advanced student is likely to say to his teacher has already been spoken to Moses on Mt. Sinai."*

*Of course, the Talmud is full of minority opinions. For example, there is an oft-cited pronouncement (Avoda Zara, 36a): "No court can overrule the decision of another unless it is greater in number and in wisdom." Taken literally, it merely means that the judges sitting as a Court of Appeals must be both more numerous and more experienced than those of the lower court. It was reinterpreted, however, to mean that no Halachic rule can be set aside except by a legislative body of higher standing than that of the one that promulgated it. Strictly speaking, this means that no decree can ever be repealed; it could only be done by an assembly of at least 72 rabbis who were prepared to declare themselves wiser than the sages of the Sanhedrin!*

*In a dissenting opinion, Rabbi Jochanan, the most highly revered figure in his generation, rejects this view as impractical, saying: "A court can set aside any ruling of an earlier court, except for 18 that even the prophet Elijah's tribunal is not empowered to overrule." Rabbi Mesharshia explains why these 18 prohibitions, decided several hundred years earlier by the followers of Hillel and Shammai in join session (Shabbat 13b), are sacrosanct: "It is because they have since been adopted by a majority of the House of Israel." It is ironic that, although Rabbi Jochanan's pronouncements are almost invariably taken as law, his opinion on this question is rarely, if ever, cited.*

Majority opinion in the Talmud would take a dim view of Dworkin's suggestion that "any judge's opinion about the best interpretation will be a consequence of beliefs other judges need not share."

Judicial discretion (*shuda de'dayanei* - שׁוּדָא דַּיָּאנַי) is allowed when the evidence in a specific case is not conclusive, but permitting a judge to choose one halachic interpretation in preference to another it a "no-no." The Talmud spells out its rules in painstaking detail, and Rabbis who argued for greater leeway in their interpretation were put down harshly.

The best know example is that of Rabbi Jeremiah, who repeatedly made a nuisance of himself in the discussion of when lost objects can be kept by the finder and when he has to make an effort to return them. In the case of a baby pigeon found wandering on the ground, the rule is (Bava Batra 23b): If it is found within 50 ama (ca. 75 feet) of a dovecote, it is presumed to have fallen from it and must be returned to its owner; if it has strayed beyond 50 ama, it can be kept. Rabbi Jeremiah considered it unreasonable to deny the judge the prerogative of considering circumstantial evidence, such as the terrain, the weather, the number of dovecotes in the area, etc... , so he reduced the ruling *ad absurdum* by asking: "Suppose it has one foot within the 50 ama limit and one foot outside...," for which indiscretion he was expelled from the study hall. Rabbi Jeremiah was so dissatisfied with the judicial system being codified in Mesopotamia, that he moved to Tiberias, from where he taunted the leading sages of the day saying (Pesachim 34b): "Stupid Babylonians! It is because they live in a dark country that they make such obscure rulings."

Needless to say, the Babylonian rabbis did not take this lying down: "Rava said: Look at Jeremiah! Here [in Babylon] he did not understand what the rabbis were saying' now that he has moved there [to Palestine] he calls us 'stupid Babylonians!'" (Ketubot 75a). Unfortunately for the applicability of Dworkin's thesis to Jewish law, main-line Halacha - even considered purely as methodology - derives form the Babylonian Talmud, that insists on cutting the prerogatives of an individual court to the barest minimum.

**Daniel Gordis:** When Prof. Barzel said before that there is no Ha-Halacha (there is no legal ruling but there is a methodology); it may very well be that the Halachic sources really reveal a variety of methodologies, and that what we call Halacha or Halachic system or whatever is really Halachic Systems and that you might find competing conceptions as to how this system works depending on geography or chronology or even in the same place and the same time. Clearly we, as moderns, bring a greater degree of philosophic consistency to bear on these issues than even Hazal did. To the extent that they had less of a respect for philosophical systems than we do, they may have had something on us. I think frankly the question is more

complex though I thank you for raising what is clearly one of the crucial issues involved here.

In response to Irv, the question of, for example, things like custom and other kinds of issues that go on - those are clearly all present - the Halachic literature is replete with them. But they are in effect subsumed into the question of what the law is. You have instances of "Minhag Ha-Halacha" and you have instances in which custom is not Halacha. So, this is simply to say that it is very complex; the Halachic system and its sources do discuss a variety of other components, but the bottom line is that if the custom has achieved legal status, then the judge is obligated to consider it. If the custom has not achieved legal status, then according to positivism, the judge might consider it, but the judge need not consider it. That is where the discretion comes in; in the hard case of the positivist system, the judge might be influenced by a variety of things but there is no "right answer" in hard cases. Dworkin is committed to the idea that according to positivism, there is no right answer in such cases.

This gets of course to the question which both of you touched on. That is the difference between drawing on Jewish sources versus making a Halachic decision. I think that is a very important distinction. I must tell you very frankly that this is a very interesting conversation to have between an American and an Israeli, to a certain extent, because my own personal experience has been, with the exception of a few academics here and there, in the Galut, those people who are not committed to Halachic authority tend not to make decisions that are made on Jewish sources, or, if they do, they tend to draw on Jewish sources that support the decision which they have arrived at a priori. I think it may very well be the case that here in Israel where even non-observant Jews have complete access to the sources because they certainly know Hebrew (and you can figure out a little about Aramaic and you learn it in school and so forth), they certainly have greater access to the literature than is the case in the Galut. So I think, first of all, that it is an important distinction, and then the question of whether one wants to draw on sources or make Halachic decisions is going to be a very personal decision based on what ones personal orientation is.

The orientation that I brought to bear on this particular paper is that, personally, I am committed to the authority of the Halachic System; I want to do more than simply draw on Jewish sources. Why that is the case is not a neat, simple, little theological claim; it is not as simple as Torah l'Moshe as Sinai, which you have cited; it is somewhat more convoluted than that. The bottom line is that I am none the less committed to it and as a result my inclination is to look for Halachic authority and not to only draw on Jewish sources.

One personal experience: I work during the summer in LA at a place called Brandeis-Bardin Institute with students who are mostly finishing up college and about to start Graduate School and who spend four weeks intensively studying Jewish life. For the Americans who are the majority of the group, this is for many of them their first real exposure to Jewish life of any substance whatsoever. You have a few Europeans and we always have about 5 or so Israelis. The impact that this has on the Israelis is profound. I was just interviewing the new group last week in Jerusalem. There was a woman who has been here 14 years (an Olah from Russia), and we asked them to say something about what their Jewish background is. She said "Well, I came from Russia when I was about 7 or 8 years old and I was really very busy in school and I have lived in Jerusalem my whole life since then, but because I have been very busy in school, I really don't know what Judaism is and I have never had a chance to figure it out."

So all of a sudden I felt really great about Los Angeles! What struck me at that moment is that outside the Halachic community, I am somewhat more dubious than you may be about the long-term viability of sufficient levels of knowledge that draw on Jewish sources, the way you are advocating. I must say that here I follow Prof. Barzel in adopting a certain degree of pessimism. My experience, certainly in the United States, but especially when I meet these particular Israelis who come during the summers, is that in those communities in which the Halachic issue, authority, legitimacy, and all of that, is not the real issue, the sense of familiarity with, warmth for and these kinds of sources is disappearing. So even as these Israelis, for example, had an interesting discussion last summer, even as they read, Amichai, for example, and talk about how this is their new culture, they don't pick up the resonance in Amichai to the biblical sources. So on one level Amichai has become the new culture to which they are going to turn, but on the other hand they do not get where Amichai himself is coming from. So I guess I am a little bit of a pessimist about the long-term viability about our ability to draw on Jewish sources without that Halachic commitment. But that is certainly not the issue for this conference.

**Z. Ziering:** I would just like to draw a parallel because the center of the discussion seems to deal with Halacha and technology. In my opinion Halacha has a certain problem in what you might call as a mathematician, discontinuities in history, like the explosive advent of technology. The real point I want to make is that the same occurred outside of technology as the response of Halacha to the Holocaust for instance, so it is not unique to technology. The implication simply is that in certain major explosive events, there is no guidance as I read it, that you can get from Halacha.

**A. Berkovits:** First of all one of the great things to come out of this Symposium is the realization that amongst us scientists and engineers there are quite a number of "Talmidai Chachamim". It is no longer necessary for me

to say that there are different ways of looking at Amitai Halevi's remarks on Halacha, it has already been said by Rabbi Gordis. I would like to point out though, that if we look at Shas uPoskim who wrote on the basis of the Talmud, there are many instances of what you call a "hard case." Much of what is written there I indeed view as hard cases. The problem for us, at the end of the 20th Century, or the end of the 58th Century if you want to put it that way, is that we have been gathering these precedents for not two or three hundred years as they have in the United States, but for perhaps two or three thousand years, so the whole system has become much more inflexible. Nevertheless, just to take an example from Shas, the Rabbis of the Talmud themselves asked many centuries ago, why if there is one Halacha, are all the other opinions reported: the second, the third, the fourth? The answer which Hazal gave at that time was that the time will come when the Halacha may be the opposite, and then we will need to have the precedents, we will need to have the record of the other opinions.

In examining Halacha, even though the precedents become more and more inflexible, we must use the tools of Halacha. The legal, legislative tools remain constant in application, and certainly in principle. We must use them to face the new legal questions which arise today. That does not mean that there are no hard cases. There are hard cases, obviously, but there are fewer hard cases than we think. Even judging new cases and new problems according to old principles of legal deduction, does not mean that you are going to find the exact parallel. In many cases there is no exact parallel, and then the classic tools, in the hands of the modern intellect, will produce valid Halacha.

**A. Barzel:** Unfortunately, Halachah is misused and misinterpreted, and I wonder whether the situation can be changed without the emergence of a dramatic transformation in Jewish thought and reality. (Perhaps next week, on June 23 - election-day - some first steps toward change will be experienced.. at least in Israel). Judaism is a culture, and hence, it "has a say in everything"; this is opposite the assumption of Dr. Gordis Jr. in his paper. Christianity is not a culture but a religion; it cares for the depth of the individual soul, for the Sunday-mass and holy day ceremonies, while Judaism is impregnated in the everyday praxis of 365 days a year, 24 hours, in the concrete history of human beings living together. Hence, Halacha cannot be stopped at a certain time, it cannot become Ha (The) - Halacha, some corpus of regulations; it is a method of reasoning on human deeds and their consequences. All those who say: "The Halacha told, stated, decided, etc." do not say, in fact, anything relevant for Jewish historical existence. Halacha is not a codex from which ready answers for actual problems can be obtained - not for existence and life (to be well distinguished!), not for recent medical intervention, nor for politics. This concept must be emphasized, especially now. Polis is the human community, the Kehila, and since community is meaningless without ethics there can be no two different and distinct concepts:

politics and ethics. Their necessary unity is well exemplified in the whole of the Torah - in the full sense of this concept: Torah as the ongoing reasoning on all historical developments and situations, which cannot cease to be continued always and everywhere.

Miriam Cotler spoke about the problem of premature children, or more correctly: of premature fetuses. She stressed, that "we do not always know what their quality of life will be. We do not know what their prognosis is". The crucial question is, what is the meaning of 'knowing' in the realm of medicine? Obviously, she does not expect to allow decisions only on the basis of absolute-total knowing, since in this case medicine would have no real chance for any of its functions. Nevertheless, all medical interventions are, in fact, rooted in high degree probability of expectations, at a given time. The accumulated experience and the available knowledge at this time permits one to assume that, in certain cases, the fate of premature fetuses in their familial and social surroundings may be thoroughly inhumane. If medicine were to tell us that on the basis of best-judged actual knowledge and experience this fetus indeed has the chance only to exist but not to live, we are not forced to grant him existence.

Dr. Ziering argued that "the universe is rational, or at least we assume that it is rational." I would counter that rationality is a human attribute and hence, the universe is neither "rational" nor "irrational," but is understood by human ratio. Let us hope that human existence in the universe can be constructed by human ratio, and consequently, that human beings can and should act responsibly, i.e. respond rationally to challenges.

My dear friend Prof. Avraham Berkovits argued against my position that "man was made not the owner of the world but the trustee" and "even our bodies in Jewish thought do not belong to us." First, many sources state that man is the sovereign of the Earth, being but "little less than God" and he is the world's authorized constructor, steward and perfecter. Second, regarding the concept of "belonging to us" - the notion of "belonging to" is but a metaphor coined in the Scripture for the sake of a correct human understanding, according to the precept: "dibrah torah kilishon bnei adam" ("דִּבְרָה תּוֹרָה לְבָנֵי אָדָם"), but it has no informative meaning. Not one of the numerous Jewish medical doctors from Talmudic times, to date, ever limited human activity in healing diseases, but instructed people to live in accordance with their nature.

Avraham is right in saying that all men are equal, so I said, myself. But all men, and hence the definition of human life is here urgently needed.

Much more needs to be said, but my time is over. Thank you.

**Ron Wolfson:** I would like to ask a questions, just because I do not know the answer. Prof. Better mentioned last night that when an issue of medical decision making comes up, they even asked the Chief Rabbi to come and give an opinion. What happens when there are serious issues of ethical decision making, medicine or otherwise, in Israel. Who do you ask? Do you ask the Rabbinic Court, or do you ask the legal courts of the government? Do the legal courts of the government listen to the Rabbinical courts? Where do you go? I am curious.

**Judge Carmi:** Regarding the last question about what happens in courts, I would like, as an anecdote tell you only what happens in our courts, not in Rabbinical courts, as many of the medical issues reach our courts. So what role is Halacha playing there? This is very much a matter of a psychological matter and of the background of the judge. There is a new law which states that if there is a "Lacun" you are authorized to apply the Halacha under certain conditions.

I would like to refer to our case, as follows: This was a matter of a woman who was pregnant, I think in her second month. Due to severe conflicts with her husband, she applied to the Rabbinical Court in order to have a divorce. As she was pregnant, according to the Israeli law with regard to abortion, she went to the hospital and according to a certain paragraph in the law, she was authorized to ask for abortion. The woman argued: we have already one child, now I am asking for a divorce. If the Rabbinical court divorces us, I do not wish to have another child from this gentleman. The abortion committee at the hospital authorized her to do the abortion, but then the husband asked for a stay. Why? The husband claimed that the committee did not give him the opportunity to say anything or to take part in the hearing. Sitting on the Bench, I decided that the abortion should not be done for another 2-3 days in order to allow the husband to appear and argue before the committee. According to the Israeli law for abortion, it is only the woman in such a case, that should give her consent for abortion. The husband is not mentioned at all in the law. But my argument was that there is something beyond and under the law which is sociologically speaking, the main factor or basis of our society, which is the family. Since a child is born, for at least 18 years, maybe more, the father is obliged to take care of him, so it is impossible, even though the legislature did not say so, to prevent the husband from the opportunity of presenting his view to the committee and say what he would like to say as the future father of the child. Afterwards, it will be for the woman to decide about the abortion.

My decision was turned down by the Supreme Court, who decided that the husband has no say about the fetus and that the committee does not have to listen to him. There were three judges and there was a majority and a minority. In the minority was Judge Aloni, who used the Halacha.



**Elliot Dorff:** *Along the same lines. I share a lot of Rabbi Gordis' view on Halacha in general and I also share a lot of his experience in terms of dealing with people who, in the United States at any rate, are not really involved at all with Jewish law, as to how it can become relevant to them in some way. I am interested primarily in the younger generation in Israel. Its a larger question. They see themselves as Jews in very strong ways, and I'm sure also as Israelis, and I imagine that they differentiate in some way because after all there are Israelis who are not Jews. But what is the content of their Jewish identity such that, would they be interested in Halachic decisions or matters at all, or is that so politicized for them, that does asking a question about Halacha means "Mafdal" or mean the "Aguda" automatically and therefore it is something that you just don't want to handle in any way. Or is there at any rate some opening for, among the younger generation to these kinds of discussions, even if they don't see it as Halacha. I think Danny and I also share the same view, namely that ultimately it has got to have some kind of authority if the next generation is going to see it as serious in any way. But what I am asking now is a question short of that. Namely, even if they do not see it as being authoritative in any way, are they at least open to talking about Halacha as being an important source of their own Jewish identity. This is in particular in relationship to what I understand that a number of us had to the Tali Schools, because that is all based upon the notion that you can raise a generation of Israelis who are open to the tradition without seeing it as being a closed book to the Orthodox alone.*

**Daniel Weihs:** *Looking around, I may be the second youngest Israeli in the room here, so what I can answer about that is that there has been an attempt to put into grade school and high schools an education which should kind of show the young "Chilonim", the non-religious people something about Halacha. It is considered, at least from the two children I have in the system now, and their friends and teachers, to be Hammer's idea, being the religious Minister of Education. And it is not going very well. I want to raise a different question.*

*Don't you think that it would be good for both Halachic judges and secular judges to have a technological education, a partial technological education to reduce the number of what Danny called "Hard cases." Hard cases can sometimes be simpler if you have a broader view and you don't need only to go 0-2-4-6. The 2 - 4 - 6 means that you rely for your next decision only on previous decisions, many of them, especially in the Halacha, many hundreds of years ago or tens of years ago, so that there is no new input from the direction of the electrical sciences, engineering sciences and so on. We have heard now that at Technion there are 4-5 graduate and undergraduate courses on ethics for engineers. How about engineering for ethicists?*

**Chanoch Jacobsen:** *I should like to respond to the question about the young people of Israel. Of course, I cannot answer for them, but I know them pretty*

well through my children, grandchildren and students. For most of them, Halachah is simply irrelevant. They do not care one way or the other. Let me add that for the actual behavior of many people, young and old alike, the secular law is also irrelevant. That is a field I have studied. People do as they think fit, that is to say, what they think they can get away with, and most of the time they can get away with much. That is so because in modern societies any kind of formal control is severely limited. We restrict formal control, because we do not want policemen to control education, nor health inspectors to handle traffic. Informal social control and autonomous control (conscience) are also weakened by structural constraints.

Therefore we should not delude ourselves. In Israel, Halachah has some coercive power, yes, but no authority except for maybe 10-15% of the population. Most Jews in this country (and I believe also in the U.S.) simply consider the Halachah irrelevant. That is why I said that, if this conference can make Halachah relevant again, by this methodology or another, then it can give back to Halachah some of its lost authority.

**S. Prath:** I too know the young and I think that a very terrible thing has happened. They used to love tradition, they used to love the Bible, they used to love the Haggadah, which are the stories, the popular customs. They do not any more and I am afraid it is because of your lack, maybe. They have been coerced directly, or via family affairs, army affairs and led to hate persons who try to coerce. And of course this goes down very deeply. I am very sorry about it. I grew up with that love. I was educated here. My children were. But those who are educated now do not have the Haggadah any more because it is not Law enough, that is not Halacha. And of course they can not study Talmud when they are young. They could start much later but by that time they would hate it. I am very sorry about it.

**Ron Wolfson:** Well it is certainly an interesting challenge, especially to those from the University of Judaism. You are absolutely right., for most of our population the Halacha is not only irrelevant, but it certainly does not have the same kind of coercive Rabbinic authority that you have in Israel on certain issues. Our challenge is always to make the Halacha relevant and interesting. I think that certainly on the issue of law, those of us who have tried to get a taxi driver to put a meter on in this country, have learned that lesson. I must say that the issue that has been raised here this morning, so brilliantly by Danny Gordis, relates to all of these issues of technology and ethics. Certainly the issue of how we can take this tremendous body of Jewish experience as expressed in Jewish law and open up those communication channels, both to the Civil Courts, to all of us in our personal confrontations with life and death, of technology and medicine, and so on, is tremendously important. I think Danny has given us a clear vision of a methodology to do that and I want to thank him and Dr. Jacobsen for a very stimulating discussion.

ALTERNATIVE PERSPECTIVES ON  
GENETIC ENGINEERING

## INTRODUCTION OF SPEAKERS

**Amitai Halevi:** In the first session, yesterday afternoon, we heard from a technologist, a scientist and a physician about ethical problems arising in their own disciplines. In this morning's first session we were treated to a philosophical discussion of ethics in general and in the second, to Jewish ethics in particular. In this final session we return to practicalities, concentrating on one of the most troublesome problems at the borderline between ethics and technology: genetic engineering. Now we are going to get alternative perspectives, which may turn out to be not so different from each other, we'll see. Our speakers will be Amnon Carmi and Miriam Cotler. We will then have a discussion followed by a summation of the entire symposium by David Gordis. Following the precedent set by earlier chairmen, I would like to introduce all three of them now, so that we can get on with the business of the session without further interruptions from me except to say time is up.

*Judge Amnon Carmi*, who has recently retired from the Haifa District Court, is President of the World Association of Medical Law, and Professor at Haifa University. He has been teaching Medical Law and Medical Ethics at the Technion's Medical School for the last 15 years. He is Editor-in-Chief of the bi-monthly publication *Medicine in Law*, and author of 20 books and around 300 papers.

Like our previous speaker, our respondent, *Miriam Cotler*, is, associated with the Sponsoring institution in a temporary way. She is Visiting Professor of Management of the University of Judaism. She received her Master's and Ph.D. degrees in Public Health from UCLA. She teaches health care, ethics and policy there and at the University of Judaism, in addition to her regular duties as Professor of Health Sciences at California State University, Northridge. She serves as Consulting Director of the BioEthics Institute of the Northridge Hospital and also serves on numerous committees concerned with various aspects of this very important topic.

*Rabbi David Gordis*, is Vice President and Professor of Talmud at the University of Judaism. He received his Master of Arts and History at Columbia, Ph.D. at the Jewish Theological Seminary in Talmud, which remains his field. He is director of the Whizin Institute of Jewish Policy Studies.

# Alternative Perspectives on Genetic Engineering

Judge Amnon Carmi

In Jewish folklore a famous 16th Century Rabbi the Maharal, or Rabbi Lev was his name, was reputed to have created a man of clay from the banks of the Moldow in Bohemia, now Czechoslovakia, to protect the Jewish people in times of persecution. The Rabbi named that creature Joseph, and ordered him to obey his commands, whatever they should be. The Jewish people, who were physically protected by that giant creature, called him the clay Golem. Golem means in Yiddish, a clumsy fool. Joseph was, to all appearances, an ordinary person. Only the faculty of speech was lacking to him. People used to say that this was really an advantage. God knows what could have happened if a Golem had been given the faculty of speech. Some of them do have it, even now. There was no trace of good or bad instinct in the Golem and all of his actions were only like those of an automatic machine that fulfills the will of its creator.

Many stories were told about the mechanical functioning of the Golem. The wife of the Rabbi one day ordered him to fill two water kegs which stood in the kitchen. The Golem took the pails and ran to the brook. Several hours later the courtyard of the house was flooded with water. The Golem obeyed the order by continuing to pour water into the kegs, because the Rabbi's wife did not tell him to stop when the kegs were full. However, after a long time had passed and the Jewish community was no longer molested by blood accusations and impeachment, the Golem had become superfluous and the Rabbi decided to destroy him. Thus the Golem was transformed again into a clod of clay. This was apparently in 1593. In 1965, a newly built computer at the Weizmann Institute at Rehovot was named Golem I, it was of course, Golem II.

Now apropos our American colleagues here and please do not take it personally, there is a Golem joke that goes something like this. A wealthy American Jew visiting Prague, after WWII, wanted to see the remains of the Golem in the attic of the Alt Noishul. When the Shammas explained that it was forbidden for anyone to enter, the American business man was insistent, opening his wallet and taking out a substantial bill which he slipped into the Shammas' pocket. Fifteen minutes later the visitor returned and complained angrily that he had wasted his time and money because he found nothing in the attic but old worn talisim, torn prayer books and mounds of dust. When the Shammas asked if there was nothing else in the attic, the angry American remembered one other thing, an old mirror on the wall. "Aha," said the Shammas, "then you did see the Golem!"

The story of Dr. Frankenstein's monster serves as a reminder of the difficulty of restoring order if a creation intended to be helpful proves harmful instead. Only when his monster began to destroy did Dr. Frankenstein realize what he had done. But then it was too late. The slave may become the master. In seeking control over the world, people may lessen it. No wonder that while trying to understand and evaluate the nature and the implications of genetic engineering, that Frankenstein's monster and the clay Golem, strike our imagination with horror for an uncontrolled, mysterious power.

Genetic engineering investigates and develops various procedures, like gene deletion surgery, splicing and transplantation, cloning, construction of genetic material, introduction of new genetic combinations and synthesizing life. Genetic engineering constitutes a great potential value for human well being and may provide substantial aid in the relief of human suffering. It will allow a large number of diseases to be detected before clinical symptoms are manifested and provide a means of curing many hereditary diseases. The novelty of genetic engineering ought not to raise automatic impediment to it use, but rather should provoke thoughtful analysis. As a matter of fact, every human activity, which produces changes that otherwise would not have occurred, interferes with nature. Most medical activities are, in this sense, unnatural. The problems involved in using drugs produced by gene splicing techniques, do not appear to be radically different from those involving conventional drugs. The dilemma is, whether there is something basically wrong with intentionally crossing the lines of the common conventional conceptions.

Of course, this dilemma raises additional questions, who should decide which lines of genetic engineering research ought to be pursued and which applications of the technology ought to be promoted; by what standards will the scientists be guided? Scientists may strive for the chance of modifying human beings, but others may oppose the idea of men controlling the minds of men and feel horror while studying the possible implications of genetic engineering.

## **FAILURES AND FAULTS**

Failures and faults which frequently occur necessitate caution with regard to our preparedness to adapt and implement new technologies and innovations. Failures and faults may be derived from various sources, medicine and science at large, wrong attitudes of researchers and doctors, commercial interests and political considerations. I shall try to illustrate these factors by a few cases.

## A. Medicine and Science

The medical establishment has become a major threat to health. This is the opening statement and basic contention of Ivan Illich, a searing social critic. In *Limits to Medicine*, he demonstrates how the fulfillment of genuine human needs such as the maintenance of good health has been turned by over-professionalization into a nightmarish spiritual and physical agent of destruction. According to Illich, most of today's skyrocketing medical expenditures are destined for the kind of diagnosis and treatment whose effectiveness at best is doubtful.

## B. Researchers and Doctors

1. *The Corralgill Case*: Corralgill was first developed by an Italian firm. The importing and sale of Corralgill in Japan began in 1965. This same year, the drug company confirmed the existence of side effects through animal experiments for chronic toxicity. However, this drug caused damage only came to light at the end of 1970. Corralgill was sold as a drug for heart disease. As a side effect it caused accumulation of a particular type effect in the liver, blood and other cells in the body, and claimed a number of lives from liver damage. Some 350 million tablets were sold; an estimated 60,000 people suffered side effects and at least 250 people are believed to have died as a result of taking the medicine. What is frightening is that many researchers had been aware of this drug caused damage for quite some time. Nevertheless, they had not lifted a finger to prevent the spread of the damage by warning doctors and patients. For them this unusual side effect was a research theme to be pursued in their ivory towers.

2. *Medication errors*: Medication error studies in the United States found error rates of 12%. Davis and Cohen indicated that if a 12% medication error rate be projected for a hospital with a daily census of 300 patients, one could expect 360 medication errors to be committed daily.

3. *The Myth of psychiatry*: In his provocative book on the myth of psychiatry, Thomas Sass wrote, "It is customary to define psychiatry as a medical specialty concerned with the study, diagnosis and treatment of mental illnesses. This is a worthless and misleading definition. Mental illness is a myth. Psychiatrists are not concerned with mental illnesses and their treatments. In actual practice they deal with personal, social and ethical problems in living."

4. *Human guinea pigs*: Papworth placed ethical question marks with regard to experimentation. The vast majority of the medical profession are either genuinely ignorant of the immensity and the complexity of the problem, or wish purposely to ignore the whole matter by sweeping it under the carpet.

### **C. Commercial Firms**

*The Cloraquin Case:* Cloraquin was a drug for malaria. It was first synthesized by the German drug company Bayer in 1934, but because of its toxicity, it was abandoned shortly afterwards. In 1945, the drug was rediscovered in the United States and used in the Pacific War and in the Korean War. However during the Vietnam War and since then, this drug had been knocked out by the disease. The use of Cloraquin brought about various side effects, the most serious of which was retinopathy, a progressive form of blindness. The rate of absorption of Cloraquin is extremely rapid and its elimination is very slow. This means that the drug accumulates in the body over a long period. It attaches, in particular, to the retina at the back of the eye. If the retina is damaged, the eyesight is lost. The ominous thing about Cloraquin retinopathy is that by the time one becomes aware of it, it is already too late and there is no cure.

A British scholar by the name of Hopps, established in 1959, that retinopathy was a side effect of the drug. His report was published in the well known British medical journal, *The Lancet*, which was available in Japan. Cloraquin was mass marketed in 1961 as a drug for nephritis, though there was no medical basis for the theory that the drug was effective against nephritis. As it turned out, 90% of Cloraquin victims in Japan were nephritis sufferers. Thus, an ineffective substance was falsely termed a curative drug and sold as such for over 10 years, although its side effects had already been established in other countries, without issuing any warning and ignoring reports of the damage that was occurring in Japan.

### **D. Ministry of Health**

Thalidomide caused damage was first reported in Europe by Dr. Lence in November, 1961. Within one week, the drug was withdrawn from the market. Notification reached Japan on December 5, '61 in the form of a letter from the German manufacturer to Danipon Pharmaceutical. The next day the company met with the officials of the Ministry of Health and Welfare. The decision was made to continue marketing the drug. The argument for this decision was that the Lence report lacked scientific evidence and to withdraw the drug would give rise to social unrest. Thus in Japan, the drug continued to be sold without any warning and it was withdrawn from the market only 10 months after the initial warning by Dr. Lence.

### **OTHER RISKS AND HAZARDS**

The fear from enjoying the fruits of genetic engineering are understandable is considering the relevant risks and hazards which derive from various sources such as lack of knowledge, irreversibility of outcome, inheritable damage, upsetting conventional conception and other factors.



## **A. Lack of Knowledge**

Any realistic assessment of potential consequences of the new technology must be founded upon a sort of recognition of human fallibility and ignorance. In the initial stages of any new process there are uncertainties about some effects of the process. The understanding of gene function and genetic recombination in human cells is still poor, particularly with regard to the possible side effects of gene therapy. It is very unclear what the effect of the changes on man will be and what will be the consequences of using the new biological powers.

## **B. Irreversibility of Outcome**

Present interference in the biological structure of millions of people may afterwards prove to be the cause of destructive extermination. Many effects of technological changes may be impossible to reverse once they have occurred. As one leading scientist remarked, you can stop splitting the atom, you can stop visiting the moon, but you can not recall a new form of life.

## **C. Inheritable Damage**

Scrutiny is appropriate for any procedures that would create inheritable genetic changes. For instance, gene splicing afford the possibility of creating hybrids that can reproduce themselves. The possibility of self-perpetuating mistakes adds a new dimension of concern. Matters which had been settled in the past by so called natural forces have become within our own power to regulate. This brings about an extension of our responsibilities. A man is not responsible for the genes that were passed to him, but he may be found responsible as a transmitter of errors. Genetic engineering is developed by our generation but its consequences are to be felt by the next generation. The question is, whether our generation is entitled or obliged to take care of the interests of the next generation. This issue should have been considered by members of both generations but we receive an immediate response from people of our generation only.

It is generally accepted that we are responsible toward our children and descendants and that we are obliged to supply them with the best conditions possible. Advances have not been made without the heavy price paid by the past generation. We are expected to pay the price for our children's more comfortable life. Such a price demands our preparedness to adopt new ideas and to change some of our values and habits. One should bear in mind that the next generation may regard some of our beliefs as quite primitive ones. Moreover, methods which we consider as inhuman, may not necessarily be regarded as such by the next generation which may attribute different meanings to human acts and values. We are expected to offer our contributions

to the next generation, but not to cause it any harm. Scientists are not allowed to experiment on members of their own community without accepting their consent. Why should they be allowed to experiment on the members of another generation who are not able to already express their views? To what extent ought they risk future lives and interests in order to create what seems to them a better future?

#### **D. Upsetting Conventional Conceptions**

Genetic engineering marks the end of human life as known to us. The creation of new life forms may blow up societies and civilizations and destroy ideas and conceptions. The old order is coming to an end. Social and economic relations which have set the image of our culture are weakened and degenerated. The new and eugenic techniques threaten major social values such as the sanctity of life. What kind of society will be that where children may be conceived long after the death of their fathers or where women may bear children without male intervention. What will be the effect of cloning on all uncloned people? Eugenic control may change the existing interpretation of reality, destroy the present system of emotional rewards and punishment and bring about serious social implications. Man's deepest beliefs about good and evil and about his being and destiny are shattered. The sense of predictability and stability in interpersonal relations could quickly become outmoded if people use gene splicing to make basic changes in themselves over the course of their life-time. Genetic engineering techniques are not only a powerful new tool for manipulating nature, including means of curing human illnesses, but also a challenge to some deeply held feelings about the meaning of being human and of family lineage. New ideas can change the world in psychological terms just as radically as new techniques can change it materially. Genetic engineering may bring about social/ psychological trauma by producing a new non-personal culture. An extreme psychological change will confront the human race if it would become the same size and color and traits.

Since genetic engineering may bring benefits and since it will be funded at least in part by public resources, more questions will be raised like who will benefit from the new technology, and will the benefits and costs be distributed equably. The human race may become divided into two classes, the haves and the have nots. One may wonder whether a world in which only the rich could attain the benefit of genetics might not be worse than a world in which no one could have it.

#### **ABUSE AND MISUSE**

Genetics is neutral in its nature. All depends on what we do with the new knowledge. In the past we believed that all knowledge is to the good. Now we know that knowledge can be used for good or evil. History shows that man was

likely to use power wrongly and to abuse knowledge rather than to apply it in a constructive manner. The fear that some scientific advances are too dangerous for man in his current social and psychological state derives from the conception that he is more likely to use a new power for ill rather than for good purposes. Eugenics might lead to tyranny. There was a sad experience in Nazi Germany with regard to the impossibility of separating science and politics.

Great power implies great responsibility. If beneficial rather than catastrophic consequences are to flow from the use of God-like powers, an unusual degree of care will be needed with noble applications. Apparently it is a duty of scientists and the mission of our society to protect the human race from misuse of scientific developments. They have to apply precautionary measures with regard to potential risks and refrain from holding dangerous experiments. They should impose self and peer regulation and elaborate the existing codes and mechanisms of self-control in order to encourage the society to show better understanding and adaptability.

In conclusion, the questions of whether the immense growth of genetic engineering is desirable and whether it will supply happiness to the human race are still open for discussion. Genetic engineering places before man an enormous challenge, a conceptual revolution, a social earthquake. An overall human collaboration is needed in order to cope with this challenge. Scientists and laymen must cooperate and show good will and wisdom in order to bring about a balance of interests.

I would like to conclude with a short passage from B'resheet, Genesis:

And the Lord God commanded the man saying, "Of every tree of the garden thou may freely eat. But of the tree of the knowledge of good and evil, thou shalt not eat of it. For in the day that thou eat thereof, thou shalt surely die".... but the serpent said unto the woman, "Ye shall not surely die, for God does know that in the day you eat thereof then your eyes shall be opened and you shall be as gods, knowing good and evil."

The serpent said to Eve, "You shall be as gods." We, ladies and gentlemen, we do not want to be as gods. All that we wish is to master our lives as good, reasonable and intelligent men would do. We wish to eat the fruit of the tree of knowledge without being harmed by its terrifying poison. Thank you.

# Response to Judge Amnon Carmi: Alternative Perspectives in Genetic Engineering

Miriam Cotler

Three lectures on genetic engineering promises to be very heavy. My talk is a little more applied and with permission from Professor Halevi, I would like to take just a few minutes to very briefly identify primary themes in the United States Bioethics Community over the last 25 years.

In the United States, we have a secular society and significant religious as well as political pluralism. Within each of the religious groups there is no agreed upon ethical framework or priority among principles. There is disagreement within the religions, between the religions and certainly with the secular community.

The other major forces driving the bioethics community have been consumerism, technology, and the courts. The voice of the public has taken on an added power in the community, in the academic environment, and into the courts, especially since the 1960s. Persons want an increasing voice in what happens to them. Thus, added to the questions of right action is also the confusion about who should make decisions. Patient autonomy repeatedly runs against traditional professional paternalism in deciding what information to communicate. In the United States now, it is clearly accepted that patients may have treatments withdrawn or withheld even when they are clearly medically efficacious and beneficial.

In fact, we are increasingly concerned with the limits to autonomy. Autonomy is a negative right. It says, I want to make my own choices, I may want to be left alone and you have to respect my personhood. When patients behave in self-destructive ways or make poor decisions, physicians resist, feel compromised, the professional role is disturbed, and these are major issues. Another set of problems is presented by patients who demand treatment which clinicians feel are futile, - that concern is related to Professor Barzel's point this morning. When the medical establishment feels that a given treatment for an individual patient has such a poor probability of success or poor prognosis and yet the patient or the family demands treatment, we need to question our limits as individuals to demand that either society or the individual physician comply with our requests.

We thus have patient autonomy which has been driving the system, very often conflicting with the professional's notion of beneficence. What is good

for the patient? The bioethics community has tried to address and resolve those dilemmas. Obviously, sometimes there is no one right answer. Often there is more than one right way, and we have tried to base solutions on principles which respect individual values, with peaceable negotiation, and ultimately arrive at a just social consensus.

Technology provides us choices that never even occurred to us in prior generations (which reemphasizes the appropriateness of this kind of conference). The technology has not only confused the borders between living and dying, but our difficulty making predictions. One might argue the technology is value free, but it certainly confuses goals - is a person in a coma and on a ventilator alive? Have we a potential for a good outcome? How do we calculate the value of a very expensive procedure that will prolong life for only a brief time for a person with serious or terminal disease? Which of the costs should be avoided? These concerns with autonomy, technology, and costs and without consensus on values or principles for solving the dilemmas drive the American bioethics community. They are all represented in the example of genetic engineering which is our topic this afternoon.

Genetic engineering is shorthand for the diagnosis, the treatment and the prevention of genetic disorders. On the one hand it appears to offer a solution to untold human suffering, to pain, to loss and to premature death. At first glance, wouldn't it be wonderful if we could detect inborn errors before they manifest and treat them without the harmful side effects of chemicals, of radiation and of surgery? As if by magic.

You ask if there a more valuable endeavor than this. To do away with certain kinds of diseases, handicaps and inborn errors of metabolism? What could possibly be wrong with understanding and controlling our genetic mechanism? But as Judge Carmi has suggested, there are serious concerns with genetic engineering and - I would also suggest to you - with the human genome-project under whose auspices the research is being conducted.

The effort in genetic technology is to map the human genome. The human genome initiative is a world-wide research effort with the goal of analyzing the structure of the human DNA and determining the location of the estimated 4.000 genetic diseases as well as the untold number of genetically linked diseases, including the multifactorial problems such as alcoholism and manic depressive illness, in which there is a genetic predisposition. For example, the gene for sickle-cell anemia was identified almost 15 years ago. Budget for the project in the United States has been estimated about 200 million dollars a year, for 15 years - 15 X 200 million a year.

The good news is this multi-billion dollar, multi-year project is unique in that 3% of the appropriations has been set aside to explore the kinds of issues we are addressing: the social, legal and ethical implications, they call it

ELSI. For the first time they have recognized potential dangers in genetic research, which is intended to be life enhancing. Many of the concerns that have already been articulated by ELSI have been mentioned these last few days. There are seven, I will list them very briefly and then I will elaborate just on a few of them. They include, first of all, fears related to the use of genetic information including social justice and access to the data; second, the impact of genetic information on individuals, including preventing stigmatization and discrimination; third, privacy and confidentiality of data, including informed consent; fourth, impact on genetic counselling; fifth, impact on reproductive decisions; sixth, issues raised by the introduction of genetics into the mainstream medical system, particularly when there is diagnosis without effective treatment; seventh, as Judge Carmi has said, uses and misuses of genetics in the past.

It is because of the potential of genetic technology to increase our choices and to change this balance of nature so profoundly that obviously we need to reexamine our assumptions. I have some questions here, many of which were enunciated yesterday by Prof. Gershon. I won't go over them all again.

The basic question, I think, is how will the discoveries accomplish the therapeutic goals of furthering the quality of our physical, social or psychological well being. I think a corollary to that is, how will they effect our relationships to each other, to the community and to society. With the understanding that I do not condemn the quest, first let me discuss some basic questions inferred from this kind of research and then give you some practical examples. I think there are three kinds of potential problems. The first are the fundamental concerns, the second are problems for the individual given the present technology and third, the potential problems that will arise as we progress in the mapping.

There has been significant discussion of the fundamental problems. I would just like to summarize a few of my comments with respect to that. One is the limit to certainty and control.

I believe that there are very basic philosophical questions of morality, meaning and values that we have to address. Genetic engineering raises very fundamental questions about the limits of our scientific inquiry. But also, our ability to eliminate uncertainty. We are not clear about the limits of our predictive power and we are also not clear about how much of ourselves genetic engineering tells us. Fantasize for a minute, take it to its extreme. Could we do away with betting? Would we do away with life insurance? Are we going to know that happens to us throughout life? Are we going to be able to know approximately when we would die? How would our lives change? Is there a purpose to some mystery in life? Is it possible or even desirable to have the kinds of information suggested? But, in line with this, I think genetic engineering also raises very profound questions of the interactive effects of

environment with biology. What determines our identity? Is it only our biology? Is it our history, our memory, our interaction with our families . . . you see all of these are components of personhood.

We have talked extensively about potential harm. Could the knowledge of our genetic map foster a redefinition of our self-perception and of our very attitude toward life? The potential consequences to the affected individual I think are somewhat similar to the person with AIDS or who is HIV+. There is varying prognosis with respect to length and quality of remaining life and there is substantial risk of social stigma. For example, what if we had a genetic test for Alzheimer's disease. Would we not enjoy the first 20 or 30 or 50 years of our lives? Would a 21 year old person choose a career with long educational financial and time costs as opposed to a short run intermediate benefits? To know that one will get coronary artery disease in her 40s or Alzheimers in his 50s may induce a fatalism that reduces our sense of self-control and responsibility for our health that diminishes our opportunity to maximize our health status and becomes a self-fulfilling prophecy. Will our lives become about our future rather than our present? Will the gene carriers prematurely become patients, possibly forfeiting many years of otherwise good health? What is a patient? Is someone who feels well and in fact has more years of symptom free function ill?

In addition, as these questions pertain to genetic engineering, they also suggest, and this is a somewhat separate point, that our genes carry the secrets and answers to our existence. They suggest a biologic determinism that may seduce us to include other human traits and characteristics. These questions do not take environment, social discourse, personality or interactive effects into account. Genetic information is perceived (we do this continually, we do it in our language) as an emissary of biological destiny. We ignore environment and we get a false sense of predictability rather than probabilities. The very argument that a high proportion of human diseases is genetic is problematic in itself. Yes, there are correlations with killers such as heart disease, cancer and alcoholism, but they indicate susceptibility, not cause. We tend to think of genetic information as immutable facts and given this deterministic aura, we think we can not revert or restore genetic catastrophes. But they are not single cause agents and probabilities demand that we factor in subjective values.

Abbey Lipman has written "using the metaphor of blueprints with DNA and gene fragments presented as set of instructions the dominant discourse describing the human condition is reductionist, emphasizing genetic determinism.. It promotes scientific control of the body, individualizes health problems and situates individuals increasing according to their genes." So hear the major risk, that we overestimate the importance of genetic inheritance to our physical, mental and social health. These are some of the concerns that persons with disabilities have, about activities that describe people

according to their impairment rather than their capabilities and their accomplishments. As the disabled, rather than persons with disabilities. Some of you from the United States may wonder at the strident attitudes of persons with disabilities with respect to this kind of labelling and I think it stems from this kind of reduction of themselves as the disabled.

The human response to genetic information is both intensely personal and highly revealing. The extent of a gene's effects will vary widely among individuals and over time, and, I think the human genome project suggests a very limited definition of a normal person. Also, the argument that uncovering the mystery of genetics will solve physical problems I think is ethnocentric, it ignores heterogeneity within groups and between cultures.

For individuals, the genetic engineering project also presents a fundamental question of individual liberty - who has the right to know? Many of these issues Prof. Gershon alluded to yesterday: access to information, privacy, which includes ownership and control of the information, consent issues, confidentiality from employers, from insurance companies, from governments and even from family and friends, and relative benefits and harms which Judge Carmi has talked about this morning.

The goal of the scientist in this endeavor is cure. But the road along the way travels from identification of the gene to identifying the mutation, diagnosing, treating and then cure. Presently we do not have prevention or treatment and we have major concerns about this long intermediate phase. The basic data collected in the human genome project will be available in electronic data bases, "to all those who need it". We are back to our need to know basis, and the private sector is involved at all levels of both policy and research. Issues for patients in the present include limitations of our ability to detect and an even greater inability to treat genetic problems. Diagnostic information is very much prior to therapeutic information.

In terms of our social concerns, I have already mentioned, our attitude to deviance and to deviates. There are also significant differences in ability to access genetic technology by social class, as well as social class differences in the value of this information. This leads to an uneven playing field. When we have the technology, what is our obligation to the poor and to the uneducated for access to these data, to educate them about the potential and the impact of genetic information and for informed choice? Informed choice is not handing somebody a piece of paper that lists the most remote possibilities. Informed choice is communication so that the person who decides on a particular course of action is truly choosing based on accurate, relevant information.

Political questions also surround the relative use of resources. The predictive power and implication of the test for public policy, prior use and



misuse of genetics and relevance to the current situation. With the cost of genetic analysis around \$30,000 in the United States, some people have estimated \$165 billion per year to test 5 million persons. Who should be screened and who should pay for it? What should be the criteria for screening - potential morbidity? Potential response to treatment? Probable age at onset? What about ability to pay?

Much of this is not covered by private insurance. And, as mentioned earlier, there is significant concern with spending all of this money on this research when research funds are so limited. Issues for patients in the long run as well as in the short run are in their roles as persons, as patients, and members of family as well as community.

Let me talk for just a minute about the role of the physician, which may be changing. The primary obligation of the physician, as you all know, is to do no harm. Does genetic engineering justify a return to a much higher level of paternalism than I described at the beginning of the talk? And, if so, on what basis? A pregnant woman's willingness to abort a fetus with a defective gene increases with diagnostic precision, even when there is uncertain prognosis. Given tests with unknown predictive value, uncertain severity and unknown prognosis, how can we counsel patients? What is there to help couples decide the best interests of the child and of the family? We have also not clearly formulated the proper role of the genetic counsellor. Is non-directiveness a copout? Are the physician and counsellors merely technicians? What is the professional role?

There is considerable uncertainty and discomfort in these new tests and physicians have a very complex role in eliciting from patients their values and choices that will ultimately determine the significance of the test results. Yet reports indicate physicians are not clear about the sensitivity or specificity of the tests or about probable severity. Prenatal diagnosis is constructed as a way of "avoiding disaster," the language of choice and reassurance certainly make prenatal diagnosis appear attractive. Yet many feel that this approach commodifies children. It renders them consumer objects subject to quality control, gender selection and other arbitrary whims. The assumption is that abortion will follow the diagnosis of fetal abnormality. However, since most disabilities manifest after birth, this may be false reassurance and even counterproductive. Are these problems? Do they require a medical solution? How do we construct the model to answer the question "Are your children's lives worth living?" We have enough trouble with our own. Geneticists and their obstetrician colleagues are deciding which fetuses are healthy, what health means and who should be born. Now if this is so, they gain power over decisions to continue or terminate pregnancies that pregnant women themselves may not always be permitted to make. Prenatal diagnosis thus is in danger of becoming or has become a biopolitical as well as biomedical activity.

A significant number of couples choose not to abort, despite test results, and many tests have substantial degree of uncertainty. A health maintenance organization in the United States reportedly threatened to discontinue insurance coverage for a woman who wanted to deliver a child after a prenatal genetic test showed that the fetus had a diagnosis of cystic fibrosis. I would suggest to you that abortion with no perceived choice is a bad outcome. It is not moral. A pediatrician ethicist in Chicago has suggested that governments and courts stay out of these decisions and that the best interests of the unborn child are best served by the potential parents. Could that argument be made in a system where the government finances medical care? It is something you need to talk about.

You mentioned Huntington's Chorea yesterday. Nancy Wexler, who is one of the Chairs of the Human Genome Initiative and one of the primary discoverers of the Huntington's disease has recently reported that although anywhere from 60-80% of the people at high risk for Huntington's disease (74% in recent studies she has completed) said that they would choose to be tested, very few have availed themselves of the test. At the several sites in the United States where they have in fact offered testing for Huntington's Disease under this very tight protocol and out of 125,000 people estimated at high risk, only about 1,000 have come forward. Some people just choose not to know. Recently a woman requested a surrogate mother arrangement because she was at high risk for Huntington's Disease and she did not want to know. But she wanted to have a family and her husband wanted to contribute his genetic inheritance.

But there are other reasons why people do not want to be tested. The disease is insidious in onset, the test is not 100% accurate, you can have false negatives as well as false positives. The test involves other family members, it is psychologically traumatic as reported by some of the potential patients, and it is very costly ( \$3-4,000 including confirmation with family members). There are also exclusionary criteria and the test is very invasive in that it is accompanied by four hours of counselling and eight hours of psychological evaluation in the present protocol. Of those who agreed to be tested, one third quit before their test results were complete. And they have reported (I have trouble with these kinds of data because you do not know how depressed subjects were before the tests), that about one half of the people in the study were moderately depressed and another half were severely depressed as a result of this entire process. One person made an aborted suicide attempt.

How can one minimize the adverse consequences from the knowledge about a disease for which there is no treatment or cure? What about the multifactorial genetic disorders for which there is only a predisposition? If we find a gene for manic-depressive psychosis, do we recommend that fetuses carrying the gene be aborted? Some persons argue that the world would have

been denied poets like Sylvia Plath and ministers like Winston Churchill. Others believe that is a specious argument. We do not really know if knowledge of our genetic inheritance would increase the number of suicides.

Other issues for the future as well: Given that the present genetic information almost always has information for the welfare of others including family members and questions of confidentiality and trust, honesty, fidelity may arise. Secondly, there is extensive concern that if genetic information becomes available to the government or employers, it will effect our insurability, our ability to obtain a passport, or even to get into college or medical school.

Persons with sickle cell trait, not the disease, just the trait, were dismissed from their jobs, lost or denied life and health insurance, and experienced job hiring and firing discrimination. Can we provide confidentiality? Fred Rosner reports a site in Brooklyn that provides total anonymity for persons who want to be tested for Tay-Sacks disease. But that is a private activity. Is information derived from the research public or private? What about a student who chooses to get on with his life but the medical school admissions committee has limited numbers of seats and denies acceptance based on probable number of years that this person will be able to practice medicine. If there are mass screening programs, will the government or insurance companies have access to the data? Won't we risk the kinds of discrimination that we now have with AIDS. And will we encourage fraud, as we do with many of our health insurance policies. The American Medical Association (AMA) has expressed serious concern that employers may be reluctant to hire individuals who have a predisposition for cancer or coronary artery disease, because they will be prematurely unable to work. If employers could exclude them they would lower the cost of training, they would lower the cost of recruiting and of certainly health insurance. The AMA position goes on to state that future employability is not an adequate basis for performing genetic testing, the tests are poor predictors of disease and even poorer predictors of disabling disease. Many individuals who possess a gene will never manifest the disease and those who do will experience a wide range of onset and severity.

It is entirely contradictory to our anti-discrimination policies with respect to persons with other disabilities and, as I said to you earlier, insurance companies are already using genetic information. We have a long list of conditions for which persons are already either excluded from health insurance or only being given conditional health insurance.

Lastly, can genetic science divide us as a society? Although we are painfully aware of the misuse of genetics in the past, I need to mention the eugenics movement. It was not limited to Nazi Germany, it was popular throughout the Western world, including the United States in the early part

of the 20th Century and behavioral genetics has been used to advance discriminatory social policy and prejudicial stereotypes as well as eugenics. We act as though babies with impairments are defective like bad parts on cars and that they can be prevented. Guess to whom the following is attributed?

"Someday we will realize that the prime duty, the inescapable duty of the good citizens of the right type is to leave his or her blood behind him in the world and that we have no business to permit the perpetuation of citizens of the wrong type. The great problem of civilization is to secure a relative increase in the valuable as compared with the less valuable or noxious elements in the population. The problem can not be met unless we give full consideration to the immense influence of heredity. I wish very much that the wrong people could be prevented entirely from breeding and when the evil nature of these people is sufficiently flagrant, they should be done. Criminals should be sterilized and feeble minded persons forbidden to leave offspring behind them. The emphasis should be laid on getting desirable people to breed."

Anybody want to guess who said that, or even what country? Theodore Roosevelt, the 26th President of the United States of America. Social Darwinism of the late 19th century and worldwide eugenics of the first 30 years of the 20th century were widely popular and the academics are not spared. The conservative elite saw eugenics as the answer to their loss of control over the economics and political situation. The liberals resorted to eugenic answers to explain the failure of their social programs. Genetics has been used repeatedly over time as an argument against environmental reform. In 1906, the President of the University of Wisconsin wrote "all available data indicates that the fate of our civilization hangs on the issue of the disproportionately large number of the worst human types." By 1928 3/4 of the Universities in the United States has courses in eugenics. Troy Duster, sociologist at Berkeley, has recently written, "We give up to science and expertise a deep human concern that has little to do with either science or expertise, namely, what kind of knowledge we should pursue in determining what kind of children should be born." He argues that genetic technology has rekindled and legitimated the old nature/nurture debate surrounding race, ethnicity, gender and mental capacity.

In summary, however, if we grant and remember the concerns, and if we are very cautious about benefits without treatment or cure, and since this project is long-run, why not go for the marvelous opportunities to prevent genetic impairment?

1. In the short-run there are other uses of resources that may provide a greater benefit to mankind, like space exploration. Do we really want to spend all this money on genetic research?
2. There are question about whether it represents a societal value.

3. If we pursue it, we need to be very clear about the ethical, legal and social risks and safeguards.
4. We need to consider potential differential impact on class and race.

The social and ethical questions relate to the appropriate relative level of public funding for basic genetic research when there are competing social needs and the extent to which the research should be influenced by the larger social good. How much genetic information do we need, given public costs and unclear public return on the investment? Access to and ownership of information, commercialization, the gaps between diagnosis and available therapies and the degree to which information should then be treated differently. We need to recognize the multi-factorial nature of illness, particularly chronic and long-term disability from auto-immune diseases such as arthritis and behavioral problems such as alcoholism. Even if we could detect a gene or genetic impairment, there would probably be more than one combination and there is so much interaction with the environment that we can not predict the degree or the direction of genetic contribution to the problem. We need to remember that testing brings false positives and does not indicate severity. It raises crucial questions of privacy and ownership. We need education as well as treatment. The population to be tested needs information about the disease and possible implications of the test results. Physicians need to communicate the nature, need and limitations of the test. What does it mean to carry a particular gene, what can we do about it and what should we do about it? We need to prioritize as we progress and I would hope that is what we are trying to do here today.

There is too much at stake here to go on a fishing expedition. It is not OK to just go out and see what we find. We still do not know whether there is a representative human genome and we are not clear about what is normal vs what is ideal. We need to very critically reevaluate our language as well as our behavior. What do we mean by failure or worth? To what extent or degree or limits are we obligated to make these kinds of adjustments? We have to acknowledge and be sensitive to social stigmatization. The reasonable short-run values of the research include detection of genetic conditions in utero, to help expectant parents to make choices, discovering our susceptibility to diseases may encourage a more healthful lifestyle, and discovery of genetic cause could lead to cure.

But remember the reasonable goal, to identify the gene, diagnose, and prevent a genetically acquired disease, ideally by some recombination of DNA. It is much more conservative and realistic goal; begin to think about the activity's promises, and do not forget the pitfalls along the long way.

## DISCUSSION

**Amitai Halevi:** We thank Professor Cotler for a very thoughtful and thought provoking presentation. If she ended up agreeing to a large measure with Judge Carmi, I think we will certainly agree that she did not duplicate his arguments. All three people who have spoken about genetic engineering, Prof. Gershon, Prof. Cotler and Judge Carmi, have raised similar questions. If three people from such diverse backgrounds come up with similar points, it means that these points are extremely important and it is very important to discuss them.

The discussion can now begin and I suspect that we will hear from the scientists at this point.

**David Gershon:** I am Chairman of Biology here at the Technion and also a geneticist by training. I was not here yesterday because we dedicated the genetic engineering building in my Department. I figure that says something as an introduction to what I am going to discuss. I heard that the previous two speakers, I assume that they played the Devil's Advocates, because they presented things from an extreme point of view. But I must say that as a geneticist, and I hope that I understand something about genetics, I must conclude from what I heard from the previous two speakers, that we should spend more money on educating people and explaining to them what genetic engineering is all about. Particularly with regard to the study of the human genome: It seems to me that what they presented here, to a certain extent, derives from the fact that they do not really understand the meaning of genetic engineering. Obviously, I can not describe and explain the whole field of genetic engineering in a nut-shell because I am sure that we do not have time for that. However, I must say a few things.

First of all, as a geneticist who really understands what genetics means, I can state that eugenics is not a dirty word. Many of the people who deal with eugenics are geneticists who are keenly interested in the future of man and the welfare of mankind. One of the major problems of the human race is that with the advance of medicine and the preservation of many mutants, mutations that would have been eliminated naturally until medicine developed all kinds of prescriptions for not curing, but maintaining those people who are carriers of mutations, who are going to transmit defective traits to the next generation because they can function normally and have progeny. We have a very big problem in the human race that is called a load of mutations which is really increasing in the population and can lead to a disaster. Genetic engineering, if properly used, can alleviate this situation. No one is talking about elimination of people carrying mutations. But, by genetic engineering techniques, we can at present obtain a single fetal cell, and tell if that fetus is carrying a mutation. Many such mutations have detrimental effects which

would make the life of the carrier unbearable and unproductive. We can tell that from one cell. Genetic engineering is entering an era of obtaining germ cells from individuals and correcting whatever genetic defect they carry and assuring that they do not transmit that defect to the next generation. That will constitute a tremendous benefit, a feat that will be achieved very soon. This genetic correction will have to be done or our "load of mutations" will be out of control. If any technology gets into the hands of a monster, the results may be disastrous. The technology has got to be controlled very well, by politicians and other public institutions employing people who are highly educated and competent to pass judgement. Politicians have got to understand what the whole thing means. I have heard many misconceptions here in the previous two talks and that alarms me, because you can sell almost anything to anybody who is not really very well educated about these things. I am, therefore, very alarmed that emotions and not reason will be used in judging the future of genetic engineering and the human genome project.

Genetic engineering also means improving crop plants and increasing the amount of food that is produced in this world, it will be used for improving the nutritional value of all kinds of foods that we are producing in agriculture now, it can be harnessed into many other things, particularly industrial processes that involve organic chemistry. You know that people will object to that but only recently there was a report in Science where plants were produced that make plastic compounds. You can make plastic now in plants, instead of industrial plants and things of that sort, so the progress is going to be huge for the benefit of human beings. If we do it in a very controlled way, a very educated way, without really introducing misconceptions, I think it is going to be a tremendous bonanza to the human race. There is no doubt about it. What I am really amazed about is what Judge Carmi said, that getting the sequence of the human genome is a terrible thing because it will leave nothing to mystery. That reminds me that somebody said "Well we should not land on the moon because the moon is such a romantic thing. Now that we know that somebody landed on the moon, the whole romantic concept is gone." This is about the equivalent of that because if we know the makeup of the human genome, we will be able to do a lot to eliminate some of the adverse things that are happening, the mutations and the things that are caused by the advance of other kinds of technologies. Without going into detail, I can assure you that people who are dealing with genetic engineering are responsible people and genetic engineering is a very precise science. We know exactly what we are doing, and we know how to do it. At the moment, only things that are absolutely under control are being done. There are, no doubt, certain things that we do not know enough about yet. I will just tell you that correcting some inborn errors do not have to go through the germ cells. For example, we are on the verge of curing anemias and leukemias as well as other inborn errors, without interference with the transmission to the next generation. There are many ways of very responsible use of genetic engineering and just let those guys who deal with it go ahead and work and do things, and simultaneously

*educate and inform everyone and tell them exactly what genetic engineering does and means.*

*Believe me, if you understand the details of what is going on, you will be able to see that these activities can be controlled well and can be used mainly for the benefit of the human race.*

**Brian Silver:** *Judge Carmi mentioned Genesis - the Tree of Knowledge. That is not a unique myth. As you know, the idea that knowledge is forbidden exists in a great number of societies. The Prometheus myth is one for example, he stole the gift of fire from the heavens. Of course he had to suffer eternal torture for that, the general idea being that knowledge is forbidden and those who steal it will be punished. While I don't believe in the myth, the myth has a very deep meaning for us. People are worried about the fact that we appear to give ourselves the right to do research in any area that we want to. Most of the people who are worried are not scientists. If you took a vote most people would say it would have been better, for example, if we had not discovered how to split the atom. I do not know that mankind would have suffered a hell of a lot if we had not found that out. We have not yet gotten over the difficulties which have come out of that discovery. We in this area - you may be less so in Los Angeles - are very worried about it. We have Saddam Hussein over there, and the Syrians and the Iranians; they are definite threat. That threat came out of some experiments which were done in Berlin around the 1930s, when somebody discovered that you could split the atom. So I am not so sure that everything should be allowed in that sense, without every thinking about what the future is going to hold. Oppenheimer was worried about it. After the bomb he said that the physicists have seen sin. He was deeply worried about the whole business. And there may be things which maybe we should not be examining. This controversy about IQ and race. Chomsky said that there was no decent reason for examining the connection between IQ and race, that anything found in that area could only lead to difficulties and prejudice, etc. I do not know if that is right or wrong, I have my own opinion, but there is an uneasy feeling about whether we should be allowed to examine anything. I think it is very important from my point of view that there are groups of people like us talking about these things and that we will go on talking about them things. They are extremely serious. As a scientist I am worried about them. I am not sure that unrestricted research is to be allowed just in the name of divine discontent. Michelangelo's divine discontent.*

*I would like to make a very personal comment about something that you said, Professor Cotler, about, if I can paraphrase you very badly, that genes do not determine everything, there is the environment and there are other things as well. I have three children. One of them has Down's Syndrome. If you would ask me today whether, now, I would have preferred that he had not been born, my answer is negative. I have learnt more from him than I have*



learnt from a hell of a lot of other people. I learnt tolerance, and he is the most responsible member of the family and I love him deeply. The other two children have learnt tolerance as well. Maybe with genetic engineering he would not exist, I prefer that he does.

**Miriyam Glazer:** I am chair of the English and Literature Department at the University of Judaism. I very much value the expertise and the gifts that modern medicine has brought us. I am awed by many of the kinds of discoveries and the progress that modern medicine has been capable of. But I find in the argument you presented, four points that are very dangerous, I believe. Your argument consisted of: 1. Trust the experts; 2. We know what we are doing; 3. You can not understand what we are doing, or lay people can not; 4. Do not worry, we are responsible.

I think that those arguments of trust the experts, we are responsible, just let us do our work, is paternalism at its worst and that it would be an expression of fundamental social irresponsibility on the part of an informed citizenship not to ask the kinds of questions and to raise the long range issues that some of our social scientists are raising. We were told to trust the experts when forceps were introduced to the obstetrical and gynecological process, relatively unnecessarily. We were told to trust the experts when there was an outbreak of unnecessary Cesarian deliveries in the United States. We were told to trust the experts when children were given the Stanford-Berne IQ tests, when we were young, and that was used as the sole determinant of how that child was going to be tracked for years to come. When a parent would protest, but my child has so much more creative ability, or is so much more intelligent, the answer was, I am sorry the experts have determined that the child's IQ is 100 and as a result, that child has to be tracked the way that child is tracked. Trusting the experts is a refusal on the part of society to take responsibility for the future that is going to impinge upon it. So while we need to honor the kinds of discoveries that science is bringing us, not to raise the questions would be a tragedy. Further, you are talking about what is happening now. But the kind of issues our speakers were raising were looking at it from the long range point of view. Neither speaker, it seems to me, was doubting the value of the kinds of immediate research that is going on. But there is a time where we have to look in trans-scientific terms, at what are the long range social implications of genetic research. What possible consequences can there be. There is a poet named William Blake who once said, what is now real was once only imagined. We have to look at what we can imagine as possibly that becoming real.

**Amitai Halevi:** We had best cut the general discussion short at this point and allow our speakers to respond to this rather violent attack from the scientific community, but, since I am a scientist myself, I will allow myself a few words in response to Judge Carmi's comment about the Garden of Eden. You remember that God also said "In sorrow (meaning: in pain) shall you bear

forth children." Now science has developed anesthesia and medical technology and learned how to apply it, so that at least one part of the curse has been ameliorated. I am not saying that we are going to stop death. What I am saying is that having once eaten of the Tree of Knowledge we are not going to stop free inquiry. I say this as a scientist, categorically and with absolute certainty. What you have to do is learn how to control its application; that is our problem.

**Judge Carmi:** Professor Halevi, your last statement is already part of my reply so I can pass on. Professor Gershon, yes, I played the Devil's Advocate and if it causes you any bad feelings, I apologize. I am ready to accept your statement that you and your colleagues do your best, or try to do your best, when you deal with genetic engineering. I am sure you do because I know and appreciate your knowledge very much, your skill and your work. I also accept that there is much hope in this relatively new field of genetic engineering.

But, are all the researchers who deal with it really responsible persons? Some of them, many of them, maybe. But if all of them - and all of us - were responsible persons, there would be no need for genetic engineering, because we all are angels! The problem is that in your field, as in my field, there are people like you and there are people who are a bit different. I do not speak about charlatans, but about honest mistakes. I think that appeal, critique, is very important, even when it refers to people who deal with genetic engineering and it is for the benefit of you people and of us all.

**Miriam Cotler:** I appreciated your comments and I will try not to be defensive; I would hope that you weren't. Nor do I profess to be a genetic engineer. I would like to start where Judge Carmi stopped, what are researchers responsibilities and duties?

I am sorry if anyone heard me sounding like a "luddite", being anti-scientific progress, or anti-investigation. That is certainly not my intent nor is it my practice. However, I am concerned with the application of your knowledge. In the broader social/political sense I am concerned, I think we shall have a right to have a voice in the relative appropriation of research moneys. I am not sure that I want to spend 200 million dollars a year for 15 years when the United States has other very serious, very pressing problems of 35 or so million people without any health insurance and an increasing number of homeless persons, along with the highest standard of living in the world. However, I very much value what you do and I have enormous respect for it, so let us make that really clear.

I do not profess to be geneticist, nor am I a physician, I have a Ph.D. but I work at the bedside. I see persons who are maintained on ventilators for months and sometimes years. The product of our technology with completely unexpected outcomes. We don't know what these people would have wanted;

*we do not know what, if we could wake them up for a moment, they would want now, and we often have disagreements between their families and their physicians. Can we avoid this kind of dilemma? No. Should we not have invented the ventilator? Of course not?*

*On the other hand, we can now begin to educate the public so that people can express their values and their choices in advance of becoming incompetent or in this condition, so that they can say, "should I ever be in this position, this is what I would want". I think, as importantly, or even more importantly, we can foster a public dialogue in which people talk and reach some kind of consensus about is reasonable, and is it ever reasonable to override previously expressed wishes? Those are very dramatic departures from, for example, this morning's discussion of the sanctity of life. Those are very horrible things to think about doing. Yet, given the availability of technology and the lack of money that almost every society, including the United States has, these conversations are being held. People commit behaviors every day in the absence of any kind of articulation of the principles. I had hoped I had made clear what I was doing today was to say, look - you have a goal. Your goal is treatment, prevention, cure. In the intermediate phase, which may last 5, 10 or 50 years, how do we want to deal with some of the choices that your scientific activity are providing us for which we have no model at all, and for which we have had not public dialogue? Because the questions have never come up before, and we can not do it on an individualistic basis, I am reminded of Danny Gordis' discussion this morning. How do we then begin to apply the principals which sometimes do not appear to apply because the questions appear new. Some ethicists say the questions are not new, they are just new twists. Others say now, you have to use a case-by-case approach because we do not have any precedent for them. What I was trying to do, and what I heard Judge Carmi trying to do was to say, look, in the intermediate phase as well as in the present, we have problems with respect to privacy, with respect to confidentiality, ownership of the information and choices that people want to make. How do you want, as a society to begin talking about these? And then, in the longer run, when you scientists have given us choices?*

*Yet nobody is questioning the enormous value of bone marrow transplants; UCLA is in the forefront of some of the most marvelous work. No one is questioning how wonderful it would be if we could identify the gene for diabetes, which is another one of your efforts. Nobody is questioning that. What are we questioning is the application:*

*Knowledge is not value neutral.*

*Secondly, Science I would suggest to you, is not either completely objective, nor independent of social context.*

*I think we need to remember that. That is my job here. I do not pretend to understand how the scientist works in his laboratory. But this morning there*

*was discussion and disagreement about the question of a truly valid distinction between pure and applied science. I do not know if there is or there is not. But I am an applied scientist, an applied social scientist. It is the application with which I am concerned. I very much appreciated the comments that Miriam made and certainly those of Professor Silver. I thank you, Sir, for those. I hear similar comments from students, friends and patients.*

*Now just one other thing, you asked about gender selection. There is a public acknowledgement of gender selection in the laboratory and that is not abortion. That is pre-fertilization selection. Do I have a problem with it? Yes. Physicians disagree about whether it is the male who is always preferred over the female. Certainly in different cultures it very clearly prefers the male over the female and there is some question about gender. We do know that physicians perform abortions based on gender choices and even in a society that is very pro-choice, I think this raises concerns about social values which is a separate issue from personal choice, and the same kind of application of the issue that I am trying to raise with Prof. Gershon. I do not suggest that we retreat from the laboratory and behave as if this technology were not available, certainly not. Do I see my job as raising the concerns? Absolutely. Thank you.*

# TECHNOLOGY AND THE MEDIA

## INTRODUCTION OF THE SPEAKER

**Brian Silver:** I would like to introduce, *Professor Miriyam Glazer*. Miriyam Glazer is Associate Professor of Literature and also serves as the Chair of the English and Literature Department of Lee College of the University of Judaism and she is also Director of the Department's annual Arthritis Institute. She was a tenured Senior Lecturer at the University of Ben Gurion for 11 years, Chair of the Department of Foreign Languages and Literature. She has a long curriculum vitae which is impressive and to me interesting. The thing that caught my mind was her expertise in the British Romanticist William Blake.

Miriyam is someone who has been interested for some time in interfaces and amongst them are the interface between technology and popular culture as expressed through literature and film. She is going to address us on that subject.

# Technology and the Media: 'Terminating' the Twentieth Century

Miriyam Glazer

*Images from the film Terminator II: Judgment Day: A nuclear blast, children burning, Los Angeles reduced to skulls and rubble, the war against the machine.* As a Professor of Literature, observer of culture and something of a science fiction movie buff, I am acutely aware of underlying anxieties voiced as much by our technologists as by our humanists. "Many of our technologies of survival," Professor Merhav, for example, has said, "are a threat to survival." Popular mass culture reverberates with that anxiety. Films like *Blade Runner*, *Total Recall*, *Aliens*, and *Robocop*, all express fear about biotechnological scientists operating in an amoral context and feeding the hunger of multinational corporations. Most recently, most vividly, those concerns have been echoed in *Terminator II*.

Academics may well be tempted to dismiss *Terminator II* as just another money-making venture, complete with that super hero of the body building industry, the redoubtable Arnold Schwarzenegger. But if we suspend disbelief, and put aside prejudices, we may have about popular culture, Schwarzenegger or the mass media, we may see that popular culture is telling us something about people's fears that all of us need to respect. On behalf of the intense and global anxieties that *Terminator II* has tapped into, let us consider together how much we can learn from that film.

Let me first offer an historical perspective. Almost 200 years ago, in 1798, during a period of brutal corruption, social oppression, and war, the Spanish artist Francisco Goya did a painting of a scholar obviously tired from his intellectual labors, sound asleep at his desk. Surrounding him on all sides, like images from a nightmare, are horrifying bats with almost human faces. Written large and menacingly on the side of the desk are the words, "The Sleep of Reason Produces Monsters." Goya was cautioning his public about the dangers of violent irrationality. Like the ancient map-makers who warned navigators of the ocean's beasts lurking at the edge of the known world, Goya's monsters symbolized how frightening it was to be overwhelmed by the unknown, by the night world of the unconscious, that part of us lurking beyond our rational faculties, beyond our reason. "Here be monsters," those old cartographers wrote on their maps.

Before the age of electricity, the darkness of life seemed so all encompassing it is no wonder that thinkers worried that the darkness within us, the disruptive id, could devour us. That is why, too, most of the monsters of the ancient world were imagined as half animal, half human: creatures like

the Sphinx, with its lion body and head of a man, or the Centaur, a race of monsters with the head, trunk and arms of a man and the body and legs of a horse. We fear the power of our animal passions. We fear the animal within. Because of that fear, the heroes of the ancient and medieval myth were those who slew the dragon, who conquered the monster, who interpreted the Pharaoh's dream, and thereby restored the well being of the kingdom, the fertility of the land, the serenity of the individual mind. But Goya's fear, in 1798, that the "sleep of reason produced monsters" was only one side of the story. In the eighteenth and nineteenth centuries the Industrial Revolution gathered momentum. The rapid urbanization, social dislocation, and political upheaval and repression wrought by the spread of industry and the market economy, all forged an ambivalent legacy.

The word "automaton," for example, once used to conjure up the ingenious gadgets of inventors, in the industrializing age was redefined to mean dehumanizing subjugation, the human being become machine. As Professor Merhav has also noted, the classic example from the cinema is Charlie Chaplin in *Modern Times*. Once believed to be the key to enlightenment, reason in the service of technological ambition now seemed problematic. Surrounded by burgeoning industry, poets, essayists, social and political activists, questioned what evils an over-reaching scientist, that personification of reason, might unleash by going too far.

And so we come to an unusual gathering in 1880 at the Swiss villa of Lord Byron, eccentric and flamboyant English poet, one alluded to by Judge Carmi today. "We will each write a ghost story," Lord Byron instructed his guests. One of the guests was nineteen-year-old Mary Shelley, who took his challenge to heart. "I busied myself to think of a story," she later wrote, "one that would speak to the mysterious fears of our nature and awaken thrilling horror." Restlessly tossing in her bed that night, Mary Shelley dreamed up Frankenstein. the work, as Judge Carmi noted, that gave creative birth to the anxieties of the modern age. It is not hard to see why *Frankenstein* was a best seller, even in its day. Shelley's ghost story gave compelling form to society's troubled fantasies about the dangers unleashed by a scientist who pursues his goal oblivious of the consequences of his research for humanity, or for his own creation. Dr. Frankenstein was the irresponsible expert; his piecing together of his creature from fragments of dead human flesh can be understood as an emblem of the fragmentation that is part of the specialization and modus operandi of contemporary academic disciplines. What *Terminator II* so vividly shows us is that even the well-meaning family man, who in his scientific profession focuses on only fragments of the whole -- as Dr. Dyson focuses only on the electronic hand -- can be unwittingly dangerous. Like Dr. Frankenstein, Dr. Dyson never considers the goal or the consequences of his research; he works oblivious of an ethical context. In *Terminator II*, the hand so carefully kept under wraps in the modern lab, is a visual emblem of this issue.



The message of *Frankenstein* is not that the sleep of reason produces monsters, but that reason itself does, when it is unencumbered by humility, or by moral, ethical, social, or religious limitation. On the one hand, legend is rich with lore about philosophers like Albertus Magnus in the thirteenth century, sixteenth century medical showman Paracelsus, and even, as Judge Carmi mentioned this morning, Rabbi Yehuda ben Loew, creating their quasi-human homunculi and golems. But, on the other hand, once the Industrial Revolution and machine technology began to consume the old world, this human drive to duplicate the miracle of life also began to be imagined as inherently destructive. It began to be feared.

In the myth created by Mary Shelley, Dr. Frankenstein isolates himself in the laboratory, away from human society and his own family. He fails to consider the implications or consequences of his own research. He galvanizes his creature into life and then takes no responsibility for the life of the creature he has made. As morally abandoned by his maker as the split atom was abandoned by its makers in our day, the creature created by Frankenstein, like the atom, became deadly and destructive in revenge.

Mary Shelley's *Frankenstein* might seem very far from us, but as we lurch forward into the twenty-first century, the fears inscribed in that novel are still with us. In fact, our fiction, our films, and even our daily newspapers all indicate that those fears are intensifying, becoming extreme. The nightmare today is not that we will be engulfed by our irrational animal passions. The nightmare today is that reason itself, technological knowledge, will run amok. That is why the monsters that stalk through our media are no longer those old hybrids, merging beasts and human; they are not even clumsy robots, automatons, pure machines. Instead, the media reflect back to us the public's anxiety that we are losing our humanity altogether. That we have in fact injected technology ... that we are all like the women that we have been reading about in the newspaper, whose silicon is oozing through their nerve fibers and bones.

The increasingly illiterate young, we educators are told, think in sound bites. On our television sets we see and hear less about material reality than about image. American culture packages political candidates for public consumption like breakfast cereal. Our bodies are billboards marketing designer labels. "Not for us the giant steam-snorting wonders of the past, the Hoover Dam, the Empire State Building, the nuclear power plant," says science fiction writer Bruce Sterling, "the technology of the late twentieth century sticks to the skin, responds to the touch. The personal computer, the Sony Walkman, the portable telephone, the soft contact lens." The vastly expanding communications grid is our collective synthetic nervous system, our shared electronic brain. We have artificial hearts that can pump but not feel. In an age of technologizing human reproduction, the phrase "test-tube baby"

already has an old-fashioned sound. Ethicists, theologians, lawyers and even some repro-technologists have predicted that in the next twenty years, ovaries will be removed from aborted female fetuses so that eggs may be harvested before the "contamination" of living can touch them. The results? Armies of laboratory creations, humans without human parents. The next frontier is not outer space. The next frontier is woman's womb.

The advance of technology once seemed to promise the alleviation of human misery. We believed it would bring about a better world. But contemporary popular culture is ridden with the fear that technology now functions only to generate more technology, and in the process our social environment decays. In the United States the content of the television news is increasingly other television shows. We are living in an electronic pseudo-world of electronic images about other electronic images.

"Blade Runner Los Angeles," screamed our newspapers during the riots, describing the city of the rampaging angels, like the haggard, brutal, aflame Los Angeles of that so-called "futuristic" film. A cartoon reprint in the New York Times puts our condition very simply. "I remember the Watts riots," says the speaker in the cartoon drawing, "I saw it the next day on my ten-inch black and white TV. This time I taped the Los Angeles riots on a remote activated digital VCR direct from six simulcast live feeds, and watched on a new high resolution forty-inch split screen color monitor with surround sound. Talk about progress!"

Dr. Frankenstein's creature was patched together with the flesh and organs of corpses. But the monster for our age is a projection of the reality that we fear is already under way. It is an image of our threatened humanity, a cybernetic organism, a simulated organic/electronic. Like our market economy, it is relentless; like our children, it probably thinks in sound bites; like those victims of plastic surgery and media imagery, it has silicon in its bones. Cut open its laboratory-raised living tissue and there is a brilliantly advanced computerized machine underneath. But future generations will pay the price.

In *Terminator II*, for example, the Connors as well as the Terminator invade the sacrosanct domain of Dyson's home. Sarah Connor pours out to him the story of the consequences of his research: the nuclear holocaust to which his pursuit of the microchips embedded in that hand eventually leads. The Terminator cuts open his pseudo-flesh; for once, Dyson is confronted with the whole: this "hand" was the "hand" of a creature designed to put an end to the world Dyson knows. The scientist is stunned. "How were we to know?" he laments. "How were we supposed to know?"

Vivid, violent, provocative, *Terminator II* fascinates us with the electronic wonders of its visual wizardry. But it also warns us that our very fascination with that wizardry may be our own death wish, and it warns us,

finally, that we must prevent science from serving the amoral corporate appetite without regard for human well-being. It warns us that we must temper our desire to play with our electronic toys, to pursue our technological research, to become entranced with our electronic wizardry. The future is at stake. As young John Connor in the film says, "There is no fate but what we make."

We still have a window of opportunity. We can still change course. It is vital that the public ask ethical questions of our scientists; it is vital that our scientists ask ethical questions of themselves. It is also crucial for ethicists to learn about technology. For, in the absence of mutual questioning, and in the absence of scientific and ethical accountability, technology will relentlessly advance until, as *Terminator II* cautions us, it will assume almost unconquerable form. In the film, for example, the now benevolent Terminator, played by Schwarzenegger, is already obsolete. A new, even more powerful, nearly indestructible, model has been created: one that, like our own increasingly sophisticated electronic technologies, can become almost everything it beholds. The reality of substantial bodies disappears; the new Terminator is capable of generating any image. It is more dangerous than that nihilistic vacuum cleaner in the old Beatles movie, *The Yellow Submarine*. For it does not merely swallow up everything in its path: it destroys all human life.

In an age like our own, the sleep of ethics will produce monsters. What will be terminated in the end is our human community and all we care for, all we love, all that gives our life meaning. Us. In the film, Sarah Connor's nightmare vision of the end of the world causes her to act. The microchip that would have led to the apocalyptic Skynet is destroyed. Los Angeles 2029 does not become a scene of nuclear devastation. The film cautions us: The future is not set. "There is no fate but what we make." The responsibility is ours alone.

## CLOSING SESSION

## CLOSING REMARKS

**Amitai Halevi:** *I would like now to call on Prof. David Gordis, to summarize this symposium.*

**David Gordis:** That is a very easy assignment! I knew when I got up here that I would have some doubts as to the wisdom of writing the summary on the plane on the way to Israel!

I will not attempt to summarize, but I do want to make three kinds of observations by way of summary and perhaps by way of placing into context my own reaction and response to these discussions.

First, I would like to make a comment or two on the nature of this enterprise, because it is a rather unusual kind of coming together, one that is the result of the serendipitous relationship of the Whizin Institute the Technion, the University of Judaism and many of the individuals here. It produced a rather interesting coming together here and I would like to say a word or two about that. Secondly I would like to reflect for a moment or two on the Jewish nature of this enterprise that we have been involved in. Third, a dimension that was alluded to briefly but I think has some appropriateness at a moment of summary, that is the Israel-Diaspora or the Israel/American Jewish dimension of this discussion. All of them I think are significant and unusual. Since it is really impossible to summarize the content of the discussions and we all will await the published papers to reflect upon, to learn from and to be enriched by once again, perhaps these comments will be more appropriate than any vain attempt to summarize.

Firstly, the nature of this discussion. You know that general principle when one listens to a talk or hears a paper. The principle is, if I can understand it, how good can it be? I do not mention that merely to be facetious, I mention it rather seriously at this moment because it relates even to the very last few minutes of the substantive discussions that we were involved in. This is not an academic conference. It was not intended to be so and it is not one. It is not an academic conference of people in engineering and technology, nor is it even a kind of joint academic conference of ethicists and technical people. It is a coming together of a varied group of people, including those people whose principal enterprise is in the area of science, medicine and technology. Some, a small number of people, who are technically philosophers and ethicists, also a large number of people who are involved professionally in humanistic areas, but also a number of people who are not professionals in any of these areas but are intelligent, sensitive, informed human beings who are anxious to be part of this discussion. It is appropriate that they be a part of this discussion. What this context called upon all participants to do, and my own feeling is that they all acquitted themselves magnificently, is to translate what may have been easier for them to talk about in technical terms, into the kind of intelligent

discourse which was accessible to intelligent, knowledgeable people who are neither deaf, nor blind to moral/social policy considerations. I think it is particularly germane to this last interchange that we had because I would argue that fundamental to this exchange is the notion that control over any area of activity, whether it is ethics in the technical sense or science in the technical sense, while it should be informed by the technicians and the technical people, should not be in the hands of these technical experts alone. These are social policy decisions which require the broadest participation by an informed intelligent citizenry and that is only possible when those people who are involved in the technical areas are willing to accept that responsibility of translation. This has been an exercise of translation, or what you might call high popularization. Lay people and technical people from a variety of areas were not only engrossed but, I think, in many ways, electrified by many moments in the discussion and it was a remarkable discussion for that reason. It is also important to note that we are only at the beginning. These last moments of discussion were not an appropriate ending for an enterprise but they were the beginning of a new stage of discussion. That is why it is most welcome, as Prof. Weihs mentioned in his introductory comments, that this is the first of a series of discussions that will take place. If this were to be a single event and we were expecting closure at this point, even in the form of a 1974 type of document, then we would say that this enterprise was a failure. But it was not a failure. Quite the contrary it was an extraordinary success because it was the beginning of a series of conversations which, in my view, are most promising.

In connection with the following stages of discussion, I think there are certain things that we need to learn from this discussion. One is that while it is appropriate for this introductory discussion to have been as global as it has been, further discussions will have to be far more specific and limited. They will have to deal with specific segments of the problem and not attempt to deal with this global issue of "ethics and technology". We will have to deal much more precisely with what we mean by ethics, one will have to choose technological areas to talk about and that is all to the good. That is part of the plan for subsequent conferences that would not have been possible without this first broader exploration. Subsequent explorations will have to move to a new level of specificity and precision.

I believe there are going to have to be distinctions made which I think were not made adequately here. For example: is our subject in this series of conferences "technology and ethics", or is it, the ethical dilemmas that the person who works in technology faces? That is not quite the same thing. A number of issues came up which are really not technology issues although they are issues that a practitioner of medicine or technology will face in the course of his or her work. For example, the issue of Tzahal's training program which causes some unfortunate casualties and causes certain dilemma's for a medical practitioner may be more a question of poor public policy and the nature of

training programs for the Israel Defence Forces, more than it is an issue of the intersection of ethics and technology. Also many of the issues of triage, which certainly do have important articulations in the field of medical ethics, are really broader social policy issues dealing with the reality of inequality and the distribution of the resources of a society. And to view them in a narrower context of ethics and technology may limit them unproductively. We can decide to include them in the discussions or we can decide to draw the limits for the discussions somewhere short of them. Either of these possibilities is acceptable, but I think it would be useful to attempt to define more carefully what the scope of our discussion ought to include.

I think it is also useful to reflect on what the expected outcome of these discussions ought to be. I think there were some, perhaps, overly ambitious expectations expressed all the way back to yesterday when we began, that by the end of the conference we will "solve the problems". Remember that rhetoric? Well if that was the criterion for success then I think one or two problems still remain, even after these very productive deliberations. But of course the expectation was not to solve the problems. I think it is useful to ask, however, what was the expectation? What can we reasonably expect to accomplish in these discussions? I think we can, as someone put it in the course of these discussions, begin to forge an approach to these issues and develop a vocabulary. Part of the function of that vocabulary is to serve as a vehicle of translation of the technical into accessible public discourse. We can develop a vocabulary, we can develop an approach, we can develop the capacity to talk to one another, we can begin to suggest what the criteria ought to be for making the choices which are necessary choices. Many people have made the point that we do not have the luxury of waiting with the decisions affecting the uses of the technologies which already are before us. These decisions are being made *de facto* all the time and I do not think it is possible to suggest that they all should be put on hold. On the other hand, it is useful for us to have some sense of that gap separating our ability to grasp the ethical implications of the emergency technologies, and the galloping technologies themselves. The real, sometimes tragic problems often center on that gap which we ought to keep in mind. While we may not be able to deal with these difficulties in very quick ways, there is a degree of urgency involved in our discussions. It is important that we move along and that we not view our work simply as an abstract discussion.

A word or two about the Jewish dimensions. I think it is clear to those of you who have not previously been exposed to the kind of religious approach that some of the purveyors of a progressive view of Jewish sources have articulated here is that in our vocabulary when we talk of the religious and traditional approach we do not mean that we'll consult the Chief Rabbi and see what he has to say. Danny Gordis remarkable presentation this morning was I think a very good illustration of the subtleties of the kind of approach that we are talking about. I wanted not to deal with this in any length, nor to

deal with anything in any length, but since Prof. Weihs was good enough in the opening statement to mention the fact of my late father's participation in the 1974 conference and the statement that emerged from that day, and since there is a kind of historically significant event for our family in Danny Gordis and my participating here in this conference, I wanted to read a short, but I think appropriate quotation which is from a recent, soon to be published review of my father's last book, by Prof. Milton Konvitz, Prof. Emeritus of Cornell University, where he talked specifically about this notion of tradition and Halacha as it deals with ethical issues. He says that, meliorism, which is the position which he attributes to my father, I think correctly, implies change, improvement on an existing situation. Something is wrong that calls for replacement with something that is better. Judaism involves the use of two forces to accomplish a change for the better, namely reason and moral conscience. Both are attributes that are *helek eloah mima'al*, a portion from God above. Throughout Jewish history, says Gordis, now this quotes briefly from the book itself, "these two great canons of reason and moral conscience have been the means by which Jewish leadership received the traditional inheritance of the past and preserved it for the future. In the majority of instances, the tradition could be and was maintained with little or no change. But when change became necessary, the rabbi's did not hesitate to evaluate the tradition and modify it before handing it over to their successors. They recognized that successive generations of scholars were not merely repeating traditions and decisions from the past, but were revealing new and unfamiliar aspects of the Torah."

Robert Gordis concluded in this little section: "It is not without interest that the comments of scholars on the work of their predecessors in Jewish tradition are called *Hidushim*, they are called *Novelli* or new interpretations. They are not an attempt to suggest that it is simply a repetition of what came before but it involves a creative and innovative dimension of Jewish tradition".

That is the adventure that we are invited to participate in, when we as *Judaica* scholars, as humanists, draw not only on the Jewish tradition, but on those other sources of our values and behaviors in an attempt to shape a position on ethical questions. Notice that we do not argue, and no one has argued here, that we are conditioned solely and exclusively by Jewish sources, by some hermetically sealed notion about what the Halacha is all about. But we as children of the West and children of the Jewish community and those who are equipped with the two qualities that my father spoke of, that is both the intellectual and moral strength and power to make moral decisions, are called upon to use all of these resources to synthesize a point of view on these ethical questions and to relate with others in attempting to develop moral consensus on these issues. That is the enterprise as I see it, in which we are involved together as Jews, not simply as human beings. Those two are not antithetical. For us as Jews, Judaism is the best way that we know for us to be



human. It is not something which takes the place of our humanity. It simply is one component of it.

This leads me briefly to the last of the three points: the nature of the Israel/ diaspora dimension of this discussion. I do not think it is any secret that the Jewish community is troubled by a fragmentation, by a decline and deterioration of congruent areas of concern, the lessening of a common vocabulary, a decreased understanding and sensitivity to the realities of the experience of the State of Israel, and I should say also the deteriorating understanding of the nature of Jewish life in the diaspora on the part of our Israeli brothers and sisters. This fragmentation is in my view, tragic. It is tragic for the future of Jewish life. To put it in positive terms, one of the fundamental issues that will determine the nature of Jewish life in the future, is the nature of the relationship between Jews in the State of Israel and Jews in the Diaspora in the Galut, (and the choice of terminology does not bother me either way). It is also clear to me that one of the most sterile and unconstructive ways of attempting to overcome this is to have further dialogue where we talk about political issues alone, or dialogues where we talk about the interrelationship between Israel and the diaspora. Those are deadly and increasingly unproductive and sterile. What we need to do together is to begin to create a modern Jewish culture which is a culture that will embrace both Israel and the Diaspora. One way of looking at culture, is as a vocabulary and set of responses to the fundamental questions that life presents to all people. What is life all about? How should people relate to one another? What do we aspire to? What are the most important issues that we face? How do we set up priority in our behavioral choices? How do we construct a value system?

The most positive way of fostering the Israel-Diaspora interrelationship and nurturing the development of that contemporary Jewish culture, that can embrace Jews throughout the world, is to come together and to deal with fundamental issues, bringing perspectives which are different but out of which can emerge a consensus among us. That is, in my view, an extremely important contribution to the future of Jewish of life, which this Whizin Symposium has already afforded us and which I am confident it will afford us in even greater measure in the years to come.

I want to personally thank the Whizin family for the opportunity of being part of this really remarkable two days. Of course, we want to thank our hosts at the Technion who have really made these days remarkable in every way for us in terms of the arrangements and the hospitality and the graciousness and the warmth of reception to us, I am sure that these two days represent only a beginning of an important collaboration through which we will be blessed and I hope it will be a blessing to the Jewish people and the rest of the world as well. Thank you very much.

*A. Halevi: I want to thank Prof. Gordis for summarizing this Symposium so well and also going quite a bit beyond it. Before closing, let me take just a few minutes for some personal comments, including a confession.*

*When I was asked by our President, Zehev Tadmor, to get involved with the Whizin International Symposium, as coordinator of the Israeli members of the Organizing Committee, I was taken aback. What could such diverse institutions have in common. I think you are aware of the fact that in Israel the word Judaism is a very controversial term. We decided, and I am prepared to take some credit - or blame (in view of what Rabbi Gordis has said, I think it is probably more credit than blame) for the decision, to keep the first Symposium in-house, in order to find out whether the two institutions can find a common language or will simply talk past each other. In the latter case, Bruce Whizin's intuitive idea, well meaning as it was, may have been over-optimistic.*

*Now, after this day and a half of thoughtful presentations and lively discussion, especially the last hour or so, I admit that Bruce's ideas of a collaborative effort between the University of Judaism and the Technion was not only brilliant, but practical. The common language has not yet been found, I am afraid, but we are not talking past each other. I think we are talking to each other, and that is a wonderful thing. I am now convinced that the Whizin International Symposia can indeed continue as an annual event, alternating between Haifa and Los Angeles, and take on a more fully international character. With this I would like to close and ask Bruce to have the last word.*

**Bruce Whizin:** Regarding the common language yet to be found that Professor Halevi spoke of, common language is the outcome of relationship, the result of differing views being presented and through discourse the forging of common principals. Cooperative relationship depends on defining goals and creating environments of safety so that individuals can state positions and beliefs. Through the communicative interaction between parties, disagreement and more importantly apparent disagreement, begins the formation of common language. Cooperative relationship therefore, depends upon common language.

David Gordis talked about translation, which interests me a great deal. While David was speaking, I started thinking about the Tower of Babel. The practical impact of the Tower of Babel story is that it forced relationship. Relationship by its very nature requires difference. When we all speak the same language I suggest there is no relationship. I am pausing, because as I say this I want all of us to think about this for a minute. The notion I present is that without difference there is a sameness, no possibility for growth and no opportunity for cooperation, coalition, synthesis and, if you will, mutation. We, as a species are the result of a process of mutation, and if we expect to evolve in a manner that assures our continuing existence, we must "mutate" the system we presently use to create and utilize new technologies.

I think one of the things we are trying to do here is to create a relationship that will change the way we use the technological achievements of our brilliant scientists and engineers. This, I believe, will be the outcome of seeking common language, common principles and forming partnerships. We will always "see things differently", that is the very nature of perception. The trick is to make the "seeing of things differently" work for us, instead of against us.

I hope we have begun a partnership and a process of relationship that will move us in a different direction.

I want to thank the people at the Technion for your warm and generous hospitality. It has been overwhelming. My thanks Zehev Tadmor, President of the Technion, who from the time he became President has been excited about the symposium project and has been instrumental in seeing its vision turn into reality. I want to thank the members of the planning committee, Amitai Halevi, David Gershon, Alex Barzel, Amnon Carmi, Chanoch Jacobsen and the presenters Shmuel Merhav, Ori Better, and Harriet Gershon. I am most grateful to the Samuel Neaman Institute and to Danny Weihs, its Director, who was responsible for being the synergy point of this project at the Technion.

I also want to thank Gary Leo, my first contact with the American Technion Society, and Brian Silver, the retiring Vice-President of Academic Development, who was my first contact with the staff and faculty at the

Technion here in Israel. Gary and Brian have always been enthusiastically supportive as the Whizin Center for Biotechnology took form, the symposium was envisioned and the relationship between the Technion and the University of Judaism developed.

We at the University of Judaism, like you, at the Technion, have a strong investment in pluralism. We think that it takes a multitude of disciplines to accomplish a given task. We believe that by being pluralist we hold the middle ground and provide an institutional environment for the discussion of the differing views that are so much a part of our Jewish tradition.

I would like to thank David Lieber, the retiring President of the University of Judaism, for being here, lending your presence, wisdom and personal connection. I want to thank Jack Ostrow, the Chairman of our Board. Elliot Dorff, the Chairman of our Committee, who coordinated this symposium in addition to all of his other responsibilities at the University, and Danny Gordis, the co-chairman who has been so helpful in pitting this symposium together. My thanks to the other members of our planning committee: Miriam Cotler, Miriyam Glazer, and David Gordis. I want to thank two members who are not here, Hanan Alexander and Bob Wexler, our new President who takes office in September. A special thanks to Gail Mincow, our program coordinator who is back in Los Angeles and handled all of the logistics for the twenty-eight of us who are here in Israel.

Thanks to the twenty-eight members of the Board of Directors and supporters of the University who have traveled with us and given their wholehearted support to this project. I also want to thank two other people, the first is Ron Wolfson, the Director of the Whizin Center for the Jewish Future at the University. Ron was tireless in his coordinating and helping to develop this symposium and our trip to Israel. The second is committee member Shelley Whizin, my wife, my partner, my editor and without whose encouragement and help this symposium would not have happened.

Most conferences of this type happen once and the proceedings are published and then they sit on a shelf. We have designed this series of Symposia to enjoy the luxury of continuity. We will meet again next August at the University of Judaism in Los Angeles, where you will be our guests, and then in 1994. This gives us the opportunity to engage in long-term discussions of technology and ethics. We shall return. That was Douglas McArthur, but this is a collective we. This gives us the opportunity to engage in long-term discussion of technology and ethics to deepen the relationship that we have established here between the University of Judaism and the Technion. Thanks for making our dream a reality.

Appendix A:  
The Mount Carmel Declaration on  
Technology and Moral Responsibility



TECHNION  
WUNSCH  
INTERNATIONAL  
SYMPOSIUM

# ETHICS

in an age of pervasive  
TECHNOLOGY

# THE MOUNT CARMEL ON TECHNOLOGY AND

We, the undersigned, meeting at Haifa to celebrate the fiftieth anniversary of the Technion — Israel Institute of Technology, deeply troubled by the threats to the welfare and survival of the human species that are increasingly posed by improvident uses of applied science and technology, offer the following Declaration for consideration and adoption. It is addressed, most urgently, to all whom it concerns, to governments and other political agencies, to administrators and managers, experts and laymen, educators and students, to all who have the power to influence decisions or the right to be consulted about them.

Without minimising the prevalence of human irrationality and the potency of envy and hate, we have sufficient faith in ourselves and our fellows to hope for a future in which all can have a chance to close the gap between aspiration and reality — a chance to become at last truly human.

No agenda is more urgent for human welfare and survival.

We herewith affix our signatures to this declaration, henceforth to be called the Mount Carmel Declaration on Technology and Moral Responsibility, proclaimed in Jerusalem on this day, Wednesday, the twenty-first of December, 1974, in the Residence of the President of the State of Israel.

(1) We recognise the great contributions of technology to the improvement of the human condition. Yet continued intensification and extension of technology has unprecedented potentialities for evil as well as good. Technological consequences are now so ramified and interconnected, so sweeping in unforeseen results, so grave in the magnitude of the irreversible changes they induce, as to constitute a threat to the very survival of the species.

(2) While actions at the level of community and state are urgently needed, legitimate local interests must not take precedence over the common interest of all human beings. In justice, happiness and peace. Responsible control of technology by social systems and institutions is an urgent global concern, overriding

all conflicts of interest and all divergencies in religion, race or political allegiance. Ultimately all must benefit from the promise of technology, or all must suffer — even perish — together.

(3) Technological applications and innovations result from human actions. As such, they demand political, social, economic, ecological and above all moral evaluation. No technology is morally "neutral."

(4) Human beings, both as individuals and as members or agents of social institutions, bear the sole responsibility for abuses of technology. Invocation of supposedly inflexible laws of technological inertia and technological transformation is an evasion of moral and political responsibility.

(5) Creeds and moral philosophies that teach respect for human dignity can, in spite of all differences, unite in actions to cope with the problems posed by new technologies. It is an urgent task to work toward new codes for guidance in an age of pervasive technology.

(6) Every technological undertaking must respect basic human rights and cherish human dignity. We must not gamble with human survival. We must not degrade people into *things* used by machines: every technological innovation must be judged by its contributions to the development of genuinely free and creative *persons*.

(7) The "developed" and the "developing" nations have different priorities but an ultimate convergence of shared interests:

Ephraim Kitzis

Max Black

Mordechai Miller

Dr. Joel J. Zinn

David S. Leshem

Paul T. Easton

Ralph May

Joseph B. Berman

Herman Bravover

Ch. Sack

W. T. Ravder

John H. Hinz

Robert Fox

Anthony Branno

Samuel Fish

Nathan Rotenkreuz

Joseph Regev

Amos Shoshani

Orla Kumbin

Technion-Israel Institute of Technology

# DECLARATION OF RESPONSIBILITY

Robert Usher Ray Stief Stuart Hampshire Nathan Gross Eli Ginzor  
 E. Packer Isaac Berlin Joseph Rappaport  
 Dr. Kuzweil Laurence N. Taidi (M. Orgel) S.H. Eisenstat  
 Z. Kipuri Yehuda Edelman  
 F. Ollendorff Haim Harizan Harold A. Miller Edolph Weisman

For the developed nations: rejection of expansion at all costs and the selfish satisfaction of ever-multiplying desires — and adoption of policies of *principled restraint* — with unstinting assistance to the unfortunate and the underprivileged.

For the developing nations: complementary but appropriately modified policies of principled restraint, especially in population growth, and a determination to avoid repeating the excesses and follies of the more "developed" economies. Absolute priority should be given to the relief of human misery, the eradication of hunger and disease, the abolition of social injustice and the achievement of lasting peace.

(8) These problems and their implications need to be discussed and investigated

by all educational institutions and all media of communication. They call for intense and imaginative research enlisting the cooperation of humanists and social scientists, as well as natural scientists and technologists. Better technology is needed, but will not suffice to solve the problems caused by intensive uses of technology. We need *guardian disciplines* to monitor and assess technological innovations, with especial attention to their moral implications.

(9) Implementation of these purposes will demand improved social institutions through the active participation of statesmen and their expert advisers, and the informed understanding and consent of those most directly affected — especially the young, who have the greatest stake in the future.

(10) This agenda calls for sustained work on three distinct but connected tasks: the development of "guardian disciplines" for watching, modifying, improving and restraining the human consequences of technology (a special but not exclusive responsibility of the scientists and technologists who originate technological innovations); the confluence of varying moral codes in common action; and the creation of improved educational and social institutions.

Abraham Kravitz  
 Judith Pankaj Lapon  
 Joseph H. Harris

Chaim Finkelman

Z. NAVEH  
 Z. Kipuri

Alan Rosenberg

Amiram Carmou

PLUTSKY

M. Nussim

Doreen  
 Leo Stief  
 F. J. Dublin

A. Haron

Arnette Kook

Hugh Gaiter  
 Bernard Wundt  
 H. G. Gaiter  
 L. David

Daniel Fogel  
 Julian J. Harman

David Brown  
 Noke Landau

Benjamin Epstein

Haifa & Jerusalem

December 21 - 25, 1974



WHIZIN INTERNATIONAL SYMPOSIUM ON  
TECHNOLOGY AND ETHICS

This publication summarizes the proceedings of the first in a projected series of International Symposia on Ethics and Technology, held at the Technion's Coler Center on Wednesday, June 17 and Thursday 18, 1992, as a cooperative venture of the Technion and the University of Judaism in Los Angeles. The impetus for organizing a series of annual symposia devoted to the exploration of the interface between ethics and technology was provided by the Whizin family, generous donors to both of the sponsoring institutions.

The Symposium was organized by the Samuel Neaman Institute for Advanced Studies in Science and Technology as an "in-house conference", designed primarily to familiarize the members of two such disparate academic institutions with the problems that have to be confronted jointly and to map out a common frame of reference for dealing with them.

This is the second occasion on which the Technion has concerned itself with the interrelation between Technology and Ethics. In December of 1974 an International Symposium entitled "Ethics in an Age of Pervasive Technology" was held to mark the Technion's 50th anniversary.

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