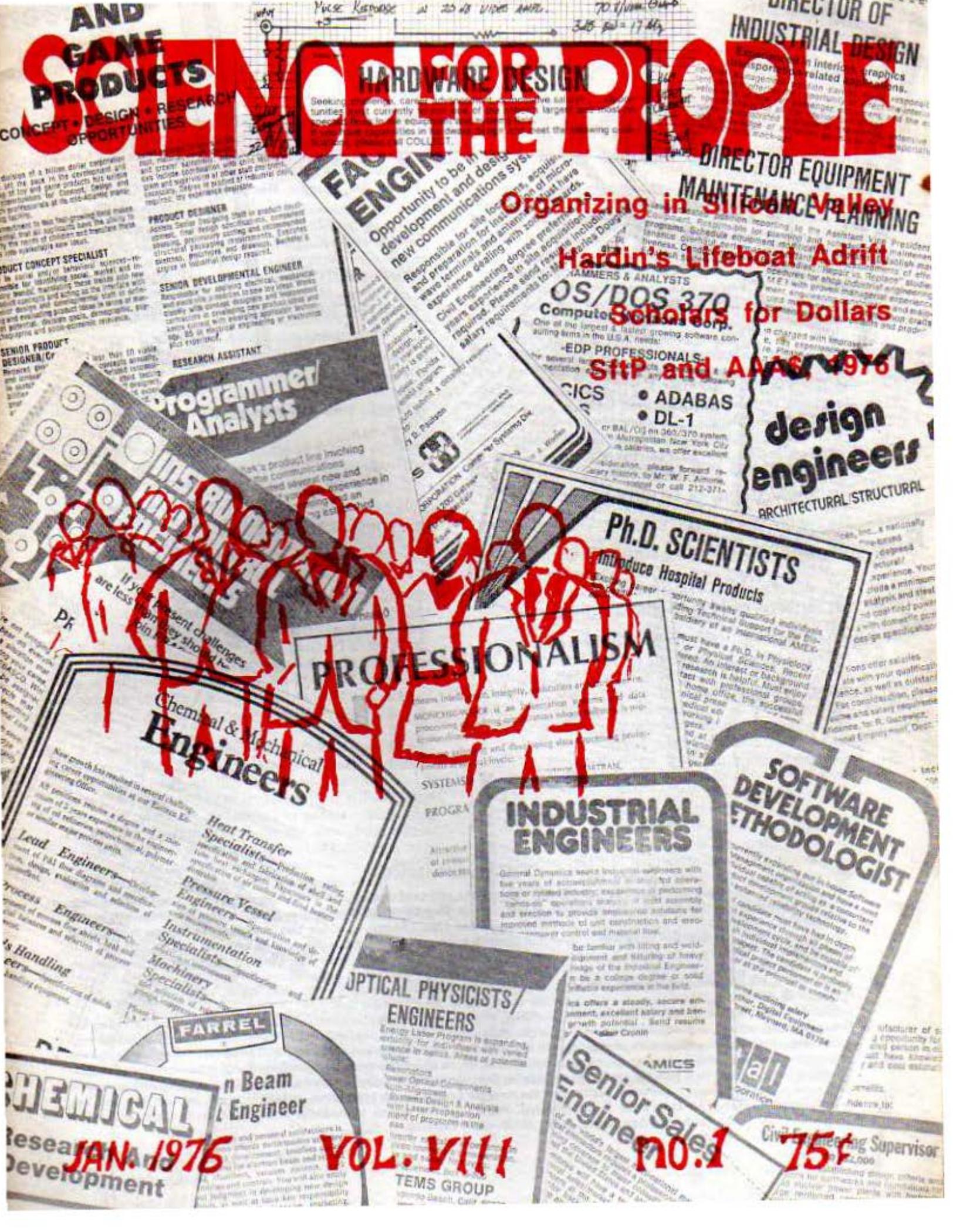


SCIENCE FOR THE PEOPLE



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SITP and AAAS, 1976

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INDUSTRIAL ENGINEERS

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OPTICAL PHYSICISTS/ENGINEERS

Senior Sales Engineer

CHEMICAL
n Beam Engineer

JAN. 1976

VOL. VIII

NO. 1

75¢

TEMS GROUP

INSIDE

MAGAZINE COMMITTEES: **Production;** Mark Hoffman, Ross Feldberg, Ann Sevin, Monica Veneziano, Bert Walter. **Editorial;** David Culver, Eric Entemann, Chuck Garman, Patty O'Leary, Bob Park, Ken Peterson, Ginny Pierce, Joe Shapiro. **Distribution;** David Chidakel.

CONTRIBUTORS: Ann Arbor SftP, Kostia Bergmann, Len Gilbert, Herb Fox, Charlie Schwartz, Peggy Strom, Mike Teel, John Vandermeer, Al Weinrub.

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COVER: Ross S. Feldberg

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EDITORIAL PRACTICE

Science for the People is prepared and distributed through the efforts of three groups of our members, each taking responsibility for the editorial, production, and distribution functions respectively. Membership in these groups reflects a commitment to participate in magazine work for at least six months, up to a maximum of one year. The groups will be accountable to the general membership through open meetings called to discuss each issue and through criticism and comments received through the mail. In this way it is hoped that the magazine will present a more coherent political perspective, better reflecting the view of the larger organization. Nation-wide participation is strongly encouraged; interested individuals should contact the magazine coordinator at the Science for the People office. We also encourage preparation of single issues of the magazine by chapters outside of Boston, and point out that the separation of editorial and production functions should make this a more realistic task.

Every effort will be made to publish articles describing Science for the People activities. Analytical articles will be judged on the quality of their writing, and whether they reflect the general political outlook of Science for the People. The editorial committee may make minor changes, but any extensive rewriting will be carried out with the consent of the author. The editorial committee reserves the right to make editorial changes, or comments in italicized script, on all articles submitted. Authors should submit articles as double-spaced typed manuscripts; if possible, six copies are helpful. Contribution of drawings, cartoons, photographs, or designs on the topics of science, technology, energy, pollution, health care, the struggle against racism and sexism, imperialism, etc. are very welcome. For legal purposes, *Science for the People* is incorporated. *Science for the People* is available in microfilm from Xerox University Microfilms, 300 North Zeeb Rd., Ann Arbor, Mich. 48106, (313) 761-4700.

about this issue

In this issue the Editorial Committee embarks on a new direction. For the first time in our history, guidelines for the magazine have been established. At the Northeast Regional Conference in October (see conference report, page 25), four guidelines were passed:

1. SftP magazine should deal with issues of science and technology in a radical manner rather than presenting general Leftist issues and analysis.
2. The magazine should not be exclusively an organizing device. Since the magazine would aim at a broad readership, it would have to be less polemical and more readable by the general public than it is at present.
3. *SftP* should be the magazine of a mass organization, whose objective is to raise the political consciousness and participation of its readership.
4. The Magazine Coordinating Committee should investigate how the magazine can also become an instrument for building chapters and activities and report their results in the Internal Discussion Bulletin.

Although not everyone at the conference and on the Editorial Committee agreed with the guidelines, everyone on the Committee feels that it is a step forward to have general direction given by the organization to the magazine. In putting together this issue, we have interpreted the guidelines and used them in our selection and editing of articles. In order for us to better apply the guidelines, though, we welcome comments and criticism from the readership.

Persons considering submitting articles for publication are encouraged to keep these guidelines in mind. Also, we would like to suggest that people who are planning to write something send us an outline of their article so that some agreement can be reached in advance concerning whether the material falls within the current guidelines.

In keeping with SftP's general goal of building a mass organization of radical science-related people, the Northeast Regional Conference voted to focus the energy of the organization on the upcoming meetings of the American Association for the Advancement of Science (AAAS) in Boston in February, 1976. The AAAS is the largest professional association in science and performs a variety of roles in integrating science into the established order. These range from special features in the mass media, Congressional science advisory programs and regional seminars in fashionable research, to the publishing of books, tapes and, of course, *Science* magazine. The officials of the AAAS are part and parcel of the science establishment, representing academia, government and industry. The political orientation of Association activities ranges from moderate liberal to mainstream reac-

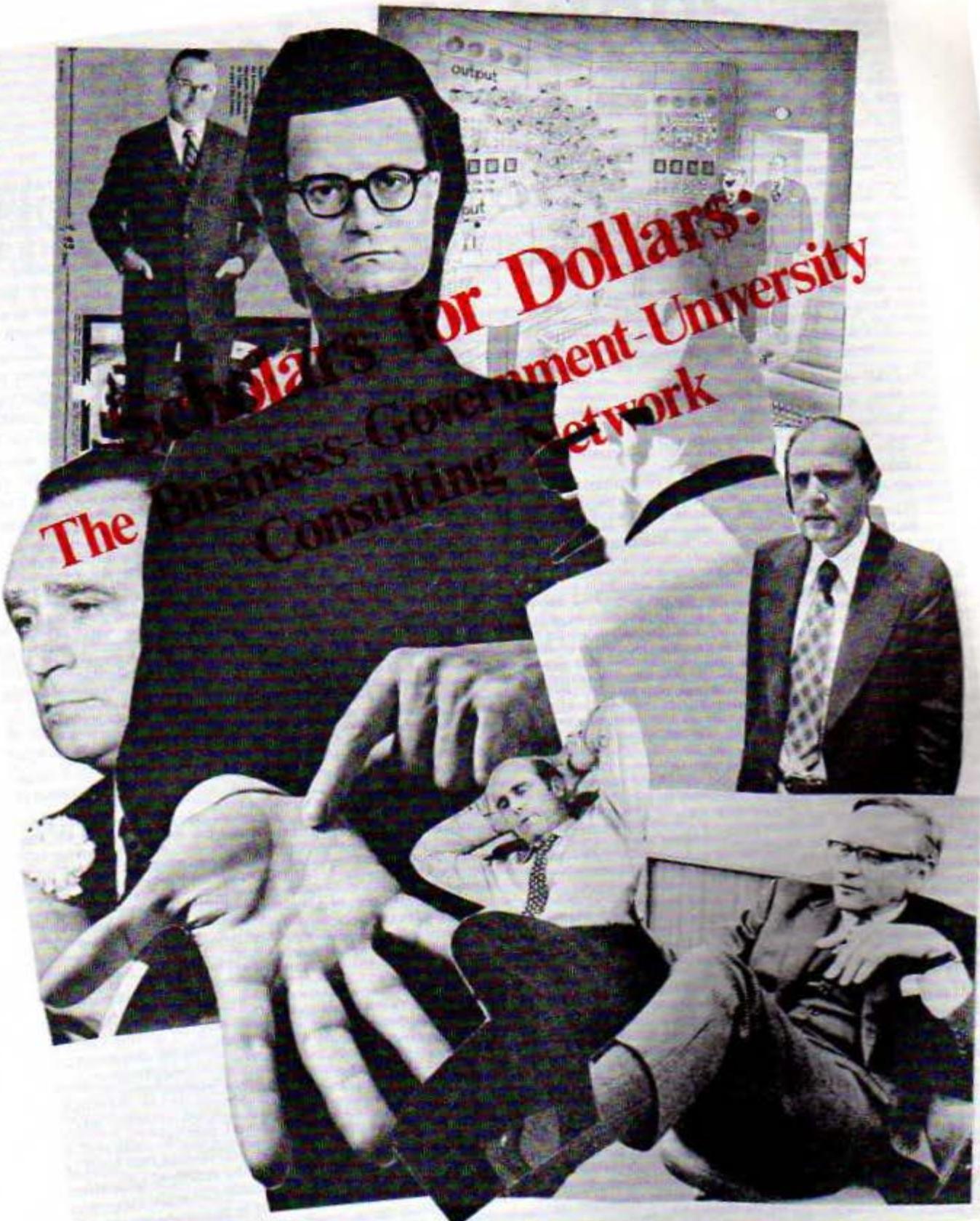
tionary. However the general membership of the AAAS numbers over one hundred thousand and constitutes a diverse grouping of science workers: researchers, students, technicians and teachers, in all areas of both the natural and social sciences, "pure" and "applied."

AAAS meetings are an annual event where the more elite members of big science, and others, come to display their latest wares, reflecting recent years' research funding (which many of them are responsible for allocating). The topics also reflect priorities in current social policy and are presented with emphasis on public information and the mass media. The technical options posed in many areas of social policy are presented as objective, neutral science. This is the main focus of SftP: showing that science is a political force serving those who rule; that the questions asked, directions suggested and solutions sought reflect overtly, or subtly, the dominance of the ruling class.

Past SftP activities (and other developments) have had significant impact on the drift of the AAAS political climate. During the peak of the Vietnam War, the AAAS passed a resolution condemning Nixon's bombing of Hanoi, an unprecedented, "political" act. The policy role of science "experts" in areas such as education are propagandized with more caution and reserve than in the past. But equally important, SftP has met many friends, supporters and participants at AAAS meetings. One of the ways that science and the AAAS are biased is in what is left out. SftP's contribution this year includes a number of sessions arranged by members of SftP, two of which pinpoint gross omissions from the rest of the program: a session on occupational health and one on the politics of cancer research priorities. These two areas are probably among the most acute examples of how big science does not serve the people, and provide an opportunity for SftP to specify positive alternatives as well as negative criticism of establishment science.

In a class society, the class that rules develops and relies on technical knowledge via numerous pathways. Private consulting by university faculty is one avenue which is less well known. These academics help the ruling class maintain control not only by giving specific technical assistance to advance the goals of corporations and government agencies but also by helping disseminate the ideology needed for the present system to continue. The article on consulting provides some detailed information on consulting practices and further, lays out a program addressing this issue. One benefit of this kind of program would be an addition to the political education of students and faculty about not only the university, but the real world outside. Consulting is particularly vulnerable to exposure since much of it is highly confidential, even to the point of the subject and the sponsor-client.

continued on p. 38



The

**for Dollars:
Government-University
Consulting Network**

Science for the People

The following is an adaptation by the editorial committee of a pamphlet — "Academics in Government and Industry" by Charles Schwartz.

800 years ago, at the University of Bologna in Italy, professors had to obtain permission from their students and post bond in order to leave town on private business. No such requirements impede the travels of entrepreneurial professors in modern America. While it is widely known that university faculty sometimes hire out their special expertise as private consultants, the full nature and scope of this activity has generally been kept well hidden from public view. While it takes the professor's time and interest away from teaching and other academic pursuits, and even though consulting fees earned by professors for time spent working elsewhere require no surrender of academic salary, college officials do not look upon consulting as "moonlighting." Aside from espousing the vague tenet that outside consulting should not interfere with basic teaching commitments, universities generally take a completely *laissez faire* attitude toward it. In reply to a query about consulting practices, Dr. George Maslach, Provost of the Professional Schools and Colleges of the University of California, Berkeley, said:

I have no knowledge of the extent of outside consulting by faculty and others; I have no knowledge of how many people consult, nor do I know how they have spent their time. There is no indication of how I can obtain this information in any easy way.

The rather startling information presented in this article shows that a large number of academics serve not only as ordinary paid consultants to private industry, but actually sit on the boards of directors of major business corporations. It is proposed that all consulting-like activity by faculty should be treated the same as any other research or academic activity: scrutinized, evaluated in terms of objectives sought, interests served, and publicized and criticized accordingly. It should be another focus of political struggle in academia.

Some Data on Consulting

A survey conducted by the Carnegie Commission on Higher Education in 1969 shows how widespread is the

practice of faculty outside consulting. Forty-one percent of the faculty surveyed devote between 1 and 10% of their work time to consulting, with or without pay; fourteen percent devote between 11 and 20% of their time; and five percent devote more than 20% of their time. The recipients of paid consulting services were diverse: federal or foreign government (20%); local business, government, schools (18%); national corporations (17%); non-profit foundations (11%); research projects (10%). Only 42% of all the faculty had done no paid consulting during a two-year period. Of all sources of supplemental earnings reported by faculty, consulting was the leading type but other types — such as summer teaching and research, private practice and royalties and lecture fees — were also significant.

An earlier survey, covering the academic year 1961-62, gave data on the outside earnings of faculty broken down according to their academic discipline.[2] The overall fraction of faculty having outside earnings was 74%, the highest being in Psychology (85%) and the lowest in Home Economics (44%). The average amount of outside earnings was highest for Law (\$5,297) and next highest for Engineering (\$3,197); the average for all areas was \$2,165.

A reported survey of the Harvard faculty indicated that nearly half of the senior professors had outside incomes that exceeded one-third of their college salaries; and a leading economist at a major Ivy League school was quoted as saying that he charged about \$200 a day and added as much as \$12,000 a year to his regular income: "I simply need the money," he explained, "Our nine-month salary is not adequate for the standard of living we like." [3]

Information on individual professors' consulting connections is not publicly available in any systematic form. The standard biographical reference books (*Who's Who* for the very elite, or such professional listings as *American Men & Women of Science*) sometimes list business firms or government agencies for which the individual biographee is a consultant; but these sources, relying as they do on the voluntary contributions of the persons listed, are often incomplete. Numerous cases of academics' consulting relationships, verified through other sources, are not mentioned in these published biographies.

There are, however, two special kinds of consulting relationships for which one can find published listings of the individuals involved. The first kind covers people who serve on advisory committees to the federal government. According to a law passed by Congress in 1972 (PL 92-463) the President must give an annual report of the activities and membership of the more than 1400 advisory committees that serve the various departments and agencies of the Executive Branch. The first such report was issued in 1973 and it included an index of committee members, arranged by institutional affiliation as well as by name. [4] Quoting from the Senate Subcommittee press release that accompanied the publication of this index,

Approximately 24,500 individual positions on advisory committees are identified in the index. The Department of Defense had more representatives on advisory committees — 713 — than any other agency. The university with the most representatives on advisory committees was the University of California (374), followed by Harvard (130) and Columbia (108). Companies with large numbers of representatives on advisory committees include the following: RCA — 93; ITT (and affiliates) — 92; . . .

The index includes 78 names of U.C. Berkeley faculty and staff serving on a wide variety of government committees, from agriculture and military affairs to science and poetry. (One notes that Provost George Maslach, who had “no knowledge” of faculty consulting activities, is himself listed as a member of two advisory committees in the Department of Defense.) Rich as this index is in information, it should be noted that there are other types of government consultantships which are not covered by the public-disclosure requirements of this law. Also, it appears that this index has not been prepared for years later than 1972.

The second kind of consultantship for which one can find thorough tabulations involves a very special relationship to private industry: being on the board of directors of a sizeable business concern. *Dun & Bradstreet's Million Dollar Directory*, published annually and available in many libraries, contains an alphabetized index of directors and top officials in U.S. companies worth over \$1 million. The data in this volume is generally one or two years old; and one must take care to verify the identity of persons who are named as directors. This has been done using several published sources: corporation annual reports and stock prospectuses, the biographical books mentioned above, and newspaper items. (*The Wall Street Journal* has a very useful index for this purpose.) This searching can be a very tedious task: however it has yielded some surprising results.

In Table 1 is presented some data on the University of California (U.C.) showing the faculty and administrators who sit on the boards of directors of sizeable corporations, including some of the country's largest industries. (This is not an exhaustive list since this search was not carried out for the entire faculty, numbering several thousand persons.)

Similarly a survey of the boards of directors of the 130 largest corporations in the U.S., as ranked by *Fortune* in 1974, shows that academics serve as directors in fully one-half of these giant companies. These findings are presented in Table 2. This listing could readily be extended by further research in this area.

While the job of an ordinary consultant to private business is to help that business solve some particular technical problems, the job of the board of directors is to set and supervise overall company policy, with the express objective of maximizing profit for the company's shareholders. Thus, the data presented in Tables 1 and 2



suggest that the academic world is integrated into the structure of corporate power at all levels.

Not only do some academics consult for private industry and others serve as advisors to government, but some academics do both. These situations present the most obvious possibilities for traditional conflict-of-interest: for example consulting for industry while advising the government agencies which regulate those industries. Of course the potential conflict between a particular industry or business enterprise and the government in general is a relatively minor one, usually limited to disagreements about standards, product claims, legal requirements, etc. Nevertheless such conflicts can be critical for profits. Thus academic consultants, usually promoted in government advisory circles as experts supposedly independent of special interests, are valuable for business to cultivate, especially when they have intimate knowledge of government operations, policy-making, etc.

Recently, a study of the membership of the two highest science advisory bodies in the federal government found, not surprisingly, that the great majority of the people appointed to these bodies were academics as opposed to people from industry or government agencies. However, what was surprising was that more than half of these academics have significant personal ties to big business, mostly in the form of directorships in large corporations.[5]

The data given so far whet the appetite and make one eager to find out more about this vast unexplored territory of faculty consulting activities. It is difficult to believe the comment quoted earlier of Provost Maslach (formerly Dean of the School of Engineering) that he has “no knowledge of the extent of outside consulting by faculty.” Rather it seems clear that this subject has a certain taboo associated with it. When a Physics Department chairman was asked about looking into this subject

of faculty consulting he declined, referring to it as "a whole can of worms." When a faculty member suggested that a faculty Senate committee be given the task of reviewing campus policies and practices regarding outside consulting, the response was as follows:

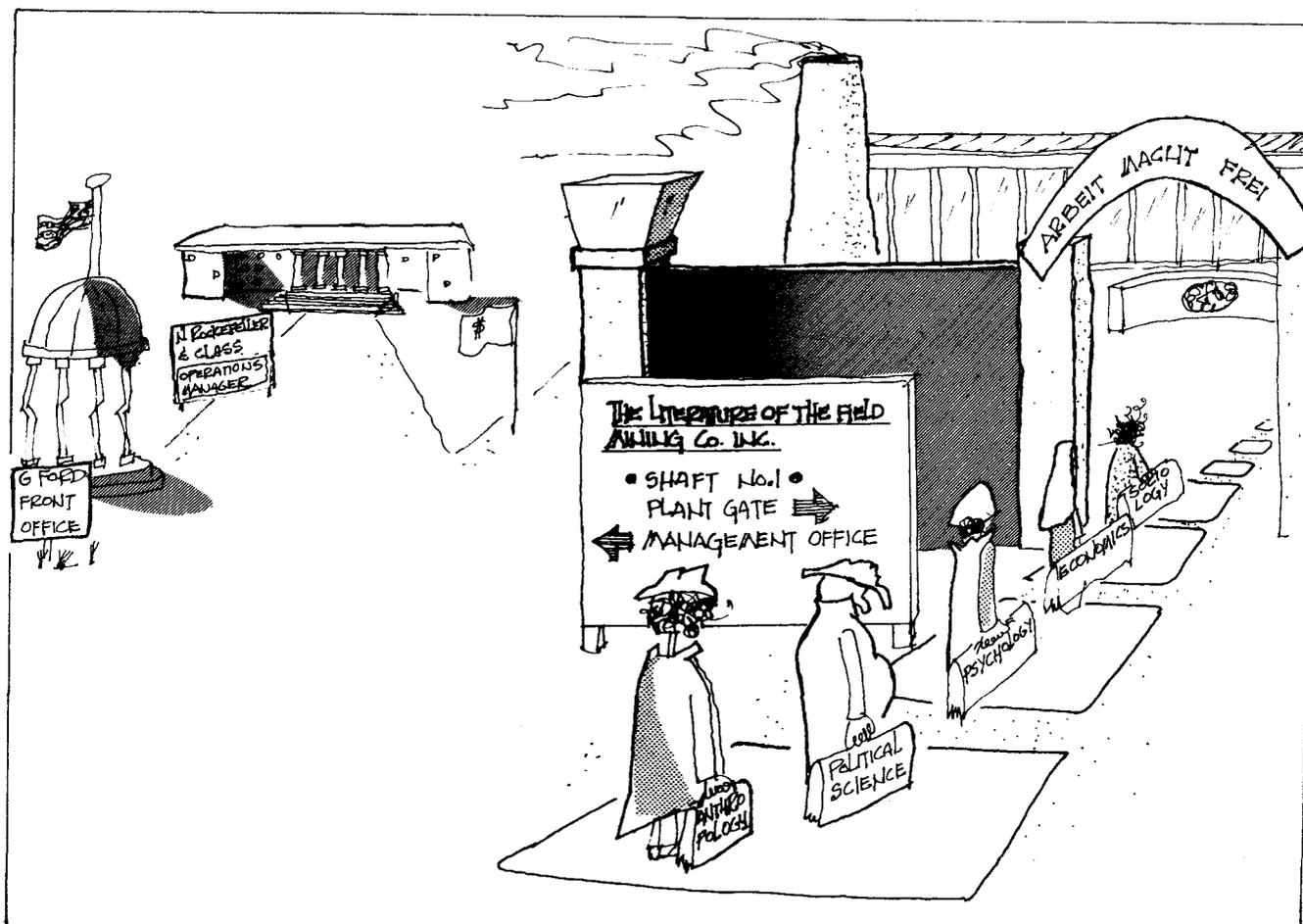
The policy committee has thoroughly discussed the arguments in your letter of April 13, 1973, and finds itself unpersuaded that a useful purpose would be served by Senate surveillance of faculty consulting.

When we considered examples of specific proposals that might emanate from a committee charged with such responsibility, we were unable to imagine situations where positive consequences were plausible. Questions of conflict with University duties are already covered both by Administrative regulations and the Faculty Code of Conduct. The only effective safeguard we can see against the more subtle dangers in consulting is the conscience of the individual faculty member.

Nevertheless a few people, in positions to know what is going on, have been willing to discuss the subject of

consulting in at least some detail. Prof. Richard H. Holton, Dean of the School of Business Administration, U.C., Berkeley, in an interview with students looking into consulting activities, expounded as follows:

First I should tell you that I have only a vague notion of how much consulting is done in our school; no records are kept. Right now we're reevaluating our promotion and consulting policies. . . We're looking at the whole reward system that the faculty works under. There is an argument now that faculty in the College of Letters and Sciences have an easier time with promotions than faculty in the professional schools. The greatest emphasis for promotion is on research, with teaching closing fast. Neither University and public service nor professional competence is assigned much importance. . . Not much is done with consulting in the area of professional competence, and faculty don't keep their files up to date on their consulting activities. . . Our rule of thumb is that 1 day a week of consulting can be carried without problem. The desirable kind of consulting is the sort that reinforces research and teaching, not competes with it. Consulting can strengthen teach-



ing by providing real case studies and a close look at live management problems . . . I would guess that perhaps 50%, plus or minus 10%, do some consulting. Most of this would be for business, but many faculty do unpaid work for government and for not-for-profit organizations.

Examples of faculty collaboration in the corporate world

The following is a sampling of some of the more celebrated cases of dedication to corporate and/or government service on the part of consulting faculty.

1) When the Federal Trade Commission was trying to get ITT-Continental to clean up its fraudulent advertising, the government's position was attacked in a series of learned speeches by Professor Yale Brozen, a University of Chicago economist; the Brozen speeches were printed in full by *Barron's*, the financial weekly, and full page ads containing the speeches appeared in the *New York Times* and other newspapers. Hordes of ITT PR men called on financial editors all across the country to acquaint them with Prof. Brozen's views. It turned out that Brozen was on the payroll of the PR firm handling ITT-Continental's account and that he was paid for making the pro-ITT speeches. [3]

2) In January, 1975 32 eminent American scientists, all of them Nobel Prize winners, issued a public call for a national energy policy which strongly emphasized nuclear power. Their statement, widely reported, appeared as a 3/4 page ad in the *Wall Street Journal* (paid for by Middle South Utilities System), and was displayed in full on the editorial page of the *San Francisco Chronicle* where it listed the signers of the statement and their institutional affiliations. Twenty-six out of the thirty-two were identified with universities and only two with private industry. However a little research established that 14 out of the 26 academic scientists listed have been on the boards of directors of major corporations and 4 others were shown to have served as consultants. The companies to which these academics had connections included several with large investments in energy.[6]

3) A notorious episode in California concerns the famous oil leaks in the Santa Barbara channel in 1969. The state's chief deputy attorney general publicly complained that university experts on this problem had refused to testify for the state in its multi-million dollar damage suit against the oil companies, and that petroleum engineers at U.C. campuses indicated fear of losing industry grants and consulting arrangements. One Berkeley professor was quoted as saying, "We train the industry's engineers and they help us." [7].

4) A recent newspaper story revealed that "Equipment and personnel from the University of California's Lawrence Berkeley Laboratory are now being used in exploratory tests for geothermal steam on a ranch near Calistoga — providing valuable services at no charge to the private interests involved. . . . An official with another company that specializes in geothermal exploration estimated the work would cost as much as \$100,000 if it were undertaken by his or other private firms." The American Metals Climax Co., had made this advantageous arrangement "through a faculty contact." According to the article, the Dean of Engineering on the campus "declined to comment on the propriety of the arrangement". [8]

Table 1
SOME UNIVERSITY OF CALIFORNIA ADMINISTRATORS
AND FACULTY ON THE BOARDS OF DIRECTORS OF
SIZEABLE CORPORATIONS

Vice Presidents

Chester O. McCorkle, Jr.	-Del Monte Corp.** -Universal Foods Corp.*
James B. Kendrick, Jr.	-Tejon Agricultural Corp.

Chancellors

Daniel G. Aldrich, Jr. (Irvine)	-Buffums, Inc. -Stanford Research Inst.
William D. McElroy (San Diego)	-Southern California First National Bank*
Charles E. Young (Los Angeles)	-Intel Corp.*

Faculty, Berkeley

Luis W. Alvarez (Physics)	-Hewlett-Packard Co.*
Melvin Calvin (Chemistry)	-Dow Chemical Co.**
Richard H. Holton (Business Admin.)	-Rucker Co.* -Dymo Industries, Inc.* -Northwestern Mutual Life In- surance Co.**
Kenneth S. Pitzer (Chemistry)	-Owen-Illinois, Inc.**
Glenn T. Seaborg (Chemistry)	-Dryfus Third Century Fund
Edward Teller (Physics)	-Thermo Electron Corp.
Charles H. Townes (Physics)	-Perkin-Elmer Corp.* -General Motors Corp.**
Theodore Vermeulen (Chem. Eng.)	-Memorex Corp.*
John R. Whinnery (Elec. Eng.)	-Granger Associates

Faculty, Los Angeles

Neil H. Jacoby (Management)	-Occidental Petroleum Corp.**
Willard F. Libby (Chemistry)	-Nuclear Systems, Inc. -Research-Cottrell, Inc.*
Harold M. Williams (Management)	-Signal Companies, Inc.** -Norton Simon, Inc.** -ARA Services, Inc.** -CNA Financial Corp.**

* Corporations having over \$100,000,000 in annual sales or total assets.

**Corporations having over \$1,000,000,000 in annual sales or total assets.

5) Many academic scientists serving on National Academy of Sciences committees have ties to industry that are difficult for an outsider to detect. Thus a committee that issued a report in 1971 on the biological effects of airborne fluorides was composed entirely of scientists from universities and research laboratories that were seemingly independent of industry influence. It was later revealed that the 4 scientists who had written most of the report had close ties to the aluminum industry, which is a major emitter of fluorides. Some had written publications for the Aluminum Association, received research support from the industry, or testified for the industry in hearings on fluoride standards. []

6) In 1965, Dr. Robert H. Ebert was appointed dean of the Harvard Medical School, and in 1969 became a member of the board of directors of Squibb-Beech Nut Corporation, owners of the large drug company E.R. Squibb & Sons. However, some months later following a protest by medical students charging a serious conflict-of-interest between his loyalty to Squibb and his loyalty to the principles of medical practice and teaching, Ebert resigned his directorship. Squibb then gave the vacant seat to Dr. Lewis Thomas, Dean of Yale's Medical School.

Three years later, Dean Ebert and Dean Thomas appeared together as expert witnesses in a hearing before the Food and Drug Administration, arguing against the banning of one of Squibb's lucrative drug products. When questioned by the press, a Squibb official stated that neither dean had been paid a special fee for his appearance, since both of them had been retained on the company's payroll for a number of years. This revelation raised another brief flurry on the Harvard campus; however, when one student was bold enough to propose a university-wide "audit" of faculty consulting, this idea was branded as "McCarthyite" by a prominent administration official. []

7) The Jason group is an elite gathering of mostly academic physicists who provide consulting services for the Defense Department. Little is known about Jason however, the publication of the Pentagon Papers revealed their role in the creation and promotion of the "electronic-battlefield" strategy in Vietnam.[9] Several Jason members ran for elective office in the American Physical Society, along with the ballots came long lists of their

professional achievements and honors. It was later pointed out that none of them had acknowledged their connection with Jason — although several did list their consultantships with the more dovish Arms Control and Disarmament Agency.[10]

Conflict of interest in the university

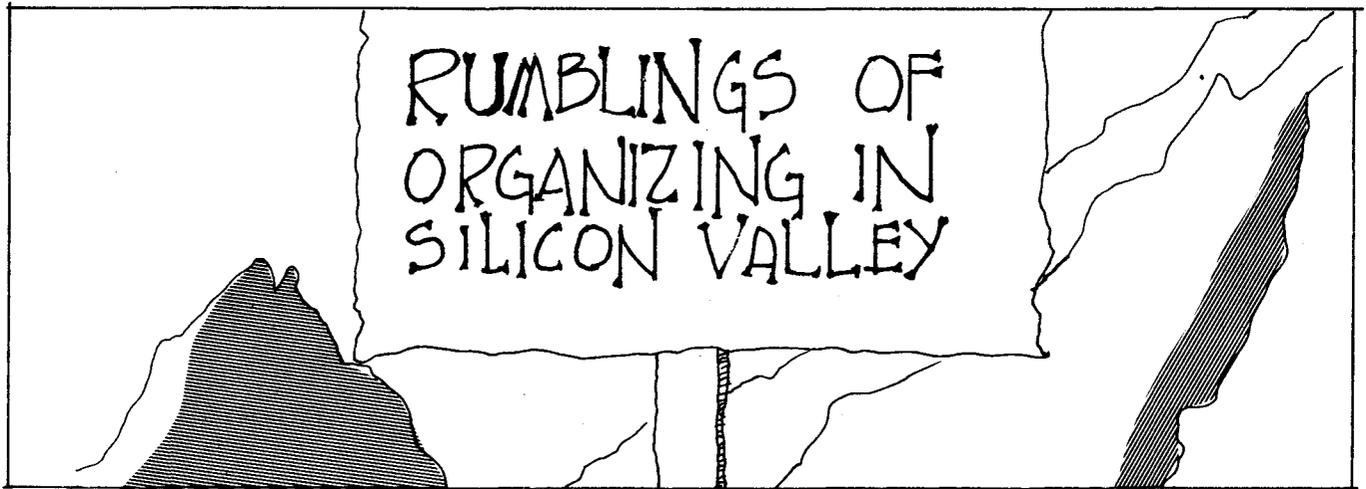
The purpose of the modern university is usually proclaimed in high and noble terms: to search for truth, to transmit knowledge and critical skills to students, and to do all this for the betterment of society as a whole. Research and Teaching, the twin primary jobs of the professor, are expected to advance civilized society with both short-term and long-term benefits. We now want to ask how outside consulting is said to fit into this imaginary scheme. In the basic U.C. policy statement on outside services it is spelled out that this activity by faculty may be justified provided that

- 1) it gives the individual experience and knowledge of value to his teaching or research;
- 2) it is suitable research through which the individual may make worthy contributions to knowledge; or
- 3) it is appropriate public service.[11]

Thus as Dean Holton indicated in his interview, outside consulting is supposed to be an adjunct to the professor's primary tasks of teaching, research and public service. Certainly there are examples of faculty consulting work that meet this literal standard (using traditional definitions of "value", "worthy" and "appropriate") and just as surely there are cases that would fail this test. It is equally clear that university administrators have no particular desire to meddle in these matters. But what of the more basic conflict of interest for which there are not only no rules but also no admission of its existence? What are the many ways that consulting for private corporations or government agencies influences the content of teaching, directions of research, and allocation of university resources? Ways which have nothing to do with "knowledge", let alone serving progressive social purposes, but rather with serving the pressing needs of special interests.

The real conflicts-of-interest involved in the practice continued on p. 26





Today Santa Clara County (California) is a center of innovative technology like no place else in the world. . . . The dense concentration of so many scientific companies has created an innovative ferment on a scale without precedent in industrial history. Some 800 pioneering technology companies are clustered in this area, . . . thousands of people skilled in the newest technologies already live and work there, as does a small army of knowledgeable venture capitalists. . . . The success ratio for company founders is so high that Santa Clara County can be said to mass-produce millionaires.

Fortune, June 1974

They call it Silicon Valley. Its products are the latest thing in every advanced technology from semiconductor electronics to lasers, medical instrumentation, computers, solar power generators, pollution control devices, robot brains, and food additives. In the last twenty-five years, the number of workers in high-technology companies in Santa Clara County has grown from less than 3,000 to more than 150,000.

I became part of this workforce in October 1972 when I took a job at one of the research facilities of the Smith-Corona-Marchant (S.C.M.) Corporation, a huge diversified conglomerate.[1] At the time the company was rapidly expanding its research staff to about 200 workers in order to carry out development work on an improved photocopy machine and a new line of office machines to automate secretarial work. I was hired to do solid-state physics research on photoconductivity. In the course of working for S.C.M. I became involved in a unionization drive among the chemists, physicists, engineers, and technicians in the facility. This article is an attempt to summarize and analyze that experience.

Work Conditions Far From Good

One of the first stories told me by my co-workers when I went to work at S.C.M. was of their recent clash with management, one that had obviously bred a lot of resentment. S.C.M. had acquired the research facility as a result of a merger, around 1970, with a local military

microwave-research company. One year after the merger, the corporation summarily declared that the existing number of sick-leave days would be cut in half — from 20 to 10 days per year. The explanation? It was to make facility policy conform to "corporate policy." When middle-management people protested (in response to complaints of the workers) they were told to leave if they didn't like it.

So much for the heavy hand of top management. As to my co-workers, they were predominantly from working-class families. In their striving for upward mobility, they had overextended themselves. But this life-style, a house in the suburbs, two cars, and three children, was being made increasingly difficult to support by the combination of inflation and company attacks on wage levels. About 1/3 of the technical staff, especially a large block of engineering draftspeople and technicians, were hired as contract labor.[2] Some of the workers were foreign born, some were still unmarried, and a few led a sort of counter-cultural existence.

Within the ranks of these technical workers, status depended upon the amount of education. Those who had a Ph.D. functioned primarily in a managerial capacity; the little technical work they did was esoteric, done primarily for image-building reasons. The bulk of the actual work was done by lower-degreed or non-degreed workers (usually technicians), and the greatest amount of creativity seemed to reside with them as well (an interesting commentary on the value of "higher" education). The Ph.D.'s maintained control over these workers by impressing on them their inferiority in the arcane arts of higher mathematics and physics — all pretty far removed from the research being done at the facility.

Compared to many other research and development companies in the Silicon Valley, S.C.M. had rather poor working conditions for its technical staff. The wage levels and pension benefits were below industry norms. The drive to produce was so great it led to unbearable tension and anxiety. Everyone experienced this continuous, heavy pressure. The company maintained an artificial crisis atmosphere by claiming severe urgency for almost every project. By implying a loss of job or status, the management was able to get large amounts of free over-

time ("remember, you are a *professional*"), and justify almost constant harassment. Two fatal heart attacks of workers in their early forties occurred within one year in this small facility alone, and there were several other nonfatal attacks as well.

Despite this constant speed up, the tortured solutions to various technical problems were often never even used, and frequently the research worker was merely the pawn in a competitive struggle between two different supervisors. The ability of the management to employ high pressure tactics and not lose employees wholesale was made possible by the bad U.S. economic scene, the hiring of employees without degrees, and, of course, the absence of an organized response to the bosses.

The high pressure work conditions were one side of the coin; the other was the low wage levels. Salaries, for instance, were uniformly one to two thousand dollars less than national averages for the same job categories. For example, an analytical chemist with an M.S. and no experience earned less than \$11,000 at S.C.M., while the national average, according to the American Chemical Society survey of 1972, was \$13,000.

The biggest joke at our facility, however, was the pension plan. No matter one's age on joining the company, pension accruals did not start until age 30, and pension benefits could not be received before working at S.C.M. for 15 years! Based on my salary of \$12,000, for example, I would only be able to collect at age 65 a pension on the order of \$1,000 per year from the company and \$3,000 from Social Security. Most pension plans at least match Social Security benefits.

In response to the derision heaped on this ludicrous pension plan, the management instituted a stock option plan to appease the employees. According to this plan, workers could invest up to 6% of their salary in the company and the company would donate an additional 1½%. In order to receive the company's contribution, the money could not be removed for 4 years. By comparison IBM workers have immediate access to their fund.

The company tried to keep the different pay rates secret from the employees. "Merit" differences in salary seemed to depend more on age, family size and composition, particular skills, etc. As a public-relations tactic, the company made a big to-do about its compliance with Nixon-administration wage guidelines. Management patriotically held the average wage raise at the facility to under 5.5% by reducing the raises of older workers, those with less education, etc. During the same time the cost of living rose between 10 and 13% per year.

The salary situation had remained apparently static until summer 1973, the time of the annual salary review. It was clear that the weight of events, particularly inflation, was making everyone increasingly militant. The raise procedure itself consisted of an elaborate system of categories and scaling factors designed to confuse us and to convince everyone that the company's judgement was fair, detailed, and tailored to the individual. For the first time people were openly discussing their salaries and the process of setting them. The mood was ugly; public threats of mass resignation were made by the employees.

The raises granted by the company were significant improvements over previous years, but still did not meet inflationary increases. New employees (those with less than one year on the job) received no raise at all. Questioning the rationale for salary decisions, a few workers asked to see the management policy book. They were told that this could only be done on their own time with a supervisor present, and unfortunately, no supervisor would remain after work. Finally some of the workers were able to arrange to see this policy book. It was quite revealing. It only applied in the absence of collective bargaining agreements (the company had such agreements in its production facilities) and it made perfectly clear that there really was *no* policy — it was just left up to local management to determine raises as they saw fit.



Organizing Gets Underway

All these conditions — the low pay and job insecurity, crisis pressure of work, and arbitrary management decisions — pointed to the need for a strong union that could, at a minimum, protect the workers and fight against the exploitation taking place. I for one saw the necessity of trying to break through the fairly conservative worldview of most of my co-workers. During the first six months of my employment, the Watergate drama proceeded to unfold and I used every device I could think of to emphasize the relationship between government corruption and the corporate establishment. This involved putting up cartoons on company bulletin boards; it involved emphasizing embarrassing incidents (the company was found to be sabotaging competitors' copy machines). I tried to analyze larger events, particularly inflation and energy shortages and tie them to monopoly capitalism.

I found that people were very disillusioned by what was going on in our country and therefore were quite open. I publicized small issues, using each incident to try to heighten people's understanding of how the system works. In each instance, I lent my personal support, and protested against arbitrary management decisions. At this point, the few attempts I had made to discuss organization had been met with tales of bad experiences with unions.

Together with a co-worker I was able to discuss organization of research workers with a shop steward of the Chemical Workers Union. It seemed clear to me, considering the size and resources of S.C.M., that an established union's assistance would be helpful. The steward, however, was not very encouraging and the union was not very interested. When I made inquiries of my co-workers to get a more specific idea of their organizational needs, I was met with vague resignation and expressions of fear of creating "trouble."



A new opportunity opened up, however, at a workshop on labor organizing at the summer 1973 SftP conference in Berkeley. There I met representatives from Engineers and Scientists of California (ESC). They had organized some 2,000 technical workers, and seemed interested in dealing with the unusual problems of research workers. I moved quickly to arrange a meeting between the people at work and the representatives of ESC.

Twelve people attended this initial meeting. It was agreed that we should attempt to obtain a National Labor Relations Board (NLRB) election at our facility.[3] It became clear, however, that fear was to limit the participation of many of the workers. It was impossible to get volunteers to work as a steering committee beyond myself and one other worker. Although the National Labor Relations Act (NLRA) legally protects a worker from dismissal for this activity, the company obviously had many ways of punishing unorganized workers, and the fear felt by most people was not unjustified.

In order to obtain an NLRB ordered and supervised election, 30% of the relevant workers (those to be in the proposed unit) must sign cards stating their desire to be represented by a legally constituted labor organization. We decided to obtain the minimal number of cards and file for an election under the sponsorship of ESC.

During these days the management, for the first time, instituted regular meetings with the employees to discuss grievances. Clearly worried, the company's tone was solicitous and paternalistic; all involved clearly understood this to be a response to the organizing effort. Simultaneously, the company hired the best anti-union

law firm available in San Francisco. The firm had already established a record of defeating organizational efforts of technical workers.

The law firm's goal initially was to prevent an NLRB hearing from taking place. Failing that, its strategy was to have the case thrown out at the hearing, and if that was not possible, to have the NLRB designate a bargaining unit most favorable to the management (that is, a unit including as many supervisory personnel as possible). The firm's first action was an attempt to block the hearing by artificially inflating the size of the unit (so that our signed cards would constitute less than 30%), even including the name of a dead employee! This was apparently intended to be testing and harassment move. It failed and the NLRB hearing was set.

The hearing consisted for the most part of testimony centering around the function of several supervisors. It was management's contention that these individuals were merely professionals directing other professionals. Since there has been relatively little organizing among technical workers, legal definitions of supervisory roles are not yet established. The management, obviously fearful of organization of its technical labor, had set up its structure to make the legal defining of an individual's management role very difficult. Legally a manager is someone who has the direct power to hire or fire or make effective recommendations in hiring or firing. The company made sure this direct power rested only in the hands of the directors of the research facility and made sure they at least saw potential employees before their hiring. The directors did all actual firing, though clearly on the recommendation of immediate supervisors.

The result of two full days of hearings and 550 pages worth of testimony was that the NLRB officer ordered an election, but with a unit which included a large percentage of supervisors. In only two out of twelve cases were we successful in having an individual removed from the unit.[4] Included were people who assigned work, recommended raises, signed time cards, and recommended hiring and firing.

Meanwhile a campaign to prevent unionization had already been launched by S.C.M. management. Prior to the NLRB hearing, letters prepared by the directors of the facility and opposing organization were sent to all the employees. The letters contained general anti-union arguments (such as, "if a union came in you would lose your personal ability to bargain with management") and constant references to the management's open door policy ("if you have any problems, just tell us"). They also contained unsubstantiated slurs as to the sinister backing of ESC.[5] All letters were signed by the directors with only their first names! Their obvious bias and anti-worker slant actually helped us. Even identified "company men" expressed disgust with these letters.

By the time the election was ordered, S.C.M. management had had enough of the directors' ineptitude, and brought in three anti-union professionals and installed them at the facility full time.[6] This huge effort was being mounted against only 50-60 technical employees

seeking to organize! Immediately, long and almost daily letters were sent by the management to each employee. Again these letters attempted to discredit ESC and its MEBA backing.[7] They harped on our supposed lack of leverage even if we were to unionize ("So what if some researchers strike?"). And they circulated rumors that the company would move its research facility out of the state if organization were successful (this constitutes an unfair labor practice, but the rumor hurt us, especially among the workers fearful of uncertainty in a tough job market).

Despite the strong economic incentives for unionizing (the continued erosion of salaries, cuts in sick leave, poor retirement and pension contributions, manipulation of fringe benefits), and the long-standing resentment of management's double-dealing, it was still difficult to combat management's anti-union propaganda. It was *not* certain that a strike of technical workers could cripple the company and win demands, even though S.C.M.'s ability to compete with other high-technology companies was almost entirely dependent on its technical staff. (Why else should the company be so uptight about a technical workers union?) The charges against our particular organizing agent (MEBA) were hard to refute. Other companies *had* moved their operations to nullify unionization attempts (Shell Oil Research moved from Silicon Valley to Houston, Texas). And a few members of the staff *had* moved into management positions, indicating that the road was still open, though it meant vicious competition among the staff and certain failure for most.

In countering the anti-union arguments, we had to depend on the union for secretarial assistance (preparing and mailing 50 letters a day for three weeks). We soon discovered that we were but one small group of several the union was trying to organize. The letters were not written as we specified (communication of our situation was difficult) and management's charges against MEBA were met with generalities.

As the election approached the union became increasingly fearful of a defeat somehow humiliating to them. At this point they suggested that we should decide to withdraw. We considered and rejected this, feeling that while the unit had been stacked against us by the NLRB and the campaign had gone badly, we still had a chance to win.[8] In response to our decision the ESC executive board withdrew its support. This was done in spite of previous assurances of autonomy. While in a formal sense all this meant was a six-month wait before another election could be held in actuality it was very demoralizing. Most of the workers were disappointed yet somehow relieved. The consensus seemed to be that we had shown the company how upset we were, and, in some paternal way, it would reform. I could understand the frustration of the union organizers, for the worker passivity did not bode well for any successful union local. As a result of the unionizing drive, some changes have been made at the facility. A few of the particularly bad supervisors have been removed (functioning largely as scapegoats for the company). All this out of fear of the possibility of another election in six months.



Francis H. Brunner for UAW Ammunition

"Don't think of it as a decrease in salary. Think of it as a shot in the arm for the company."

Some Problems and Dilemmas

What could we hope to accomplish in such a first organizing drive and how could we transcend the limited scope of unionization? These were questions that continually came up. However obvious the contradictions between us and corporate management, there are many technical workers who still respect the company as their source of financial security and relative privilege. Yet the objective basis for this subjective orientation appears to have been largely eroded over the last ten years. Stemming from World War II, the cold war of the 1950's and the technological competition between the U.S. and U.S.S.R., scientists and technical workers were given certain privileges: good job mobility, little fear of layoff, and high salary levels. Beginning with the mid-1960's, however, the situation began to change. Job mobility was ending, layoffs started to become a real threat, and salary gains began to fall behind those of the organized craft unions, and then behind inflation. Increasing numbers of scientists were entering the job market causing a glut of unemployed workers. These trends have continued and intensified in the 1970's,[9] especially as the crumbling of the American Empire (U.S. defeat in Indochina, national liberation struggles in Africa and the Mideast, competition from Japan, Western Europe, and the U.S.S.R.) has put pressure on the U.S. domestic economy. Fewer jobs, more layoffs, less mobility, and a clear absence of bargaining strength have changed the objective economic circumstances of scientific and technical workers. But the consciousness built during the years of expansion of U.S. imperialism — especially the years of scientific plenitude (1945-1965) — changes much more slowly. It is propped up by a whole ideological structure perpetuated by educational institutions and maintained by corporate propaganda.

continued on p. 30

BIOLOGICAL DETERMINISM ATTACKED AT ANN ARBOR CONFERENCE

DOES BIOLOGY EXPLAIN VIOLENCE? SEX ROLES? COMPETITION?

Class societies must provide a system of police in order to maintain themselves. Historically such a system has had a dual basis, physical and ideological. The development of ideological weaponry is accomplished largely through the work of intellectuals. To counteract the ideological arsenal has been, and still is, an important responsibility of the left.

A currently popular form of ideological weaponry is a somewhat amorphous and pseudo-scientific collection of statistics and speculation which might be collected under the heading "biological determinism." This reactionary doctrine treats many human problems as simply outgrowths of "scientific" biological fact, ignoring environmental (social) causes. The low performance of many blacks on I.Q. tests is explained through the biological "laws" of genetics, that poor people starve is an outgrowth of the biological "law" of exponential population growth, women are accorded lesser social roles by the biological "laws" of hormonal reality, and so forth. Clearly, biological determinism qualifies as a potent ideological weapon.

In light of much recent propaganda aimed at resurrecting biological determinism to be used in the ideological arsenal, the Ann Arbor chapter of Science for the People organized a symposium, "Biological Determinism: A Critical Appraisal", which included speakers, workshops, and a weekend retreat. The symposium took place Sept. 29 - Oct. 5, 1975, and drew a great deal of attention to the subject. The University of Michigan "values year" program came up with \$1000.00 to help support our symposium.

Richard Lewontin, a Harvard population geneticist, opened the symposium with an introduction to "Biological Determinism as a Social Weapon". Lewontin began by tracing the history of biological determinism, emphasizing how it has been used to justify the existence of grossly unequal distributions of wealth and power by "proving" scientifically that those who received a disproportionately small fraction of society's products did so because they were inherently inferior. He then analyzed the pseudo-scientific methodology of the neodeterminists, pointing out that their arguments are motivated by a desire to support status quo ideology (consciously or unconsciously) and only trivially, if at all, out of an honest quest for "objective" scientific truth. He also emphasized the role of universities as "ideological weapons factories" —

places where people gather to develop these ideological weapons under the guise of so-called value-free scholarship.

The second day of the symposium was concerned with environmental issues. The afternoon speaker, John Vandermeer, a University of Michigan ecologist, talking about "ecological determinism", (see article in this issue) summarized much of what is wrong with current popularizations of the "ecological crisis". He noted that the ecological crisis is potentially one of the most revolutionizing of current human problems, yet it became co-opted in the late 60's by supplanting the needed analysis of necessary structural changes with the all encompassing rubric "the population crisis". He then critically analyzed the more recent liberal and reactionary programs for limiting populations.

In the evening Murray Bookchin, a writer on ecology and anarchism spoke on "The domination of nature: its social origins". Bookchin traced the historical evolution of social views on the functioning of nature, emphasizing the fact that the ambient social and material relations of a particular time dictated the manner in which humans viewed nature. These views of nature, in turn, are used to justify existing social structures as "natural". He went on to analyze contemporary society's urge to control and dominate nature as an out-growth of industrial capitalism and its tendency to treat all things — including nature — as commodities.

The third day of the symposium was devoted to an analysis of sex roles. Robin Jacoby, a University of Michigan historian, presented an historical account of the development of ideas relating sex role differences to biological differences. She made it clear that most of our present day attitudes on the biology of sex stem from Victorian rationalizations of the role assigned to middle-class women. In the evening Pauline Bart, a University of Illinois sociologist, discussed various sociological aspects of sexist ideas, especially those relating to the attitudes of the medical profession towards women. She touched upon menopausal depression and the "menstrual stress syndrome", pointing out how men have stressed these in order to prevent women from attaining respected positions. In addition, she criticized a recent book analyzing "natural" sex roles in the kibbutzim, calling attention to the fact that the economic development of the kibbutzim forced women back into traditional roles.



Human aggression and competition were discussed on the fourth day of the symposium. Richard Kunnes, an Ann Arbor psychiatrist, presented the "political determinants of violence", pointing out that most contemporary concern centers on acts of individual violence rather than acts of institutional violence. He went on to analyze how institutional violence is a structural necessity of capitalist society and how capitalist ideologues divert attention from this violence by stressing the behavior of individuals. In the evening presentation, Ashley Montagu, an anthropologist and author, provided an excellent review of Konrad Lorenz and Robert Ardrey. He showed how these arguments are false and are based on a manipulative use of archaeological and anthropological data. Finally Montagu pointed out how the innate aggressionist viewpoint deflects attention from the real causes of aggression.

The fifth day's lectures concerned intelligence and heredity, and the use of the supposed relation between them to justify racism. Art Schwartz, a mathematician at University of Michigan, criticized the concept of intelligence and its "measurement" by I.Q. tests, showing that both the statistical assumptions and the data used to estimate heritability are biased in favor of hereditarian arguments. He also reviewed the early use of I.Q. tests in America to stigmatize immigrants as "feeble-minded". In the evening, Val Woodward, a University of Minnesota geneticist, criticized the race-and I.Q. arguments as "Scientific Racism". He placed in historical and social perspective Jensen, Shockley, and others who misapply the principles of genetics to lend scientific respectability to racial supremacists arguments, emphasizing that it is not the Jensens and Shockleys who are the primary villains but the class ruled society which creates them.

The symposium was offered as a University of Michigan mini-course and advance publicity was centered

around the university community. Those who enrolled in the course attended the lectures, workshops, and a special weekend retreat. The retreat was held off campus and provided the opportunity to discuss ideas raised during the previous week. During the weekend, those who attended the retreat not only analyzed the basic deterministic arguments but developed strategies for combatting them. Outlines for both high school and college courses in biological determinism were prepared. Having the retreat off campus enabled those attending (undergraduate and graduates) to temporarily forget their normal academic pressures and devote their full energies to the purpose of the retreat.

All presentations were well attended (the evening lecture attendance ranged from 250-500), and discussions and workshops were held in each session. We consider it of great importance to make the information presented during the symposium available to a much larger audience. All lectures were tape recorded and we are now negotiating with the Pacifica radio stations and National Public Radio to have them broadcast. Any group that would like taped copies of the lectures should contact us. Each of the speakers prepared a manuscript which we intend to publish as a Science for the People report. Several publishers have expressed an interest in publishing it.

Partly in response to the symposium, we have quadrupled the membership in our local chapter and have divided into 5 issue-oriented subgroups. The "Sociobiology" subgroup is in the process of developing a critique of E.O. Wilson's new book on sociobiology (see *SftP*, Nov. 1975,) and will respond to the many articles which are being written in the national press praising his book. A fuller report of chapter activities will appear in the March issue of the magazine.

Ann Arbor SftP

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RADICAL
POLITICAL ECONOMICS**

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Published by the Union for Radical Political Economics

Volume 7, No. 2 Summer, 1975

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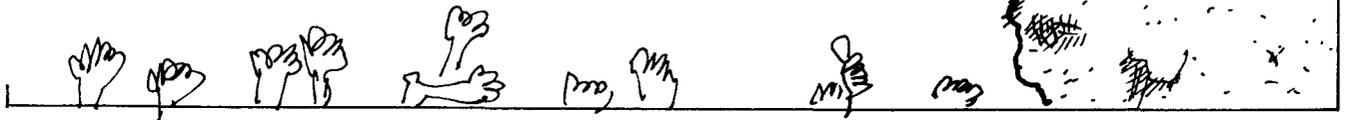
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HARDIN'S LIFEBOAT ADRIFT

ECOLOGIST SAYS "IMPERIALISM TOO GOOD FOR THIRD WORLD".



Garrett Hardin has finally made it. Once a little known man preaching strange science, his name now appears in *Time* magazine and on placards at demonstrations in India. He has seized the time and found a friendly reception from an audience fully primed with tales of welfare chislers, lazy poor folk, and belligerently unthankful recipients of foreign aid. He commandeers a bandwagon which uses a pseudoscientific ecological analysis to justify the past and current policy of a class biased distribution of resources.

Originally a bacteriologist, Hardin began writing on ecological and environmental issues about 10 years ago. His most well known work is "The Tragedy of the Commons"[1], a thinly disguised attack on community owned property and collective responsibility. He is currently active on the lecture circuit and has appeared on several TV talk shows, primarily for the purpose of selling his latest reactionary dogma. What has now come to be called Hardinism is more sinister than most of its detractors admit. It is a pernicious political doctrine based on a so called ecological analysis. The ecological analysis is scientifically wrong, but ideologically consistent.

What exactly does Hardin say? His analysis of the current food and population crisis proceeds along two inter-related lines. First, his lifeboat ethics, as he states in *Bioscience*,

Metaphorically, each rich nation amounts to a lifeboat full of comparatively rich people. The poor of the world are in other, much more crowded lifeboats. Continuously, so to speak, the poor fall out of their lifeboats and swim for a while in the water outside, hoping to be admitted to the rich lifeboat, or in some other way to benefit from the 'goodies' on board. What should the passengers on a rich lifeboat do? This is the central problem of 'the ethics of a lifeboat'.[2]

Second, his theory of the guardians of civilization,

It is unlikely that civilization and dignity can survive everywhere; but better in a few places than in none. Fortunate minorities must act as the trustees of a civilization that is threatened by uninformed good intentions.[3]

This two step analysis is backed by three basic assumptions: First, the world's population is locked into a scarce resource situation mainly because of its excessive size. Second, the distribution of resources into have and have-not lifeboats is inevitable. Third, privileged classes are necessary or at least desirable to make a better life (or at least an acceptable life) for future generations.

Hardin's analysis (the lifeboat model plus the trustees of civilization theory), coupled with his three assumptions (population causes scarcity, class structure is inevitable, and class structure is desirable), lead to the conclusion that it is our moral responsibility to future generations to withhold resources from those who presently do not have enough to survive. If we do not, they will only produce more babies, thereby exacerbating an already critical situation. As the *National Observer* put it, "let 'em starve" is an ethical consequence of Hardin's lifeboat ethics, and the "em" are all the others who are not the trustees of civilization. In the following paragraphs I shall argue that all three of Hardin's assumptions are incorrect, and that he is driven, perhaps unconsciously, by a particular ideology.

Population and Resource Scarcity

This assumption is guided by a theoretical line with supporting empirical evidence. The theoretical line states that world resources are finite, and that if population continues to increase we must eventually reach the point where there are not enough resources to keep people alive. The empirical evidence is that a large fraction of the world's population is hungry, and many are starving. However the conclusion that present starvation and hunger results from present overpopulation is the result of muddled logic. Proponents of this conclusion seem to have the concepts of "necessary" and "sufficient" a bit confused. It is true that real overpopulation necessarily results in large numbers of starving people. It is not true that the existence of large numbers of starving people today is "sufficient" to demonstrate the reality of overpopulation.

In fact, there is an equally plausible alternative hypothesis, namely that resource scarcity is caused by in-

equalities in the distribution of resources, i.e. resources are only apparently scarce. As long as the economic and political system generates an inequitable distribution of resources, even a non-growing population will experience apparent resource scarcity, well before resources are actually in short supply.

Thus, theoretical arguments suggest that the problem should be posed in the form of two alternative questions: is hunger caused mainly by overpopulation? Or is hunger caused mainly by inequitable distribution? The available evidence supports the second hypothesis. In terms of energy and resource consumption, each U.S. citizen costs the world the equivalent of what somewhere between 25 and 500 Indians cost. [4] Most of the world's resources are consumed by developed nations with low population growth rates. [5] Country by country comparisons show, if anything, a negative correlation between population density and hunger. [6] Generally, those countries with higher population densities have higher standards of living than those countries with lower population densities. It is thus apparent, from the available data that present population density must be far less important than distribution of resources in generating hunger. [7] (This is not to imply that over population will never be a problem — clearly the possibility of absolute overpopulation will always exist since we live on a finite world.)

Distribution of Resources

His arguments on this assumption seem to be two: First, historically it has always been that way. Second, no matter what we do, a few people will garner the lion's share of the wealth — if someone who has a lot gives his or her wealth away, someone else will take over that person's position and nothing will have been changed. The

historical argument is obviously vacuous and merits little comment. It is at least debatable whether historically it has always been that way [8], and even if it were, that doesn't argue one way or another for the future.

However, his second argument is curiously correct, within its self-defined limits. It is not a new argument by any means. According to Hardin,

'I feel guilty about my good luck,' say some. The reply to this is simple: Get out and yield your place to others. Such a selfless action might satisfy the conscience of those who are addicted to guilt but it would not change the ethics of the lifeboat. The needy person to whom a guilt-addict yields his [sic] place will not himself feel guilty about his sudden good luck. (If he did he would not climb aboard.) The net result of conscience-stricken people relinquishing their unjustly held positions is the elimination of their kind of conscience from the lifeboat. [9]

Hardin seems to be reminding us of one of the basics of Marxism. Under capitalism, wealth and power will tend to concentrate in the hands of a small segment of the population. Hardin is merely reaffirming this principle, albeit somewhat superficially. Thus, if Hardin is referring to the idea of the owners and rulers of the industrialized countries giving up their power and wealth, then we would have to agree with his conclusion and we might accurately paraphrase his words to read, "the net result of conscience-stricken capitalists relinquishing their unjustly accumulated capital to the labor force is the elimination of their kind of conscience from the capitalist class, and thus the world's economy." However, if Hardin is referring to the people of the industrialized countries in general as if they all are net beneficiaries of imperialism, then his premise is patently false because it



ignores class structure. If Hardin is ignoring class differences, then it is another of his false premises which serves to justify his lifeboat/trustee ethic.

The sad and frightening feature of this piece of the analysis is that most people approaching these problems from the point of view of ecology, do not seem to see that inherent features of the capitalist system are the major driving force of those ever present inequities. Hardin does not admit that his own analysis says, in part, that any population organized under capitalism will be driven to the lifeboat ethic, regardless of its population size or rate of growth.

Hardin would, I suspect, grant all of the above — that is, that capitalism has led to the lifeboat ethics in the first place. (He would probably also insist that any industrially organized society would generate the same consequences — “socialism too”.) He would also probably admit that in generating the inequalities that presently exist, the developing world has been choked by the developed world, that the rich countries have been massively stealing the resources, squandering the labor, and stunting the economic and political development of the underdeveloped countries. But he would then probably counter with his oft heard “I don’t care about the past, I’m worried about the future.” With that seemingly rational pragmatism he would point out that he, personally, is not responsible for the present outrageous inequities, and that as much as he deplores their existence he nevertheless feels he must face up to their realities. That which exists now is what we must work with. From here on in let’s keep distribution constant. But what he fails to acknowledge is that it is impossible to keep distribution constant when the very force that has in the past determined distribution remains in effect.

In summary, if we accept capitalism as the mode of economic organization, Hardin’s second assumption is quite correct, inequities *are* inevitable. However, he is certainly not correct if we admit to a larger world view.

Privilege and Trusteeship

Hardin’s third assumption is perhaps the most pernicious of all, that inequities are in fact desirable. This assumption is derived from an elitist conservation ethic. For example, consider the dawn redwood tree (one of Hardin’s actual examples). [10] Long thought to have been driven to extinction by axe wielding *Homo sapiens*, the species was rediscovered in isolated pockets in China. These pockets correspond to former or present locations of temple gardens. Hardin paints the historical picture of the peasant seeking firewood and the priest protecting the firewood (the dawn redwood tree). The conclusion is that without those priests — a privileged class — protecting those redwood trees from those peasants, the dawn redwood would indeed be an extinct species. Thus if we are to preserve nature for posterity, some privileged class must be relied upon to do so, since common people are more concerned with common problems such as where to find food and shelter.

This particular assumption derives much support from an ethic of philanthropism which has in fact resulted in

the protection of large tracts of wilderness, national parks lands, and other natural phenomena. However, that support quickly loses its force when one realizes that the sources of that philanthropism are the same entities which have raped so much of the natural world in the last century. The lower classes haven’t polluted Lake Erie, or putrified the air in Gary, Indiana. For every 50 acre plot of natural forest “protected” by some philanthropist, it is safe to assume that the equivalent of thousands of acres of nature have been destroyed by capitalists in search of profit, accountable to no one but themselves — part of this profit fills the pockets of the philanthropists.

The real choice faced by the conservationist is not between equality in social justice versus preservation of nature, as Hardin would have us believe. Rather it is between the preservation of small islands of nature in a sea of vulgar exploitation versus the creation of a system human organization which promotes a harmonious existence both among human beings and between humans and nature. Do we wish to preserve patches of nature by way of luxury and exception or do we wish to preserve nature itself for all people’s benefit?

I have argued above that the three principal assumptions leading to Hardin’s lifeboat-guardian of civilization arguments are wrong. They are wrong for a variety of reasons and little can be done to make them right without destroying the underlying axioms upon which they are based. In the face of this result I am forced to conclude that humanitarians, ecologists, and conservationists alike should proceed to struggle against the axiomatic framework which makes assumptions like Hardin’s plausible.

In effect, lifeboat-trustee ethics is a rationalization of the existing socio-political system in most of the “developed” world. It is a rationalization which is couched in a “scientific” framework, the science in this case being ecology. It is important to realize that this form of rationalization is not without precedent.[11] Jensenism is the most obvious development of this sort in recent times. In spite of the fact that responsible refutations of the Jensen-Herrnstein line are abundant [12] *Time* magazine treats the issue as if it were still “controversial,” and Daniel Moynihan says “The winds of Jensenism are spreading across Capital Hill” [13]. The thesis of Jensen and Herrnstein, in spite of the fact that it is demonstrably false, remains potentially influential in policy decisions about educational programs at the national level. More importantly it still acts as a “scientific” justification for the existing socio-political system.

The parallels between the Jensen-Herrnstein line and the Hardin line are clear.[14] Hardin does not justify the existence of an inequitable society directly, but implies that changing to an equitable society would be an ecological disaster. The ecological consequences of doing anything other than what we are currently doing are disastrous. Jensen and Herrnstein use, or misuse, psychology and genetics to justify the status quo. Hardin uses ecology to do the same.

A deeper analysis indicates that what we are dealing with is an ideology in trouble. If any lifeboat is in danger

it is the ideological lifeboat in which the trustees find themselves. Our national myth — though somewhat of a joke right now — is an egalitarian society. But “all people are created equal” comes face to face with blatantly obvious inequities. Our international posture, also a myth, is one of generously giving developmental aid to poor countries. But those poor countries continually “bite the hand that feeds them” with increasingly sharp attacks against the agents of so-called aid (multinational corporations, AID, etc.), pointing out that the net flow of wealth, goods and services is to the developed countries, not from them. Our ideology seems to lead to contradictions. What a wonderful way out — “all people are not created equal” according to Jensenism, and even if they were “egalitarianism would lead to ecological disaster” according to Hardinism.

Science has been almost religiously mystified in the minds of most people in our society. As a result, “scientific” evidence usually weighs heavily in policy decisions. But we see that it is not so important that the scientific evidence be correct as it is that the scientific evidence be in accord with current ideology. Scientific apologists for the status quo have been called upon in the past, they are being called upon now, and they will be called upon in the future. It is important for us to recognize the political content of all scientific proclamations. It is important for us to realize that such scientific proclamations inevitably are based at least partially on some ideology. Therefore, in judging the merits of scientific rationale for policy decisions it is most important that we first clearly define our own world view. What are our social values? What is our ideology? Garrett Hardin has made it abundantly clear what kind of society he wants. He has given an ecological rationale for that society. There is serious fault with Hardin’s ecological analysis. But more importantly, we must stand in strong opposition to his ideology.

John Vandermeer

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Except for eclipses, atomic explosions and rocket trips, science and scientists do not usually get lead coverage in the daily newspapers. A notable exception was the week between Christmas and New Year's Eve in 1969, when the papers were full of pictures and stories about a scientific meeting, of all things. This, indeed, seems remarkable. Because even for the scientists and technologists themselves, scientific meetings are among the most boring of events. And yet, during that week, front-page articles and photographs showed such things as long lines of ordinary people waiting their turn to ask some prestigious technocrat such questions as, "Why are there slums on earth and rockets on the moon?" Reports in the papers of other strange happenings like guerrilla theater and earthy language suggested, that at least one scientific meeting was not a bore.

Ten thousand people attended that Boston meeting of the American Association for the Advancement of Science (AAAS). They were treated to some rare events:

- a cough-in at an American Tobacco Association booth on lung cancer
- the handing out of free "moon rocks"
- the presentation of the "Dr. Strangelove Award" to Edward Teller, "father of the H-bomb"
- films of people's struggles from Viet Nam to Detroit
- and plenty more . . .

For many, the whole show was free; a bunch of fun-loving but very serious critics of the uses of science (later to be known as Science for the People) had successfully pressured the staid old (founded in 1848) AAAS to open its doors free of charge to the general public.

The 1969 meeting in Boston was the beginning. Similar newsworthy and entertaining things happened at subsequent AAAS meetings: in Chicago, Philadelphia, Washington, etc. And similar things began to happen to other scientific and professional associations, like the American Physical Society, International Genetics Meeting, and the National Science Teachers' Association. But the things that happened were not just entertaining (or "outrageous" as some of the establishment claimed); they were serious and provocative in content as well as in form. In addition to the distribution and sale of numerous pamphlets, papers, and leaflets, which seriously addressed questions of vital concern about the development and use of science and technology, in many sessions there was systematic, penetrating interrogation of technocrats responsible for the development and use of destructive and undemocratic science and technology. The technologies targeted included the automated battlefield, the anti-ballistic missile system, psychosurgery (e.g. lobotomies), and theories about the inferiority of Blacks and women. Most significant was the appearance of a few activist scientists and technologists who put their professional ambition second to a desire to have their scientific work serve (rather than oppose) the interests of the oppressed people of the world.

CONFRONT BIG SCIENCE CRITICISM, CONFLICT BOSTON AAAS



The massive publicity, increased attendance and wider general interest in meetings of the AAAS brought about by the active presence of Science for the People did not endear the activists to the AAAS hierarchy. Behind repeated incantations about "freedom from disruptions" and of how the protesters had "no positive program" was

WITH SftP ' AND CREATIVITY MEETING FEB 18-24, 1976



the awareness by the AAAS that a *content* of the Science for the People message was at variance with their own purposes. The AAAS would speak about promoting human welfare through science, but in reality it was promoting a science of social control, mystification, profit, or (at best) irrelevance. SftP asked the fundamental

question of *whose* welfare was being promoted.

Well, AAAS meetings have not been as newsworthy and exciting of late. Even the calling-in of Washington, D.C. police to remove the Science for the People literature table at a meeting did not make many newspapers or attract new people to the meetings. Nevertheless, the message of Science for the People still seems to be of interest to a substantial minority of those who attend AAAS meetings, as can be judged by the sales of *Science for the People* magazine at meetings. But this October at Voluntown, Conn., at the third annual Northeast Regional Conference of Science for the People a spark was kindled that may well make the AAAS meeting worth going to again. In a show of enthusiasm the conference overwhelmingly approved plans for applying its full resources to participation at the February meetings of the AAAS in Boston, Feb. 18-24. It is yet to be seen how well the AAAS will be able to distort the facts; to portray the reasoned criticism of dedicated and informed activist scientists and technologists as nothing more than destructive outrage. But the enthusiastic intention is to combine the highest level of informed criticism with the most uncompromising opposition to the science fatcats and the class they serve.

So Boston, in the 200th year since the war of independence from the British colonial rule, and the seventh year since the challenging of the science establishment, is likely to hear once again the voices of protest. Science for the People will be challenging such assumptions as: scientific progress benefits everyone in our society; social problems come from defective individuals; science works best in a profit-oriented system of immense corporations. And we will be putting forth the positive strategy of uniting with the working class and oppressed people.

Pivotal in the planned presence are several sessions in the official program initiated by Science for the People members. (See enclosed box.) The purpose of these sessions is to provide some of the framework within which the class role of science and technology can be questioned. And the sessions are organized to encourage this questioning from the floor. In fact, the success of the sessions will be judged by how many people can be drawn into the discussion and then into action.

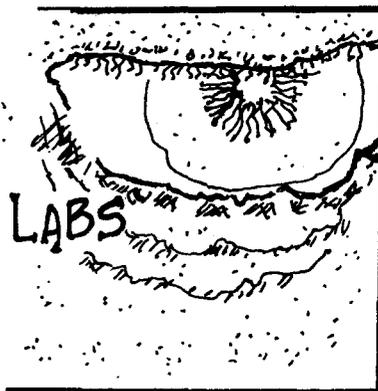
There will be many other activities. Some are being planned by Science for the People groups; others are sure to result from the work of many other participating groups and individuals who Science for the People is mobilizing. They are being encouraged to prepare leaflets, guerrilla theater, tapes, slide shows, etc., and bring them along. To maximize participation a substantial publicity campaign is being initiated.

In the bicentennial of one struggle against oppression, Science for the People is calling on everyone to join and challenge science to serve the people.

(see page 32 for listing of SftP sessions at AAAS)

Kostia Bergman
Herb Fox
Mike Teel

ACCELERATING THE STRUGGLE: DISCONTENT STALKS THE NATIONAL LABS



The National Laboratories are a post-World War II development that evolved from the wartime mobilization of scientists. Partly devoted to basic research and partly to continued atomic-weapons development, the Labs offer employment to research scientists under favorable conditions, but with somewhat less prestige than a faculty job at an elite university. (In certain fields, an individual may have a joint appointment at a cooperating university and a National Lab.) The Laboratories engaged primarily in research are Brookhaven on Long Island, Argonne near Chicago, the Lawrence Berkeley Laboratory and the new National Accelerator Laboratory in Batavia, Illinois. Knolls Atomic Power Laboratory, Lawrence Livermore Laboratory, Los Alamos in New Mexico and Oak Ridge are Labs that do nuclear-weapons and nuclear-reactor research with some support for basic-research programs. The research programs are mainly in elementary-particle physics and related areas in nuclear physics, but Oak Ridge, Brookhaven, Argonne and Livermore also support programs in biology. The Labs employ tens of thousands of people about 10% of whom are staff scientists or engineers (with status roughly equivalent to that of university faculty).

Scientists in these Labs work in programs dictated by management, and have little say about organization or direction. Nevertheless these jobs are desirable; indeed, in elementary-particle physics the Labs are virtually the sole employer. Until five years ago these jobs were secure but the common work problems of layoffs, job insecurity, and the assignment of routine tasks are beginning to reach into this section of the science workforce as the economic crisis is precipitating large-scale attacks on the working conditions of people at the National Laboratories. In broad outline these attacks include speed-ups, layoffs, and tightening control over the freedom of scientists to choose their own conditions of work. [1,2] The responses to these attacks on traditional scientific prerogatives have ranged from apathy and defeatism to attempts to organize. However, these organizing efforts have received little attention from the media and the organizers themselves face hostility from both management and their co-workers.

Scientists and many other technical workers are now in a situation where their relative privileges are being taken away by the same institutions which offered them in the first place. Thus a dominant theme faced by the organizers is reluctance on the part of scientists and

engineers to confront the managements with whom they have had a relaxed and privileged relationship in the past.

Conflict at Argonne

Events at Argonne National Laboratory (ANL) illustrate these themes concretely. At this laboratory is an organization of scientists called the Argonne Senate. Organized in 1967 by senior staff members, it was designed as an advisory body to the ANL administration on "matters pertaining to the performance and operation of the Laboratory". It was expanded in 1969 and again in 1972 to include all ANL salaried employees. At first concerned with new research programs, the Senate got involved in job issues as the budget cutbacks in the early 1970s started to roll in. Response of the ANL management to this interference was hostile. In 1972 a management policy statement was issued titled "Obligations and Responsibilities of the Argonne National Laboratory and Members of the Staff in Regard to Employment." Called the "O and R document" by the staff, the statement simply asserted that "Argonne reserves the right to terminate an employee . . . because of conduct inimical to the interests of the Laboratory or the US government."

In 1973 five percent of the ANL staff was laid off. A fired employee filed suit against Argonne in May 1973 charging that the Argonne Senate was sympathetic to management, having had supervisors as members, and that the existence of such an organization constituted an unfair labor practice under the National Labor Relations Act (the Wagner Act). The settlement in 1974 permitted the ANL management to terminate its relationship with the Senate until the supervisor "problem" was solved.

So on the one hand the Senate incurred the wrath of management when it attempted to challenge management's hiring and firing prerogatives, and on the other hand it failed to build a supportive membership because it acted, in fact, as a company union. The Senate attempted to move forward by polling its constituency about future possibilities. The members were asked to choose between (a) continuing as present and refraining from "discussing all matters relating to wages, hours, terms and conditions of employment," (b) disbanding, or (c) transforming the Senate into a legally acceptable labor organization of nonsupervisory staff members which could seek recognition (*but not necessarily collec-*

tive-bargaining power) with ANL management. I do not have the final results of this poll, but the preliminary results showed (c) to be ahead.

Encore at Oak Ridge

The same themes were played out a year later at Oak Ridge National Laboratory (ORNL) in Oak Ridge, Tennessee. Oak Ridge gained fame during World War II because it was the site of the gaseous-diffusion plant that produced the uranium 235 for the atomic bomb. In the post-war period it continued as a weapons- and thermo-nuclear- research center although it developed basic-research programs in biology, physics, and chemistry. ORNL is operated by Union Carbide Corporation for the federal government on a contract basis.[3] All employees are employees of Union Carbide. The Lab employs about 2,000 so-called professional or monthly-salaried scientific and technical people, and about 16,000 people overall. Of the professional employees, 725 are Ph.D.s. The political climate is conservative.

In 1973 a small group of scientists began meeting to discuss demoralization at ORNL. Frank Collins, a union organizer in the professional division of the Oil, Chemical and Atomic Workers International Union (OCAW), spoke with them about organizing problems. Collins advised unionization even though he predicted that there would be extensive staff resistance to be overcome. At the same time Carbide began to reorganize ORNL. A new laboratory director, Herman Postma, was appointed. Postma, a staff nuclear physicist and a crony of retiring

director Alvin Weinberg, supervised the reorganization of the Laboratory structure. Scientific sections (in general research areas like cell biology) headed by section leaders were replaced by programs and program managers. The material basis for these changes is the desire of Union Carbide to transform ORNL from a science research center into what Carbide would like to call the "Energy Capital of the World." Coal, coal gasification, and breeder reactors in close contact with the Tennessee Valley Authority and strip-mining interests are expected to displace other activities.

The reorganization was accompanied by the layoff of 500 workers just two weeks before Christmas. The scientific staff was left intact, but people were shaken by the viciousness and severity of the layoffs.

In September 1974, against this backdrop of insecurity and uncertainty, the organizers issued a call for the formation of a Professional Staff Association (PSA).

We believe that solutions to many of the morale problems of the staff which occur at the Laboratory could best be obtained from a constructive and candid dialogue between management and the staff. This has not been possible in the past and does not exist at present. . . . An organization structured by the staff itself whose members are not appointed or controlled by management would insure the necessary support from the staff to provide the individual employee with the confidence to express freely his or her opinions."

The statement was signed by 112 staff members.



Postma attacked immediately: "PSA could be interpreted as a 'labor organization' and must be dealt with at arms length." Postma attached sections of the Taft-Hartley Act to his memo and warned that "all group leaders, section heads, department heads, scientific directors, project managers, etc., must be excluded" from the organization.

The organizers now faced a potential membership fearful of entering into anything like a trade union. At the first meeting a steering committee of 23 people from twelve divisions passed two motions:

"It is the consensus of the interim steering committee of the ORNL PSA that the Association should *not* seek collective bargaining power as defined in Section 8(d) of the National Labor Relations Act."

and

"The Interim Steering Committee affirms that the 112 signatures of the original PSA letter to monthly employees at ORNL, or any further signatures solicited in response to that letter should not be used as authorizations to represent or be used to accompany a petition for an election to determine a bargaining agent."

Subsequent biweekly meetings of the steering committee were low key. An informative newsletter was distributed regularly. The PSA supported a program to screen people for possible exposure to plutonium and other transuranium elements. Investigations had begun into age discrimination and the issue of professionalism as an impediment to organizing was under discussion. But the only issue which engaged the organization in active struggle with the ORNL management was a partially successful attempt to obtain copies of the current contract between ORNL and the Energy Research and Development Administration. The PSA used the Freedom of Information act to obtain copies of the contract, but Union Carbide withheld all information about salary policy. "This means," one organizer said, "that they can reward whomever they want, whenever they want, for whatever they want." The challenge is proceeding through legal channels.

The central problems the organizers face, however, are unsolved. First is exhaustion. Second is their own reluctance to push militant issues. And third is the fear of the potential membership to participate in collective political activity on their own behalf. These problems exist because scientists and engineers have had relatively privileged jobs until now. Relationships with employers have been friendly and *laissez-faire*. In short, scientists and engineers have become accustomed to being looked after, and are not used to political struggle.

Old ideas die hard! In a discussion of how to build membership it was suggested that a demand be made to Union Carbide that the staff should have three-year contracts. As it now stands, anyone can be fired with only two-weeks' notice. The idea was that people would join the organization if the PSA could win a victory of real value. The people in the room were divided on the issue. One of the most effective and hardworking organizers

opposed the demand because he felt that "management needs the flexibility to remove dead weight." This ambivalence towards management must be resolved for the organization to move past its present limits. Since there is a conflict of interest, the organizers have to be clear about what they really want. Otherwise the conflict remains unexpressed and the organization is unable to serve the interests of its members effectively.

Other professional workers have resolved this problem: School teachers, nurses (see *Science for the People*, March, 1975), and hospital resident physicians have successfully taken on managements with militant strikes to obtain reduced class sizes, lighter patient loads, and reduced working hours. These gains benefit the people served as well as the workers themselves.

Finally, it must be realized that the successful outcome of these struggles requires the alliance of nonprofessional and professional employees. The resident physicians in New York and Chicago hospitals created a strong alliance with hospital workers around the issue of improved patient care. Without this support the residents would not have had the leverage to win their demands for a reduction on the length of their work-week and the number of consecutive hours they could be required to work. In New Haven, the leaders of a teachers' strike were released from jail when the New Haven Central Labor Council threatened to call a general strike. At ORNL, on the other hand, the PSA is top-heavy. Whereas 75% of the 200 initial members were Ph.D. scientists, only 35% of the PSA's constituency are Ph.D.s. These figures reflect the difficulties that the organizers have in breaking down elitist divisions.

Summing Up

Scientists and engineers are in an ambiguous position. They can try to preserve their working conditions and jobs by making an appeal to management that they are special and superior, and that therefore they should not be treated as ordinary workers. Such an appeal is clearly reactionary and elitist. Alternatively, scientists and engineers can ally with "nonprofessional" employees to gain control of the workplace by recognizing that not only is this essential to good scientific work but that all workers are entitled to the same decent working conditions. The forging of this alliance is the first step toward the creation of a real science for the people.

Peggy Strom

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NORTH EAST REGIONAL CONFERENCE

From October 24-26 the Third Annual Northeast Regional Conference of Science for the People was held in Voluntown, Connecticut. Approximately forty people attended, representing Boston, NYC, Stony Brook (NY), Chicago, Tallahassee, Washington (D.C.) and Montreal.* In addition, there were reports from the West Coast and a newly formed chapter in Charlottesville, Va., although they were not represented. The main task of these conferences is to sum up Science for the People's work in the past year and to discuss the future direction of Science for the People—our practical work and our political understanding. As established by last year's conference, one goal this year was to move the organization forward in developing principles of unity. Preparation for the conference took the form of position papers on four questions: 1) the role of Principles of Unity; 2) our main strategy; 3) the role of the working class and our relationship to it; 4) programmatic objectives for the organization. These questions, chosen from nine formulated at the 1974 conference, have been the guidelines for discussion on principles of unity in the organization over the past year.

The conference opened Saturday morning with a plenary session devoted to Chapter and Activity Group reports. People spoke of their current projects, history, and plans for the future, including criticisms and problems in their work. Thus, the morning provided an important forum for sharing practical experiences and gaining information and support.

Saturday afternoon we broke into workshops to discuss the questions listed above. The workshop reports established the direction of the rest of the conference. A sense-of-the-body resolution was passed Saturday evening which helped focus our discussions the next day. It stated that Science for the People should direct its activity toward building a mass organization with broad principles of unity. This resolution set the theme of the conference and reaffirmed the goal of building a national organization.

*The group in Montreal was initiated by a Science for the People member. However, since they have established their own principles of unity, they do not want to be considered a chapter until Science for the People as a whole has principles of unity, allowing them to join or not join on a principled basis.

Sunday morning we again broke into workshops, this time to discuss program: the magazine, the AAA\$ meeting (to be held in Boston, February 1976) and national organizing. These workshops reported to the afternoon plenary session. After discussion of the workshop reports several guidelines for the coming year's program were decided upon:

1) *Science for the People* should be a magazine of a mass organization, focusing in a radical manner on issues in science and technology rather than on general left political issues. It should aim at a broad readership; and thus its style should be more readable and less polemical.

2) The AAA\$ conference should be the primary focus of Science for the People over the next four months. This focus was chosen because it was felt that the AAA\$ audience includes part of our constituency and a concrete activity around the conference would help build Science for the People. Several Science for the People members have arranged symposia on the official program and there are also other actions planned — confronting establishment speakers, leafletting with alternative information, and addressing the media. All chapters, project groups and individuals were encouraged to prepare for those AAA\$ sessions in which they were particularly interested. (For more information about preparations for the AAA\$ meeting, contact the AAA\$ coordinating committee of Science for the People c/o the Boston office.)

3) The Northeast Regional Committee was directed to form a national organizing committee, which would coordinate the assembly of a "chapter forming" packet of materials created by activity groups with critical discussion of successes and failures. They would also coordinate the travel of experienced members to encourage the formation of and strengthen new chapters.

A second sense-of-the-body resolution was passed dealing with the class position of Science for the People and our relation to the working class. The two main points of this resolution state: 1) The strata that make up our constituency — technology and science-related people ranging from technicians to tenured professors and senior scientists — are characterized by ambiguity both in their material conditions and consciousness. Consequently in their political consciousness and behavior we find vacillation and individualism. However, it must be noted that these strata are in a process of transition toward greater proletarianization which at the same time does not automatically generate working-class consciousness. 2) Our organization, which includes progressive members of the technical strata should strengthen its support work of working class struggles, raise the importance of actions in solidarity with the working class and continue to expose ruling class ideology.

This conference also directed the preparations for next year's conference to center around summing up and evaluating our practice (present and past) and using this

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of outside consulting can thus be identified in the following areas:

1) Teaching: Some professors may be distracted from conscientious teaching because of their frequent involvement in outside enterprise; a commitment to some outside business or government agency might distort the presentation of course material. For example, in the words of one student: "I remember taking a forestry course which repeatedly emphasized how the public should leave the big forestry companies alone and trust them to harvest safely; afterwards I found out that the professor was consulting regularly for the big timber companies."

2) Research — "the unfettered search for truth": The outside connections a professor has may readily influence the choice of research topics, especially if the availability of research funding is scarce; and may also have the effect of slanting the research analysis or limiting the types of solutions that may be considered for acknowledged problems. For example, the well documented history of scientific studies on the health hazards faced by asbestos workers shows how an industry can essentially purchase the kind of research it needs for its own uses.[12]

3) The Role of Universities in General: Students, parents, taxpayers, and legislators are paying professors' salaries for the same time for which outside income is being earned in the service of private clients. As an illustration, the University of California pays its Vice President, Dr. Chester O. McCorkle, Jr., an annual salary of \$53,500 (more than the State pays its Governor); but at the same time Dr. McCorkle is working for two large agribusinesses — Del Monte Corp. and Universal Foods Corp. — as a member of the board of directors of each. (\$10,000 a year in director's fees is typical for a corporation the size of Del Monte.) Thus any citizen can see the contradiction that emerges when the university presents itself as an institution dedicated to the broad *public* interest while at the same time its faculty is being subsidized to do consulting for the *private* interests of outside employers, or worse, to help direct entire enterprises. At a time when cut-backs are forcing large scale reductions in hiring, academic programs etc., free handouts to corporations and government continue. It is in this last category that the issue of conflict of interest is most fundamental, because it allows us to look beyond the activities of individual faculty members to focus on the roles of social institutions.

As we might expect, there are common arguments in defence of current consulting practices. First, there is the elitist-pragmatic view, held by many academics, that the ideal of service to the whole society is merely propaganda, (which it is), designed to placate the masses but never taken seriously in practice. The consulting privileges of faculty were obtained during past years when money was plentiful and top rank experts were rare; the universities had no choice but to allow these "big-time-operators" a free reign, and they had no objection in principle. This position deserves no comment.

Apologists, on the other hand, will claim that the participation by academics in the powerful institutions of our society will provide an *enlightening* influence, and is thus to be praised. (This parallels the arguments advanced in favor of ROTC programs on campus and the justification given by many liberal professors involved in reactionary research programs such as counterinsurgency work for the Pentagon.) The problem is that academics in this position can only work to assist powerful institutions to achieve their goals whatever those goals are; they can try to modify the *means* (as by suggesting the electronic battlefield alternative to massive bombing in Vietnam) but they must support the *ends* (military victory) as given.

Another example of this view is the case of Dr. Clifton R. Wharton, Jr., president of Michigan State University, who recently accepted positions on the board of directors of Ford Motor Co. and Burroughs Corp. He announced that he would consider himself to be a "public director" and turned over all his directorship fees to the university. Interviewed about this in *Business Week*, he said, "I view my role as a person who can exercise the responsibility of the directorship to make a profit, and bring to it a broad social and public concern." [13] Left unsaid is what he will (or can) do when these two stated objectives, corporate profits and social good, come into collision with each other — as they surely do.

This criticism of consulting is not to say that all consulting by faculty would be abolished in a different social order where private corporate and illegitimate governmental institutions no longer dominate. We should not imagine the university as an ivory tower; it *should* be interactive, it *should serve society*. We should struggle for a society in which education, research and production would be much more integrated than at present. Private-property restrictions on knowledge, production-technology and future-research planning would be replaced by



public access, discussion and critical evaluation. Consulting would not be an activity of elite, highly privileged individuals who happen to monopolize specific technical knowledge, but rather a communication process involving large numbers of people in all institutions.

A Proposal for Action

While much of the data on faculty consulting presented in this report is new, the broad issues raised are embedded in a rich history of criticism.[14] During the 1960's the campuses of America were hotbeds of protest, against racism, against imperialism, often against the universities themselves, seen as instruments serving those evils. Radicals analyzed the relationship of the university to the larger powers in the society and saw the flow of government dollars into campus research for weapons of war and subtler means of social control, saw the predominance of big business leaders on the boards of trustees or regents that ruled the campuses, saw the calling in of police power to repress student movements that seemed to present any palpable threat to the existing order of things, and saw students, being educated not for the "glory of knowledge" but rather to meet the call for highly trained workers that the corporate system required.

This present study, concentrating on the area of faculty consulting, is intended to illuminate one more aspect of the integrated relationship that exists between the university and the mainstream of American power, showing the outflow of the special expertise of professors into the service of the large corporations and their allied institutions.

The next question we consider concerns action. Extensive public discussion on consulting may itself bring

about formal public disclosure of consulting activities. University administrators might decide that it is best for them to institute such a procedure themselves rather than risk too much attention from students, legislators, etc. looking into the cozy arrangements. Under a public disclosure scheme, every faculty or other staff member who engages in outside consulting should make an annual report of this activity for public inspection. It should include the name and location of each person or organization served, the amount of time spent and the compensation received for each consulting job, a brief description of the work done along with copies of any written reports. There is a precedent for this kind of public disclosure in the Freedom of Information Act, which itself resulted from increased public interest and probing into the activities of government bureaucracies.

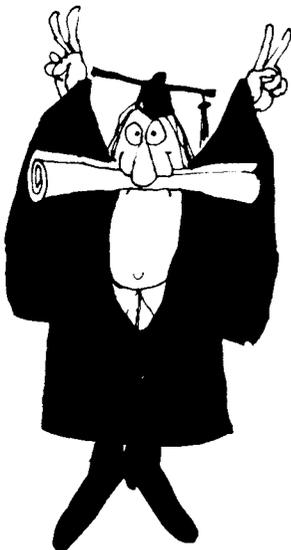
Examination of consulting activities in detail would have the effect of stigmatizing the most odious kinds of service and forcing much wider accountability than now exists for others. As has happened to some extent with defense contracting, consulting in some areas would become much less frequent. Of course there is always the recourse of seeking faithful consultants at universities not normally inconvenienced by critical debate — as has also happened in many areas of sensitive research work — but this merely reinforces the need to encourage that debate everywhere.

There will naturally be indignant outrage with this sort of program. Claims will be made about the "invasion of privacy" of faculty members, about "where you draw the line" on these kinds of issues, the bureaucratic burden, and "harrassment and embarrassment." Prof. Luis W. Alvarez, then president of the American Physical Society, explained why a proposal for disclosure of consulting activities was rejected by the Society as follows:

I do not see how one can find a proper cutoff point for information if one does not restrict it to information concerning one's ability to serve the Physical Society. I think that if I happen to be a member of the Board of Deacons of the local Presbyterian Church, it would be none of the Physical Society's business. I feel the same way about my directorship on the board of the Hewlett-Packard Company, which is known to most of my friends and associates.[15]

It doesn't take much insight to see the difference between a local church and a 500-million dollar electronics-manufacturing corporation, as far as significant consulting involvement is concerned.

It is not difficult to predict which groups would oppose the disclosure of consulting activities. The faculty establishment, university administrations, business and government organizations all have benefitted from these traditional arrangements. However, on the other side are students, working people, most consumers and taxpayers in whose interest it would be to see this program aimed at consulting actively pursued. These people are not usually able to hire university "experts" to advance



their causes, (however they would usually *benefit* from publicity if they did so), and in fact are often the victims of big business and government agencies that do make use of the professors' special talents.

Generally it would seem that a political program that addresses current consulting practices should attempt to reveal what really goes on, to more people, and restrict the freedom that private interests and government agencies have in utilizing these resources unencumbered by public discussion. We should also try to show the way toward a different social order where "consulting" (among other things) would serve the people. In exposing and publicizing the consulting situation, it is especially important to reveal the activities of the most elite faculty members, some of whom as participants in the rule of major institutions, have graduated from being servants of the ruling class to being members. We should incorporate critical examination of consulting into broader debates concerning teaching and research goals at every university.

This program can come about only if there is strong and determined effort from students, with some support from faculty, in educating, organizing and agitating. This can go forward in open campus debate, and inside faculty committees where students have a voice. Groups can form to work in individual departments to investigate, generate discussion, pool findings and build pressure for changes. Many students have first-hand experience with the professor-away-consulting syndrome and have extensive knowledge of such activities.

Lastly, it should be recognized that this is a systematic problem that can't be solved with a patch-up job of treating symptoms instead of the real problem — ruling class control of society. Only by making this clear and attacking the full spectrum of problems can we bring about a society in which consulting can be done in the people's interest.

Charles Schwartz

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8. William Moore, *San Francisco Chronicle*, June 1, 1974; page 5.
9. See "Science Against the People; The Story of Jason", Berkeley SESP, 1972.
10. Charles Schwartz, *Physics Today*, January 1975; page 13.

11. "Principles Underlying Regulation No. 4", University of California Office of the President, June 23, 1958.
12. David Kotelchuck, *Science for the People*, September 1975; page 8.
13. *Business Week*, February 17, 1973; page 69.
14. Upton Sinclair's book, cited above, is remarkably fresh and relevant despite its age. From recent years there is James Ridgeway's "The Closed Corporation: American Universities in Crisis" (Random House, New York, 1968) which contains much information pertinent to this present study; and there have been a number of local campus pamphlets: "Who Rules Columbia?", etc.
15. Op. Cit. Charles Schwartz, *Physics Today*, page 13.

TABLE 2

ACADEMICS ON THE BOARDS OF DIRECTORS OF THE 130 LARGEST U.S. CORPORATIONS

From a search of the annual reports of the companies listed by *Fortune* in 1974: the 100 top industrials and the 5 top companies from each of the other 6 categories. Many of the individuals listed below also sit on the boards of other, lesser, corps.

University of California

Melvin Calvin (Prof. Chemistry, Berkeley) — Dow Chemical
Neil H. Jacoby (Prof. Management, Los Angeles) — Occidental Petroleum
Kenneth S. Pitzer (Prof. Chemistry, Berkeley) — Owens-Illinois
Charles H. Townes (Prof. Physics, Berkeley) — General Motors
Harold M. Williams (Dean, Management, Los Angeles) — Signal Companies

University of Michigan

W.J. Cohen (Dean, Education) — Bendix
Morgan Collins (Prof. Emer. Business) — S.S. Kresge
Robben W. Fleming (Pres.) — Chrysler
Paul W. McCracken (Prof. Business) — S.S. Kresge
William E. Stirton (Vice Pres. Emer.) — American Motors

Harvard University

Donald K. David (Prof. Business) — Xerox; Great A&P Tea Co.
Lawrence E. Fouraker (Dean, Business) — RCA; First National City Bank, NY
Jean Mayer (Prof. Nutrition) — Monsanto Chemical
Frederick J. Stare (Prof. Nutrition) — Continental Can
Massachusetts Institute of Technology
Howard W. Johnson (Chm.) — Du Pont; J.P. Morgan; John Hancock Life; Champion Int'l.
James R. Killian, Jr. (Hon. Chm.) — General Motors; AT&T
William F. Pounds (Dean, Management) — Sun Oil
Jerome B. Wiesner (Pres.) — Celanese

Columbia University

Courtney C. Brown (Dean, Emer. Business) — Borden; American Electric Power
Grayson Kirk (Pres. Emer.) — IBM; Consolidated Edison
William J. McGill (Pres.) — Texaco; AT&T

California Institute of Technology

Robert F. Bacher (Prof. Physics) — TRW
Harold Brown (Pres.) — IBM

Cornell University

John E. Deitrick (Dean, Emer. Medicine) — Prudential Life
Franklin A. Long (Prof. Chemistry) — E Exxon

Duke University

Juanita M. Kreps (Vice Pres.) — J.C. Penney
Terry Sanford (Pres.) — Cities Services

Northwestern University

John A. Barr (Dean, Management) — Esmark
Donald P. Jacobs (Prof. Finance) — Union Oil

Princeton University

Burton G. Malkiel (Prof. Economics) — Prudential Life
Courtland D. Perkins (Prof. Engineering) — American Airlines

Purdue University

Frederick L. Hovde (Pres. Emer.) — General Electric; Inland
Steel
Mary Ella Robertson (Prof.) — John Hancock Life

University of Rochester

Robert L. Sproull (Pres.) — United Aircraft
W. Allen Wallis (Chancellor) — Eastman Kodak; Esmark;
Metropolitan Life

Stanford University

Arjay Miller (Dean, Business) — Ford
J.E. Wallace Sterling (Chancellor) — Shell Oil

Barnard College

Martha E. Peterson (Pres.) — Metropolitan Life

Brown University

Donald F. Hornig (Pres.) — Westinghouse

Bryn Mawr College

Katherine E. McBride (Pres.) — New York Life

California State University

Brage Golding (Pres., San Diego) — Armco Steel

Carnegie Institution of Washington

Caryl P. Haskins (Pres.) — DuPont

Case Institute of Technology

T. Keith Glennan (Pres. Emer.) — Republic Steel

Emory University

E. Garland Herndon, Jr. (Vice Pres.) — Coca-Cola

Hunter College

Robert C. Weaver (Prof. Urban Affairs) — Metropolitan Life

University of Illinois

John Bardeen (Prof. Physics) — Xerox

Illinois Institute of Technology

John T. Rettaliata (Pres. Emer.) — Western Electric; Inter-
national Harvester

University of Leiden

Ernst H. van der Beugel (Prof. Int'l Relations) — Xerox

Marquette University

Charles W. Miller (Prof. Business) — W.R. Grace

Meharry Medical College

Lloyd C. Elam (Pres.) — Kraftco

Michigan State University

Clifton R. Wharton, Jr. (Pres.) — Ford; Equitable Life

University of Nebraska

Durward B. Varner (Pres.) — Beatrice Foods

New York University

James M. Hester (Pres.) — Union Carbide

Notre Dame University

Theodore H. Hesburgh (Pres.) — Chase Manhattan Bank

Pepperdine University

M. Norvel Young (Chancellor) — Lockheed

University of Pittsburgh

Marina vN. Whitman (Prof. Economics) — Westinghouse;
Manufacturers Hanover Trust

Pomona College

David Alexander (Pres.) — Great Western Financial

Rensselaer Polytechnic University

Richard G. Folsom (Pres. Emer.) — American Electric Power;
Bendix

Rutgers University

Margery Somers Foster (Dean, Douglass College) — Prudential
Life

University of Southern California

Norman H. Topping (Chancellor) — Litton

Syracuse University

William P. Tolley (Chancellor, Emer.) — Colgate Palmolive

Tulane University

Herbert E. Longenecker (Pres.) — CPC International; Equit-
able Life

Tuskegee Institution

Luther H. Foster (Pres.) — Sears, Roebuck

Virginia Polytechnic Institution

T. Marshall Hahn (Pres.) — Georgia-Pacific

Washington University

William H. Danforth (Chancellor) — Ralston Purina

Wayne State University

Edward L. Cushman (Vice Pres.) — American Motors

Wesleyan University

Edwin D. Etherington (Pres. Emer.) — American Express

Yale University

John Perry Miller (Prof. Economics) — Aetna Life & Casualty

Statistical Summary

68 academic people, from 44 universities, holding 85 director-
ships, on the boards of 66 corporations.

[14] When these findings are compared with the tabulation given by
Ridgeway (1981) we find that the presence of academics on the
boards of these largest corporations has increased by 65% in the
seven year interval between these two studies.

continued from p. 13

The unionization drive, the struggle to organize technical workers against exploitation, can serve to clarify the contradiction between the interests of workers and of corporation managers and owners. Even where it first fails, the unionization drive often serves an important educational function.

Another problem, however, in waging such organizing struggles is that the power and resources of large multinational corporations like S.C.M., combined with our inexperience and physical limitations, often pushes us to obtain legal, financial, and material assistance from established unions and union bureaucracies. These unions can provide an organizing drive with a certain legitimacy and psychological support. While union support is not always crucial, it often is very important. But most unions are characterized by a very narrow trade unionism, the kind which is limited at present to economic issues and narrow self-interest, with no broader political perspective to speak of.

ESC, for example, has been somewhat successful in effecting economic improvements for its members, but remains otherwise largely conservative or indifferent to questions of democracy and political power. The organizers I worked with had only a marginal interest in broader political questions. They enjoyed wielding large amounts of personal power and privileges of union expense accounts and high salaries. I have spoken to some marine engineers in MEBA; they expressed dissatisfaction with the highhandedness and paternalism of the union leadership. Workers belonging to ESC expressed greater satisfaction, especially with their newfound economic power, but their remoteness from union leadership was apparent.

So we are led into this difficult situation. On the one hand it is expedient, helpful, and sometimes necessary to deal with established unions in order to organize the scientific and technical workforce, and to begin moving it in progressive directions. On the other hand we are limited or held back in these attempts by the political backwardness of the existing union bureaucracies and their policies. This dilemma is even more pronounced given that our goal is not simply to establish a narrow trade unionism within the scientific and technical

workforce; it is to go much further than that, to organize a political force which engages in the revolutionary struggle to overthrow imperialism. Unionization is but an important first step. Its value lies in the politicizing of scientific and technical workers and in heightening the contradictions within the present economic system — that is, in putting organized economic pressure on the capitalist class.

The general problem of how to bring a broader political perspective into organizing around concrete issues manifests itself in the day-to-day work of trying to build the unionizing drive. My own political perspective, for example, extended beyond simple unionization, and because of that I had trouble in identifying in many ways with my co-workers or with the union organizers I had to work with, and they, in turn had some trouble working with me.

I was coming from a much different place than they. I had drifted out of graduate school in early 1972 (without a Ph.D.) dissatisfied with the individualism of basic research and concerned with the oppressive uses of scientific work. While in school I had been involved in two strikes for higher wages and benefits for research and teaching assistants. These efforts were successful in terms of obtaining slightly better wages, but no continuing organization developed out of them. This was a mistake I did not want to repeat.

Industrial research work was nothing new to me — my father had done it all his adult life. Through him I gained a comprehension of the deficiencies of the traditional monetary rewards of scientific work. Upward corporate mobility and lots of money were not too meaningful to me. Freedom, dignity, and some say in the use and directions of my work were my objectives. Of course, this attitude was consistent with the fact that I lived inexpensively, had no children, and was not generally caught up in the lifestyle of middle American consumerism.

I found myself at odds with the thinking of almost all the people I had to work with. My response was to be open about my political orientation. This was initially allowed, as it is in many such facilities; “eccentricities” are permitted as long as work is not affected. I attempted on a day-to-day basis to establish some form of human contact with all employees, breaking down the taboos of “professional” conduct with maintenance and support people. As I mentioned before, I took every opportunity to do political education, to discuss political issues with my co-workers.

But this practice, combined with my political orientation and life-style, made me different from the other workers, and made it sometimes hard for us to identify with one another. This came out most clearly when only one other person volunteered to work openly on a steering committee to coordinate the unionization drive. Not having a strong group to lead the struggle, the organizing attempt was limited from the start. But the other workers feared for their jobs or good favor with management. I was thus nearly alone in my willingness to take on the organizing commitment and deal with the possible consequences.



Nevertheless, the problem remained. I did not see myself dedicated to a technical career nor wishing to remain with the company for a long period of time. A unionizing drive could help politicize a number of my co-workers, but they were not in a position to take the risks that I was. So we were left with the result that without a strong steering committee, there would certainly be real problems in leadership even should a unionizing drive prove successful, especially given the economist nature of the union.

What is the future?

The difficulties encountered in the unionizing drive at S.C.M. — the resistance of scientific and technical workers, especially the so-called “professionals,” to organizing around their work and salary conditions, and the limitations in the political scope of such organizing — raise important questions about these workers’ potential for becoming a progressive political force. In analyzing the situation, we must always be conscious of the changing nature of the scientific work process as well as its relationship to capitalist economic development.

For one thing, the privileges long associated with scientific and technical work are fast disappearing. For another, the products of industrial research are bought and sold on the market, and even exported to the third world (see “Technological Dependence,” *SftP* vol V #4, July 1973). Consequently, the process of technological innovation is assuming the same forms as other kinds of commodity production. Scientific work is being proletarianized. All this is but another example of the way in which capitalist forms have expanded into every previously non-capitalist sphere. Changes in technical work are part of the historical development of imperialism.

Technological advance, on the broadest level, is seen by the ruling class as the method of resolving many of the contradictions of our social and economic system. But on the more immediate level as well, technological innovation has assumed major economic importance. Industrial research is a prime area of competition among capitalists; products and processes become “obsolete” after only a few years. The importance of this research is reflected in the high level of opposition we met at S.C.M. in our unionizing drive. As research is put on an increasingly production line basis, it seems likely that slowdowns and strikes along with pickets and boycotts can have immediate economic consequence.[10]

Research workers are only now beginning to explore these possibilities. The system is vulnerable in this area, and that should provide us some incentive to organize. More directly, the level of exploitation is significant and is increasing and should be opposed by all means possible.

Len Gilbert
in collaboration with
Al Weinrub

NOTES

1. This research facility was located far away from the production facilities in Japan as well as from other S.C.M. research and development facilities in the U.S. and Europe.
2. Contract labor is a particularly onerous form of employment used on a large scale in California research. It allows a company to hire a worker at a premium with the excess above normal wages going to the labor contractor. It gives the employee no benefits at all, and even less security than ordinary employees. It allows the company the option of employing older workers without having to worry about pension payments, since the employee is nominally working for the labor contractor. It allows the company to bring in large numbers of employees for short periods and creates artificial legal and class barriers to labor organizing.
3. An NLRB representation election is one in which workers decide if they want to be represented by a particular labor organization. The NLRB must first set a hearing at which it determines who in a given workplace will constitute the represented unit. It then orders an election in the workplace, where a majority vote is required for the union to become the bargaining agent for that unit.
4. The most extreme decision in this case involved an employee who served as a consultant. He was actually one of the three owners of the facility prior to its acquisition by S.C.M. He received about 1/2% of the total S.C.M. stock in this merger (total S.C.M. stock is worth over \$100 million). This individual was ruled a worker in spite of his obvious ownership position.
5. ESC is affiliated with the Marine Engineers Benevolent Association (MEBA) which provides organizing funds. MEBA (AFL-CIO) is a wealthy craft union made up primarily of marine engineers. Over a 20-year period it has made significant economic improvements for them (average salary of \$36,000/year and a \$600/mo. pension after 20 years). It is now putting a lot of effort into organizing engineers and scientists more generally. This is where ESC comes in.
6. Management had been studying a book called *Winning NLRB Elections — Management Strategy and Preventive Programs* by Louis Jackson and Robert Lewis, from the Practising Law Institute, New York City (Practice Handbook Series #6). It's worth reading to get detailed management strategies.
7. This time the letters contained detailed financial information on MEBA, including salary information on MEBA officials (around \$40,000/year) and statements of financial deficits within the union (implying fraud but never so stating). This information was quite damaging, especially the union salaries, which were much in excess of what workers at our facility were getting.
8. The unionizing drive was pretty solidly backed by the technicians, who constituted almost half of the unit. It was with the more “professional” workers that anti-union sentiment was most strongly felt.
9. See the following articles in *SftP*:
 “Engineers in the Working Class” vol III #4 9/71 plus a letter in vol IV #1 1/72.
 “Some Myths and Contradictions Concerning Engineers” vol V #3 5/73 plus the rest of this issue.
 “Pushing Professionalism or Programming the Programmer” vol VI #4 7/74.
 “Engineers and Unions” vol VI #6 11/74.
 “Computer Workers as Professionals” vol VI #6 11/74.
10. There is good evidence that the research and development companies in the Silicon Valley have organized to provide assistance to any one firm threatened by a unionizing drive. It is certain that they have black lists of activists, and possibly other coordinated activities just like the airline companies.

APOLITICAL INTELLECTUALS

I.

One day
the apolitical
intellectuals
of my country
will be interrogated
by the simplest
of our people.

They will be asked
what they did
when their nation died out
slowly,
like a sweet fire,
small and alone.

No one will ask them
about their dress,
their long siestas
after lunch,
no one will want to know
about their sterile struggles
with "the idea
of the void"
no one will care about the way
they ontologically acquired their funds
They won't be questioned
on Greek mythology,
or about the self-disgust they felt
when someone within them
began to die
the coward's death.

They'll be asked nothing
about their absurd
justifications
born in the shadow
of the total lie.

II.

On that day
the simple folk will come,
those who had no place
in the books and poems
of the apolitical intellectuals
but daily delivered
their bread and milk,
their tortillas and eggs,
those who mended their clothes,
those who drove their cars,
who cared for their dogs and gardens,
and worked for them,
and they'll ask:
"What did you do when the poor
suffered, when tenderness
and life
burned out in them?"

III.

**Apolitical intellectuals
of my sweet country,
you will not be able to answer.**

**A vulture of silence
will eat your guts.
Your own misery
will gnaw at your souls.
And you will be mute
in your own shame.**

Guatemala

—Otto Rene Castillo
(translated by Margaret Randall)

SftP and AAAS, 1976

• **Priorities in Cancer Research: Occupational and Environmental Carcinogenesis.**

—*The politics behind cancer spending.* Feb 20.
Feb. 20. 3 pm. Sheraton/Beacon A.

Arranged by Allen E. Silverstone (Massachusetts Institute of Technology Center for Cancer Research).

• **Research for the People**

—*What is it? Can it be done?*

Feb. 21. 9 am. Hynes/Rm 207.

Arranged by Jonathan King (Massachusetts Institute of Technology).

• **Are Scientists Different? The Job Crisis in Perspective**

—*How can scientists organize to deal with unemployment?*

Feb 21. 2 pm. Sheraton/Independence-East.

Arranged by Joseph Schwartz (City University of New York)

• **An Introduction to Occupational Health and Safety**

—*Who will protect the worker?*

Feb. 22. 9 am. Hynes/Rm 210.

Arranged by Kostia Bergman (Northeastern University).

• **Genetics, Gene Manipulation and Social Policy**

—*Who will make the decisions about our destiny?*

Feb. 22. 3 pm. Sheraton/Commonwealth

Arranged by Jon Beckwith (Harvard Medical School).

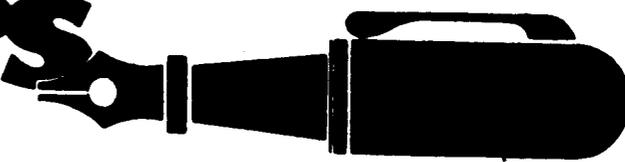
• **Energy and Food Production: Contemporary Technology and Alternatives**

—*Politics of Food/Energy decisions.*

Feb. 23. 9 am-6 pm. Sheraton/Fairfax B.

Arranged by George Salzman (University of Massachusetts).

letters



*The letters which follow are all in response to David Chidakel's review of Schumacher's *Small is Beautiful* ("Small is Beautiful as a Book, and as a Bum Steer," SftP, July 1975). Some of the letters agree with David's condemnation of the 'alternative technology' movement; others defend it, though not necessarily as Schumacher conceives of it. Because of the large amount of interest in and disagreement about alternative technology, the editorial committee has decided that there should be a future issue of the magazine, set now for May, which deals entirely, or in large part, with this subject. We hope that these letters will stimulate people's thinking about the issue.*

We would like articles which describe what the alternative technology movement is, and which analyze its political potential. People interested in contributing to this issue should write to the Alternative Technology Group, if possible, with an outline of a proposed article.

Dear SftP:

In his article on the alternative society idea in your July 1975 issue, David Chidakel says: "The alternative society is losing the battle for the same reason that the U.S. military lost in Vietnam — the wrong enemy."

The statement is worse than wrong; it is a slander on the world revolutionary movement. The U.S. military had the right enemy in Vietnam — they made war on the people in Vietnam, both north and south. They just fucking lost. They lost because the Vietnamese were stronger, and because the U.S. was weaker. We played a part in weakening them.

You see, David: You imply that if the military understood revolutionaries (had the right analysis) they would win. But they understood it. That's what the whole Kennedy trip was all about. They know they have to win the "hearts and minds" of the people, they just can't do it.

And: you imply that the U.S. military tried (however ineffectively) to protect the people of Vietnam, when they actually slaughtered them. Literally slaughtered all they could. Now, I know you know that; but you said the opposite!

Obviously, I think it's important to think clearly and say the right thing. So let's sieze on our victories and hold them to our hearts and quit talking about the Vietnam war as if it were a defeat.

Also, I really liked the article. Many of us (dare I say most?) came out of the counterculture, and it's important to try and figure it out. I haven't figured it out yet. We all like to think our freak brothers and sisters are embryonic or misguided revolutionaries; this is the assumption of David's article, and I usually operate on it

myself. And as Prairie Fire points out, freaks were *in fact* a major force in the war. But what about today? Sometimes I get the cold feeling that the counterculture exists very nicely in the Imperialist US, and couldn't exist in a revolutionary society. What side in fact are freaks on today? I honestly don't know. I'd like to read and hear more debate on the subject. We're having a hard time trying to figure it out down here.

Think about this: alternate societies are not a dead end at all if they are, in fact, neat accomodations to Imperialism. What if they serve the same function the colonies served for England in absorbing the "younger sons?" It's just a thought, and I hope I don't sound cynical. I love hippies and in fact "are one myself." Thanks for your wonderful magazine. Let's fight to win.

Terry Bisson
Scottsville, KY

Dear People:

Thank you for your note of August 4 and free subscription. I shall do everything I can to spread your name around in Canada. Could you send me a few dozen copies of the flyer? . . . I am trying just at first to get reactions from people or groups likely to be interested.

One sharp reaction came already from David Chidakel's denunciation of Schumacher's *Small is Beautiful* as a "bum steer." Chidakel is very convincing but in his particular review he does not shed much light on *his* alternative to the "alternative society." He seems to throw the baby out with the dirty bath water of Schumacher's approach.

Even if Schumacher is no radical; even if he mixes religious metaphors in a confused attempt to establish himself as a critic of the system; even if he presents sexist views and does not seem to know that the rich countries got that way by stealing from the poor or enslaving them — it still does not follow that Schumacher's emphasis on "intermediate technology" is useless, that *Big* is beautiful necessarily, or that the 20-year head of the British Coal Board deserves no credit whatsoever for even putting his mind to thinking about "economics as if people mattered."

Incidentally, a comment on the Chidakel assumption: ". . . from what I've read of Bookchin I'm not so sure he'd like to share a tradition or anything else with *Small is Beautiful* and its simpering distortions." He may be right, but I happened to be in a small group with Murray Bookchin in Montreal a year or two ago when he first brought to my attention Schumacher's book — with enthusiasm. . . .

I believe David Chidakel when he describes from his own experience the anguish of trying to do a small business without being trapped into the system or

destroyed by it; or of moving to the country to start the "simple" life. I appreciate our need "to seize our society back from those who have it and are taking it for a ride (over a cliff!)" Of course we have to organize. **BUT IF WE EVER GET IT BACK WE HAD BETTER BE SURE WE DO NOT RUN IT THE SAME WAY UNDER NEW MANAGEMENT.** While some more effective revolution than we have seen yet in North America is busy doing the necessary work of getting wealth, power and oppression off our backs, some people had better be getting experience living a different type of life with completely different values — a lifestyle that can last because it is in harmony with rather than in conquest over nature.

In Northwestern B.C. last May we held the Northwest Study Conference '75, where a potentially great coalition was formed among Indian people, trade union people, environmentalists, some church and other community organizations. Members of the power structure, in so far as possible, were allowed only to observe. **The voice and vote was limited to people who generally have very little influence on the decision-makers. We are trying to protect and enhance a high quality of life in this area against rapid, massive, mindless, dehumanized development.** I think one reason we can't get off our materialistic consumer kick is that we lack specific, visible models of attractive alternatives.

So which comes first: somehow emasculating the power and wealth, the oppression and exploitation which now controls our society; or creating a great variety of viable, attractive, re-humanized alternative ways of living in harmony with nature including people? Or must they go together?

"You can accomplish almost anything if you don't mind who gets the credit."

—Anonymous, obviously.

With thanks and best wishes,
Walt Taylor

Dear Science for the People:

David Chikadel's views on alternative society and his reactions to E.F. Schumacher's book *Small Is Beautiful*, published in your July issue was disappointing. It is less a review than a Marxist polemic aimed mostly at Theodore Roszak's introduction and at the idea of alternative society, with predictable results. The author chooses a few easy targets from Schumacher's book and then announces that he isn't going to discuss the book any further. This is unfortunate because *Small Is Beautiful* presents a number of ideas that are important and deserve serious and intelligent discussion.

Ideas such as decentralism and workers' control have never been popular among Marxists, at least not those favoring State-Socialism and central control — but these are the very ideas that Kropotkin, Paul Goodman and Murray Bookchin have tried to promote. We can not agree that for "technically trained people with rebellion in their hearts" to be attracted to these ideas is "un-

fortunate" as Chikadel says. It's important to ask why such people are drawn to clinics, food co-ops, non-profit worker controlled businesses, and developing alternative technology. They yearn for a chance to do socially useful work, to act as self-respecting professionals, to work alongside others on a collective task, and to make the decisions that shape their lives. And if they haven't developed the proper "class analysis" it's probably because they are too busy being mechanics or farmers, running co-ops and taking care of their families to give much time to theories, political or otherwise. The average working man or woman hasn't much interest in political theories, but practical working experiments may have some influence. Marxists in the West have done little in a practical way to demonstrate that a cooperative society is viable and it is unlikely that they will as long as they keep bickering among themselves dividing and subdividing while they wait for the "working class" to rise up.

We don't claim that food co-ops and other alternative businesses will drive Safeway and Tenneco off the market. They are survival institutions to help people get as free from our untenable economic system as possible under present conditions.

There are limitations to consumer cooperatives as social change forces but they do establish some space for community, for people to work together cooperatively, instead of being passive consumers. Without a self-reliant spirit, combined with a sense of community even the overthrow of the 2% would likely open the way for new bosses.

Whatever revolution does or does not take place there will be a need for solutions to technical problems. In this Schumacher should be recognized as more than a writer of essays. He is founder of Intermediate Technology Development Group which has been working on small-scale, ecologically compatible machines and methods of production adapted to the needs of Third World countries. This appropriate technology is certainly something Bookchin would applaud.

The result of industrial development on the model of the West, applied to underdeveloped countries has been cataclysmic social change that has demoralized the have-nots and made cheerful robots of the haves. Certainly criticism may be made of Schumacher for his noble obligation attitude toward Third World countries, and his predilection for change via administrative fiat instead of popular initiative, but taken together, the essays in *Small Is Beautiful* amount to an important critique of materialism, capitalist or socialist.

Small and medium-scale technology supportive of a cooperative society which Schumacher describes is only one possible element in transformation. People must first want community and move toward it by incorporating cooperative ways into their behavior. The significance of *Small Is Beautiful* comes from its suggestion of the need for a transformation more profound than most radicals realize.

We can't defend Schumacher's apparent notion that it is uneconomic for women to work outside of the home. We believe that male domination of society is at the root

of much of what is wrong with modern civilizations. But this is presented in Chidakel's essay as a criticism of Schumacher's Buddhist Economics and it is not even an element of it. Buddhist Economics arises from the principle of "right livelihood". The purpose of work in this view is at least threefold: to give a person an opportunity to skills and faculties, to help overcome ego-centeredness by joining with others in a common task, and to produce the material goods necessary for a happy material and spiritual life.

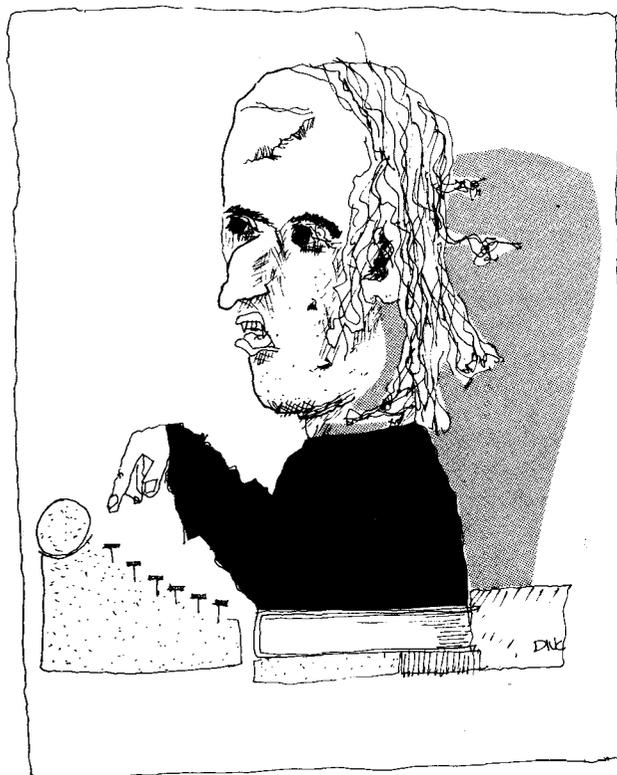
The hostility so many radicals have for anything that sounds like religion is misplaced. There is a current in traditional religion that runs counter to the liberation of the people, but while we struggle against this we can cultivate those elements that work for the transformation of the world. "Any place in the world people are human beings with the same aspirations, interests and sentiments. Everyone needs love, peace and solidarity, a happy material and spiritual life." This isn't a quote from Schumacher or some bourgeois utopian, it is Prime Minister Pham Van Dong of North Viet Nam. And again from another North Vietnamese, a minister "Buddhism taught us charity, and Communism gave us a vehicle for bringing charity... to where the people can actually practice it."* The cynicism that afflicts so many of us only serves to narrow our vision and weaken the will to struggle. The courage and idealism of the Vietnamese presents a stunning contrast to the well-heeled despair of the United States.

All the answers to the questions that arise from the conditions of present cannot be found in the writings of Marx or anyone else from the 1800's no matter how great his contribution may be. The answers will come from our own heads and hearts. Schumacher closes one chapter with this passage:

To struggle more successfully we need a theory built up from principles. But where do these principles come from? The best formulation of the necessary interplay of theory and practice that I know of comes from Mao Tse-tung. Go to the practical people, he says, and learn from them; then synthesize their experience into principles and theories; and then return to the people and call upon them to put these principles and methods into practice so as to solve their problems and achieve happiness and freedom.

Elaine M. Latteman
Jack Latteman
Tom Brodersen
Tempe, Arizona

*Quotes from Tom Hayden's pamphlet *A Vietnamese View of Human Nature*.



Writer Chidakel, after a quick breakfast of ammonia and blackstrap molasses, at his typewriter attacking alternative institutions.

Dear Friends,

I started to write you a letter over a month ago, and then went off on Holiday, so I'm starting again.

I have placed eleven copies [of the China book] with two leftist bookshops in Dublin (I'll make a loss on those if the value of the £ drops any more) and left in two more for my Maoist friends to examine for revisionism and bourgeois ideology before they decide whether or not to sell them. The street vendor, who says he is a Trotskyist, won't touch it because he doesn't approve of China; and he won't touch SftP VII 4 because he doesn't approve of Ho Chi Minh. I suppose we can't please everyone, but I do have friends of a wide range of political viewpoint, and of "none", and I appreciate the range of views held in SftP and the occasional bit of ideological war — though I find that too infrequent, and I would prefer more discussion and less consensus. I would also like to see more straight scientific reporting in a social context — things like the IQ issue, Ritalin, arguments for and against "alternative technology" rather than a black-and-white approach to Schumacher, industrial hazards, science and war, education for freedom (or slavery), "mental health"...

On the subject of Schumacher, I think the anarchist-decentralists are having a rather hard time lately, and I would like to remind us that any organization tends to have centralist-commandist tendencies, and we are all deeply indoctrinated with the growth ideology, to the extent that we tend to believe that for us, too, Big is Beautiful. Perhaps I'm an anarchist-decentralist myself, but if so I have a lot of company. I find it hard to relate to "large" social/political units and would favour some system based on local democracy and cooperation; I note that in China the basic unit seems to be the village, neighbourhood, or street and that these cooperate in larger groups; I also note that the Black Panthers have or had policies such as community control of police, community health programs/clinics, community food and welfare and education programs, and when I last saw their paper it had a heading "Intercommunal News" where any other paper would have had "International News." I think we should set up all sorts of alternative institutions from which we and everyone else involved can gain the experience, insight and motivation necessary to transform ourselves and society. "Communes" and worker-managed factories, agricultural cooperatives and "progressive" schools as they exist in our respective countries may not be accurate pictures of the society that will be, they may well not be financially viable, but they do give us an opportunity to learn and practise new ways of relating to others. Democracy and cooperation and mutual respect and responsibility are easy to talk about but are a lot of hard work and often an embarrassment at the beginning when you actually try to live like that — but there are also rewards when things begin to work. I don't think the teacher and the students who have learnt to work together as equals will "ever be the same again," and I suspect that at least some of them will work to recreate the world in their own image (see Festinger's theory of Cognitive Dissonance).

Hugh Dobbs
Waterford, Ireland

My thanks go to the authors of these letters for their criticism of my review of "Small is Beautiful". I believe that a debate on this subject is important and would like to encourage other reactions to the article for future publication.

David Chidakel



Dear Editorial Collective:

I am enclosing some evidence of how genetic explanations of social behavior become popularized. In response to a letter from the father of a 23-year old young man who went on drugs at age 14, ended up in reform school and had subsequent arrests, Ann Landers (oracle and consoler of the lovelorn) writes,

When children go wrong, it's not always the parents' fault. We now know that the genetic factor can be a dominating influence in behavioral patterns.

Some children inherit fragile nervous systems. They go haywire and crack up — don't respond to parental love or professional help.

So stop feeling guilty. You've done your best. Angels can do no more.

We should not be fooled by the fact that the "explanation" given here appears to be a few steps removed from the academic arguments of an E.O. Wilson or Herrnstein; the effect is the same if not magnified given Ms. Landers' large readership.

Since one can discern in recent years a rising trend in genetic arguments to "explain" social and political problems it is good and important that *Science for the People* publishes articles that expose the ideological nature of such works as Wilson's *Sociobiology* (see "Sociobiology — the Skewed Synthesis" in *SftP*, Vol. 7, #6, Nov. 1975). But beyond an analysis of the functions of such theories it is also necessary to understand why these theories come to prominence *at this time*: when unemployment is high, when the economy is in a severe crisis, when the political system (bourgeois democracy) is turning increasingly repressive. It is out of such crises that fascism has emerged in the past. The examples of Germany, Italy, Spain, Brazil, Chile, South Korea, etc. show that fascism may come in many different forms. When some of its symptoms appear in the United States, who is to say "It can't happen here"?

Britta Fischer
Boston

Dear SftP,

I am learning a lot by reading SftP, but I considered myself radical or anti-capitalist before I started reading it. Friends and classmates of mine in Austin are still put-off by "jargon", and don't really take the time to read and contemplate an article. I wish I could give you suggestions, but I don't know how a publication can inform its regular readers while at the same time try to attract the interest of those who are only leaning toward a radical analysis. Maybe a future issue could contain an article describing the "personal political histories" of some members. Many "alienated liberal" scientific workers could probably relate to shared feelings rather than intellectual prose.

Ed Cervenka
Austin, Tex.

Dear Frank:

I hesitate to **renew my subscription** but decided to give it ~~one~~ more try. **The organization** seems so far from where its talk is and so far from the revolutionary imperatives of the **current scene**. And it's not that I've not tried at **every level** to effect some change.

In the **total organization** as well as in the magazine there is **too much rhetoric** and too little action. What action **there is is talk** . . . written or oral. What the US needs **today is to be organized for action** . . . real, **functional, progressive** action. The only group which is **anywhere near** this goal is the health and nutrition **collective** and because of them I'm hanging on for a while.

The magazine has very little science in it . . . it reprints articles which can be read elsewhere (such a waste!) and it indulges in so much rhetoric as to be non-communicative. The issue praising itself was shocking. The only issue which was different and hopeful was the one done by Stony Brook. The endless opinions on society (mostly not related to science) are much better done by URPE and much more valuable because URPE is chock full of well researched facts related clearly and purposively.

There are so many valuable people in SESPA with sound intentions . . . if only they'd move off their seats and act, organize, listen to people and communicate where people are.

SESPA is left and the left needs to be unified for action and communication.

At present I do not have the time to work with any SESPA group because I am very occupied with several organizations which are organizing, which are in actual fact combatting racism and sexism and communicating nationally and widely . . . even internationally. The choice is demanded by current urgent contradictions.

In basic solidarity and hope

Brenda Lansdown
Cambridge, Mass.

Dear Gentlepeople,

I've stumbled upon your magazine (May '75 issue) more or less by accident . . . holy capitalism! I'm impressed!!

To get right to the point, I wish to subscribe immediately, if not sooner. Because my income is zilch, my resources diminishing, and my outgo finite, I propose exchanging my substantial appreciation in return for a subscription to your vital publication.

The majority of my waking hours are spent in efforts to facilitate passage of the nuclear safeguards initiative here in California. I've been working on this for the past year. Prior to that I created/operated/taught an alternative preschool for 2 years. And prior to *that*, I worked for 3½ years as an electronics engineer for the (shudder!) so-called defense industry.

I look forward to joining forces with you!

Towards eventual peace,
Terry Masters

Dear wonderful people,

I love Science for the People. I am working in women's health, community clinics and presently learning more about acupuncture, acupressure, herbs etc. More articles on health care. It is so good to continually see articles on science with an anti-sexist, anti-imperialist perspective!!

Katie Allen
Eugene, Oregon

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ABOUT THIS ISSUE

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At the beginning of October, 1975, the Ann Arbor Science for the People held a conference to confront the issue of biological determinism. With the capitalist system increasingly under attack, this old ideology is being pushed again and again to defend and promote the contradictions in the status quo. Whether the issue is the women's movement, third world and nationalist struggles, environmental issues or allocation of resources, ideologues have found 'scientific proof' to support the continued oppression and exploitation of people, resources and nature. The report from the Ann Arbor conference illustrates the breadth of this ideology.

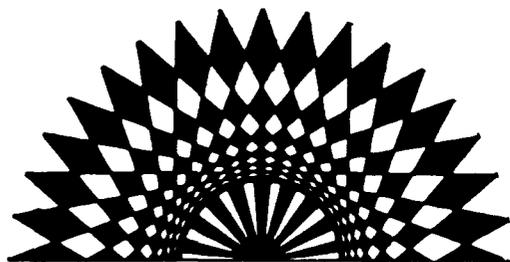
In addition to this report, there is an article in this issue that describes in some detail one example of this ideology of scientific determinism. In "Hardin's Lifeboat Adrift" the author examines Garret Hardin's theory of the inevitability and desirability of a class-biased distribution of resources. From discussing this article in the editorial collective, it seemed to us that there were certain implications of this theory that should be examined in more detail. As the article points out, the ethical consequence of Hardin's theory is to 'let them starve.' If the present distribution of resources is to continue, the only solution to the scarcity of resources faced by most of the people in the world is Hardin's non-solution. But Hardin isn't saying that we should pull out of the third world and developing nations and leave them alone. Many of those countries would probably be better off without our 'help' since 'our help' usually consists of multi-national corporations (protected by the U.S. government) draining those countries of their resources while selling them worthless consumer goods. What Hardin is saying is — leave the corporations alone, leave us (the ruling class) alone, stop making us feel guilty with all of this talk about starvation — and leave the rest of the world with business as usual.

This article also brought out again the question as to how the left should respond to this sort of pseudo-scientific defense. It is often argued that the lack of real scientific justification for these theories is enough to insure that they will not be accepted as valid explanations. But have theories like Jensen's been effectively countered by that tactic alone? Is it enough to just challenge the results? Or should we also challenge the assumptions, the bias inherent in the questions?

Finally there are two articles dealing with attempts to organize scientific and technical workers. Scientific and technical workers, especially those designated as professionals, have traditionally enjoyed a degree of privileged and autonomy unknown to other workers. Many of these people are now realizing, however, that their privileged status is far from inviolable. As the economy worsens and as the results of scientific research become a commodity to be bought and sold, along with the labor that produces it, scientific and technical workers are being faced with lay-offs, speed-ups, lower real incomes, fewer benefits, and less and less of the intellectual autonomy they'd

come to expect. The articles by Strom and Gilbert and Weinrub describe attempts to organize scientific and technical workers around some of these issues. They illustrate problems that arise as a result of individualistic styles of work, other problems that can be traced back to the ambiguous position of many scientific workers vis a vis the managers. There are some lessons that can be learned from these articles that should help in developing more effective strategies in the future. From the Gilbert and Weinrub article we can see again the need to work collectively, to do preliminary work on a small scale that allows the development of a long range strategy and concrete demands that will gain the support of the workers. We can see that the process of building a movement calls for protracted struggle, not just spontaneous actions, collective actions rather than individual ones.

These articles also illustrate the need for a better understanding of the class positions of the scientific and technical strata. Are the staff scientists at the National Laboratories part of the working class? What are the demands that they are making? Are these progressive demands or are they organizing to protect their privileges? We need to learn how to work among members of the scientific and technical strata, to put forward progressive demands, demands that can be linked up with the demands of the working class. Though not necessarily part of the working class, scientific and technical workers can play a part as allies in the struggle. To do that we must evaluate and learn from actions of this sort so that we can begin to develop more effective long range strategies.



N.E. REG CONFERENCE

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experience to draw general criteria for choosing future programs. To this end, the Northeast Regional Committee was directed to solicit evaluations of activities from chapters and project groups for publication in the Internal Discussion Bulletin. In general it was felt that principles of unity could best be developed out of an analysis of our practice.

Although a high level of unity was not reached on all questions, for the most part, the conference was positive, providing guidance and a focus for our work in the coming year as well as a means for evaluating it. For a more complete summary of the conference and the resolutions see the next Internal Discussion Bulletin, the internal political document of the organization. Subscribe now! \$2.00 from the Boston Office.

LOCAL ADDRESSES FOR SESPA/SCIENCE FOR THE PEOPLE

ARKANSAS

Joe Neal
P.O. Box 1772
Fayetteville, Ark 72701

CALIFORNIA

* Berkeley SESPA
Box 4161
Berkeley, CA 94704

Al Weinrub
429 S. 13th St.
San Jose, CA 95112
(408) 998-8744

Al Huebner
P.O. Box 368
Canoga Park, CA 91303
213-347-9992

Sue Conrad
2026 Rose Villa St.
Pasadena, CA 91107
213-793-4767

* Shel Plotkin
3318 Colbert Ave.
Los Angeles, CA 90066
213-391-4223

* Palo Alto SESPA
c/o Palo Alto Tenants Union
424 Lytton Ave.
Palo Alto, CA 94306

CONNECTICUT

N. Sadanand
Dept. of Physics
University of Connecticut
Storrs, CT 06268

Neal & Margie Rosen
71 Stanley St.
New Haven, CT 06511

FLORIDA

Gainesville Research Collective
630 NW 34th Place
Gainesville, FL 32601

Tallahassee SESPA
c/o Progressive Technology
P.O. Box 20049
Tallahassee, FL 32304

ILLINOIS

Northside Chicago SESPA
c/o Bob Ogden
1110 Webster
Chicago, IL 60614

INDIANA

Stephen Friend
T163 G.R.C.
Indiana University
Bloomington, IN 46240
812-337-6862

MASSACHUSETTS

Marvin Kalkstein
University Without Walls
Wysocki House
University of Massachusetts
Amherst, MA 01002

* Boston SESPA/SftP
16 Union Square
Somerville, MA 02143
617-776-1058

MICHIGAN

* Ann Arbor SESPA
John Vandermeer
2431 Darrow St.
Ann Arbor, Mich. 48104
313-971-1165

MINNESOTA

* Science for Vietnam/SftP
Minneapolis Collective
1507 University Ave., S.E.
Minneapolis, MN 55414
612-376-7449

MISSOURI

* St. Louis SESPA
c/o Gar Allen
Dept. of Biology
Washington University
St. Louis, MO 63130
314-863-0100, ext. 4387

NEW MEXICO

Jim Tobias
3703 Barcelona SW
Albuquerque, NM 87105

NEW YORK

* N.Y.C. SESPA/SftP
c/o Rich Rosen
245 W. 107th St.
N.Y.C. 10025

* Stony Brook SftP
c/o Ted Goldfarb
Chemistry Dept.
SUNY
Stony Brook, N.Y. 11790
516-246-5053

Marvin Resnikoff
174 West Ave.
Buffalo, N.Y. 14201
716-856-6587

OHIO

Jenny Thie
21417 Fulton Ave.
Cincinnati, OH 45206
513-931-3334

PENNSYLVANIA

Les Levidow
4816 Florence Ave.
Philadelphia, PA 19143
215-SA4-5360

VIRGINIA

Bill Samson
318 Park Place #3
Charlottesville, Va. 22903

* Chapter — three or more people
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WISCONSIN

* Madison Science for the People
c/o Joe Bowman
306 N. Brooks St.
Madison, WI 53715
608-255-8554

AUSTRALIA

Tony Dolk
234 Bobbin Head Rd.
North Turrumurra
New South Wales
2074 Australia

BELGIUM

Gerard Valendue
Centre Galilee
B.P. Galilee 047
B-1348 Louvain-La Neuve
Belgium

CANADA

Bob Cedergren
Dept. of Biochemistry
Univ. of Montreal
Montreal 101
Quebec, Canada

Science Progressiste/Science for the
People
c/o McGill Daily
3480 McTavish St.
Montreal
Quebec, Canada

ENGLAND

Dave Hayes
14 Goodwin Rd.
Sheffield 8, Yorkshire
England

British Society for Social
Responsibility in Science
9 Poland St.
London, W1V 3DG
England
01-437-2728

* Science for the People Group
Brunel University
c/o Mark Piney
63 Hillingdon Hill
Uxbridge, Middlesex
England

IRELAND

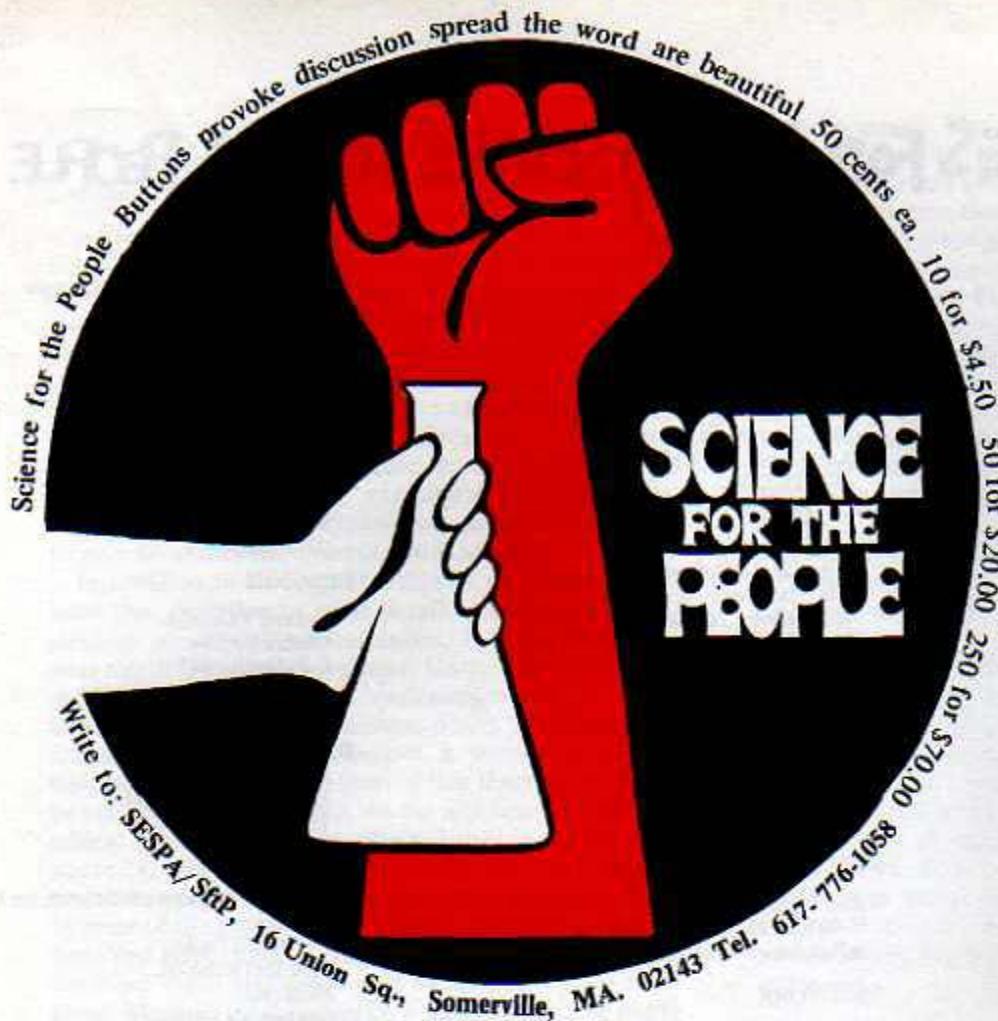
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INDIA

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SUBSCRIPTIONS TO SCIENCE FOR THE PEOPLE AND MEMBERSHIP IN SESPA

SESPA is defined by its activities. People who participate in the (mostly local) activities consider themselves members. Of course, there are people who through a variety of circumstances are not in a position to be active but would like to maintain contact. They also consider themselves members.

The magazine keeps us all in touch. It encourages people who may be isolated, presents examples of activities that are useful to local groups, brings issues and information to the attention of the readers, presents analytical articles and offers a forum for discussion. Hence it is a vital activity of SESPA. It is also the only regular national activity.

We need to know who the members are in order to continue to send *SCIENCE FOR THE PEOPLE* to them. Please supply the following information:

1. Name:

Address:

Telephone:

Occupation:
 (if student or unemployed please indicate)

2. Local SESPA chapter or other group in which I'm

active. (If none, would you like us to help you start one?)

3. I am enclosing money according to the following scheme:

- A. Institutional subscription-\$15 for libraries and others. _____
- B. Individual memberships: (1) regular memberships-\$12, (2) indigent membership-less than \$12, (3) affluent or dedicated revolutionary membership-more than \$12, (4) completely impoverished-nothing, (5) I have already paid. _____

4. I will sell _____ magazines. This can be done on consignment to bookstores and newsstands, to your co-workers, at meetings. (If you want to give some away free because you are organizing and can't pay for them, let us know)

5. I am attaching a list of names and addresses of people who I believe would be interested in the magazine. Please send them complimentary copies.

Please add any comments on the magazine or SESPA or your own circumstances. We welcome criticism, advice, and would like to get to know you.

SEND CHECKS TO: SESPA 16 Union Sq., Somerville, Ma. 02143