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Ethical Norms in Science

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Western Michigan University

Center for the Study of Ethics in Society

ETHICAL NORMS IN

SCIENCE

Rachelle D. Hollander National Science Foundation

Papers Presented to the Center Vol. 1, No. 1 October 1987

Center for the Study of Ethics in Society Western Michigan University Kalamazoo, MI 49008

The purpose of WMU's Center for the Study of Ethics is to encourage and support research, teaching, and service to the university and community in areas of applied and professional ethics. These areas include, but are not restricted to: business, education, engineering, government, health and human services, law, media, medicine, science and technology.

> Founded 1985 Phone (616) 383-1657

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The Center for the Study of Ethics in Society was established in the Fall of 1985. It evolved from the efforts of an interdisciplinary group of faculty to work together in examining ethical issues related to their teaching and research interests. Recognizing that the study of applied ethics is not the province of any single academic discipline, members of the group quickly recognized the value of sharing their concerns and reflections with each other. They also recognized that even more could be learned through a forum open to students and members of the general public.

A central activity of the Center during its first two years has been its series of public presentations. A wide range of areas of ethical concern have been addressed: medicine; engineering; business; journalism; media; agriculture; and education. More specific topics discussed have included: making critical medical decisions; product liability; environmental safety; affirmative action; appropriate and inappropriate scientific research; organizational ethics; whistle-blowing; moral development; and ethics in educational institutions.

Now in its third year of existence, the Center continues its series of public presentations. In order to share with a wider audience some of the outstanding presentations made during its first two years, the Center is initiating this series of publications. We hope you will find these publications helpful in thinking through some of the vital and complex ethical issues now facing society.

The Center has benefited from the participation, support, and encouragement of many faculty and administrators at Western Michigan University. We are grateful to them all.

We especially wish to express our appreciation to WMU President Diether Haenicke, without whose strong support the publication of this series would not have been possible.

> Michael S. Pritchard Director

From President Diether Haenicke, WMU

In recent years, we have witnessed across American campuses a resurgent interest in problems relating to applied ethics. Students, faculty, and professionals alike outside the academy are seeking answers to questions posed by political decision makers, by businessmen, lawyers, physicians, and academics. The multitude of existing questions reflects not only an increasingly complex technical, political and professional environment, it also indicates a widespread sense that ethical concerns have, in the past, not been sufficiently integrated into some of our societal decision-making processes and that our professional and personal decisions and practices need to be subjected to a careful philosophical examination of, simply put, what is good and bad.

The renewed interest in applied ethics on our campuses has spawned one of the most vigorous. provocative and fruitful debates academia has encountered in many years. The discussion has attracted genuine interest and involved argument from a wide variety of academic disciplines and has drawn many professional practitioners back into the campus life and its intellectual disputations. At Western Michigan University the Ethics Center plays the vital, coordinating role for this important academic endeavor. Founded by faculty members from rather dissimilar departments, the Ethics Center represents one of the few truly successful interdisciplinary programs of the University. In its willingness to examine through public lectures, discussions, and publications the ethical questions faced in politics, business, engineering, medicine, law, and other professions, it provides, beyond the realm of the campus, a valuable and constructive public service to the larger community.

Although still young, the Ethics Center has made its impact on our campus. The University looks forward to the Center's continued practical contributions to an essential and productive scholarly debate.



ETHICAL NORMS

IN SCIENCE

Rachelle D. Hollander Coordinator, Ethics & Value Studies National Science Foundation

This paper is based on a presentation made to the WMU Center for the Study of Ethics in Society, February 18, 1987.

In an article published in 1980, entitled "Ethical Responsibility and the Scientific Vocation," Sanford A. Lakoff recalls the German sociologist Max Weber's writing in 1918, that it is characteristic only of <u>modern</u> science that pursuit of truth is no longer synonymous with "the quest for the meaning of life." Unspoken, says Lakoff, if Weber's reason for his own commitment to science: satisfaction of the modern need for knowledge in and of itself.¹

I think that I agree with Lakoff and Weber, that one of the defining characteristics of the contemporary human condition is the desire to know. What Lakoff overlooked in his article, however, is the connection between the desire to know and other desires. There is the desire to reap the reward for what is known. Or to escape blame for unsuccessful pursuit of knowledge. The desire to reap large rewards for small investments. And so on and on.

For a long time, at least since the second world war, students of the organization and processes of science believed that pursuit of truth offered enough rewards to the individuals pursuing it that leaving them to their own judgments about true and false scientific claims would suffice to allow society as a whole to benefit from the enterprise. In fact, American politicians also believed it. Because of this peer review--where scientists alone judge the merits of scientific proposals--is institutionalized at the National Institutes of Health and the National Science Foundation.²

The notion that pursuit of truth was in and of itself enough to assure beneficial ends and allow scientists the autonomy to govern themselves was probably a myth, perhaps a benign one, while it was in effect. But its power as a myth--over scientists and others--seems to be rapidly coming to an end. Just now, both internal and external threats to open inquiry are a topic of growing concern. These threats seem to take many forms: scientific fraud, disputes over patents and access to data, restriction of communication for national security or commercial purposes, are some examples. This paper describes current attitudes and responses of scientists, journal editors, and universities to a few of these controversies.

Concerns about inquiry are not limited to scientists. They are topics of media attention and Congressional hearings. This is not surprising, because science is now big business, and it's a business operated from the public purse. Lakoff reminds us that science is a social enterprise. A great many individuals and institutions are involved. Each bears some degree of responsibility for what happens, and for what doesn't happen. Responsibility is diffuse, but nonetheless present. It encompasses all of us, and public opinion plays a part. The debates over creationism or using animals in research provide some illustrations.

Public interest is also not surprising, because most all of us are aware that scientific and engineering work has had and will continue to have profound effects on human societies and on our physical world. Human influence is spreading into the universe. Furthermore, while scientists and engineers know that their work has these potentials, they are perhaps less willing to recognize that they are not experts about the societal implications of their work. Indeed sometimes they are insensitive to ethical or value dimensions associated with their work. Most scientists and engineers, like the rest of us, muddle through on these matters.

What starts to come clear in this discussion, is that we need to help each other muddle through. We have to try to determine what the significant problems are and then design or modify social institutions to try to overcome them. We have to identify, articulate, and evaluate a spectrum of views on these matters. This can help us see a little better what our options are and what the positive <u>and</u> negative impacts of our actions might be. We will only succeed if we design reasonable processes whereby interested and affected parties can participate in these discussions. We may need to pay special attention to views that have generally been ignored or excluded in order to make wise decisions.

One way to characterize the concerns and threats that I have identified above is as responses based on the desire or need, real or perceived, to hold science accountable. Two values that conflict when societal institutions are organized to foster the pursuit of knowledge and its fulfillment are the values of autonomy and accountability. These values are not easy ones to grasp.

They have a number of meanings and connotations. Autonomy can be defined as freedom, independence, or self-direction. Yet, these words don't mean exactly the same thing. One can have too much freedom, but can one have too much self-direction? Accountability can be thought of as being <u>held</u> to account or being <u>held</u> responsible, or it can be thought of as being able to explain, being able to show one has acted responsibly, having the "right" self-direction. Some philosophers insist truly autonomous persons always act responsibly; these persons are then accountable, in one way or construing that term, but they may or may not be <u>held</u> to account.

The commitment to the pursuit of truth, Lakoff says, is of little help in providing ethical guidelines to scientists. It offers, he says, "only a limited guidance with respect to the responsibilities that may be inherent in or especially associated with the scientific vocation. At most, it suggests that scientists should be concerned about threats to their freedom of inquiry, and perhaps by extension to all constraints upon freedom of thought and expression. It does not indicate at all whether and in what respects scientists have an obligation to concern themselves with the uses to which their discoveries are put."³

I don't think this is totally right. In cases of scientific fraud, it may well be the lack of commitment to truth or the likelihood of self deception in that commitment which leads to problems. And a commitment to truth <u>could</u> also lead to a commitment to ferreting out the consequences of the commitment. On the other hand, Lakoff is right when he says that a commitment to truth is quite different from a commitment to doing something about the truth.

Nonetheless, it should be acknowledged that the scientific vocation, or ethos, as Daryl Chubin calls it in an article in the summer 1985 issue of Minerva, is peculiarly sensitive to threats to its autonomy.4 After all, scientists for a long time thought they had struck a bargain with society that would leave them alone to discover truths; let them decide for themselves what counted as truths so that all society would benefit. The contract asks for a special freedom--the autonomy to decide what is meritorious science--in return for two special responsibilities. One acknowledges the importance of pursuit of truth. The other is the promise of benefit. Now science is facing challenges to its commitment to truth itself. and it needs to be able to resolve these to continue to make progress.

Science faces this challenge within and without. The "ethic of liberal democracy," says Chubin, quoting a 1982 article by Kenneth Prewitt, proceeds from very different premises than the ethic of science, requiring "public control and accountability," "public scrutiny," "checks and balances, external regulations, and publicly produced evaluations." The contract, Prewitt writes, is being renegotiated because "science is of public consequence." Chubin reminds us, however, that "Autonomy and accountability are not mutually exclusive. They are in a state of continuous compromise."⁵ Chubin's point can be expanded by reminding ourselves to distinguish between any individual scientist or engineer's commitment to truth, and the commitment of a discipline or professions. As I note later in this paper, the institutions of science--the disciplines or professions--have always recognized that the public trust depends on their demonstrated commitment to truth. The public assurance of autonomy thus presupposes that commitment or readiness to hold one-self accountable to and for the truth.

The remainder of this paper describes some current events in this process of adjustment in scientific norms and expectations--in attitudes, behaviors, and organizations--and attempts to highlight some challenges and some opportunities in the process. I base much of my discussion on a symposium which Jules LaPidus, President of the Council of Graduate Schools, and I put together for a recent Annual Meeting of the American Association for the Advancement of Science. LaPidus and I asked several people to present papers on the topic of ethical norms in science, and several others to respond to their prepared remarks. I will report something of what they said and mention a few related matters of interest. Since this is a complex issue, with many components and permutations, there is much of importance I will not mention. I will touch on issues of data sharing, editors' and universities' responsibilities, and graduate education. All of these are areas where ethical norms in science are being renegotiated.

Data Sharing

Stephen Ceci of the Science, Technology and Society Program at Cornell University, made the first presentation at the symposium. He described the results of several surveys he and his colleague Elaine Walker conducted about scientists' attitudes toward data sharing. He pointed out that a relatively small percentage of scientists, from all sorts of fields-physical scientists, biologists, bioengineers, social scientists--and in various work settings--academic, industrial, government--reported they refuse to share data when a colleague requests it. The overall rate was "fairly stable across disciplines, ranging between 14 percent and 20 percent."

However, when Ceci and Walker undertook a second survey asking scientists to comment not just on their own attitudes towards data sharing, but those of their colleagues, the majority reported that their colleagues were not prone to sharing data, even data collected with federal funds. This result supports a standard hypothesis in social sciences research: If you want to find out what's going on, don't just ask people what they do, ask them what their neighbors do. What are the reasons researchers gave for their reticence to share? In biotechnology and allied health sciences, the main reason was fear of financial loss (getting future funding or patent rights). In social sciences, the reason was fear of being preempted in "publication of subsequent research." This result, said Ceci, poses a challenge and an opportunity for himself and his

colleagues (1) to introduce into training of the next generation of scientists norms of science encouraging sharing that he believes characterized preceding generations of scholars; and (2) for the individual disciplines to hold a national dialogue to try to repair the damage to these norms.⁶

It may seem unlikely, given human dispositions to wish to garner credit and rewards, to have such a call heeded. Yet this is not so. There has been ferment in professional communities on these and related matters for a considerable time. Clearly, as I noted earlier, professional groups have an interest in maintaining autonomy, in establishing and maintaining control over professional standards and working conditions. They need this, they claim, with what may be considerable historical justification, to make scientific progress and provide for the public safety. But they are unlikely to keep control without establishing policies and practices that garner public trust and support. Otherwise government requirements will become ever more onerous. This is one sense, at least, in which autonomy requires accountability. For reasons of self-protection as well as the public interest, then, professional societies and associations, in fact almost all institutions, recognize some need to establish rules or guidelines for their members, even when their members would rather they didn't. Further, the same motivation propels them to participate in public processes that establish regulations that will affect them.

Universities' Responsibilities

Alfred Sussman described the kind of reflective process on these matters that has characterized the University of Michigan, Ann Arbor,7 In August 1983 the University established a Task Force on the Integrity of Scholarship, which developed standards for the research process. Sussman indicated that the most important part of the task was not its results, but the doing of it. Doing it established terms for the debates which will arise because standards conflict with each other. The debates are essential for the adjudication, the adjustment of norms. In this case, Sussman noted, one standard for the research process says be objective, another, be concerned for the broad consequences of research. A third standard says make results available, while another counsels the maintenance of confidentiality as appropriate. Between such standards conflicts can arise, and views on what constitutes infringements of these standards will differ.

Having described these debates, Sussman asked who is to arbitrate conflicts in applying the standards? He recommended involving a group of faculty and administrators, and perhaps students, in monitoring compliance and interpreting the guidelines. It is probably worthwhile to have younger faculty as well as students participate; and it might be helpful to open the process even further, so that university standards could be challenged by other under-represented views. Sussman also reported on the progress of another group at the University which was recently charged to review policies on classified research. The prior policy basically banned classified research by requiring a one year limit on publication restrictions. The group issued a majority and minority report in July 1986. The majority recommended extending a policy of openness to all university research, nonclassified--e.g., commercially sponsored, as well. The minority criticized the majority for not allowing researchers the freedom to choose to do what research they pleased.

Sussman did not favor the minority position. He believed that such an individualistic policy would prevent the kind of social discourse needed to determine that societal goods are being served by the research society helps to support. Ethical questions cannot be raised about secret matters. Nevertheless, he said, one argument in favor of defense research at universities, even at some risk to openness, is that were universities not involved, more secrecy might surround basic research, increasing the risks to society.

I think Sussman is quite right to point out the threat that secrecy poses to democratic and moral discourse. However, I find the view that more secrecy may result if universities do not participate in defense research questionable. But the problem is not any easy one. Both military and civilian agencies of the federal government are beginning to clamor for more secrecy for purposes of national security, of competitiveness,

and for reciprocity. With these pressures, the question whether university involvement in research mitigates against increasing secrecy is at best an open one. Here, Sussman's recognition of the need for individuals and institutions to adjudicate norms is most compelling, and how the problems are defined and who participates in the discussion is perhaps at its most important.⁸

Episodes of scientific misconduct are also requiring universities and journals to adjust their norms and expectations. Paul Friedman, Associate Dean of the School of Medicine of the University of California at San Diego, described how that school's procedures were used to handle an allegation that a junior scientist in the Department of Cardiology had published numerous articles containing false data, and fabricated methods and results.⁹ The UCSD Medical School was very well served by processes that had been put in place before the incident occurred. In particular, the decision to conduct formal inquiries outside the affected department, and to separate determination of fraud from determination of its extent, were very useful--the first, because it answered questions of appearance and actual conflict of interest; and the second, because it allowed media demand for answers to be satisfied relatively quickly.

The case shows clearly the social nature of science. Players and bystanders shared degrees of responsibility and were affected by the outcomes. As reported in <u>Science</u> on October 31, 1986, UCSD told all of the co-authors of the accused scientist's publications that they were responsible for authenticating those that two investigative committees had determined to be questionable. Although some researchers' names were placed on papers without their knowledge, many researchers, young and old, who had allowed their names to be placed on papers about which they knew little or had questions, found themselves considerably embarrassed. This case, like others, put the practice of adding the lab chiefs' names to papers about which they may know little in an unfavorable light. It also called into question general laboratory supervisory practices. In this case, as well as several very highly publicized others, journals also suffered from the need to print embarrassing retractions, and they faced puzzling questions about the adequacy of their review procedures.

A UCSD committee wrote and adopted recommendations that the members hope will prevent similar difficulties in the future. One recommendation, for much closer supervision of young researchers, was dropped because it was felt it would stifle creativity. This demonstrates the tension between autonomy and accountability, even internal to science itself. However, participation of younger researchers in establishing these norms might alleviate this tension.

The committee adopted recommendations that peer review of scientists focus on quality, not quantity, that departments develop ways to identify "type and degree" of authors' participation in publications, that coauthorship imply scientific responsibility, "including a responsibility to defend" papers if necessary, and that "the medical school . . . develop clearer guidelines for supervising trainees and 'realistic' standards of productivity.¹⁰

In her remarks on the presentations, Patricia Woolf, a sociologist at Princeton University who has studied scientific practice, suggested that clearer standards are needed for promotions. She pointed out that those giving out promotions and those up for them often have different notions about what the requirements are. Here is another example where adjudication of conflicts would benefit from broad participation in the discussion.

Editorial Responsibilities

Marcel LaFollette, editor of the journal Science. Technology and Human Values, reminded listeners that editors, staff, associated referees and advisors, and publishers are also caught up in the negotiation of new norms of autonomy and accountability.11 Journals are often the arenas where fraud is "committed. detected, and retracted." And the research community has traditionally "placed much of the burden of skepticism and detection" at this point. Editors are caught in a "structurally ambivalent situation." between responsibilities "to the field, to the publisher or sponsoring society, and to the other individuals caught up in a case." Legal questions play an increasing role in disputes over scientific publications. LaFollette called for a reassessment of the "criteria for evaluation and our standards

for behavior in publishing," and for a new spirit of openness in the process.

Editors and journals are beginning this reassessment. The Council of Biology Editors has developed and distributed a set of scenarios raising ethical and policy questions to editors of biology journals.¹² They have gotten back an interesting range of opinions, sharing only one common characteristic. Editors' opinions differ significantly from each other about these issues; but they are all very strongly held. Currently, the Council is extending the sampling to other fields and will hold a general conference to discuss the findings, at the end of the project, in October 1988.

In addition, the <u>Journal of the American Medical</u> <u>Association</u> hopes to encourage original research on questions of editorial peer review by recruiting abstracts and papers on such topics for a conference in early 1989. When we see who is invited and who attends these meetings, we will have some evidence as to how open and inclusive a process this is to be. We will begin to answer Sussman's question, "Who is to arbitrate?" in this context.

Let me give an example drawn from LaFollette's presentation of some of the different answers that can be made to that question. All of them may be morally legitimate. She cited an example of an editor to whom a paper was submitted that he considered fraudulent. She was amazed that his response was not just to call the author but also to call the author's dean. She thought the only explanation for such a strong reaction was the editor's feeling of betrayal. However, a member of the audience believed the call was appropriate. LaFollette said that she did not believe that editors should intervene directly in this kind of unrelated matter; she thought that the journal's sponsor needed to have a process in place to which the editor could refer such problems.

Graduate Education

All the panelists were concerned to some extent with questions about norms in graduate education. Sigma Xi, the Scientific Research Society, has become interested in this area recently. In 1983, former executive director C. Ian Jackson, reported he began to realize that principles of integrity in science that he, the Board of Directors, and Sigma Xi members had taken for granted, needed to be articulated and discussed explicitly.¹³ The result is the booklet Honor in Science, "intended as practical advice to those entering careers in scientific research." The booklet succeeds admirably in that goal, and is available through Sigma Xi.¹⁴

I recommend this book highly. It provides useful, terse guidance to individuals and institutions in an increasingly complicated and atomistic world. Jackson calls attention to the need to overcome this fragmentation of the research environment, which he believes has a powerful albeit indirect influence on research integrity. He believes that the "bystanders" have to assume much more responsibility for creating an environment in which unscrupulous acts are unlikely.¹⁵ To illuminate the role of bystanders, Jackson told a little story about how he had recently to hire three people for the Sigma Xi staff. When he checked the references on five applicants for these jobs, none of which required a college degree, he discovered that three had faked credentials. But how many potential employers take the time to check these matters?

To try to help, Sigma Xi, the Council of Graduate Schools, and the Committee on Scientific Freedom and Responsibility of the AAAS, cooperating with a new nonprofit research corporation called the Acadia Institute, are developing a project to collect and analyze information on the values graduate students in science and engineering associate with professionalism and on the value conflicts they experience and how they resolve them. They want to devise questionnaires and interviews to administer to graduate students themselves.¹⁶ It will be interesting to see how open and inclusive a process they use to develop the focuses of their project.

It is easy to overlook the views of important, but low status groups. A paper Ed Hackett, of Rensselear Polytechnic Institute, presented at another AAAS symposium illustrates how this happens.¹⁷ Hackett reported on interviews he did with a category of people at universities he calls "academic marginals." The people he interviewed were very productive scientists who were not in tenure-track positions at the universities where they worked. They had very little autonomy and their livelihoods were very precarious. Many were postdoctoral fellows. Because of funding patterns, they, and graduate students as well, often pursued short-term and constricted research goals rather than projects that may have provided more educational benefit. This apparent tension between educational and research objectives will need to be identified and addressed in a project to help graduate students in science and engineering identify and preserve professional values.

Conclusion

Science and scientists have traditionally taken a relatively elitist and isolationist attitude toward the resolution of problems they face. If they want to preserve their autonomy, however--and I believe it is important that they do so--this may be an attitude they can no longer afford. To preserve and deserve public trust, they may be well served by further attempts, similar to those I have described, that will open up the process of examining these issues.

The examples in this paper illustrate the importance of an open process of critical reflection and discussion on these matters. They show that individuals and groups have different and strongly held views about what behaviors are appropriate. The policies and practices that these persons and organizations enact will have great impact on other individuals and society. The use of arbitrary or exclusionist mechanisms to make decisions about these important matters is not likely to result in the best decisions, nor in public concensus about their merit or the good will of the decision makers. This result will further weaken public trust in the decisions and the decision makers. To put Stephen Ceci's recommendation in a broader context, associations concerned with these matters would be wise to place initiatives to encourage national dialogue about them high on their action agendas.

FOOTNOTES

¹Sanford A. Lakoff, "Ethical Responsibility and the Scientific Vocation," in <u>Science and Ethical</u> <u>Responsibility</u>, edited by S. A. Lakoff, Reading, MA: Addison-Wesley Publishing Co., 1980, pp. 19-31.

²Even here, the criteria and communities for appropriate review and reviewers are broadening now.

³Lakoff, ob. cit.

⁴Daryl Chubin, "Misconduct in Research: An Issue of Science Policy and Practice," <u>Minerva</u> XXIII:2, 175-202, Summer 1985.

5Ibid.

⁶Stephen J. Ceci, "Scientists' Attitudes Toward Data Sharing," presented at the symposium on Ethical Norms in Science, 1987 Annual Meeting, AAAS, Chicago, February 17.

⁷Alfred S. Sussman, "Establishing New Norms: University of Michigan Reports on Graduate Students and Research Policy," presented at the symposium on Ethical Norms in Science, 1987 Annual Meeting, AAAS, Chicago, February 17.

⁸The importance of all of these matters is highlighted by three articles in the 9 September 1987 issue on the <u>Chronicle of Higher Education</u>, titled "U. of Rochester Cancels Admission of Employee of Kodak Competitor," "Reagan's Plan to Limit Foreign Access to Data Opposed by Scientists," and "One-Third of Scientists Surveyed at Major University Suspected a Colleague of Fraudulent Research." (The first two start on p.1; the third on p. A6.)

⁹Paul J. Friedman, "Institutional Response to Charges of Unethical Practices: The University of California San Diego School of Medicine Approach," presented at the symposium on Ethical Norms in Science, 1987 Annual Meeting, AAAS, Chicago, February 17.

¹⁰Eliot Marshall, "San Diego's Tough Stand on Research Fraud," <u>Science</u> 234:534-535, 31 Oct 1986.

¹¹Marcel C. LaFollette, "Changing Norms in Scientific Publication," presented at the symposium on Ethical Norms in Science, 1987 Annual Meeting, AAAS, Chicago, February 17.

¹²Committee on Editorial Policy, Council of Biology Editors, "Ethics and Policy in Scientific Journal Publication," Draft, September 1986.

¹³C. Ian Jackson, "Developing Honor in Science--First Steps and Next Steps," presented at the symposium on Ethical Norms in Science, 1987 Annual Meeting, AAAS, Chicago, February 17.

¹⁴C. Ian Jackson, <u>Honor in Science</u>, New Haven, CT: Sigma Xi, The Scientific Research Society, Inc., Second Edition, 1986.

15 Jackson, "Developing Honor," ob. cit.

¹⁶Judith P. Swazey, "Developing Honor in Science: A Proposed Next Step--Project on Values Training and Ethical Issues in the Graduate Education of Scientists and Engineers," presented at the symposium on Ethical Norms in Science, 1987 Annual Meeting, AAAS, Chicago, February 17.

¹⁷Edward J. Hackett, "Effects of Incremental Funding Shifts on Science--Preliminary Results," presented at the symposium on The Research Basis for Science Policy Making, 1987 Annual Meeting, AAAS Chicago, February 17.

Rachelle D. Hollander coordinates Ethics and Values Studies (EVS) at the National Science Foundation. EVS supports research and educational projects examining ethical or value issues of significance to U.S. science and engineering. She developed an interest in these issues while working as associate editor at the John Hopkins Magazine, and she returned to school to complete a doctorate in applied philosophy. She has written articles on applied ethics in numerous fields, and on science policy and citizen participation. Recently, she was elected a Fellow of the American Association for the Advancement of Science for her work in fostering this kind of research and its integration in professional practice.

The views expressed in this article are Dr. Hollander's own and do not represent those of the National Science Foundation. Indiana University The Poynter Center Bloomington, Indiana 47405

I am delighted to learn of the formal establishment of the Center for the Study of Ethics in Society at Western Michigan University. Because I was lucky to be involved in some of your programs in the past, I know that the Center reflects years of thought and planning; it also enjoys a broad range of faculty support. The Center's potential contribution of the Center to the state, the campus, and indeed to higher education nationally is significant.

Individually and collectively, you have already accomplished a lot. I am confident you will continue to do good things in the future. Our Center and I will be proud to work with you, if that association should suit your purposes. In any event we will watch your work with great interest.

David H. Smith Director

PROGRAMS--Fall 1987

SEP 18	A MODEL FOR UNDERSTANDING AUTHORITY
3:00 PM*	AND LEADERSHIP IN ORGANIZATIONS •Faith Gabelnick, Director, Honors College, WMU
OCT 12-14	 Laurence Thomas, Philosophy, Oberlin College and Visiting Professor Martin Luther King/Rosa Parks Program OCT 12 LIBERALISM & THE HOLOCAUST 8:00 PM 2750 Knauss OCT 13 FRIENDSHIP AND ROMANTIC LOVE 8:00 PM 2750 Knauss OCT 14 A LIBERTARIAN APPROACH TO 8:00 PM AFFIRMATIVE ACTION3770 Knauss
OCT 23 3:00 PM	FREEDOM OF EXPRESSION IN THE WORKPLACE: DOES THE PUBLIC/PRIVATE DISTINCTION HOLD? •Robert Ladenson, Center for the Study of Ethics in the Professions, Illinois Institute of Technology
OCT 27 7:30 PM	INTERVENING IN CRIMINAL EPISODES: THE GOOD/BAD SAMARITAN3760 Knauss •Gilbert Geis, Social Ecology Program University of CaliforniaIrvine
NOV 20 3:00 PM	THE ETHICS OF ENTREPRENEURS •Trudy Verser, Management, WMU
DEC 4 3:00 PM	ETHICAL DILEMMAS & HEALTH CARE SYSTEMS: IS SOCIETY SENDING A MIXED MESSAGE? •John Hartline, M.D. Neonatology, Bronson Hospital

*All 3:00 PM Friday sessions are in the FACULTY LOUNGE OF THE BERNHARD STUDENT CENTER.

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During 1987-88, the Center plans to publish five papers previously presented to the Center. Distribution will be free to members. In the future, the Center plans to publish four presentations a year.

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