

2K

SOCIETY ON SOCIAL IMPLICATIONS OF  
TECHNOLOGY

ADCOM MEETING  
MAY 19, 1990

ATTENDEES

A.Wald	V.P.	212-305-6214
J.M.Benjamin	Sec'y.	215-438-9729
R.H.Brook	EMC/S Liason	516-595-3136
J.L.Jatlow	Membership Chmn.	212-758-0798
R.Newcomb	Div. X	301-454-6869
S.Unger	Past Pres.	914-353-5375

Regrets Were Received from:

Balabanian  
Barus  
Cassidy  
Robbi  
Specter

(ACTION ITEMS ARE IN ITALICS)

**1, 2, 3) WELCOME, INTRO., AGENDA ADOPTION, MINUTES APPROVAL**  
Because of Pres. Balabanian's unavoidable absence, he asked V.P. Al Wald to preside. V.P. Wald opened the meeting at 10:30 A.M. The attached Agenda was adopted as presented, and the minutes of the previous meeting were approved as presented.

**4) PRESIDENT'S REPORT**

In the absence of Pres. Balabanian there was no President's Report.

**5) PAST PRESIDENT'S REPORT**

Unger reported for Robbi that Robbi has been appointed to take part in the planning of the ELECTRO '91 meeting in NYC 4/16-18/91. The deadline for proposals for the meeting is 7/30/90. He suggests we may want to consider giving our Award at this meeting.

**6) TREASURER'S REPORT**

In Apter's absence there was no Treasurer's report

**7) OTHER SOCIETY LIASON**

See attached report by Gardner.

**8) STANDING COMMITTEE REPORTS**

.1 Ethics - Unger

At the April 21, 1990 meeting of the USAB Ethics Committee a resolution was passed endorsing the proposed new ethics code with the following changes:

Item 1. (Pertaining to public safety) change "consistent with" to "holding paramount".

Item 6. Add the words "and the social implications" after "technical work".

Item 7. Delete. (This item pertains to bribery)

Item 8. Simplify so that it reads in its entirety "to treat all persons fairly".

Item 9. Delete

This resolution went to the USAB. Ultimately the BOD will vote on the Ethical Code. USAB subsequently recommended that the BOD delay its vote on the Code until after the major IEEE Boards review it and until recommendations are received from the delegates to the 1990 Sections Congress.

**.2 Awards** Unger reported for Barus on Basdekas' and Pollard's candidacies for our Award. Justification for the Award would be that they effectively worked from *within* the system effectively to produce change.

Benjamin moved. Newcomb seconded that the Award be raised from \$750 to \$1,000. After discussion, the motion was tabled until the next meeting.

**.3 Publications** Wald reported for Specter that Derek Paul, guest editor of the Special Issue on Disarmament has been ill, but Susan Schneiderman will contact the American Nuclear Society to buy 500 extra copies.

Specter also says that the IEEE Geoscience and Remote Sensing Symposium is going ahead on schedule for the Special Issue in June 1991.

**.4 Conferences** Specter sent word that the IGRS/SSIT Conference will be 5/27/90 as planned. It was suggested that we start planning our conferences 2 or 3 years ahead. Brook has contacted Gene Cory, who has been responsible for organizing EMC conferences, for information that would help us.

**.5 Membership** See attached report of Chmn. Jatlow. He also reported that the increase in active membership last month was the fourth highest of all IEEE Societies.

**.7 Chapters** See attached report of Chmn. Gardner. Discussion ensued on how to start a New York Area Chapter. It was, at length, concluded that there is no substitute for a really interested person to do it. It was suggested maybe someone in PACE could be interested. *By this minute Veg Gardner is requested to contact Tokyo and Zurich Chapters.*

**.8 PACE** See Attached report of Chmn. Gardner.

**.13 Fellows** Jatlow suggested we publicize in T & S the election of members of SSIT to 'Fellow'.

## 9) NEXT MEETING DATES

The next two meetings are: September 15, 1990 and December 8, 1990.

## 10) ADJOURNMENT

There being no further business, the meeting was adjourned.



IEEE

SOCIETY ON SOCIAL IMPLICATIONS OF TECHNOLOGY

SSIT AdCom Meeting Agenda

Time: Saturday, May 19, 1990; 10:15 AM to 4:00 PM
Location: New York City, Empire State College, 330 W. 42nd St.
(McGraw-Hill Bldg. adj. Port Authority Bus Terminal),
Room #3 on 2nd Floor.

- 1. Welcome and Introductions Wald
2. Adoption of Agenda Wald
3. Approval of Minutes of Prev. Mtg. Wald
4. President's Report Balabanian via Wald
5. Past President's Report Robbi
6. Treasurer's Report Apter
7. Other Society Liaison Gardner
8. Standing Committee Reports
1 Ethics Unger
2 Awards Barus
3 Publications (T & S)
4 Conferences Specter
5 Membership Jatlow
6 Nominations/Elections Unger
7 Chapters Gardner
8 PACE Gardner
9 Publicity and Public Relations
10 Technology and Public Policy Bogumil
11 Students
12 Constitution and Bylaws Lawrence
13 Fellows Mukhedkar
9. Next Meeting Dates - September 15 and
10. Old Business
11. Liaison Reports
12. New Business
13. Adjournment

7

INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS  
SOCIETY ON SOCIAL IMPLICATIONS OF TECHNOLOGY  
OTHER SOCIETY LIAISON

6624 Kirby Court,  
Falls Church, VA  
22043  
May 19, 1990

Norman Balabanian,  
President, SSIT-IEEE,  
Electrical Engineering Dept.,  
111 Link Hall,  
Syracuse University,  
Syracuse, NY  
13210

Subject: Other Society Liaison

Computer Professionals for Social Responsibility (CPSR):

The District of Columbia Chapter of CPSR has developed a 12-page draft of "The Computer Professional Code of Responsibility" which was distributed at the joint meeting with the Northern Virginia/Baltimore/Washington Chapter on March 14. The draft points out that in law there are approximately seven levels of conduct and that each disciplinary rule needs to consciously use one of these levels:

- Strict liability.
- Negligence.
- Recklessness or gross negligence.
- Knowledge that one is doing the act.
- Intent to perform the act.
- Intent to violate.
- Willful and malicious action.

Further information may be obtained from:

Law Offices of  
Joel Rothstein Wolfson,  
Federal Bar Building,  
1815 H St., N.W.,  
Washington, D.C.  
20006

(1202) 887-5623

One of the recent meetings of the District of Columbia Chapter was a panel discussion on "Computer Modelling as a Tool for Environmental Policy-making" held on May 9. The panel featured authorities ~~xxx~~ from the National Acid Precipitation Assessment Program, Resources for the Future, Climate Change Division of the Environmental Protection Agency, and the Soil Conservation Service.

American Engineers for Social Responsibility: I have received the April 1990 issue of the AESR Newsletter and notice that the National Board Meeting will be held in Seattle on Friday, May 18. Also, this newsletter indicates that the office of  
(cont.)

Other Society Liaison (cont.)

Section X, Societal Impacts of Science and Engineering  
American Association for the Advancement of Science (AAAS):  
Rosemary Chalk, author of the book "Science, Technology, and  
Society - Emerging Relationships" which has been advertised  
in the AAAS publication SCIENCE, has been invited to address  
the Washington, D.C., area groups interested in social  
implications.

No recent action to report regarding the following:  
Technology and Society Division, American Society  
of Mechanical Engineers.  
National Association for Science, Technology and Society.  
Government Accountability Project.

Respectfully submitted,

*Vernon E. (Veg) Gardner*

Vernon E. (Veg) Gardner,  
AdCom Member, SSIT  
(1703) 533-0999

Copy to:  
J. Malvern Benjamin,  
Secretary, SSIT-IEEE,  
5446 Wayne Ave.,  
Philadelphia, PA  
19144



Report to SSIT  
ADCOM.  
Membership

5/20/90  
Jack H. Galloway

8.5

**SC87**  
VOICE OF THE SECTIONS

Based on IEEE Membership monthly reports

Period	Previous Year	This Year	$\Delta$
End of Month			
JAN.	2496	2598	102
FEB	2161	2259	98
MAR	2330	2453	123
Apr.	2309	2420	111

Because of the IEEE Membership accounting system, progress must be compared against the previous year and not the previous month. A certainty is that the SSIT membership is stabilized. We have 677 members in arrears, at present. This is a problem, for all societies, and IEEE as a whole. IEEE is starting a drive to reduce the number in arrears in the IEEE.

I plan to write to each of our Chapter Chmn, informing them that about 90% the SSIT members are also members of other societies. To increase our membership, they should distribute our Brochure at their Section meetings, other Society meetings and encourage their Chapter members to distribute the Brochure at their Society meetings. I believe the Brochure has been instrumental in showing the increases of the previous year. In 1984 we had negative Deltas.

INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS  
SOCIETY ON SOCIAL IMPLICATIONS OF TECHNOLOGY

6624 Kirby Court,  
Falls Church, VA  
22043  
May 19, 1990

Norman Balabanian,  
President, SSIT-IEEE,  
Electrical Engineering Dept.,  
111 Link Hall,  
Syracuse University,  
Syracuse, NY  
13210

Subject: Report of the SSIT Chapters Committee.

1. For the year beginning on July 1, 1989 and ending on June 30, 1990 the three active Chapters continue to be the Los Angeles Council Chapter, the Boston Chapter and the Northern Virginia/Baltimore/Washington Chapter. According to our unofficial records the Boston Chapter had 8 meetings and the Northern Virginia/Baltimore/Washington Chapter had 8 also although there may be some question regarding the method of scoring one of the meetings of the latter. The Los Angeles Council Chapter has obviously been very active although specific numbers are not available at this time.
2. This Committee's report dated Feb. 28, 1990 failed to include a meeting on Jan. 17, 1990 of the Northern Virginia/Baltimore/Washington Chapter on the subject, "The Implications of High Technology on Food Processing", with Dr. Mary G. Enig, Research Associate, University of Maryland, as the speaker. Dr. Enig's research has been reported in some 24 publications and 28 presentations since she initiated her work on the correlation between fats and colon/breast cancer in 1978.

On March 14, 1990 the Northern Virginia/Baltimore/Washington Chapter joined forces with the District of Columbia Chapter of Computer Professionals for Social Responsibility for an open discussion of a 12-page draft of "The Computer Professional Code of Responsibility". The leader in the discussion was Joel Rothstein Wolfson, a lawyer who is an Affiliate in the IEEE.

The record of the Boston Chapter appears in the minutes of the SSIT ADCCM meeting held on March 17, 1990. I have called this high performance record to the attention of Dr. William B. Jarzembki, the Division VI PACE Chairman.

3. The PACE Divisional Activities Council has developed a proposed requirement which is suggested for inclusion in the Bylaws of the various IEEE Societies. It is quoted as follows:

"Professional Activities Committee: The function of the



SSIT Chapters Committee (cont.)

Professional Activities Committee for Engineers (PACE)  
will be to:

- a. Participate in programs of the United States Activities Board PACE Divisional Activities Committee.
- b. Encourage Chapters to appoint Chapter Professional Activities-Chairmen, who will represent Committee the Chapters on Section PACE Committees.
- c. Include sessions on professional topics at each conference sponsored by the Society.
- d. Include professional topics in the Society newsletter.
- e. Promote public awareness through the publication of position papers, entity position statements, and other publications."

(As for item #b" above I realize that we must first have some viable Chapters.)

Respectfully submitted,

*Vernon E. Gardner*  
Vernon E. (Veg) Gardner,  
Chairman, Chapters Committee.

Copies to:

J. Malvern Benjamin,  
Secretary, SSIT-IEEE

AND

Michael J. Whitelaw,  
Chairman, USAB, and  
Vice President for  
Professional Activities.



INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS  
 SOCIETY ON SOCIAL IMPLICATIONS OF TECHNOLOGY  
 PROFESSIONAL ACTIVITIES COUNCIL FOR ENGINEERS

5624 Kirby Court,  
 Falls Church, VA  
 22043  
 May 19, 1990

Norman Balabanian,  
 President, SSIT - IEEE,  
 Electrical Engineering Dept.,  
 111 Link Hall,  
 Syracuse University,  
 Syracuse, NY  
 13210

Subject: Professional Activities Council  
 for Engineers (PACE); report  
 of the SSIT PACE Chairman.

1. The 1990 PACE Workshop will be held in Phoenix, AZ, from Aug. 31 to Sept. 3. The theme this year will be "Engineers Meeting the Professional Challenges of the 90's". The preliminary program includes the following topics:
  - State of the Board presentation, questions and answers. Michael J. Whitelaw, Chairman, United States Activities Board, and IEEE Vice President, Professional Activities, presiding.
  - Legislative Initiative. Edward C. Bertnolli, Chairman National Government Activities Committee.
  - Peace Dividend. Edward J. Doyle, Session Chairman.
  - Taking Engineers Public. James V. Leonard, Session Chairman.
  - Technology in the 90's. James F. Strother, Session Chairman.
  - The Mechanics of Local Program Development.
  - Professional Development. William D. Whipkey, Session Chairman.

I am proceeding to make arrangements to attend the Workshop as the PACE Chairman for the Society on Social Implications of Technology. Hopefully, some of the contacts to be made will serve to revitalize those of our Chapters which have had little activity.

Respectfully submitted,

*Vernon E. (Veg) Gardner*  
 Vernon E. (Veg) Gardner,  
 SSIT PACE Chairman  
 (1703) 533-0999

Copy to:  
 J. Malvern Benjamin,  
 Secretary, SSIT-IEEE



**IEEE**

THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.  
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THE ENCLOSED MATERIAL WAS INADVERTENTLY OMITTED FROM THE  
IEEE SOCIETY ON SOCIAL IMPLICATIONS OF TECHNOLOGY ADCOM  
MINUTES OF MAY 19, 1990.

PLEASE INCLUDE THIS MATERIAL TO YOUR COPY OF THE MINUTES.

AUGUST 10, 1990

95th Congress }  
2d Session }

COMMITTEE PRINT

## THE WHISTLEBLOWERS

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A REPORT ON FEDERAL EMPLOYEES WHO  
DISCLOSE ACTS OF GOVERNMENTAL  
WASTE, ABUSE, AND CORRUPTION

PREPARED FOR THE

COMMITTEE ON GOVERNMENTAL AFFAIRS  
UNITED STATES SENATE

U.S. GOVERNMENT PRINTING OFFICE: 1978



The seal of the United States Senate, featuring an eagle with wings spread, perched on a shield with stars and stripes, holding an olive branch and arrows.

FEBRUARY 1978

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WASHINGTON : 1978

CHAPTER 4

COMMUNICATION: GETTING THE MESSAGE OUT

Federal employees responsible for implementing policy have a unique and valuable perspective which must be conveyed to those who formulate policy.

IN-HOUSE COMMUNICATION

The need to provide more effective vertical communication within the executive agencies has been well known for many years. Federal employees responsible for implementing policy have a unique and valuable perspective which should be conveyed to those who formulate policy.

The amount of relevant data and knowledge at a policymaker's disposal is directly proportionate to the effectiveness of communication from the agency's "front line" employees. There can be no question that policymakers with functioning, open lines of communication are better qualified to make decisions.

The internal act of communication itself is a neutral, objective act. It does not imply that the policymaker's authority should be shifted to policy implementors. Furthermore, it does not even suggest that the policy implementor's personal opinion on a policy decision should be considered. Communication merely ensures that all relevant facts are made known to the policymaker. This increased level of knowledge adds to the resources from which to draw in decision making. It also increases the policymaker's accountability for a policy's implementation.

Several internal communication efforts have been developed throughout the Federal Government. However, few, if any, appear to be successful in conveying necessary information, facts, and accountability to the policymakers. These attempts may look good on paper, but they aren't working.

Existing programs vary in both degree of management enforcement and level of success. A study of existing internal communications systems can be useful in the development of alternatives to whistleblowing.

Nuclear Regulatory Commission: "Open Door"

The "open door", as it has been implemented and enforced by the Nuclear Regulatory Commission (NRC), reveals some shortcomings of such a policy. The NRC maintains the open door policy among its various offices. It is an informal mechanism, without written guidelines, that has not been enforced agency-wide. Responsibility for implementation and enforcement has been delegated to the different NRC offices.

In theory, NRC's open door allows any employee to bring a disagreement on a technical issue to the Commission level for discussion. This should ensure that minority viewpoints are heard and discussed.

Developments in the past several years have forced the NRC to re-examine its informal procedure, and to acknowledge the existence of problems with employee-management relations. Since enforcement of the open door was left to the Office Directors, the program's success depended on their commitment. Some Directors proved more favorable than others, and this fact caused problems in several NRC offices.

The Electrical Instrumentation and Control Systems Branch (EICSB) of the Office of Nuclear Reactor Regulation (NRR) has been the center of employee criticism concerning the expression and resolution of technical and safety issues. The NRR reviews and licenses construction applications for nuclear power plants. This is a complex process requiring detailed evaluations from numerous technical disciplines. The review staff must be certain that the applicant meets Commission safety standards.

Debate and discussion are considered essential throughout the review in the formation of a common staff position. There are no easy answers in the controversial area of nuclear power and a degree of discretionary judgment is necessarily involved in licensing decisions. This judgment usually reflects the majority opinion on any specific question. Minority opinions, though they may have been voiced, are overridden. In theory, the open door should provide staff the opportunity to voice their minority views at the Commission level. Unfortunately, the open door has not always proved successful in handling NRR employee dissent.

On February 13, 1976 Robert Pollard, a Product Manager in the Division of Reactor Licensing of the NRR, resigned over institutional problems within the NRC regulatory process as well as safety issues which he felt were continuing to go unresolved. Before resigning, Pollard utilized the open door, discussing his concerns on several occasions with NRC officials.

Pollard was told to come back with more specific problems. He concluded that middle level management stifled most dissent and decided to go directly to NRC Chairman Anders with his resignation. Pollard presented a report entitled, "Obstacles to NRC Staff Communication with Top Management" with his letter of resignation. He stated in the report that, aside from open door speeches, there was no established procedure for voicing dissent at the NRC.

Pollard resigned publicly on an episode of CBS's "60 Minutes", stating that Americans were being misled about the safety of nuclear power plants. He felt that this step was necessary to ensure an accurate portrayal of his concerns. Anders had never heard of Pollard or his problems before the television interview. Pollard's immediate superiors had failed to take action or transmit his concerns to higher officials. (Appendix P-1)

The Pollard case focused national attention on the NRC, forcing the Commission to critically reevaluate its open door program as well as overall employee-management relations. NRR Director, Ben Ruscha, initiated attempts to improve the situation.

In May of 1976, Ruscha requested that the Office of Inspection and Audit conduct an inquiry to assess personnel policy and employee



cerns. Rusche's effort resulted in the 300 page "McTiernan Report", which included interviews with both supervisory and non-supervisory personnel. The report was not released in its entirety, however, because employees expressed concern for management retaliation for their comments in the interviews. It is interesting to note this reaction since those interviewed were assured that no reprisals would be directed against them for their part in the inquiry. (Appendix P-2.)

The report described a substantial amount of NRR staff concern for problems relating to management, personnel, and technical issues. It concluded that the less formal procedures used in the past were not adequate enough to ensure the resolution of dissenting opinions.

On October 20, 1976, Donald Fluegge, a reactor engineer in the EICSB, resigned over safety evaluation reports that he alleged had been "... carefully censored to conceal major safety problems." Fluegge contended that NRC management had compromised the agency's ability to regulate the nuclear power industry. He stated that the industry's effort to reduce the cost of nuclear energy sacrificed safety measures. The open door had also failed for Ronald Fluegge. (Appendix P-3)

On November 2, 1976, NRC Chairman Rowden issued a memorandum to all employees stating that different opinions strengthened the agency's regulatory function. Going further, he said that it was the duty of NRC staff to notify management of any situations relating to the public's safety. The next day, NRR Director Rusche followed up Rowden's effort with Office Letter No. 11, entitled, "NRR Policy Concerning Resolution of Technical Issues". Rusche intended to establish a more formal procedure for airing and resolving disagreements. (Appendix P-4)

Rowden also requested that the Advisory Committee of Reactor Safeguards (ACRS) complete a report covering some fifteen (15) issues raised by individual NRC staff members. The ACRS met in early December of 1976, with five NRC staff members of "minority" viewpoints participating. The committee called for the establishment of a formalized procedure in addition to the open door and the provision of an oral as well as written interchange of opinion between lower-level working staff and upper supervisory levels of management. It also recommended that a mechanism for dissent be established as part of the normal review process, attaching no stigma to those involved.

On December 8, 1976, Demetrios Basdekas and Evangelos Marinou, two of the vocal minority of NRR electrical engineers who had testified before the ACRS, received notice of their transfer out of licensing so that they would no longer be involved in safety issues. They had raised concerns before the ACRS involving highly technical questions about overall electrical systems in power plants, and the possibility of the escape of nuclear materials into the surrounding environment. Basdekas maintained that the open door failed to resolve the personnel problems that arose from these issues.

Basdekas believes that the open door is a "smokescreen" put up by management, without commitment, to provide an expression of safety concerns. He stated that the open door did not work and the only way to accomplish anything was to go outside.

Hearings were held on December 13, 1976 by the Senate Committee on Environment and Public Works concerning the "Nuclear Regulatory Com-

mission's Safety and Licensing Procedures." The hearings were instigated as a result of Fluegge's resignation. Basdekas, Marinou, and Fluegge were among the employees who testified, while Chairman Rowden and Director Rusche represented management.

The hearings dealt largely with the problem of ensuring the communication and resolution of employee views on technical issues involved in the licensing process. The adequacy of the open door procedure and new efforts at formalizing it, including Office Letter No. 11, were also discussed. Don Lasher, an EICSB reactor engineer, testified that Office Letter No. 11 was too narrow and cumbersome to function properly. He expressed the belief that staff might not use the formalized procedure because they would fear reprisals in spite of the letters and assurances to the contrary. José Calvo, another EICSB reactor engineer, maintained that Office Letter No. 11 did not address the real problem of dealing with the dissent caused by management reversal of its position on technical regulatory issues without reasonable basis.

During the period between February and December of 1976, more NRC employees resigned and were transferred while management attempted to resolve the growing problem. Congressional interest was aroused and directed to the situation. The open door policy did not emerge from this review with its problems resolved. It is still far from perfect as an effective mechanism for dealing with a resolution of technical disagreements.

James Conran, an employee in the Nuclear Material Safety Safeguards division of the NRC, was transferred from the division on July 11, 1977. Conran attempted to express his concerns over existing safeguards at NRC for over two years, and has many thoughts on the open door procedure. He first expressed his concerns by utilizing the open door, but stated that although staff could talk to management, the problems went unresolved. As a result, Conran felt compelled to go outside the NRC with his allegations in April, 1977.

Conran believes that the open door is not a total failure and is a better mechanism than is available in most agencies. It provides some protection from the use of overt retributions by management, but it fails to prevent covert reprisals. It is in this area that he believes the open door can never be perfected.

There are a million different ways for management to make you miserable. It is very difficult to prove covert actions. There are practical limits on the extent to which the Commission can exert its influence on covert retribution. Upper level management may agree with you, but middle level has to carry policy out. The middle levels control typing, secretaries, office space—the day-to-day details which are necessary to provide adequate working conditions. These day-to-day details can be subtly altered to make life difficult for an employee. (Appendix P-5.)

#### Department of State: "Open Forum" and "Dissent Channel"

The State Department has implemented unique procedures for the expression of employee viewpoints called the "Secretary's Open Forum" and "Dissent Channel." The Open Forum was introduced in

## APPENDIX P-1

(Excerpt from CBS 60 Minutes broadcast, February 8, 1976 -  
"New Life Is Safe?")

MIKE WALLACE: This man is an expert on nuclear energy. His name is Robert Pollard, and he works for the NRC, the Nuclear Regulatory Commission, the Government agency that licenses nuclear power plants. This is the nuclear power plant Bob Pollard worries about - Indian Point Number Three, up the Hudson River from New York City.

ROBERT POLLARD: In my opinion, it -- it will be just a matter of luck if Indian Point doesn't sometime during its life have a major accident.

MIKE WALLACE: William Anders, a former astronaut, is Chairman of the Nuclear Regulatory Commission. He told us that a nuclear power plant does not operate in this country unless it is absolutely safe.

MIKE WALLACE: Have you ever heard of a fellow by the name of Bob Pollard, Mr. Anders?

WILLIAM ANDERS: The name does not jump to my memory.

MIKE WALLACE: Bob Pollard is one of your Project Managers, and resigned today. Reason he resigned was he is not sure about safety of your program.

WILLIAM ANDERS: Bob Pollard has never tried to contact me or any of the members of the Commission. I never even heard of Bob before.

MIKE WALLACE: What Pollard says is that, in effect, he is resigning so that he can speak out publicly.

You want your leaving to have a public aspect?

ROBERT POLLARD: Yes, because I think it's important that the public knows what's going on. Now maybe I'm wrong, but I don't think so, and I've thought about this a long time. And if I had any doubt that I was wrong, I wouldn't be doing this. I don't think I'm wrong, and I think the public ought to know what the Commission is doing, so that the -- public pressure will get it changed. An individual can get it changed.

WILLIAM ANDERS: I think you're being used in that regard. I think that it's very unfortunate, both for you and for this agency, that this young man didn't express his views to his senior supervisors and to the Commission before he made his splash.

MIKE WALLACE: Well, that sounded like a reasonable proposition, so I decided to put it to Bob Pollard.

Bob?

WILLIAM ANDERS: Well, I -- I did try. I didn't try necessarily with Mr. Anders, but I tried with my supervisor, I tried with the legal advisors, how to follow the Code of Conduct for Federal employees.

MIKE WALLACE: And what happened?

ROBERT POLLARD: At each turn I'm told I shouldn't rock the boat, I shouldn't keep raising these concerns, this was going to reflect adversely on my employee evaluation. There's been no change in the agency since the Nuclear Regulatory Commission was created. It's the same people, the same policies and practices. Keep it from the public, keep it low-key. And that's why I'm resigning.

APPENDIX C-1Basdekas, Demetrios - Nuclear Regulatory Commission

Demetrios Basdekas is one of several NRC professional staff members who raised technical questions concerning the safety of nuclear power plants. Employed by the Electrical, Instrumentation and Control Systems Branch (EICSB) of the Office of Nuclear Reactor Regulation, his duties included detailed audit review as part of the approval of applications for construction permits and operating licenses for nuclear power plants.

In April, 1975, Basdekas was assigned to the technical review of the Clinch River Breeder Reactor Plant's (CRBRP) application for a construction permit. In reviewing the application, Basdekas raised a number of specific technical questions and problems with the CRBRP design and review schedule. During this period he attempted, unsuccessfully, to voice his reservations about Clinch River through an internal meeting with the management of the Office of Nuclear Reactor Regulation and several memoranda to his superiors. On October 14, 1976, Basdekas was removed from the review of the most crucial safety factors on which he raised substantial questions. Reasons given by management included an overload of work, which Basdekas denied. (Appendix C-2)

Beginning in early December, 1976, Basdekas and other concerned NRC employees testified before the Advisory Committee on Reactor Safeguards, the safety review arm of the NRC, and the Senate Government



Operations Committee addressing twenty-seven separate safety issues. In his Congressional testimony, Basdekas provided examples of situations that, if not corrected, could lead to nuclear accidents.

On December 8, 1976 Basdekas received notice of his transfer from the Office of Nuclear Reactor Regulation, which removed him from the licensing process. The reassignment by Office Director Rusche was explained as part of a reorganization to alleviate personal problems involving office personnel. Basdekas was informed in the letter of transfer that problems with his supervisor were an important factor. He maintains, however, that he had no problems with his supervisor, but rather with officials higher up in management. (Appendix C-3).

Basdekas is not the only NRC employee to be transferred and views his lateral transfer as a demotion. He stated that very few people actually get fired, but they get "squeezed out". Another electrical engineer in EICSB, Evangelos Marinos, was transferred from licensing review at the same time. Two other NRC employees, Robert Pollard and Ronald Fluegge, resigned in 1976 after going public with technical concerns, charges of suppression of information, and important safety issues.

Basdekas maintains that after a period of time, people with any self-respect simply leave. He is quick to point out that, in most cases, the vocal employee is the one who loses. (Appendix C-4).

Basdekas believes the transfer was also used as a measure to warn others in the agency about the results of expressing dissenting viewpoints. He is fighting the transfer internally but he still must deal with many of the same people who transferred him. The resolution of safety concerns he and others have raised are in the hands of those who attempted to neutralize them.

A pattern of management failure to consider staff viewpoints emerges within the NRC. The NRC has made attempts, through its "open door" and other measures, to deal with the situation. The transfer of James Conran, another NRC employee, as recently as July, 1977 is evidence that the problem still continues.

THE  
WHISTLEBLOWERS

Exposing Corruption in  
Government and Industry

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MYRON PERETZ GLAZER

&

PENINA MIGDAL GLAZER

1989

Basic Books, Inc., Publishers

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and to scholars in the field.<sup>13</sup>

Some ethical resisters never even considered approaching a professional organization for fear of becoming enmeshed in yet another bureaucracy. Others gave some consideration to seeking such assistance, but decided against it when they noted that some ethics committee members were employed by large corporations that had skirted the law. Others did seek active intervention of their local societies, only to find that their appeal was "put on the back burner." They began to suspect that the very groups presumably committed to maintaining professional ethics had an even larger interest in assuring good relationships with government or corporate officials whose actions the ethical resisters were calling into question.

The cases we discuss in this chapter reveal how professional values have impelled ethical resistance in the fields of nuclear engineering and medicine. Those values are highly significant despite recent criticism of professionalism itself and the failure of the major professional organizations to live up to their own ideals. These cases also show the significance of collegial support and the availability of alternative authorities as central features of resisters' ability to implement the professions' highest ideals.

### *Demetrios Basdekas and the Nuclear Regulatory Commission*

The experience of one engineer reveals the chasm between the requirements of bureaucratic authority and those of professional integrity. For Demetrios Basdekas, expertise and autonomy were the major components of his professional identification, entailing a responsibility for the common good which he fully expected to characterize the climate at the Atomic Energy Commission. Later he came to distinguish dedicated engineers from bureaucrats who were all too willing to compromise for short-term gains. His professional ideology not only motivated his decision toward ethical resistance, but also helped him explain why the risks he had taken were necessary as he faced reprisals for his actions. For him professional ethics require active concern with decisions that will have an impact on the population now and in the foreseeable future.

Demetrios Basdekas told us of his early years in Greece, his migration

at the age of twenty-three to the United States, and his engineering education at Texas A and M, where he received both a bachelor's and a master's degree in electrical engineering with a minor in nuclear engineering:

During my student days at Texas A and M, I had my first opportunity to work in the nuclear sciences. My initial ambition was to be able to control a nuclear reactor remotely in outer space. I thought the whole field of nuclear reactors was quite a challenge, and I made sure that I took all the courses in this area, which included quite a few focusing on control theory. I started the work early so I got practical experience in the problems associated with the design and operation of nuclear reactors. I got my operator's license in 1962.<sup>14</sup>

Basdekas had been delighted when the Atomic Energy Commission (later the Nuclear Regulatory Commission) offered him a job in 1972 in the Division of Systems Safety, and viewed the opportunity as the culmination of all of his professional goals.

After finishing my studies I had several jobs in both government and industry and I would say that the most challenging one and the most useful one to me was at Los Alamos where I spent about three years. In 1972 I came to the Washington area and joined the Atomic Energy Commission in the Office of Regulation. I began working on applications to license and construct nuclear power plants. That has been a major focus of my work until the present time.<sup>15</sup>

His wife, Rita, on the other hand, was far more ambivalent about his choice of jobs. She feared government bureaucracy and its requirements for conformity and knew that her husband was not the kind of person to go along. This had certainly been his reaction several years earlier when, working in private industry, he found that his colleagues and superiors had "fudged" technical data in order to get a continuance of their grant. Basdekas had felt extremely uncomfortable and had jokingly raised objections to "cheating on procedures":

After all, to falsify technical data is morally wrong in my view. It is fraud to do such things in order to win a grant. What is the difference

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between that and going to the bank and securing a loan under false pretenses? When the issue of fudging data came up, I did raise a facetious point about it, but the joke did not go over very well. My supervisor asked me whether I had noticed that I was the only one laughing. Maybe it was a poor joke. The point I wanted to make was that I had trouble accepting that kind of practice. At a minimum, I hoped that they would not come and ask me to do something like that. Although I was involved in the process, it was out of my hands. I gave them some material, and they changed it before it went out. That hit me as being very important.<sup>16</sup>

Although Basdekas had not changed the group's actions, he had set his own standards and refused to allow his ethics to be eroded. While he had not yet been ready to take a firm stand and openly defy his superiors or confront his co-workers, he was, in effect, rehearsing for future action as he formulated images of boundaries that must never be crossed and values that had to be affirmed.

About a year after joining the Nuclear Regulatory Commission, his enthusiasm for the agency slowly turned to grave concern as he gained greater insight into its procedures for licensing nuclear power plants. He felt that the NRC was under extreme pressure to grant licenses without having sufficient guarantees that control systems would be effective in the event of an accident. He knew that it was imperative that each plant have a fail-safe way to shut down operations in an emergency before radioactive material leaked into the atmosphere.

My first encounter with things that didn't make sense came as part of my asking questions about plant design, specially in reference to control systems. I raised several questions to be sent to the utility companies, but my supervisors refused to approve them. They said, "Don't ask these questions." I said, "What do you mean?" This question was intended to give me some basis to decide whether the system is designed properly. Is it safe or not? The control systems in a nuclear plant are extremely important, and they are giving us grief today, including that at Three Mile Island.<sup>17</sup>

Basdekas was not the first person to find that there was serious undermining of those who attempted to regulate safety systems. Throughout

## PROFESSIONALS AS ETHICAL RESISTERS

the 1960s, a strong feeling developed among industry leaders that nuclear power could not survive economically if safety regulations were too stringent. Industry's top executives continually requested easier licensing procedures and more leniency on siting plants closer to their customers. Corporate representatives participated in drawing up licensing criteria and continually downplayed the need for basic accident research.<sup>18</sup> The priority for the Atomic Energy Commission was to ensure commercial viability and United States leadership in the field. Safety was relegated to a subordinate position. In the 1960s and early 1970s, for example, the agency spent hundreds of millions of dollars to bolster the economic possibilities, while budgeting about \$35,000,000 a year for safety research.<sup>19</sup>

At the same time, the government agency deliberately suppressed emerging findings about potential dangers of nuclear energy. When Brookhaven National Laboratory completed a study about the dangers of a meltdown, the AEC kept the findings secret. Employees charged that their reports were being censored, and top scientists commissioned by the AEC to study health effects of radiation later found themselves stripped of budget and staff when they recommended a substantial reduction in the allowable amount of radiation released on the general population.<sup>20</sup>

By the time Basdekas came to work for the NRC and began raising questions, a long-standing pattern of minimizing safety issues was in place. Industry consistently blamed environmentalists for delays that resulted in spiraling costs, and argued that endless restrictions undermined their progress. Despite systematic studies by the Rand Corporation and others that documented management problems and an immature technology as the most serious causes of rising budgets, officials continued to harp on the costs of environmental regulation. In 1974 and 1975, when eight utilities canceled orders for nuclear reactors and instead returned to the cheaper coal-fired plants, William R. Gould, chairman of the Atomic Industrial Forum, testified before the Joint Congressional Committee on Atomic Energy. He argued that speedier licensing procedures were crucial in order to prompt new orders for reactors:

When the AEC insists on a design change after a construction permit has been issued, it may well mean replacing a piece of equipment or a system that requires so long a lead time for delivery that it prolongs the construction schedule. Delays mean price increases and erode competi<sup>21</sup>

Both Presidents Nixon and Ford essentially supported industry's viewpoint, thus further strengthening the effort to de-emphasize safety regulations.

In this atmosphere, it was not surprising that Basdekas found his superiors unreceptive to his concerns. But he would not relent or remain silent. His wife sensed that he was coming to a crossroads that would have unforeseen consequences for their entire family. Her expression during our visit, years later, bore witness to the costs the family had paid for his resolution. She spoke softly of her resentment at the path he had chosen: "Everybody has to do what he thinks is right, but sometimes when you are standing back and watching him do it, it is difficult even though you know that this is the only thing that he can do." Like Rita Basdekas, many spouses were ambivalent about the possibility of resistance, and some actively advised their husbands or wives to exercise great caution before taking actions that might harm the family. When the situation at work deteriorated and tension and worry permeated the household, most spouses recognized that whistleblowing might be the only choice even though they were deeply apprehensive about the consequences. Rita Basdekas defined the quandary: "There is no choice. It is like there is a highway and you have to go right or left. You know that the person cannot live with himself if he goes in one direction, but you know if you turn down that other road, it is going to be awfully hard."<sup>22</sup>

Demetrios Basdekas's growing disenchantment reflected the predicament of many other resisters who did not relish challenging their superiors. Yet they, too, slowly became alienated from procedures that did not make sense, from orders that they refrain from asking certain questions. They rejected the implication that they should operate solely as narrowly trained specialists, concentrating on their specific task while ignoring the design of unsafe airplane brakes, the production of dangerous automobiles, or the abuse of hospital patients. Basdekas, like many others, could not fathom how his superiors could ignore or minimize such profoundly disturbing problems, and these reactions of presumably responsible authorities began to whittle away at his trust in their competence and integrity.<sup>23</sup>

Basdekas and most other ethical resisters joined their organizations with enthusiasm and the conviction that they could significantly aid the achievement of a mission. They were not alienated or even cynical employees but, on the contrary, trusted their superiors. Indeed, such trust

was a cornerstone of their definition of a predictable and worthy social order. When this trust was eroded, they sensed they were at a crossroads. In one direction lay obedience to authority and likely career advancement; in the other, the affirmation of their own professional and human values and the dangers of retribution from powerful adversaries. Basdekas cogently explained his inability to take the safer route:

As I was struggling to get my points across, I was assigned to review the Clinch River breeder reactor plant. Again, I asked questions because they were making claims about their protection system. My questions were approved, and they were sent out, but there were no answers.

Apparently there were no answers to my questions because the justification for the design of the protection systems did not exist. Nonetheless the plant wanted a license. I was expected to go ahead and give my approval to the plant design. I was now under pressure from my own management to come up with the report basically saying that the plant was okay. Go ahead and give them a license. I could not do it.<sup>24</sup>

The Clinch River breeder reactor was intended to represent a major technological breakthrough for nuclear energy. The first nuclear plants had been light-water reactors because they could be built quickly in a highly competitive environment. From the beginning, the AEC wanted a more mature technology and heavily subsidized the research to develop the breeder reactor because it simultaneously produced electricity and plutonium for bombs. If large amounts of plutonium could be produced, then U.S. uranium reserves could be protected, and an inexhaustible supply of low-cost energy was a real possibility.<sup>25</sup>

After extensive investment in research and intense competition among the industry's giants, the AEC awarded the major contract to build the breeder reactor to Westinghouse in 1972. The proposed cost was \$700,000,000, and the site would be Clinch River, Tennessee. Almost immediately, delays and rising costs became a serious problem. Within a decade, the Government Accounting Office estimated that the cost had increased to \$6,000,000,000, and the plant's reliability was seriously challenged.<sup>26</sup>

But in 1976 the pressure to assist the project and minimize questions was overwhelming. Basdekas was aware of these pressures but felt his professional obligation strongly. He had to validate that the control system



would operate in the event of a malfunction. Basdekas declared that he was more than an ordinary civil service employee: he was an engineer who believed his own knowledge and expertise superseded the desire to contain costs for Westinghouse or even to ensure commercial viability for breeder reactor technology. Basdekas soon learned that a sense of responsibility does not necessarily guarantee the power to sustain one's judgments:

I said to myself: "Look, you are at a crossroads and you have to decide which way to go. You can either roll over and play dead or stand up and say what you think." I hit the wall, the red line. I could not go beyond that line. I was being asked to become a party to an act of fraud on the public where health and safety are concerned.

Management's response was to remove me, to assign a greenhorn to do the job. I was simply told that I was no longer responsible for this part of the work. As a result of this, I and other engineers who were performing in similar situations decided to take our case to the Congress and to the public. That was in the fall of 1976.<sup>27</sup>

Basdekas's rejection of agency policy and the pressure his superiors placed upon him to distort his own belief system puts him in the category of professionals who are not simply content to go along with management decisions despite the heavy cost of resistance. Psychologist Stanley Milgram's classic experiment on obedience to authority conducted in the 1960s documented the depth of his subjects' willingness to comply with orders even when they despised the implications of their actions. In one telling paragraph, Milgram summarized the significance of his findings:

This is, perhaps, the most fundamental lesson of our study: ordinary people, simply doing their jobs, and without any particular hostility on their part, can become agents in a terrible destructive process. Moreover, even when the destructive effects of their work become patently clear, and they're asked to carry out actions incompatible with fundamental standards of morality, relatively few people have the resources needed to resist authority. A variety of inhibitions against disobeying authority come into play and successfully keep the person in his place.<sup>28</sup>

Basdekas is not an "ordinary" man by Milgram's definition. He did have the personal "resources" necessary to voice his dissent to agency policy and to disobey his superiors when he felt his professional judgment

under attack. His training and ideology stood between him and those who would order him to acquiesce to improper standards of plant safety.

Basdekas's disenchantment was exacerbated by the humiliation he felt when his superiors took him off the job and replaced him with an inexperienced engineer who would comply with their orders. This reaction was not unique. Many employees who protested their superiors' policies were punished for their dissent. They could then "back off" and re-enter the fold or persist and seek additional means of protest. In 1976, the NRC had no procedures to allow concerned employees to air their differences. Basdekas faced a choice. He decided to move ahead and publicize his view that nuclear plants had insufficient safeguards in the event of an accident. His professional ideology provided the appropriate vocabulary and symbols to put his private concerns and anger into a larger context.

To take such action, Basdekas had to convince himself that he had a legitimate interest in the potential dangers of poorly constructed nuclear power plants. He felt that his education and experience gave him the expertise and competence to make judgments that contradicted his superiors:

In the nuclear business you are dealing with effects that can manifest themselves twenty or thirty years from now and have an impact on unborn children. I decided not to go along. I accepted it as a reasonable price for me to pay. I was an engineer who had a good paycheck coming in, but at the same time I felt an essential responsibility that came along with it. The public out there had their trust in me, and without sounding too melodramatic, I took an oath to do good for them.<sup>29</sup>

By any rational calculation of self-interest, Basdekas should have either denied any awareness of the potential danger or backed off when his superiors disagreed with him. After voicing his opinion, he could readily have deferred and allowed them to accept responsibility for their decision, but he refused to accept this role. He enacted his belief in professional responsibility and judgment and sought out United States senators who, he hoped, shared his concerns.<sup>30</sup>

The decision to challenge directly the authority of superiors is the most difficult one for an employee of a large bureaucratic organization to undertake. Milgram points out that the step from dissent to disobedience is long and only a few people are able to accomplish it. Most others are

content to voice their concern and then believe that they have done what is possible. They feel reassured that in their hearts they are on the right side. Milgram demonstrates that the moral issues remain untended unless thoughts are converted into action:

Between thoughts, words, and the critical step of disobeying a malevolent authority lies another ingredient, the capacity for transforming beliefs and values into action. Some subjects were totally convinced of the wrongness of what they were doing but could not bring themselves to make an open break with authority. Some derived satisfaction from their thoughts and felt that—within themselves, at least—they had been on the side of the angels. What they failed to realize is that subjective feelings are largely irrelevant to the moral issue at hand so long as they are not transformed into action. Political control is effected through action. The attitudes of the guards at a concentration camp are of no consequence when in fact they are allowing the slaughter of innocent men to take place before them. . . . Time and time again in the experiment people disvalued what they were doing but could not muster the inner resources to translate their values into action.<sup>31</sup>

Basdekas knew of the three GE engineers who had resigned in protest and of Robert Pollard, a colleague at the NRC, who had joined the GE employees in publicly decrying the hazards of dozens of plants then in operation.<sup>32</sup> (See pages 28-29.) Basdekas was well aware that they had received a hostile reception from the congressmen who had interviewed them, and hoped that Senator Abraham Ribicoff of Connecticut would be more receptive:

I was apprehensive when I called Senator Ribicoff's office. Nevertheless I was determined to see it through. I talked to one of his staff members, explained why I was calling, and asked for help in bringing this to congressional attention. I felt that I had reached the end of what I had been able to do on my own. I needed help from outside. The committee staff got very busy, and Senator Ribicoff assigned Senator [John] Glenn [of Ohio] to follow this specifically. Glenn was chairman of the subcommittee dealing with nuclear matters.

Basically Congress said we have this allegation and we need answers to certain things. Now it was Congress asking the questions. From that point on, my agency got into high gear and submitted a report. A lot of paperwork went back and forth.

After I was interviewed by the committee staff I reported back to

some of my co-workers who had expressed their own safety concerns. At that point, four joined me. They were willing to speak to the committee and to speak publicly. The committee decided to hold a hearing.<sup>33</sup>

Collegial support was essential. It strengthened the case for a public hearing and validated Basdekas's own testimony. He could not be discounted as an eccentric engineer at odds with his superiors and colleagues or with an overblown image of his own expertise. The group support provided both emotional sustenance and a confirming view of his professional assessment. The fact that four other engineers were willing to confront their superiors, and put themselves on the line, helped to mitigate the terrible sense of isolation and fear of reprisal that often prevents employees from challenging organizational policies.<sup>34</sup>

Stanley Milgram's findings underscore the significance of ethical solidarity provided by the support of peers: "The mutual support provided by men for each other is the strongest bulwark we have against the excesses of authority."<sup>35</sup> Milgram found it the single most significant factor in facilitating resistance to the illegitimate commands of authority figures. Such solidarity, unfortunately, did not extend to the intervention of professional organizations. Basdekas considered approaching his professional association, the Institute For Electrical and Electronic Engineers. Yet he feared that its ethics committee was dominated by engineers employed by the same corporations that were doing business with the NRC. He assumed they would have a conflict of interest that would prevent them from supporting his allegations. Basdekas was certain that neither the IEEE nor any other professional organization had taken a determined stand on ethical controversies involving its members and management. The reluctance to become involved in corporate or government controversies and the fear of potential suits had led to a hands-off approach.

During the last dozen years, Demetrios Basdekas has remained in the NRC, battling to gain greater attention for his concerns about plant safety. He has continued his contacts with Congress, written letters and Op-Ed pieces for major newspapers and has appeared before the NRC commissioners. Like that of most ethical resisters, his career has been seriously curtailed. He repeatedly states that he has done all he can from inside the organization and must soon give up on the fight. Yet he never does. Basdekas has not simply been a lost voice in the bureaucratic maze



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His concerns have meshed with those of thousands of other professionals and workers in the nuclear field. Even the NRC commissioners have praised him for his forthright stand. In a hearing held in 1982, one commissioner made it clear that Basdekas has had an impact: "Let me preface [my questions] by saying that I certainly agree that as far as the control system issue goes, from what I have seen, you have been a leader in trying to get that addressed, and I recognize that it has been very difficult to move that." The chairman, Nunzio Palladino, added his own observations:

I think you have gotten a long way. I think you have influenced this agency effectively and properly in very significant ways. So I have difficulty understanding what the frustration is. You have caused some very marked and very important improvements in our operations and I would like to take advantage of your thinking in a professional way. I find it very difficult to debate in the *New York Times* [where Basdekas had published an Op-Ed article criticizing the NRC].<sup>36</sup>

One staff member had earlier summarized Basdekas's impact succinctly. After the accident at Three Mile Island, he said: "I think in the largest sense, Demetrios has for a long time pointed out a problem which we share today a whole lot more than we shared several years ago. And to that extent he deserves credit for being a prophet."<sup>37</sup>

#### *Doctors Stand Together: Mary McAnaw, Betsy Brothers, and the Veterans Administration*

The combination of professional ideology, breach of trust by management, and ethical solidarity that drove Demetrios Basdekas to challenge his superiors at the NRC is repeated in the experience of other practitioners. In another notable case, a group of health care professionals at a Veterans Administration hospital, fearing that immediate damage could be done to vulnerable patients, united to protest a dangerous drug study. Unlike Basdekas, these professionals did not have to look into the future and imagine the fate of unborn generations. Their responsibility lay with incapacitated veterans who trusted the medical staff with their care.