

SCIENCE FOR THE PEOPLE

EPIDEMIC! Cancer-Producing Society

US DEATHS FROM VARIOUS CAUSES

CANCER DEATHS, 1975	365,000
World War II Battle Deaths	292,000
Viet Nam War Deaths (6 years)	41,000
Korean War Deaths (3 years)	34,000
Auto Accidents Deaths (1969)	61,000
Poliu Epidemic (1951) - exact year)	1,300



RACISM AT HARVARD
MALE CONTRACEPTION
JOBS AND THE ENVIRONMENT
NONVERBAL COMMUNICATION & WOMEN

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SCIENCE FOR THE PEOPLE: the organization

Science for the People is an organization of people involved or interested in science and technology-related issues, whose activities are directed at 1) exposing the class control of science and technology, 2) organizing campaigns which criticise, challenge and propose alternatives to the uses of science and technology, and, 3) developing a political strategy by which people in the technical strata can ally with other progressive forces in society.

SftP opposes the ideologies of sexism, racism, elitism, and their practice, and holds an anti-imperialist world-view. Membership in SftP is defined as subscribing to *SftP* and/or actively participating in local SftP activities. (Chapters and contacts are listed on the inside back cover.)

SCIENCE FOR THE PEOPLE: the magazine

SftP is published bimonthly and is intended not only for members, but also for a broad readership within the technical strata and for all others interested in a progressive-radical view on science and technology. The goals of *SftP* are to elucidate the role of science and technology in society, to enrich the political consciousness of readers, and to stimulate participation in concrete political activities.

The subscriber circulation of *SftP* is about 1,500, the total circulation about 4,000. The content of *SftP* derives largely from the experiences and interests of people who read the magazine. In seeking to "rely on the people", we urge everyone both to contribute to the magazine themselves and to encourage others to do the same. We are particularly interested in having articles written, discussed, or at least reviewed, collectively, when circumstances permit. 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.

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about this issue

We are excited to have in this issue several articles relating to women, reflecting in part a shift in priorities within the Boston chapter of Science for the People. We plan to continue this emphasis in future issues, and we encourage our readers to contribute other such articles.

We are discovering from our own efforts to root out sexism within the organization that it cannot be fully described in terms of unequal treatment in a formal, legalistic sense. Women's oppression is often covert and hard to identify. Nancy Henley's article uses recent findings in nonverbal communication research to show that subtle cues like tone of voice, posture, and facial expression play an important role in men's efforts to intimidate women and to keep them in inferior roles.

It is a reflection of the sexism in our society that male contraception should be considered a women's issue. As Rita Arditti's article brings out, reproduction is considered to be a woman's function, and contraception, a woman's problem. The neglect of male contraceptive development responds to market factors which in turn reflect these sexist attitudes and roles. We hardly need to point out that most of the people who focus their contraceptive research on the female reproductive system are men. At best, research to date has resulted in birth control methods which are only marginally safe and convenient and which place full responsibility on women. Possibilities for safe, effective, cheap, and convenient methods for use by men have not been adequately explored. There are numerous ways we can address this problem. In addition to challenging sexist behavior, attitudes, and role definitions at all levels, we can focus specifically on 1) improving sex education for boys as well as girls; 2) working to change the role of fathers in all aspects of parenthood; and 3) challenging priorities within the biomedical establishment (similar to the current controversies over cancer research and recombinant DNA hazards). These actions could begin to have some effect on the current bias in contraceptive research.

Cancer is an increasingly ominous, delayed "benefit" of technology-for-profit. To be sure, it is essential that laws are designed and enforced which will rigorously control the introduction and use of chemicals and processes. But more basic are the politics upon which such laws depend. Public awareness, while certainly a vital objective, is not sufficient to challenge the devious machinations of industry lobbyists and consultants, regulatory agency task forces and Congressional subcommittees. This can be done only by a conscious, organized and powerful opposition. Working people, especially workers directly exposed to dangerous substances throughout industry, have the greatest stake in controlling these technologies. When organized in progressive unions (i.e.

those controlled by the membership and realizing the importance of class struggle), these workers have the greatest potential for forcing changes. These can come through specific contract victories or through national and world-wide campaigns organized by cooperating unions. The development of these kinds of unions and interactions with other organizations (including those of science and technical workers) with common goals is thus a prime objective. For reasons such as these the conference on jobs and the environment reported in this issue is particularly important.

The report from this conference portrays the different, often opposing, political views of the community groups, labor unions, environmental organizations and government agencies especially around the issues of jobs vs. environment and economic growth vs. poverty. At present, it seems that the majority of labor unions have come down on the side of jobs and economic growth, hence they have fought against environmental reforms such as the Nuclear Safeguards Initiative in California (see May issue of *SftP* magazine).

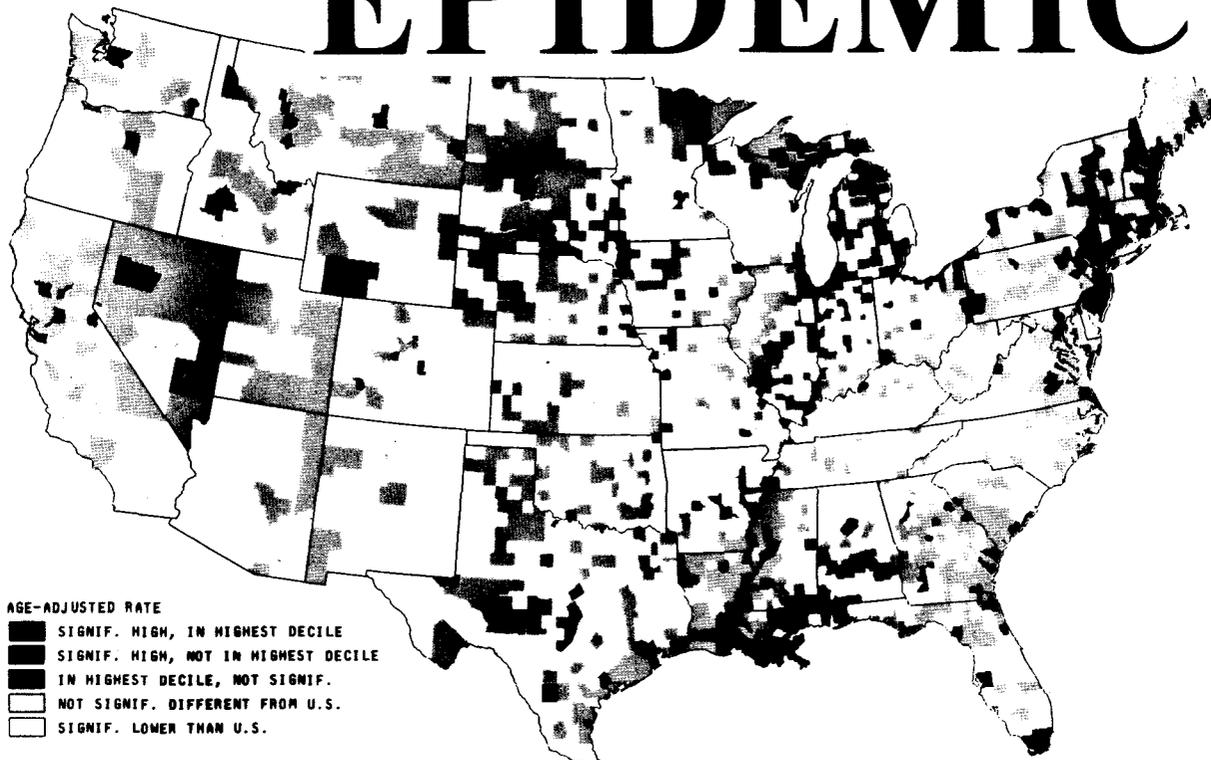
Union leaders are mainly interested in maintaining jobs and pushing for higher pay, especially now during the economic crisis. The large corporations have been successful so far in posing the issue as one of jobs vs. environment. In this way they have gained the support of union leaders on ecological issues. Corporations have also threatened to relocate or close down if stricter environmental regulations are passed. This tactic of economic blackmail has forced not only unions but also community groups to fall in line against the environmental organizations. On the other hand, environmental organizations have not adequately understood the interests of community groups or unions.

The UAW's call for an alliance between labor, environmental and community groups is an attempt to resolve their traditional differences and build a movement for jobs and a cleaner environment. The immediate effects of this alliance would be the expansion of the issues these groups usually struggle for in isolation. For example, unions would struggle around environmental issues in and outside the plant as well as wage issues. The alliance could develop into a nationwide movement which would challenge capitalism itself. This movement could push for Federal legislation reforms which would require stricter pollution control for all plants thereby defusing the corporate weapon of economic blackmail.

The authors view this conference with great optimism and we share this optimism to some extent. However we see serious obstacles. First of all, there were no rank and file union caucuses at the conference. Union leaders are

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EPIDEMIC !



Excessively high rates of cancer (mouth and throat, esophagus, colon, rectum, larynx, and bladder) are found in the industrialized northeast. Except for colon and rectal cancer, which occurs across the

population, the high rates in this area of the country are limited to males. This suggests that cancer is occupationally related. For example, bladder cancer is excessively high in New Jersey, where many men are

chemical workers. (Source: *Atlas of Cancer Mortality for U.S. Counties: 1950-1969*, National Cancer Institute, DHEW Publication No. (NIH) 75-780)

The Cancer-Producing Society

This article was one of the papers presented in the session on Priorities in Cancer Research, at the American Association for the Advancement of Science meeting in Boston, Feb. 20, 1976. (See SftP, May, 1976 for a review of this and other AAAS sessions arranged by members of Science for the People.)

Cancer is now a major killing and disabling disease of epidemic proportions. More than 53 of the 210 million U.S.A. population (25%) will develop some form of cancer, and approximately 20% of Americans now die from cancer.

It is estimated that 665,000 new cancer cases were diagnosed and that there were 365,000 cancer deaths in 1975. Thus, cancer deaths in 1975 alone were eight times higher than the total U.S. military deaths in the Viet Nam and Korean war years combined.

No age, sex, or ethnic group is spared from cancer. Cancer is a leading cause of death at all ages, including

infancy and childhood. Cancer has also been induced following maternal exposure to carcinogens, as recognized in post-adolescent girls whose mothers had been treated in pregnancy with diethylstilbestrol.

The total economic impact of cancer is massive. Estimates indicate that in 1969 the direct costs for hospitalization and medical care for cancer exceeded \$500 million. It appears that the total direct costs for a particular patient range from \$5,000 to over \$20,000. The direct and indirect costs of cancer, including loss of earnings during illness and during the balance of normal life expectancy, were estimated at a total of \$15 billion for 1971.

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Auto Accident Deaths (1969)	59,600
Polio Deaths (1952; worst year)	3,300

The Recent Increasing Incidence of Human Cancer

The rate of recent increases of cancer deaths is more rapid than the rate of increase in population, and is even more rapid than the increase in the overall rate of death. It is of interest to note that there are only three major causes of death which have significantly increased in the recent past; these are cancer, homicide, and cirrhosis of the liver. This increase in new cancer cases is real and is over and above that due to any increase from age alone. The cancer death rate appears to have approximately tripled since the beginning of this century, in spite of advances in diagnosis and cure. It is of interest to note that the major improvements in 5-year cancer survival rates occurred prior to 1955, and appear to reflect advances in surgery, blood transfusion, and antibiotic therapy, rather than in cancer chemotherapy.

The earliest year for which cancer death rates are available is 1900. These rates were crude, not adjusted for age, and were based on approximately half of the United States population living in 153 cities in 10 states. The mortality data from the National Center for Health Statistics, created in 1933, are based on the total U.S. population and are age-adjusted. Overall crude cancer death rates since 1933 have increased annually by about

CANCER DEATH RATES PER 100,000 POPULATION

Year	Cancer Death Rate
1900	64
1933	100
1960	147
1971	161
1972	167
1975	176

Environmental Carcinogens as Major Cause of Cancer

There is now a growing consensus that the majority of human cancers are due to chemical carcinogens in the environment and that they are hence ultimately preventable.[2] Numerous estimates by expert national and international committees indicate that 70-90% of human cancers are environmentally induced; the Director of the NCI recently concurred in these estimates, and placed a figure of 90% as the incidence of environmental cancer. The basis for such estimates largely derives from epidemiological studies, in large community populations over extended periods, which have revealed wide geographic variations in the incidence of cancer of various organs. In some of these studies, the role of specific environmental carcinogens has been implicated or identified.[2]

TABLE I: PERCENTAGE CHANGES IN CANCER INCIDENCE RATES FOR SELECTED SITES FROM 1937 TO 1969 [1]

Site	Whites		Blacks	
	Males	Females	Males	Females
Lung	403	238	908	435
Pancreas	61	37	200	326
Colon	48	15	100	214
Breast	—	14	—	37
Prostate	43	—	153	—
Uterus and Cervix	—	-41	—	-55
Esophagus	-23	0	225	200
Stomach	-68	-77	-46	-56

1% until 1975, when provisional estimates indicate a 2.3% increase over 1974; the reality of the 1975 increase appears to have been independently confirmed by Metropolitan Life Insurance data. A substantial proportion of this increase since 1933 has been from lung cancer and is due to smoking. Similar large increases in the incidence of cancer have been noted in other organs, particularly in Blacks, in whom some of this may reflect the increased availability of diagnostic facilities. In spite of the increase in overall cancer incidence and in various specific organ rates, there have been significant declines in incidence for other such organs as stomach and cervix (see Table I). There is evidence of a recently increasing incidence of use of estrogens by post-menopausal women. The "spotty" changes in cancer incidence and death rates over the past few decades have, in fact, provided major epidemiological clues as to environmental causes of cancer in various organs.

There is also now general agreement that the U.S. population and workforce has been and is being continually exposed to a wide range of known and identified chemical carcinogens in their air, water, and food, besides, in all likelihood, to a greater range still of unknown or untested carcinogens. Potent new chemical agents are being synthesized and introduced into commerce and the workplace at an exponential rate, generally in the absence of adequate testing for carcinogenic and for other adverse public health and ecological effects.

A recent National Cancer Institute (NCI) atlas on cancer mortality rates, in different counties, has demonstrated marked geographical clustering of rates for various organs in the U.S. while population in heavily industrialized areas. Such data suggest associations between cancer rates in the general community and the proximity of residence to certain industries.

Apart from the importance of occupational factors in the incidence of cancer in the population-at-large, specific occupational exposures are a major cause of cancer deaths, particularly in males. Various estimates have indicated that approximately 10% of all current cancer deaths in males are occupational in origin. These include lung cancer and pleural mesotheliomas in insulation workers and in others, such as construction workers, exposed to asbestos; bladder cancer in the aniline dye and rubber industry, induced by such chemicals as 2-naphthylamine, benzidine, 2-aminobiphenyl, and 2-nitrobiphenyl; lung cancer in uranium miners of Colorado, in coke oven workers, and in workers even briefly exposed to bischloromethylether; skin cancer in drilling and shale oil workers; nasal sinus cancer in wood workers, cancer of the pancreas and lymphomas in organic chemists; and angiosarcoma of the liver, besides other cancers, in workers involved in the manufacture and fabrication of polyvinyl chloride.

The toll of cancer in particular occupational exposures is overwhelming. For instance, it has been estimated that about 50% of asbestos insulation workers die of cancer, and that 20% of all long-term asbestos workers die of lung cancer. Approximately 30% of all premature deaths in uranium miners are due to lung cancer. Many other occupational groups are at high cancer risk, including steelworkers, miners and smelters, rubber workers, and workers in a wide range of petrochemical industries.

Scientific Basis for Determination of Carcinogenicity

The determination of carcinogenicity for a particular chemical or mixture is based on toxicological testing in experimental animals, or on epidemiological observations on human populations who have been exposed to chemical carcinogens. While each of these approaches has its own inherent problems, animal testing can enable the identification of carcinogens prior to their introduction to commerce and the workplace, rather than attempting their identification by retrospective epidemiological studies in human populations; the latter are generally based on identification of temporal or geographical clustering of specific organ cancers.

Current toxicological techniques are relatively insensitive and limited in their ability to detect carcinogens, individually and in various combinations or mixtures, in concentrations realistically reflecting low or ambient levels and patterns of environmental exposures. Similarly, it is generally considered that epidemiological techniques are unlikely to detect weak carcinogens unless there are sharp differentials in exposure of the general population, as with cigarette smoking; even with smoking, the single largest cause of cancer deaths, several decades of investigation were required before causality could be established. For widely dispersed agents, including unintentional or accidental food additives, such as Dieldrin and DDT, to which the population-at-large is generally and ubiquitously exposed, human experience is unlikely to provide any meaningful indication of safety or hazard.

There is an overwhelming consensus in the qualified scientific community that carcinogenicity data derived from valid and well-conducted animal experiments have a high degree of presumptive human relevance. Indeed, every chemical known to be carcinogenic to humans, with the possible exception of trivalent arsenic, is also carcinogenic to animals. Additionally, many chemicals now recognized as carcinogenic to humans were first identified by animal testing. These include diethylstilbestrol, bischloromethylether, vinyl chloride, and aflatoxins. There can be no possible scientific, besides other, justification for the continued insistence, by leading industrial representatives and some regulatory agency officials, that animal data must be validated by human experience as a prerequisite to regulatory action. The scientific validity of data derived from animal testing is legislatively recognized in the 1958 Delaney Amendment to the Federal Food Drug and Cosmetic Act*, and in recent regulatory actions, such as the suspension of the major agricultural uses of Dieldrin, and, more recently, of Chlordane and Heptachlor, whose carcinogenicity has been clearly demonstrated in animals, but not yet in humans.

Safe levels of human exposure to chemical carcinogens cannot be predicted on the basis of animal or epidemiological data. Such considerations underlie the 1958 Delaney Amendment, which imposes a zero tolerance for carcinogenic food additives. The position subsequently expressed by HEW Secretary Flemming, that "Scientifically, there is no way to determine a safe level for a substance known to produce cancer in animals." — reflects the overwhelming consensus of the qualified scientific community.

Obstacles to Reducing Human Cancer

A. Absence of Toxic Substances Legislation

There seems to be strong *a priori* grounds for associating recent increases in cancer mortality rates with the increasing synthesis and usage of industrial chemicals, and concurrent exposure of large human populations, over the last four decades. (See Table II)

Such increases are likely to have occurred in other industrialized countries, although perhaps later and less dramatically than in the U.S.

It is not possible now to estimate the proportion of these novel chemicals which pose carcinogenic, besides other, hazards to humans. Except for some special-purpose regulations in the area of pesticides, food additives, and drugs, however, this massive post-war efflorescence of petrochemical technology has occurred largely unrestricted by national, much less international, controls. There has been no general requirement for pre-testing of chemicals, prior to manufacture or use, for

*" . . . no additive shall be deemed to be safe if it is found, after tests which are appropriate for the evaluation of the safety of food additives, to induce cancer in man or animals. . . ."

TABLE II: INCREASING USE OF INDUSTRIAL CHEMICALS

Class of Chemical	1970 Production Billions of Lbs.	% Increase 1967-1970	% Increase 1949-1970
Cyclic Intermediates	28.3	38	No Data
Plastics, Resin materials, and plasticizers	20.6	36	1,130
Synthetic rubber and rubber processing	4.7	16	350
Surface-active agents	3.9	12	810
Pesticides	1.0	-2	710
Others	79.9	33	550
Total	138.3	32	No Data

carcinogenic or other adverse effects. As a consequence, it is likely that many carcinogens have been in wide use, whose effects may only manifest now, or in the next few years or decades. The case of vinyl chloride may well be a harbinger of other carcinogens from this generation of materials. Recently recognized as an occupational carcinogen, vinyl chloride was originally introduced into large-scale production in the 1950's, and synthesis grew at about 15% per year until about four billion pounds were manufactured in the U.S. in 1970. Of the vinyl chloride workers identified by June, 1974 with confirmed diagnoses of hepatic angiosarcoma more than half, however, had received their first exposure prior to 1950. It is interesting to note that the chronology of the development of recent data on the carcinogenicity of vinyl chloride has been recently reviewed in a report of the AAAS Committee on Scientific Freedom and Responsibility.[3] This report documents the suppression of carcinogenicity data by the Manufacturing Chemists Association (MCA), allowing continued exposure without warning of tens of thousands of workers to high concentrations of vinyl chloride.

Toxic Substances Legislation is critically required to enforce the requirement for toxicological testing, in general, and for carcinogenicity testing, in particular, of new chemical agents prior to their introduction to commerce and the workplace. Failure to enact such legislation is likely to result in still further increases in the incidence of cancer in the coming decades. Various adverse economic impact analyses of such legislation, in general, have failed to consider or reflect the very substantial, and hitherto externalized, costs of human

cancer. Illustrative is the Congressional testimony of 7/11/75, by the MCA and Foster D. Snell Co. who expressed "concerns on the huge costs and inflationary pressures" inherent in such legislation.

Questions have properly been raised as to the practical feasibility of expanding available national resources to permit adequate future carcinogenicity testing of new industrial chemicals, as would be required by Toxic Substances Legislation, quite apart from testing the numerous untested or inadequately tested chemicals currently in commerce and the workplace. The current Federal capability in the NCI bioassay program, largely based on contractors including the Frederick Cancer Research Center, allows carcinogenicity testing of 100-150 compounds per year; 400-600 compounds are now under test. The current capability is a significant expansion of the capability some 5 years ago for testing only 20 compounds per year. Current NCI protocols involved a total of 500 mice and rats, at a total cost of approximately \$110,000, for a routine carcinogenicity test.

Several thousand new compounds are now being introduced into commerce each year. Using appropriate systems of priorities and registration, and with the possible judicious use of short-term screening tests[4], it has been estimated that approximately 500 new compounds would have to be tested each year, and that this would necessitate some four to five-fold expansion of current facilities. This should not represent any major problem, particularly as there are major untapped potential resources in the private sector, including universities, and the chemical and pharmaceutical in-



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dustries. The National Laboratories, such as Brookhaven, Oak Ridge, and Argonne, also represent major potential facilities.

There are major inconsistencies between the philosophies and practices of various federal agencies with regard to their individual regulation of chemical carcinogens.[5] The same carcinogen is thus likely to be regulated, or not, in a widely disparate manner, dependent on whether it is found in air, water, food, or in the workplace, and dependent on its source of discharge and dissemination into the environment, from point or non-point sources. Toxic Substances Legislation is likely to encourage the resolution of such disparities, while still recognizing possible special jurisdictional requirements.

B. Low Federal Priorities for Research on Environmental Carcinogens.

Even within the scope of the currently limited available federal resources, there appears to be relatively low priority accorded to research on environmental carcinogens and on the prevention of human cancer. Various estimates, ranging from 5-20% of the total budget, have been made as to the expenditure by the NCI on environmental carcinogens; of the \$581 million for fiscal year 1974, it has been claimed that the real figure is close to 10%, based on \$134 million spent on "Cancer Cause and Prevention", which, however, includes approximately \$70 million spent on viral causes of cancer[6]; for the 1975 budget of \$691 million, direct expenditures on environmental carcinogens again appear to be close to 10%. The low priority for environmental carcinogenesis in the NCI also appears to be expressed by the fact that in January, 1974 subject index of current NCI grants, only one of a total of 307 pages deals with epidemiological and population studies on cancer. Additionally, of the

**PRESIDENTIAL ADVISOR ON CANCER
LEGISLATION: "MAY BE HARD TO
LIVE WITH."**

According to Benno Schmidt, chairman of the President's Cancer Panel, speaking to the National Cancer Advisory Board, "The time is ripe . . . It is clear that Congress and the public want to get carcinogens out of our environment and keep them out . . . This is becoming enough of a question that it may become the subject of broad legislation soon—sweeping legislation which may be hard to live with. *Do we want to ban the use of any agent until it is proved non-carcinogenic? . . . Legislation could lead to test requirements which would pre-empt the whole NCI budget . . . We've got to keep the initiative.* At the next Congressional hearing, you're going to have to say things that sound like you're doing something, not just having organizational meetings and things under consideration." (emphasis added).

—from *Drug Research Reports*, Nov. 26, 1975

3 members of the President's Cancer Panel and of the approximately 23 members of the National Cancer Advisory Board, none appear to have significant professional qualifications or experience in epidemiology and preventive medicine, and only one is authoritative in chemical carcinogenesis; there also would appear to be disproportionately strong industrial representation on the Board and Panel, in the absence of labor and consumer representation.

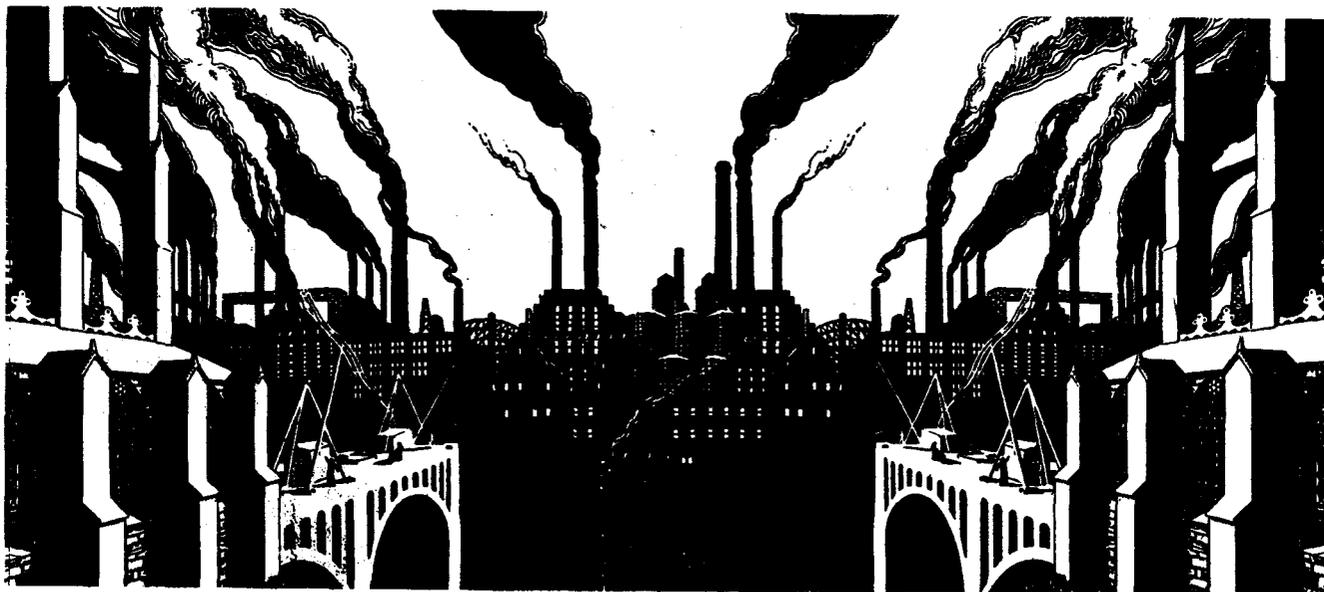
Questions have also been raised as to the appropriateness of the relatively low NCI expenditures on anti-smoking propaganda, and on their relatively high expenditures for research on "Safe Cigarettes"; the latter costs should perhaps more properly be borne by the tobacco industry, which now currently spends about \$250 million annually on advertising. In this connection, it is also of interest to note that the U.S. Dept. of Agriculture spends approximately \$50 million annually on various tobacco support programs, and that its Agricultural Research Service (ARS) assigns more laboratory space to research on tobacco, for producing a more marketable product and not for safety, than on food distribution. These federal policies do not appear consistent with very high national costs from the current epidemic of lung cancer, apart from bladder cancer and cardio-respiratory disease, due to smoking.

C. External Pressures on Scientists

Pressures on industry scientists to develop and interpret data on chemical carcinogenesis to be consistent with short-term marketing interests, have resulted in a wide range of mythologies, calculated to minimize the significance or reality of the effects of human exposure to particular chemical carcinogens. While these mythologies cannot withstand elementary scientific scrutiny, they have been vigorously and effectively advocated at a wide range of arenas including Congressional Hearings, proceedings of the 1973 OSHA Standards Advisory Committee on Occupational Carcinogens, EPA suspension hearings on Dieldrin, and the more recent EPA suspension hearings on Chlordane and Heptachlor. These mythologies include the following:

"Tumorigens" are less Dangerous than Carcinogens

The identity of "tumorigens", as opposed to carcinogens, has been vigorously proposed, particularly for chlorinated hydrocarbon pesticides, such as DDT and Dieldrin, which have long been known to induce "hepatomas" in mice. Presumably on the basis of such alleged distinctions, recent statements have been made, illustratively by a senior HEW spokesman, in response to repeated Congressional questioning, that "there is no evidence to my knowledge that DDT is a carcinogen." [7] The invalidity of such alleged distinctions has, however, been repeatedly and unambiguously emphasized by numerous expert national and international committees which have unanimously concluded that the terms tumorigens and carcinogens have synonymous implica-



tions.[2] This proposition has, however, apparently ceased to be relevant with the recognition of pulmonary metastases resulting from a wide range of liver tumors induced in mice by "tumorigens" such as Dieldrin, which also induce extrahepatic neoplasms in mice and rats.

"Animal Carcinogens" are less Dangerous than "Human Carcinogens":

This thesis proposes that valid distinctions, from a regulatory standpoint, can be drawn between chemicals shown to be carcinogenic in experimental animals and those known to be carcinogenic in humans. It is further proposed that less stringent regulatory standards should be promulgated for "animal" carcinogens such as ethyleneimine, dichlorobenzidine, and 4,4'-methylene(bis)-2-chloroaniline, unless and until their carcinogenic effects can be validated by human experience, based on deliberate human exposure. The thesis was, surprisingly, reaffirmed by a senior EPA official at a Research Triangle Park conference convened, on 1/6/76, to review recent data on the identification of relatively high concentrations of the highly potent carcinogen dimethylnitrosamine in the air of cities including Baltimore, where it is known to be escaping from an FMC plant manufacturing rocket fuel, and New York City and Belle, West Va., where it is presumably formed by interaction of atmospheric nitrogen oxide pollutants and azines, from sources probably including automotive emissions.[8]

The EPA official who has major responsibilities in this area was unwilling to entertain substantive discussions on this carcinogen as a "hazardous pollutant", on the grounds that its human carcinogenicity had not yet been established.

There is in fact no evidence for the existence of "species-specific" carcinogens. All chemicals known to

produce cancer in humans, with the possible exception of trivalent inorganic arsenic, also produce cancer in experimental animals, generally in rodents. Recent experience with carcinogens such as bis-chloromethyl ether, diethylstilbestrol, and vinyl chloride monomer, moreover, amply confirms the predictive value of animal carcinogenicity data to humans.

Human Experience has Demonstrated the Safety of Occupational Exposure to Certain Carcinogens:

Such claims have been repeatedly made for a wide range of "animal carcinogens" including Dieldrin, a-naphthylamine, ethyleneimine and dichlorobenzidine, and for "low levels" of exposure to acknowledged "human carcinogens". These claims are generally made on the basis of lack of positive documentation of excess cancer deaths or on the basis of undisclosed or partially accessible records on small populations at risk, and on short periods of follow up. Clearly, such data do not permit development of valid epidemiological inferences.

"Safe Levels" of Exposure to Occupational Carcinogens can be Determined:

It is alleged that no or negligible risks result from exposure to "low levels" of occupational carcinogens, such low levels generally being set on the basis of technical expediency, or on other poorly articulated concepts. Illustratively, the ACGIH has assigned acceptable levels, threshold limit values (TLV's) for asbestos, bischloromethyl ether, and nickel carbonyl. Numerous expert national and international committees and bodies have unanimously attested to the fact that there is no mechanism for determining the existence of biological thresholds for chemical carcinogens, and hence that the TLV concept is totally inapplicable to chemical carcinogens.

Most chemicals are carcinogenic when tested at relatively high concentrations:

This is totally inconsistent with available information. In a major NCI contract to Bionetics, approximately 130 industrial compounds and pesticides, selected because of suspicions as to their possible carcinogenicity, were tested at maximally tolerated doses in two strains of mice, with commencing exposure in infancy; less than 10% of these compounds were found to be carcinogenic.[9] Of a total of some 6,000 compounds listed in the NCI "Survey of Compounds Which Have Been Tested for Carcinogenic Activity", approximately 1000 were reported to be carcinogenic; by current standards, only some 3000 of those tests could be considered valid, and a total of only 500 compounds could now be accepted as carcinogenic. It must be emphasized that these compounds were highly selected, many of them being chemical derivatives of known carcinogens, synthesized for basic studies on carcinogenicity.

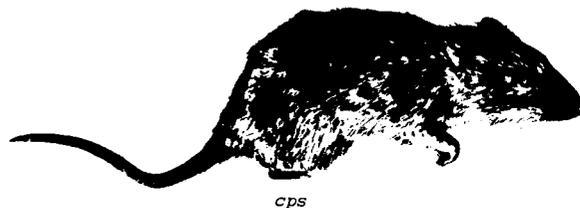
Apart from possible conflict between corporate loyalty and scientific freedom and social responsibility, as recently discussed in an AAAS report[3], sometimes industry scientists are even supposed to express opinions. At public hearings on September 11, 1973, on the proposed standards for the 14 occupational carcinogens, a lobbyist, representing the major manufacturers of those chemicals stated that the corporate scientists on the Committee were not qualified in regulatory problems, which were the exclusive responsibility of corporate management.

The record of the National Center for Toxicological Research (NCTR), Pine Bluffs, Arkansas, appears to reflect external pressures. The NCTR was created by Presidential order on January 27, 1971, is supported fiscally by the EPA and FDA, and is operated by the FDA. The NCTR is considered to be a major national source of research on the scientific aspects of regulation of drugs, food additives, pesticides, and other consumer products. From its inception, however, it appears clear that the FDA planned to use this resource to attempt to develop data with which to invalidate the Delaney Amendment, and also to establish "safe levels" of exposure to chemical carcinogens. At hearings before Congressman's Whitten's Subcommittee on Agriculture, in April 1971, then Commissioner Edwards stated that:

The Pine Bluff testing facility will provide FDA with the scientific basis on which the Delaney anti-cancer clause may be changed . . . [reiterating his long-held view that the agency is] locked into an 'all-or-nothing' position because of the Delaney box . . . [He said] FDA didn't want to make it more difficult by recommending changes until it has the scientific data to justify a modification.

The scientific programs of the NCTR, including a "Mega Mouse" experiment and other large scale experi-

ments, designed to establish "safe levels" for human exposure to such known carcinogens as DES, benzidine and other aromatic amines, were severely criticized in a report of 8/31/73 by an expert extramural *ad hoc* NCI committee, under the distinguished chairmanship of Dr. H.L. Stewart, although this report was subsequently dismissed by the Director of the NCI. As confirmed by Dr. U. Saffiotti, Associate Director of the NCI Division of Cancer Cause and Prevention, in a response to Senator Tunney of 4/21/75, these criticisms of NCTR programs still remain relevant.



Recently and more disturbingly, there are growing indications of attempts to re-write established principles of chemical carcinogenesis to suit alleged regulatory needs. Examples include a newly created Carcinogen Assessment Group (CAG) of EPA, and a sub-committee of the National Cancer Advisory Board (NCAB), charged by the NCI, on 9/19/75, to develop recommendations on the scientific basis for the regulation of environmental carcinogens.

It is of interest to note that the CAG group and a parallel group, formed to assess "benefits" of carcinogens, were formed in partial response to claims of a senior EPA official that the "scientific credibility" of the Agency had been threatened by the actions of the Office of General Counsel in Suspension proceedings on Dieldrin, and on Chlordane and Heptachlor; these proceedings were largely based on the unequivocal demonstration of carcinogenicity of these pesticides, for which no human carcinogenicity data are available.

Draft documentations of the CAG, 11/4/75 and 12/9/75, and of the NCAB subcommittee, 11/11/75, have attempted to draw scientific and regulatory distinctions between the experimental induction by chemical carcinogens of apparently benign tumors and malignant tumors; such distinctions are at major variance with an overwhelming consensus to the contrary by expert national and international committees. The CAG documents also appear to indicate that the scientific assessment of risk from chemical carcinogens should be responsive to "socio-economic consequences and costs of regulation" and to "benefit-risk" considerations. The chairman of the NCAB subcommittee issued in public a draft document which had not been seen, let alone approved, by the subcommittee members and which contained major scientific distortions and inaccuracies. The draft was then introduced by Velsicol Chemical Co. into the EPA Suspension Hearings on Chlordane and Heptachlor. Subsequently, the chairman and subcommittee members stated to EPA that this draft was

preliminary and should not be used for regulatory purposes. Nevertheless, this draft appears to have influenced the administrative law judge in his decision, 12/12/75, not to recommend the suspension of these pesticides, for which there are unequivocal carcinogenicity data in rodents; this recommendation was subsequently rejected by the EPA Administrator on 12/24/75.

D. Distorted Analyses on the Economic Impact of Carcinogen Standards

A now apparently standard response by certain sectors of industry to attempts by regulatory agencies to promulgate standards limiting environmental and occupational exposure to chemical carcinogens is to forecast, generally on the basis of procured studies, major economic disruption and unemployment attendant on compliance. Apart from the questionable economic validity of such forecasts, they do not address themselves to the externalized costs, economic and otherwise, of carcinogenic and other toxic effects.

Estimates in 1974 by A.D. Little, under contract to the Society of Plastics Industry (SPI), and by Foster D. Snell, under contract to OSHA, on the impact of proposed occupational standards for vinyl chloride predicted costs as high as \$65 billion and losses up to 1.6 million jobs. It is clear that such estimates are gross distortions, as most PVC producers are now in compliance, in the absence of major economic disruptions.[10] Illustratively, capital costs of the B.F. Goodrich Co. for compliance came to about \$34 million. Furthermore, this industry is considering leasing its "clean-up" technology and has found that the installed compliance technology actually cuts labor costs. It is of interest to note that B.F. Goodrich raised its prices in June, 1976, on PVC products, claiming that costs of meeting safety standards were partly responsible. A Union Carbide official has recently expressed surprise as to the ease of current compliance, in the absence of economic disruption, with the 1 part per million (ppm) standard. It should be noted that the 1 ppm standard is far from stringent and that commercially available equipment can monitor down to 1 part per billion (ppb), which should more properly be the current standard.

In Summary

The incidence of human cancer is rising dramatically and we are now experiencing a major epidemic of cancer which is killing one in five Americans. The economic costs of cancer are minimally \$15 billion annually. The majority of human cancers are environmental in origin and are therefore preventable. Apart from a wide range of chemical carcinogens already contaminating our air, water, food and the workplace, new carcinogens are being synthesized and introduced into commerce in increasing numbers and in a largely unregulated manner.

The constraints to a major reduction in the incidence of cancer are largely political and economic, rather than scientific. As yet there is no comprehensive Toxic Substances Legislation, a critical element in developing national policies for reducing the incidence of human cancers. Such legislation should include coherent policies for the regulation of environmental carcinogens by federal agencies. The NCI should assign higher priorities to research on environmental cancer, and regulatory agencies should control environmental carcinogens more vigorously.

Scientific research on chemical carcinogenesis, in industry, the NCI and other federal agencies, must be insulated from political and economic pressures. Otherwise the principles of chemical carcinogenesis and attempts to protect the public health will continue to be subverted by considerations including short-term marketing interests and alleged regulatory needs.

Samuel S. Epstein

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MALE CONTRACEPTION

How will men feel about receiving a capsule? Will they give up this one stronghold of male ego, even if temporarily? Will the voluntarily agree to sterilize themselves, as nine million women Pill users in this country are doing every day? Or will they balk?

From Now to Zero: Fertility, Contraception and Abortion in America, by Leslie and Charles Westoff, 1971.

In the last few years discussions about contraception and health issues have established without a doubt the dreadful menace that many contraceptive practices are for the health of women. Oral contraceptives and the IUDs, in particular, are highly suspicious and have proven dangerous in many specific cases.[1] Nobody knows what their effects over long periods of time will be and their harmful effects in the short range are usually dismissed with the argument that "pregnancy carries higher risk." Thromboembolism, the major proven "side effect" deriving from oral contraceptives makes women using the pill nine times as likely to have blood clotting problems as women not taking the pill. In numbers, this means that among the 9 million women who are taking the pill, 300 will die from blood clotting problems while the number of deaths that would occur from abortion, deliveries and complications of pregnancy and childbirth is about 1200. IUDs are not even considered "drugs" and the FDA does not require safety tests on them. One of them, the Dalkon Shield, has been implicated in 14 deaths and 223 pregnancy-related injuries. This warped reasoning forces many women to rely on these agents, presenting them essentially with a no-choice situation since other techniques (foam, diaphragm) are considered to be less effective and old-fashioned. Furthermore, subtle and not-so-subtle pressures exist to make women feel that they are responsible for the esthetic aspect of sexual intercourse, and as a result, many women feel intimidated and do not discuss openly contraceptive practices.

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One of the fallacies that has permeated our minds on the topic of reproduction is the belief, conscious and unconscious, that women are the reproductive units of the species. The fertility of the male is rarely taken into consideration, as if women reproduced by themselves. We forget that we are fertile only during a limited period of our lives, between adolescence and menopause, while males are fertile all through their lives. Moreover, women are fertile only during a certain portion of the menstrual cycle. If we think in terms of male fertility and focus on the male as the target for birth control, we begin to get a feeling of the exploitative framework on which birth control ideology has been based. The language used in the contraceptive literature gives us a clue to the frame of mind of the scientists involved: "executive hormones" is a common term used to refer to male hormones; an important gland like the pituitary is called the "master" gland. The concern for females regards their appearance and not their health: "... females, in the absence of their sex hormones, lose their soft smoothness and become wrinkled." [2]

As pointed out in another article,[3] "scientific" rationalizations are offered for the fact that many more contraceptive agents are being developed for the use by females than for males. *Contraceptive Technology* lists 29 potential methods to regulate fertility in the female, 9 for the male and 6 for use by either male or female. The argument is put forward that females have many more steps in their reproductive system which are amenable to manipulation: the maturation of the egg, ovulation itself, the transport of the egg, fertilization, transport of the fertilized egg, etc. According to the established viewpoint, the male reproductive system offers much less with which to work. Only four steps can be interfered with: the production of sperm cells, the storing of sperm, its transport and the chemical constitution of the seminal fluid. However, this argument does not tell the whole story, and it is easy to construct a case for males being the ideal target for contraception if one cared to do so. . . . The fact is that their reproductive system is less complex and a concentrated research effort aimed at understanding one or two areas could conceivably bring more results. Males do not have a cycle, and complications arising from changing levels of hormones would be avoided. Their sex glands, placed outside the body, are more accessible and easier to work on than women's organs.[4] In statistical terms, male birth control is an ideal method because males can produce as many chil-

dren as the number of women they have intercourse with, while women are restricted to about 1.4 pregnancies per year. (And so on.)

The condom, the only method of reversible contraception available for males, is definitely underplayed in the U.S. It is the number 1 method of contraception in England, Japan and Sweden. In Japan, the condom industry has taken care in presenting the condom as a device that will enhance sexual pleasure: condoms are made in a variety of shapes and colors: light blue, violet, pink, forms ranging from plain to "reservoir tipped," "two stage pagoda nipple end," "sponge pattern with narrow neck," etc. Research is done on ways of perfuming it, adding hormones for the female in the exterior and perfecting the packaging to make it practically noiseless. [5] Some of these extras may be harmful for women (adding hormones), others are plainly absurd. In this country it is hardly promoted by physicians, compared to the pill and the IUDs, and in fact, its use dropped considerably in the sixties with the advent of the pill. [6] It has an image associated with prostitution and secretive sexual relations and 22 states have laws which restrict its sale, distribution, advertising and display. [7] The condom is a highly efficient method (used in combination with a foam it is as effective as the pill) and it offers the best available protection against venereal disease. It is unique in that it is totally free of side effects, its use is easy to understand and it offers visible proof of effectiveness immediately after use. It is still one of the better available methods.

"Loss of libido" is one of the main concerns expressed by researchers in the area of male contraception. Very few meaningful studies have been done on this issue, and it is hard to understand what the concern is exactly about. Observations on rats, hamsters and rabbits are difficult to extrapolate to human males and the issue is approached in a vague and inconclusive fashion. "Loss of libido" is almost never taken into consideration when dealing with female contraception, the obvious bias being that women do not have anything to lose since the "active" force in sexual intercourse stems from the male. "Loss of libido" might very well express psychological resistance and depression arising from the fact of being the target of birth control, a role that most men are not socialized into. A recent study suggests that this might indeed be the case: in an experiment where males were taking a contraceptive pill, two of the males reported "loss of libido" during a period in which they were taking a *placebo* pill containing a *sugar* (they thought they were receiving a birth control agent). After an initial period of 8 weeks (3 weeks taking the placebo and 5 weeks taking the contraceptive pill), their libido returned to normalcy. In the same experiment, other males reported increased libido, which may have been connected to general relief and less anxiety in the area of sexual intercourse, because of the diminished probability of pregnancy for their partners. [8]



Vasectomies and Sperm Banks

Regarding "loss of libido", vasectomies, a surgical procedure in which the two vas deferens are cut and tied off, are invariably presented with the accompanying theme that "masculinity" will not be affected and sexual relations will actually improve. "The atmosphere in our house has become a relaxed and happy one. Our own children, our pupils and our careers have benefited too. As for our sex life, we both can only say — WOW," writes a couple to the surgeon who performed a vasectomy on the husband. [9] Although vasectomies have increased from a few thousand in the fifties to a peak of 850,000 in 1971, [10] this is not a method that is going to appeal to the majority of males, and the term "vasectomy revolution" flamboyantly used by the "experts" in the field is hardly justified. The men most likely to seek a vasectomy are married ("vasectomy couples" is a common term in the literature), have 2 or 3 children and are in their middle thirties. It is certainly not a method that is appropriate for single people who are not interested in having children during a certain phase of their lives. [11]

Even though a particular vasectomy may be successfully reversed, vasectomies should be considered a permanent sterilization procedure. Research on clips, valves and plugs that will allow for a "turn-on, turn-off" situation is being carried on, [12] but there is *no* way to know in advance how effective they will be for each individual case. For one thing, vasectomies may have a permanent sterilization effect even if the vas deferens is recanalized and anatomical integrity has been achieved. This is because antibodies against the sperm may have been produced as a result of the occlusion of the ducts, and the immune system of the male will now continue

producing these antibodies which will render the male sterile. There are also speculations that the anti-sperm antibodies might not be absolutely specific to the sperm. If that were the case "side effects" could arise in vasectomized males.[13]

Feeding on the males's fear of loss of fertility, commercial sperm banks have sprung up in the last few years in different parts of the country. Sperm banks were forcefully proposed in the sixties by Herman Muller, an American scientist who won the Nobel Prize in 1947 for his work on radiation and genetic material. Muller envisioned the banks to be a solution to the problems of humanity; he truly believed that out of conscious selection of germinal material, a society will arise where only the highest human qualities would exist. He spoke of "worthy genetic material," "superior lot of children," and very appropriately "germinal capital." His hope was that "normal" people would be happy to raise children of "truly outstanding and eminently worthy personalities" so that those distinguished citizens (i.e., men) would be free of the dilemma of having to raise their families or devoting their energies to other causes: "...their germinal material would tend to be sought by others, if not in their own generation, then later, and to a degree more or less in proportion to their achievements. Thus they would be free to give their best services in whatever directions they elected." [14]

For \$80 to open an account and an annual fee of \$18, a customer is directed to a small room with a comfortable armchair and pornographic magazines. His ejaculate is examined, diluted with a glycerol preservative and stored at -196°C in liquid nitrogen. He is now a depositor at the bank which is also interested in buying sperm at \$20 per ejaculate to sell to couples in which the male is sterile. Idant Company first opened a branch in suburban Baltimore, followed by a New York one in December 1971. It envisions banks in 20 major cities and plans to expand internationally (Japan, England). Genetic Laboratories, Inc. of Minnesota, opened in 1970 and has banks in 5 major cities. Although not enough data exist to indicate that frozen sperm can retain its fertilizing power after 16 months, the banks anticipate indefinite preservation of the sperm. No regulations in any state govern their operations.[15]

Who is going to use the banks? Obviously men who regard their semen as truly special. For example: a member from a prominent family from Minnesota deposited sperm in the bank to make sure that his family line will be continued in case that his only son turns out to be sterile. The bank advocates are, not surprisingly, concerned to show that high quality offspring will result for their depositors and are explicit about the results: "I shall show you a photograph of one of our older children born of frozen semen. He is a 16-year-old boy, 6 feet tall, in excellent health and an A student." [16]

The mere idea of a sperm bank tells clearly what, in our culture, seems worth preserving. But not all sperms are equally precious. It is very unlikely that the banks will open accounts in Kerala or Gujarat, where "festi-

vals" and "vasectomy camps" have been held and tens of thousands of poor Indian males have been sterilized in a few months attracted by small amounts of money, some food or clothes for them or their families.[17] In my view, sperm banks have eugenic connotations and reinforce individualistic and competitive attitudes connected with parenting and family issues.

Research for Male Contraceptives

In 1970, when the Ford Foundation awarded Alan Jones at the University of Manchester, England a grant for research on male anti-fertility chemicals, Jones commented that this type of research had to be done at universities because the drug companies have a "repugnance" toward the idea of tampering with male fertility.[18] Although a variety of compounds have been tried on male animals, very few chemicals have been tested on human males.

A fact that is easily overlooked is that the testes (like the ovaries) depend upon the pituitary in order to produce sperm cells and sex hormones. The pituitary produces FSH* and LH* both in men and women. In men, FSH stimulates sperm production and LH stimulates the production of testosterone (sex hormone). It follows that sperm production can be stopped by stopping the production of FSH. Hormonal contraceptives could be as effective in males as they are in females. Testosterone has been tried as a male contraceptive and it does suppress sperm production. But there are indications that increasing the level of testosterone might stimulate cell growth in the prostate and increase the chance of blood clotting.[19] In fact, the use of hormones in males will probably give rise to side effects similar to those suffered daily by women who are taking the pill. In 1973, a brief report in an English medical journal presented a case of pulmonary embolism in a man who had been taking an oral contraceptive. The patient, a 47-year-old transvestite had been taking on his own initiative one tablet of "Gynovlar 21" daily for 25 days before being admitted to the hospital.[20]

A combination of hormones, an *estrogen* to inhibit sperm production supplemented with an *androgen* that will deal with the eventual "loss of libido," is the current approach to male hormonal contraception. Also, instead of trying hormones that are relatively unknown and for which human testing will have to be delayed until toxicological testing is carried on animals, it makes sense to try hormonal compounds that have already been approved for sale to treat a variety of conditions. For instance, a group of compounds containing a combination of an androgen with an estrogen is currently used in the treatment of osteoporosis in men (a condition in which the bone tissue decreases in density and there is great susceptibility to fractures). Initial studies on men with osteoporosis receiving the hormones had shown that these men had stopped producing sperm. The hormones

*FSH = follicle stimulating hormone.
LH = luteinizing hormone.

were then tried on *healthy male* volunteers who took a capsule twice a day with their meals. By the 63rd day of hormone treatment, the number of sperms produced was significantly decreased and so was the motility of the sperm (100 million sperms or more per ejaculate is considered normal). After the treatment was stopped the sperm number became normal and as motile as before the treatment. It was during the course of this experiment that two of the men reported "loss of libido" while they were taking a placebo pill, *before* the hormones were administered![21] The idea of testing for contraceptive effects compounds that have already been on the market for a long time, and for which no extensive animal testing would be necessary, is a good one and it might give impetus to hormonal research.

Of the non-hormonal compounds tried, the most promising were the *diamines*, a series of compounds that totally inhibited sperm production without interfering with the sex hormones. Work with these compounds was abandoned after the discovery that when the subjects ingested alcohol, side effects appeared. There was also concern about a higher occurrence of hepatitis. It now seems that these experiments will be re-evaluated and that further work to establish an effective dose that will minimize toxicity will be undertaken.[22]

A new chemical has attracted attention in the last couple of years: *5-thio-D-glucose*, which interferes successfully with tumors and spermatogenesis in mice. It is not clear why interference with the utilization of sugar would inhibit spermatogenesis, but diabetic men have been reported to have a decreased sperm count and their sperm is less motile. This compound is not scheduled for clinical trials in the near future since the scientist working with it, (Roy L. Whistler at Purdue University, Indiana) is currently reported to be "out of funds." [23] But this compound does look interesting and it might provide some hope.*

Reports have appeared linking high temperature to intrascrotal infertility. In some cases a two-week regime of 30° cold baths has caused an increase in sperm count and motility of the sperm, but clinical trials have not yet been carried out and the state of this research is quite preliminary.[24]

Other chemicals have been tried in the last few years, but though they are effective in stopping sperm production, they all seem to have toxic effects and may cause genetic damage. It is important to keep in mind that many substances effective as anti-fertility agents have proved to be mutagens. This can cause genetic damage to the cells that survive the treatment, and the damage could be transmitted to the progeny when fertility is restored. In other words, damaged sperms could still fertilize an egg and as a result an abnormal embryo could develop. This might lead to a miscarriage or to the birth of an infant with a genetic defect.

*Being an analog of sugar, it could be less toxic than other chemicals. Also, this is the first time that a chemical other than a hormone or an alkylating agent has been shown to interfere reversibly with spermatogenesis.

Other Considerations

The issues involved in male contraception go well beyond biological problems and technological matters. On the one hand, there is the reluctance of the pharmaceutical companies to invest in areas that might turn out to be unprofitable. In 1962, the introduction of the Kefauver-Harris Amendment to the Food and Drug Act (under which the FDA derives its authority) caused the number of new drugs to drop dramatically. Research expenditures in the area of contraception have been greatly reduced and it is likely that there will not be many new birth control agents in the next decade. The government regulatory requirements have been singled out as the chief reason why so many drug companies have completely ceased all research toward new contraceptives. It costs about \$10 million to develop an agent with a new mechanism of action over a span of 10 to 14 years. If the results from the tests in animals are controversial, a complete loss of the investment can result. This is the reason why drug companies are stopping this type of research and for the next few years we will get only new formulations or different delivery systems for already existing contraceptives.[25]

*It's up to
the woman
to keep
love
beautiful*

Demko.
Pre-fill
contraceptive Foam

from an advertisement in *Modern Bride*

On the other hand, the mere mention of male contraception is anxiety-producing for many people since it reminds them of the fact that males and females are biologically equally responsible for reproduction. Sexual programming in our culture demands from the male suppression of feelings and extreme emphasis on "achievement." Male contraception raises fears of "loss of libido" and castration. Emphasis on "manliness" and performance do not allow for rational and caring communication to take place around the issues of sexual intercourse and birth control. It is obvious that the re-education of men around this topic is crucial, both for

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NONVERBAL COMMUNICATION AND THE SOCIAL CONTROL OF WOMEN *

Social systems have built into them both rules for control, i.e., making people conform to the system, and rules for the explanation of that conformity. Since social control is best exercised in disguise, we are best influenced when we are made to believe that we are acting of our own volition: the best explanation of behavior, from the point of view of those in power, is not in terms of the social control built into the system, but in terms of people's voluntary conformity.

Typically a system such as ours has the following rules that explain its members' conformity: first, there are no rules — rather, there is complete freedom of action; second, behavior is to be explained as a manifestation of individual differences (needs, drives, tendencies, and aberrations), rather than of coercion or external influence. Furthermore, in our social system the ideology of equality also depends on psychological rationalization to explain social stratifications: thus a third rule of explanation says that all people have equal opportunity, therefore their differences in occupations, privileges, association, etc., are due to ability, diligence, and preference, to likes and dislikes rather than to class or power.

People who have questioned these status-quo-preserving explications are met with evidence of seemingly voluntary choice in conformity and obedience, and of internal psychological motivation; they are challenged to point to the massive controls it would take to keep a people, or even half the population, in submission. My thesis is that nonverbal communication serves in large part as this massive but hidden control — one that particularly keeps the female half of our population in *de facto* submission.

Many questions confronting women around the issue of power may be placed in perspective through the examination of nonverbal behavior in the maintenance of the power structure. Nonverbal behavior is a major factor in communication, estimated to be over four times as informational as verbal behavior. [1] Though popular publications, and much academic research, encourage us to conceive of nonverbal communication as primarily expressive of emotional content, in fact the nonverbal channel carries much information on status, dominance,

and power relationships.[2] Because nonverbal behavior is considered trivial and is little understood, it is a perfect avenue for subtle influence. People are influenced by others' nonverbal communication when unaware; or are told their own nonverbal behavior is conveying something they were unaware of.

Moreover, nonverbal communication is of greater importance to women than to men, in several ways. First, women are socialized to docility which makes us particularly susceptible to such subtle control. And unlike most other powerless groups, we are integrated around centers of power, for example, as wives and secretaries, necessitating frequent interaction with the powerful. Finally, we are more sensitive to nonverbal cues[3] — a quality which seems to be the dual gift and burden of the oppressed — slaves were thought to be exceptionally observant of people[4], and blacks have been shown to be more nonverbally sensitive than whites.[5] In the interaction between women and men, many nonverbal acts may be seen as dominance signals emitted by men and submission signals returned by women.

In addition, nonverbal communication occupies a unique position in the exercise of power: it is at a juncture between the open and concealed expression of both dominance and submission. Let us look at power.

Power may be defined as the ability to influence others, determined by the control of resources. These resources must be defended against those who lack them (to insure continuation of power). Though the ultimate base of power is physical force[6], social control is generally maintained with only the suggestion of force, and through an elaborate system of supporting institutions and customs. Power is exercised along a continuum, from smallest to greatest application of force. This continuum involves at least the following points, from subtlest to most blatant:

1. Internalized control: one's conscience or superego, which has also been called colonization of the mind; this is achieved through socialization.
2. Environmental structuring: strategically placed reminders in our surroundings supplement the internalized control and help keep us in place if socialization fails.
3. Nonverbal communications: control is exercised through other people in their nonverbal signs of approval

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* Revised from its original form, "Nonverbal Communication as Social Control," a paper presented at Pioneers for Century III, April, 1976. This paper is adapted from Chapter 11 of my forthcoming book, *Body Politics: Sex, Power and Nonverbal Communication* (Prentice Hall). Supporting evidence, and more on race and class in nonverbal interaction, are presented in other chapters of the book.

and disapproval, dominance and submission. Power is often incorporated in body signals.

4. Verbal communication: we may be told what to do by those who have power over us, subtly or in no uncertain terms. (Of course, expressions of like and dislike, surprise, joking, and cajoling may be used in the exercise of power, as well as order.)

5. Mild physical sanctions: at times we are restrained by agents of social control, in the persons of our peers and loved ones, authorities, and even strangers. They hold our hands and arms, kick our shins, cover our mouths from doing the undoable or speaking the unspeakable.

6. Long-term restraint and its ramifications: the power of the state allows it to restrain some citizens in prisons, with physical and psychological punishment for breaking or being suspected of breaking the social/legal code.

7. Weapons, death, war: the ultimate power comes in brute force, from those who control its weapons. At this point the power is threatened, and subtle niceties lose their importance.

As noted, nonverbal behavior occupies the point in this continuum between covert and overt control, between covert and overt resistance. It is the point where people *must* be controlled, for the social structure to remain intact.

The control comes in the many forms of power-related* nonverbal communication:

Research from various sources shows that persons of higher status control more space (personal and other),[7] are allowed more freedom in demeanor,[8] and are more likely to touch others,[9] and to exhibit less body tension,[10] than persons of lower status (or less dominant persons). And research also shows that these high-status behaviors are exhibited by men; women's behavior in this realm takes the form more of submissive or affiliative behavior than of dominant behavior[11].

Other evidence suggests that persons of greater power may stare at others (without being the first to avert the eyes),[12] smile less, show less emotion,[13] and generally withhold personal information;[14] subordinate persons, on the other hand, avert the gaze when stared at, smile frequently, and exhibit much greater emotional variation. We also recognize these latter behaviors as characteristic of women[15].

Certain human gestures are analogous to the gestures of dominance and submission identified among primates, for example: staring is a gesture of dominance, met with the submissive gesture of averting the gaze (or blinking); touching asserts dominance, cuddling to the touch submits; interrupting is dominant — yielding the floor is submissive; similarly, crowding another's space — stepping back; looking sternly — smiling back.

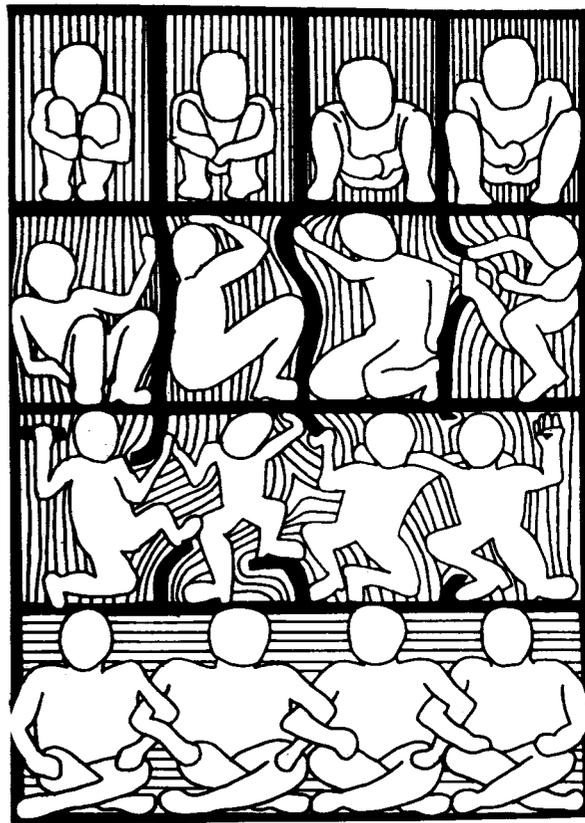
* Little research has been done on nonverbal behavior in actual power relationships; rather, the variable studied has often been status, and sometimes personal dominance tendencies. Though these are not the same as power, they are closely related to it, and give us clues to power signals; other studies have looked at power itself.

Again, the gestures of dominance are likely to be emitted by men, and those of submission, by women.

Another aspect of much nonverbal dominance behavior is that it carries a subtle physical threat; e.g., pointing, staring, and towering over someone are elements of actual combat; this is probably a residual of the origin of these behaviors in physical confrontation. Because of their training, women may be readily and unconsciously intimidated by such dominance displays, and also fail to utilize them themselves.

There is a further pattern to these dominance behaviors, in that most may also convey intimacy as well as power, e.g., touching, staring, moving close. Nonverbal gestures follow the dual pattern shown with terms of address,[16] that a single set of forms may express either status or intimacy, depending on whether their usage is mutual or nonmutual. This dual nature makes it possible for a gesture of power to be claimed as one of friendship, and therefore hard for the receiver to protest.

Similarly, when women use these signs of power themselves, the gestures may be taken as sexual advances, denying the assertion of power. The ambiguity surrounding nonverbal communication is used against women when they wish to repel unwanted sexual advances, and are told that they were "sending signals" inviting them. Such claims, far from being innocent misunderstandings between male and female cultures, are the ultimate justification for front-line attack in the sexual war: rape.



The crucial position of nonverbal behavior to power — half-covert, half-overt — is also crucial to the individual: nonverbal communication may be seen as the link between internalized and externalized control. Social control may be internalized as one's nonverbal communication to oneself — inhibitions originally imposed by others may be incorporated into one's rigid and inhibited body postures and movements — "character armor," in Reich's terms.[17] But there is a more politically important sense in which nonverbal behavior links internal and external control — it is at that subtle point between voluntary and involuntary action, where it is hard to be clear about the source of one's own behavior. And this also illuminates a major debate of recent years among women, the controversy over the source of women's "passivity" and "docility." Nonaggressive behavior in women, on the one side, is attributed by many to socialization, sometimes termed "brainwashing." This point of view implies that if women only acted differently — assertively, nonsubmissively — they would have different (and better) outcomes. On the other side of the debate are those who point to the external rather than internal conditions keeping women in subordinate place: economic dependency, sanctions against deviance from the female role, etc. They believe that to blame socialization is a coverup and diversion that perpetuates the patriarchal status quo. Implications from this point of view are that the societal structure must be changed, rather than women's behavior.

Lynn O'Connor[18] and Nicole Anthony[19] have called attention to nonverbal communication which mediates between these two sources, and between these two points of view. O'Connor describes in some detail the encounters between females and males in which gestures of dominance and submission are exchanged; she writes,

The forms of female behavior that our contemporary ideologues have called internalized self hate or masochism are usually just a logical response to a man's gesture of dominance. Women have spent years on the psychiatric couch hunting down a nonexistent internal enemy.

Similarly, Anthony writes that a strong woman may notice herself acting submissive toward a man in a heated debate, and blame herself for self-oppression. But

If we filmed the scene we would see that what really happened was that he gave a gesture of dominance and she submitted in fear. . . . The moments of 'internalization' are really the moments when we respond to gestures of dominance. They are not inside of our heads. (Emphasis in original.)

These observations give us a perspective on women's submissive behavior: much of women's behavior which is interpreted as self-limiting may in reality be the *end* of a sequence in which assertion was attempted, and suppressed, on the nonverbal level.

In a similar way the study of nonverbal behavior may enlighten us on other questions basic to women's liberation: in nonverbal communication we see how much of the seemingly personal truly is political. Some questions relevant to women and power that may be approached through studying nonverbal behavior are:

•What are the *forms* power takes, and the *dynamics* by which it works? What forms and dynamics find particular application to relationships in which women are involved?

•What *analogies* can be drawn, what *similarities* seen, between the exercise of power over women and its exercise over other groups — blacks, homosexuals, children, other racial and national minorities, working class people, etc.? What *differences* exist that make different power forms and dynamics exerted toward these different groups? What are the similarities and differences in our *responses* to nonverbal power?

•What is the relationship between *institutionalized* power and *individual* power relationships (between the macropolitical and the micropolitical)? How is the study of personal power related to questions of social control — and how "trivial" and diversionary is the study of personal power? What does the study of nonverbal communication tell us relevant to *assertiveness training* for women?

•What goals are to be obtained through studying power — *defense* and/or *offense*? Does power exercised in defense lead to power exercised in dominance? Will power that is openly known and understood (e.g., through knowledge of nonverbal communication) lead to *corruption* as readily as power that is concealed and misunderstood?

In summary, my points (made here and elsewhere) are as follows:

Power is the capability of influencing or compelling others, based on the control of desired resources. It is exercised along a continuum, from least to greatest application of force. Generally speaking, the mildest form of force which is effective will be used.

Nonverbal behavior is a major medium of communication in our everyday life, and power is a major topic in nonverbal communication. Nonverbal behavior is a major avenue for social control on a large scale, and interpersonal dominance on a smaller scale. Because our culture considers trivial, ignores, and doesn't educate us to nonverbal behavior, it constitutes a vague stimulus situation. Its interpretation is then highly susceptible to social influence — e.g., explanations utilizing sex stereotypes, which further maintain the status quo.

Many nonverbal behaviors have the dual function of expressing either dominance or intimacy, according to whether they are asymmetrically or symmetrically used by the partners in a relationship. Because of this, when nonverbal dominance is challenged, it may be claimed to be intimacy. Nonverbal power gestures provide the

micropolitical structure, the thousands of daily acts through which nonverbal influence takes place, which underlie and support the macropolitical structure. Nonverbal behavior occupies a critical point in the continuum along which power is exercised, between covert and overt control, and between covert and overt resistance. Because women must be more circumspect, particularly in challenging power, than men must, they operate at this point.

Nonverbal control is of particular importance to women, who are more sensitive to its cues and probably more the targets of such control. The overwhelming bulk of sex-differentiated nonverbal behavior is learned rather than genetically determined*, and is developed to display otherwise unobtrusive differences between the sexes.[20] Many nonverbal behaviors that seem meaningless and non-power-related in fact are aspects of sex privilege or reflect societal biases ultimately founded in power differences.

The behaviors used by males and females in the unequal relation of the sexes often parallel those expressing dominance and subordination between non-equals. Sexual attraction cannot sufficiently explain men's greater usage of those gestures which indicate either intimacy or dominance. Usurpation of the nonverbal symbols of power by women may be ignored, denied, or punished rather than accepted. Denial of dominance gestures made by women often takes the form of attributing the gesture to sexual advance rather than dominance. Finally, nonverbal behavior may mediate between explanations of women's submissive behavior based on socialization and those based on external controls: much of women's behavior which is interpreted as self-limiting is in reality the result of a sequence in which attempted assertion was suppressed on the nonverbal level.

If women are to understand power, on both the macropolitical level and the micropolitical one which underlies and maintains it, we must learn more about nonverbal communication. For every major decision in Washington or on Wall Street that determines whether and how much sugar and oil we have and what information we will read, there are a thousand unnoted, silent power gestures — the glare, the silencing touch, the grip on the arm — meant to insure that we will never question our boss, husband, or lover, let alone Washington or Wall Street.

Nancy M. Henley

* Some nonverbal behavior may be genetically determined as a consequence of such known sex differences in anatomy as pelvic bone structure and juncture, amount of fatty tissue on buttocks, breast development, etc.; but I know of none that is known to have much social consequence.

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“Professor contends medical schools’ standards have dropped because of rise in minority students.”

—*NY Times*, May 13, 1976

“Professor assails Blacks’ performance.”

—*Harvard Crimson*, May 14, 1976

In the middle of May, as students at Harvard Medical School were preparing for their exams, as many medical schools around the country were completing their admissions decisions, as President Ford spoke of “alternatives to busing,” Bernard D. Davis, a Professor at Harvard Medical School, stirred up a storm the impact of which is far from over. On May 13, 1976, Davis published an article on the opinion pages of the *New England Journal of Medicine*, which was a thinly-veiled attack on minority admissions programs at medical schools. The article was picked up immediately by the *New York Times* and then much of the media; Davis appeared on several Boston TV stations. Davis was quoted in the *Times* as warning against the “temptation to award medical diplomas on a charitable basis” and suggesting that some medical diplomas might be awarded to “a person who might leave a swath of unnecessary deaths behind him.” The clearcut insinuation was that an increase in minority doctors could cost patient’s lives.

There have been immediate and tragic effects of this publicity. First, several incidents have occurred in Boston area hospitals in which white patients have refused to be seen by black doctors — a direct result of Davis’ statements. Secondly, Medical School admissions offices around the country have since contacted Harvard Medical School to learn of the “failure” of its minority admissions programs. Such programs, which were under attack already (minority admissions to medical schools declined for the first time in 1975) may have been dealt a severe blow. This is not to speak of the contribution of this slander to heating up the racist situation in Boston over the busing issue; nor of the contribution to strengthening attempts to reverse affirmative action programs.[1,2]

What did Davis base his statements on? *There were no data of any sort in his article.* There was a reference to a single student who had been unable to pass his Medical Boards, part I, in five tries, but still received a medical degree. Among the numerous responses (see below) to Davis’ claims were some strongly worded statements from Robert Ebert, Dean of Harvard Medical School, which totally refuted Davis’ innuendos. What follows is a letter written by Ebert to the Deans of all medical schools in the United States:

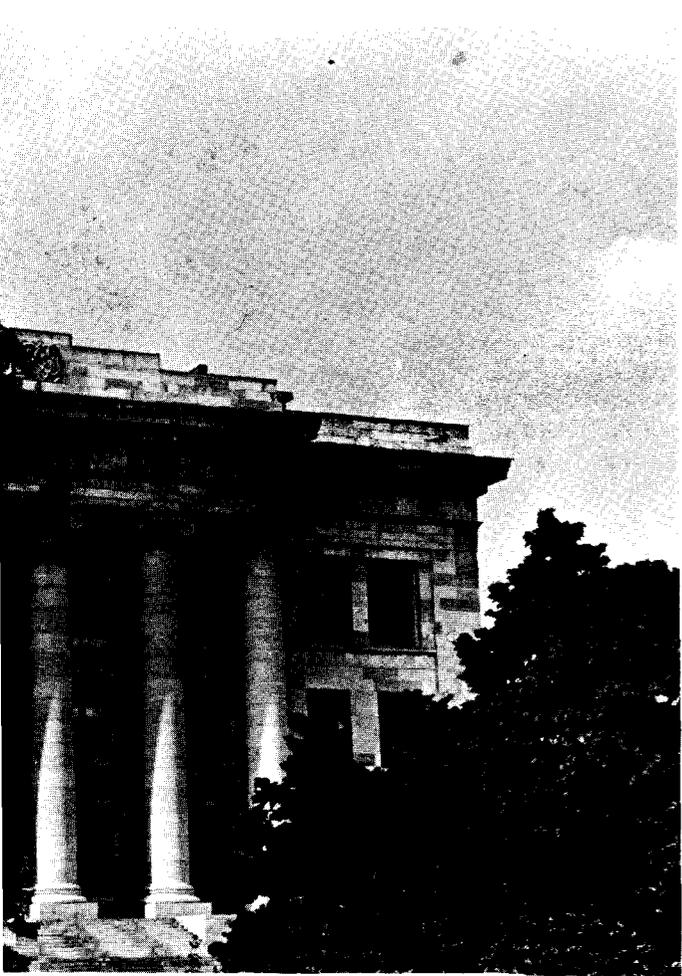
Such wide publicity has been given to the article written by Dr. Bernard Davis and appearing in the *New England Journal of Medicine* (Vol. 294, No.

RACIST O HARVARD ME



20, May 13, 1976, p.118), that I feel compelled to write you in the hope that you and your admissions committee will not be misled by what I can only term irresponsible statements made by Dr. Davis. The article, entitled “Academic Standards in Medical Schools,” purports to be a general commentary on the subject, but in fact is a thinly veiled criticism of the Harvard Medical School. He implies that academic standards at Harvard have fallen (unproven) and that some degrees have been granted on a charitable basis. He uses a single example for the latter charge, the case of a student who had failed Part I of the National Boards five

TBREAK at ICAL SCHOOL



times but was ultimately granted the M.D. by vote of the Faculty. What he neglected to state, because he had not bothered to inform himself of the facts, was that the student in question was granted a degree only after a year of highly satisfactory clinical performance on the wards of a distinguished hospital, documented by letters from all the chiefs of service under whom he served. Nor did Dr. Davis mention that the student had passed Part II of the National Boards. There is nothing to suggest that this man will be anything but a fine physician. To consider that he might be a danger to patients is ludicrous.

The facts are these: All Harvard medical students are judged by precisely the same academic standards in both the preclinical and clinical years. Some minority students have had academic difficulties along the way, and so have some white students. The faculty has never granted a degree to anyone on a "charitable basis." Dr. Ewalt, Senior Associate Dean for Clinical Affairs, and internship advisor, reviewed in its entirety every record of every medical student graduating in the Class of 1976, and he interviewed all fourth-year students. Not only did he judge that all were well qualified, but he was unable to distinguish between minority and majority students on the basis of their records.

The views expressed by Dr. Davis are his own and do not reflect those of the Faculty or the administration. Enclosed are copies of statements by the Faculty Council and the chairmen of all the preclinical science departments. Both take issue with the conclusions implied in Dr. Davis's article. The effort of the Harvard Medical School to recruit minority students has been a success, and the Faculty vouches for the competence of *all* its graduates. It is my profound hope that Dr. Davis' statements are not misconstrued by members of your faculty or by your admissions committee and are not interpreted to mean that Harvard is drawing back from its commitment to minorities or that our minority graduates are any less competent than any others. Such is not the case. I also hope that you will continue your own efforts on behalf of minority students and will not permit the pronouncements by Dr. Davis to alter your present admission policies.

Davis and Biological Determinism

Since Davis obviously had no evidence to back up his allegations, where did they come from? The views he has put forth in this incident are quite consistent with his writings and talks given in the past few years which reflect a biological determinist perspective. This perspective has led him to publicly support such areas of research as genetics and intelligence studies, genetic engineering[3], XY research[4], and, most recently, sociobiology[5].

A thread that runs throughout his recent statements is that most members of disadvantaged groups are disadvantaged because they were born that way. Thus, we can only go so far in correcting discrimination, since the basis for discrimination is the inherent lack of ability in certain groups. While he equivocates, the following excerpts from a speech presented at the Cambridge Forum on April 10, 1976, illustrated this perspective:

But while evolution must [sic] predict the existence of behavioral genetic differences between groups, it does not predict for any two groups the size of those differences or even their direction . . . We do not know that any two separated groups will



have significant differences in their pool of behavioral genes, but we certainly cannot assume they will not have such differences . . . One might argue that it would be better not to focus on such matters in an era when racial justice is an immediate crucial issue for our society. And the dangers are obvious. But there are also dangers if we ignore reality.

If we refuse to take into account the existence of wide genetic diversity among individuals, then what we mean by social equality will be vague and it will lead us to have foolish and unrealistic expectations. Similarly, for many liberals the assumption of an equal distribution of potentials between groups has led to support of quotas under the illusion that this is simply a concrete way to enforce equality of opportunity. Now within a limited range this approach actually has a sound biological basis. For all the identifiable groups in our society do overlap extensively in their distribution of potentials . . . However, for jobs that demand above average capacities, whether for abstract thought, artistic creativity or motor coordination, we cannot predict how the chips might fall with equal opportunity. *Hence for such competitive jobs, the elimination of discrimination is unlikely to result in complete parity, even though it will surely markedly increase*

the representation of many groups that have been held down in the past. In other words, if an effort is made to provide equal opportunity, and, by this, I would include efforts to correct the effects of early disadvantages, and if a residual numerical disparity is still seen, its presence does not prove that the effort has failed and that the opportunities are still unequal. Under those conditions, persistence of quotas would mean society's giving up the obvious valuable goal of trying to match responsibilities with abilities . . . Some would regard unequal ethnic representation in high status jobs as inherently unfair, regardless of the reasons . . .

Thus, science tells us that we sow confusion, if we will fail to distinguish social equality, which is a normative matter, from biological equality, which is an empirical matter, for we can manipulate our social structure, but we cannot manipulate our genes. *Science also tells us that environmental measures can compensate to some degree for various genetic defects, but only within limits.* Hence social justice must be built around the reality of our genetic diversity."

What Davis has done in this passage is to begin with a not unreasonable *hypothesis* that there may be a broad genetic diversity for behavioral traits (this may or may not be true — there is no evidence). Initially, he is very careful to point out in this talk that evolution does not "predict . . . the size or *direction*" of these differences between groups. And, in fact, nowhere does he tell us: 1) how we are to measure the genetic component of group differences (that is, separate genetic and environmental factors) and 2) determine the direction (that is, which group is better endowed for the trait). Yet, incredibly, he goes on to imply that quota systems will never totally reverse the "unequal ethnic representation in high status jobs", that "elimination of discrimination is *unlikely* to result in complete parity." *What Davis has assumed here is that those groups which are now under-represented in such high status jobs are less well-endowed overall in the qualities that lead to those jobs.* In other words, those groups which are excluded now are excluded due to lack of the requisite innate abilities. Perhaps a few group members can achieve "high status jobs" but most are simply genetically unable. The crucial step in Davis' argument is simply left out — he never even considers the possibility that the disadvantaged groups may be genetically equal or even superior to the current dominant groups. Further, he simply assumes that the abilities required to attain "high status jobs" are genetic. Both assumptions can only come from Davis' own beliefs about the source of differences between groups, and both are obviously consistent with racist proclamations of genetic inferiority. Thus, even if we accept Davis' premise concerning genetic diversity, his conclusions are groundless.

While he makes no evidence or logical basis, Davis makes these irrational claims under the guise of objective science ("Science tells us . . ."). This misuse of his status

as a scientist to promote his own opinions as scientific fact is inexcusable. It is bad enough that he claims a scientific basis for illogical theories which are immediately useful to those promoting racism; but he now has extended this unfounded perspective into the sphere of social policy by his attack on minority programs at Harvard Medical School.

Davis' pseudoscientific theories and their supposed practical implications have not been limited to criticism of efforts to eliminate discrimination. His apparent ability to perceive which groups have higher levels of which traits has also led him to make suggestions for eugenics programs:

... I wonder whether such a eugenic program is not likely to emerge, aimed primarily at reducing the production of individuals whose genetic endowment would limit their ability to cope with a technologically complex environment. Would not such a program then seem simply like a preventive approach, supplementing the curative approach, to the humanitarian goal of minimizing human misery?[6]

We further wonder, considering his perspective on "genetic endowment," whether the implications of the following statements are not an indication of which classes should be subject to such eugenics programs.

Academic performance is strongly correlated with socioeconomic status in our society, whatever be the reasons; and however painful that fact, no conscientious educator can ignore performance in assessing ability.[7]

For years, we in Science for the People and others have been exposing the dangers and the fallacies of contemporary biological determinist theories[8,9]. These theories usually begin with racist, sexist or class-based assumptions, are marked by shoddy or fraudulent research and logic, and serve to provide ideological support for the continued functioning of oppressive social institutions. In fact, the questions upon which most of this research is based are only of interest to those promoting the *status quo*. *This is not neutral research which is being misused.* Davis' extension of his own brand of biological determinism into directly harmful public statements and the rapidity with which they are picked up and publicized illustrates the seriousness with which these ideas should be taken and the need to confront them. This case also illustrates how prestigious scientific journals (*Science* and the *New England Journal of Medicine*) are quite open to promoting reactionary social policy in the name of science and health care.

Medical Schools and Health Care

The major issue raised in this controversy is equal opportunity for medical education for blacks, Chicanos, Boricuas*, Native Americans, and other minorities, and

*People from the U.S. colony, Puerto Rico.

THE RESPONSE AT HARVARD

The major initial response to Davis' statements came from the Third World Caucus of medical students. They demanded that "the President of the University reprimand Professor Bernard Davis by entirely relieving him of the responsibility of student evaluation. . ." A rally was held at Harvard Medical School to protest "racism in medicine" following a press conference. (These demands will presumably be pursued through official channels.) The rally was attended by over 100 students, employees, and faculty. Subsequently the President of Harvard, the Dean of the Medical School and the chairpeople of the basic science departments all publicly rejected Davis' allegations in a relatively strongly worded fashion.

also those from lower socioeconomic classes. These groups form a definite minority of physicians. But the issue of equal opportunity in turn has important implications for health, in terms of the distribution of physicians and influences on a community's health. The maldistribution of physicians and other health care workers by geographical area and income has been widely demonstrated; central urban areas, some rural areas, and many working-class areas have an inadequate supply of physicians, and even then many residents cannot afford high-priced health care. The past several decades have demonstrated that, for both financial and personal reasons, medical students recruited from the white middle and upper classes do not practice in these areas, where physicians are most needed.

	<i>Workingclass family</i>	<i>Black</i>	<i>Women</i>
% medical students, 1920	12	1	4
% medical students, 1961	12	2	6
% medical students, 1973	12	6	16
% U.S. population, 1973	49	12	51

While recruiting efforts have *slowly* begun to address the inadequate supply of black and women physicians, the percentage from working-class backgrounds has not changed in 50 years[10]. The result of the selection of white male middle class students to attend medical schools is not only unequal access to health care for a large part of the population, but also that physicians have little experience in their own backgrounds with the health needs of a large part of the population.

This class domination of medicine is certainly a contributing factor to the crisis in medical care that exists in this country. Infant mortality rates, which are twice as high for non-whites as for whites in some areas, reach the levels of some underdeveloped countries[11]. Longevity statistics are the worst in the industrialized world[12]. Five thousand communities are without a single primary care physician, yet more surgeons than needed are

produced (which may account for the thousands of needless operations performed each year[13]), while a meager 1.4% of current interns and residents are training in general practice programs[14].

These same problems were recognized over 40 years ago. The 1932 Committee on the Costs of Medical Care pointed out "The problem of providing satisfactory medical service to all people of the U.S. . . . is a pressing one. At the present time many persons do not receive service which is adequate either in quantity or quality, and the costs . . . are inequitably distributed. The result is a tremendous amount of preventable pain . . . anguish . . . needless death . . . largely unnecessary." [15]. By that time, the American Medical Association, with the aid of private foundations, had tightened its grip on the selection, supply, and education of new doctors (see box on Flexner report), and dictated the form that the market place of medicine would take. When the reactionary stands of the AMA in the face of pressing social needs, caused it to lose some of its influence over the course of medicine in the U.S., a new decision-making establishment began to emerge. Helped by an infusion of Federal research funds during World War II and the publicity of impressive technological advances, the scientists and administrators of large medical centers, who also had a direct hand in the admission and molding of new physicians, ascended as the new directors of the path medicine would take.

The establishment of the large university medical center as the new leader of American medicine has been welcomed by some as "perhaps the most profound and promising development in the evolution of medical care." [16] The centers became important forces in advancing the treatment of specific diseases, but they have, in effect, retarded the development of an equitable, effective and efficient system of health care for most people. Competition for prestige and funds, a desire to do "important" work, and a willingness to carry out certain research because there was money available to do so, caused human priorities to suffer. Things have changed little for the majority of Americans. Despite remarkable technological advances, a 1971 Citizens Board of Inquiry into Health Services for Americans reported that:

The United States has failed to provide adequate health services to the vast majority of its citizens. The system is in disarray . . . Consumers have few meaningful options in health care today . . . [17]

Because of the relative autonomy these centers enjoy in determining the selection of future physicians and the direction of medical education, they have contributed to what has been called the "obsolescence of the American physician . . . his inappropriate orientation to disease and to people, the economic (fee for service) and societal (one to one) framework of the physician-patient relationship, the traditional notion of a patient-centered rather than a community-centered responsibility . . ." [18] Students are chosen mainly by criteria that select for those with

SPECIAL BICENTENNIAL FEATURE: HOW DID WE GET THIS WAY?

The bias in medical school admissions toward the white middle class male is a creation only of the last 70 years. In the early years of this century, there were so many "doctors" that it was difficult for them to make a living. Powerful pressures from within the American Medical Association, a white middle-class male group, began to urge and often to succeed in closing the medical schools which trained blacks, women, and students from the working class. This process was accelerated and ultimately completed by the famous Flexner report, sponsored in turn by the Carnegie Foundation. In order to create the scientific and highly selective medical schools we know today, Flexner recommended such measures as:

1. Bias against the working class: medical schools not requiring college as a prerequisite attracted a "mass of unprepared youth . . . drawn out of industrial occupations into the study of medicine . . . (which is not suitable for) the crude boy or jaded clerk." (pp.18-19)
2. Racism: seven of the nine black medical schools would be closed. "The practice of the Negro doctor would be limited to his own race." (pp.180-181)
3. Sexism: all three women's medical colleges should be closed. There was no "strong demand for women physicians or any strong ungratified desire on the part of women to enter the profession . . ." (pp. 178-180)

To be sure, many of the "medical schools" closed after the Flexner Report were providing inadequate training. However, the result of these actions was to establish the restricted access to medical education that we have today, and also to stifle the indigenous health care traditions which have never systematically been proven inferior to scientific medicine.

scientific research interests and those who will go into specialties. The criteria work against people who, for example, would find satisfaction giving primary care in a small community.[19].

One of the major criteria for choosing medical students is the scores on the Medical School Admission Test (MCAT). While this test has very limited usefulness in predicting who will graduate, it does predict career choice. In all of the major medical specialties, the higher the average grade of students on MCATs, "the larger the proportion designating an interest in research or teaching." [20] One educator suggested that "available evidence indicates that if medical schools continue to admit students primarily on the basis of academic aptitude, we can predict with certainty a continued decrease in the number of graduates who will choose to provide primary care." [21] This continued emphasis on research as

opposed to primary health care in medical schools is reflected in the statement of the dean of a newly built and needed medical school at San Diego. He saw his school as reaching "... heights beyond (that) already achieved at major academic medical centers such as Stanford, Hopkins, Harvard and Chicago..." "Large patient care programs," he continued, "are not necessary and divert attention from other teaching and research activities." [22] Already selected for "intellect," this homogeneous group of students who will do well by certain narrow definitions of success (no known admissions criteria, nor medical school grades are useful in predicting who will become a good physician) cannot be expected to change a system which suits them well, treats them comfortably (median income of doctors is currently well above \$40,000) and with respect (doctors still stand next to Supreme Court Justices in the eyes of the public).

Conclusion

Davis' foray into the public arena with his attack on minority admissions programs raises several issues.

First, this incident shows the direct links between the resurgent "academic" biological determinist theories and racist, sexist, and anti-poor and working-class social policy. While Davis has limited himself mainly to attacks on minority programs, others have used essentially the same arguments against women and lower socio-economic classes. [23] These arguments are used to support admissions policies which contribute to the continuation of a costly, class-biased, archaic medical system and the consequent neglect of the health needs of most people in our society. In addition, the domination of medicine and medical research by white middle and upper class men further distorts research objectives and practices. For instance, it is male medical researchers who have favored directing contraceptive development towards the female reproductive physiology, thus leaving the burden of contraception on women, and the dangers of contraceptive testing on mainly Third World women. [24]

The education of more minority, women and working class students to be physicians is a highly desirable goal, and some inequities and oppressive features of medicine may be ameliorated. Some of the doctors from these groups may even help to begin the process whereby communities can gain control over their own health care. However, it is unlikely by itself to produce meaningful and lasting change in medical care in this country. As long as medical school admissions and training are oriented towards producing academicians, researchers and high-priced specialists, there will still be only a small proportion of doctors committed to improving community health.

But further, what has to be recognized here is that providing health care is not the same as promoting health. Amidst all the concern about health care providers, it must be recalled that the major influences on a community's health are income, job situation housing, environment, community self-reliance, etc. —

factors generally determined outside the community by those who control the sources of capital, such as corporations and landlords. [25] And it is the same group of large corporations who dominate the health care industry. Thus, in both generating and helping to maintain a community's health, control comes from without. Only by organized community involvement in and control of health care and living conditions can true health be achieved.

Larry Miller, Herb Schreier and Jon Beckwith

Larry Miller, Herb Schreier, and Jon Beckwith are all active in both the Genetics Group and the Sociobiology Group of Science for the People. Larry is a medical student at Harvard. Jon teaches in the Microbiology Department at Harvard Medical School and was instrumental in getting the minority student program established there in 1968. Herb is a child psychiatrist at Mass General Hospital and at the East Boston Health Clinic.

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JOBS AND THE ENVIRONMENT: A NATIONAL CONFERENCE

Marian Lowe & Paolo Strigini

The authors of this article participated in the National Action Conference Working for Environmental and Economic Justice and Jobs. They presented some data on the controversial issue of appropriate technology, particularly with respect to capital intensity and labor intensity. Throughout the conference they represented the point of view of Science for the People, although they were officially designated "environmentalists from Boston University." The following is a personal view, with some immediate reflections and constructive criticism.

From the 2nd to the 6th of May, about three hundred people from labor, community and environmental organizations met at Black Lake (the Walter and May Reuther UAW Family Education Center) in northern Michigan. Within each group there were officials and some rank-and-file members, social activists and bureaucrats. Special care had been taken to invite non-white and women representatives, although, except for community people, few of them were in prominent positions within their own groups. The atmosphere of those four busy days was somewhere in between a parliament, a convention and a radical meeting. With people hurrying from a general assembly to a caucus, or from a workshop to a personal and intense discussion with old or newly acquired friends, it was good to remind oneself that what looked like a modern high-class campus was in fact a study and meeting center and a vacation resort for auto workers. (It was not so good to learn that the services for the conference was managed by Sheraton — an affiliate of ITT.)

The conference was sponsored by an impressive number of both large and small, national and local, well-established and grass-roots organizations. It was planned by organized labor, community and consumer groups, and by government and private environmental

groups.* It was structured into three types of gatherings: general assembly, core groups, and workshops or caucuses or task forces, meetings of the first two types recurring every day. The core group deserves some explanation, because of its novelty and its success. Each conference was assigned from the beginning to a particular core group, designed to include fifteen to twenty people of different sex, race, education, profession and residence. Thus each core group provided a sample of the general assembly, where conferees through repeated meetings gradually got acquainted with each other. People who had been listening most of the time had a chance to express their thoughts and goals, sometimes their frustrations and anger — many did. Those who had been doing most of the talking had a chance to listen — we don't know how many did. Misunderstandings and real problems emerged in the core groups — sometimes in advance of the general assemblies — and a real dialogue took place between different people, which helped both subsequent talking and listening.

Different Points of View

Sunday evening UAW president Leonard Woodcock opened the conference by speaking to the first general assembly. He contended that the dilemma between jobs and a healthy environment is a false one and that the reality under the apparent conflict of interests between labor and environmentalists is the *environmental blackmailing* on the part of the bosses. This happens when businessmen threaten to close or move away their plants — thus taking jobs away from the community — unless the environmental regulations which they violate are lifted or not enforced — thus perpetuating ecological abuse. Workers' antagonism and resentment toward environmental issues has been fostered by those environmentalists who, while discovering pollution in streams, woods and residential areas, are not paying enough attention to the health hazards in the factories where

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*Some of the planners were: United Auto Workers, United Steelworkers, Communication Workers of America, AFL-CIO, Urban League, Citizens Action League, National Council for Senior Citizens, Nader's Public Interest Research Group, United Church Board for Homeland Ministries, E.P.A., Environmental Action, Audubon Society, Wilderness Society, Environmentalists for Full Employment.



Leonard Woodcock, UAW President, addresses conference.

pollutants come from. Environmental blackmail has been kept alive by national and local politicians — such as those labeled “the Dirty Dozen” in Congress by *Environmental Action* — who are not only opposed to any environmental regulation, but are also staunch enemies of labor.

Woodcock reminded the conference of the efforts of the UAW against the SST and the Concorde, against the nuclear program, against the abuse of pesticides (together with Chavez and the Farmworkers) and other toxic substances in the plants (together with other unions). He stressed the need to implement the right to have a job as part of a national economic plan (Hawkins-Humphrey bill) and the need for new legislation to protect workers and communities from environmental blackmailing. It became clear, however, in subsequent talks and during discussions in the core groups, that much work was still to be done in order to achieve unity among workers, community and environmentalists.

Monday started with a panel discussion. National Public Radio reporter Barbara Newman introduced the panel with some provocative remarks, particularly directed toward organized labor and traditional environmentalists. She reminded the conference, for instance, of the alliance between business and AFL-CIO officials to promote nuclear power before the California referendum. The panel included a community representative, Gale Cincotta from National People's Action, environmentalist David Brower of Friends of the Earth and AFL-CIO assistant to president Meany, Tom Donahue. They looked, respectively, like a strong, working-class mother, a benevolent wealthy professor, and a shrewd bureaucrat-politician, and that's how they sounded as well.

Cincotta pointed out the need for far-reaching national and local plans to rehabilitate rundown neighborhoods, which require money, action, and knowledge of the problems. She emphasized the importance of fixing up old houses and old machines (including cars, refrigerators, washers and fixtures) rather than priding ourselves on new flashy ones that the poor cannot afford. Brower drew an apocalyptic picture of a nuclear economy, leading to a broken-down unhealthy planet, where people would probably live an unhappy slave-like existence. Such real danger for humanity on the brink of nuclear disaster he traced to lack of awareness and courage on the part of politicians and labor, the rich and the poor. Donahue reminded the audience that American unionism is primarily concerned with promoting higher pay and healthy jobs through collective bargaining: it does *not* make social policies and does not concern itself, except marginally, with social issues. He pointed out that AFL-CIO does not have a policy of its own, independent of its affiliate unions, and admitted that some of these may diverge or conflict. He exalted the virtues of economic growth for cancelling economic differences and satisfying social needs, as he said happened before the present recession, and he appealed to labor, business, and government each to do its own job, so that growth can resume.

That economic growth is no panacea, however, was the main thrust of ecologist Barry Commoner's talk in the afternoon. The picture drawn by Commoner with historical perspective, hard facts and humor, showed how economic exploitation, unemployment, political false promises, problems of energy supply and environmental abuse are all bound together. He outlined the postwar

trend in corporate America to ever greater use of capital and energy (with increasing waste of natural resources and pollution of land, cities and factories) at the expense of jobs. This is the consequence of our economic system (geared to maximize profit) determining our mode of production in such a way as to come up against inflexible ecological constraints. Therefore, Commoner contended, what is needed is a new economic system: socialism. This is the only way, he said, to solve our environmental and economic problems in harmony — and it is a solution which is not necessarily inconsistent with our democratic tradition.

The conflict between jobs and the environment within the present economic system, typified by Donahue and Brower, emerged in the questions and discussions after the various talks as a division within both the labor and the environmental movements. Labor officials, in particular, felt the pressure to advocate jobs for their constituents. The large majority of those present, however, rejected Donahue's narrow view that "nuclear energy is the way we are going; and we need jobs", even though not all were prepared to struggle for the "non-nuclear future" advocated by Brower. Some workers commented: "Donahue is selling out", while some environmentalists admitted: "Brower is insensitive to labor's interests and history". Many people, however, agreed with Commoner's analysis and with his conclusions that environmental and economic problems must be solved together in a new way. Some had reservations concerning the implementation of a new economic system: "We have to change things in a democratic fashion"; "One thing at a time"; "The word socialism will bother some of my members"; "Socialism is a point of view rather than a blueprint". Others said, "He didn't call for socialism loud enough". The need for a *concrete* socialist analysis and program was very clear during this discussion.



"You want business in this town or don't you?"

Two more immediate and related problems for the conference surfaced in discussions and core group meetings. One problem was the ambivalent positions taken by environmentalists. The other was the lack of space left for community groups in the ongoing debate between labor and environmentalist leaderships. Cincotta had explicitly accused the environmental movement of elitism, and implicitly charged labor with political insensitivity in her talk. These charges remained unanswered.

Full Debate and a Case Study

Tuesday was workshop day. Each workshop was intended to bring together some political and economic analysis, some technical information and some organizing experience and program. The list of workshops offered was impressive. They could be grouped — somewhat artificially — in three main categories: (1) labor problems: impact of conservation and recycling on jobs; in-plant environment; funds for retaining and replacement of workers; toxic chemicals; etc. (2) community problems: transportation and welfare policies; fund raising; use of the media for local organizations; possible changes in the rate structure and ownership of utilities; housing; paying for pollution damage or clean-up; (3) general policy problems: energy options and conservation policies; economic growth vs. population and poverty; alternative economic and technological policies. A complete set of reports from workshops — and other meetings as well — is being gathered by the organizing committee of the conference [for further information, write to UAW]. Despite the stated purpose of integrating technical information and political economy with concrete organizing experience, the actual balance achieved in the various workshops differed. Perhaps it would have helped to maintain the balance, if each workshop had been moderated by two persons: one labor and one community representative. As it was, it turned out in some cases to be environmentalists talking to each other. This probably happened for various reasons: the difficulty of determining in advance what labor and community people wanted to hear; in some cases, the lack of interest on their part in theoretical issues; and in most cases the lack of sensitivity on the part of some environmentalists for people's main interests and concerns. Environmentalists altogether were the most articulate and the most numerous of the three groups at the conference. Some saw themselves as experts and expected to be listened to and to be asked respectful questions; unfortunately some workshops were set up in such a way as to encourage, rather than make impossible, these attitudes.

This disturbing impression from the morning workshops was strengthened by the panel discussion on the Mahoney River Valley, which was presented as a case study in the afternoon. The panel: a conciliatory EPA administrator, a militant environmentalist lawyer, a liberal businessman for community economic develop-

ment, a bureaucrat representing the local unions (or the companies?) and the Director of the Sierra Club, another lawyer, acting as moderator. The case: a set of ancient steelmills in Ohio, disturbed by the recently passed Clean Air and Clean Water Acts, had threatened to close, with consequent economic disaster in the area. The plants were perhaps only marginally profitable before the environmental regulations were passed (no one can read their books), and the steel industry claimed that they could not possibly comply without losing money. The compromise solution: a temporary local suspension of the most demanding clean water standards.

It was a very interesting case. In the first place, it involved the definition of the job of the EPA — is it just to enforce the laws protecting the environment or is it to get involved in value judgements concerning the economic consequences of such laws, and whose interests should be protected against their rigorous application. As the moderator reminded us: "Hard cases make bad laws" (or bad precedents). Further, this case may result in a situation apparently without any winner. Environmentalists saw a victory for business due to the EPA selling out. Some, if not all of the plants, however, may close anyway; and the community representative looked with anxiety at the future for business. The labor representative, on the other hand, claimed a "victory" for the people in the region. The steelworkers and the community as a whole, in fact, stand to lose *something* no matter what happens — they either have insecure jobs in a polluted environment or no jobs at all. There is plainly no guarantee of how long the plants will stay open, no plan for replacement, reinvestment or development, no power on the part of the workers and the community to obtain some guarantee or some plans from the industry and the government.

The Mahoney Valley controversy illustrates the insoluble contradictions that arise when the options presented are too narrow: in this case, jobs against environment. Some environmentalists and labor people suggested that there should be laws preventing plants from closing as a response to environmental regulation. Yet, how long can a system based on profit afford to keep non-profitable businesses operating, no matter what social issues are involved? The real problem is how to develop a new system in which environmental issues, jobs and other social concerns become the fundamental aspects of a democratic planning process.

A Change of Focus

The only scheduled assembly for Wednesday included talks by Russell Peterson, Chairman of the President's Council on Environmental Quality, and William Hutton, Director of the National Council of Senior Citizens. Peterson's talk still focused on the environment-job conflict. He noted that, while hot water and cool air can be bought by dollars, clean air and water — as well as other environmental rights — can only be secured by

votes. He stated that 300,000 more jobs were created than lost since 1971, by enacting and enforcing environmental regulations. He stressed the need for adequate funding, however, both to pay for new jobs and to ensure the necessary retraining programs which would avoid environmental blackmailing and bidding of different local and business interests against each other. Hutton dealt more with community concerns as he discussed problems of senior citizens. He pointed out that others should keep in mind the political potential of senior citizens and the senior citizen movement. These people have time, commitment and numbers and they are future-oriented. He strongly suggested that other groups should contact them for joint efforts.

The focus for the first two and a half days had been predominantly on the conflict of interest between organized labor and environmentalists. Several social activists from all groups, and especially community organizers, had been voicing frustration that the discussions and talks did not deal with the big structural questions or with specific action proposals which were important to the poor urban and rural communities, the minorities and the unorganized workers. Such frustration, concerns and demands took shape in special workshops, caucus and task force meetings from Tuesday evening through Wednesday, such as those dealing with the strengths and weaknesses of the Hawkins-Humphrey bill, the urban environment and rural America.

A briefing on the H-H bill was held Tuesday night and a task force kept working on it the next day. The bill — proposed by Hawkins, a Black representative from California, and supported by Senator Humphrey — is intended to make full employment a mandatory goal for the federal government. It also directs Congress to enact a national economic plan in order to correct the business cycle and to achieve full employment. The latter, however, as officially defined, allows a rate of marginal unemployment of 3% (already stated in a 1946 Act). It is likely, then, that non-whites, women, youth and the unorganized will carry the burden of the official unemployment statistics, even during non-recession years. Therefore it was agreed during the discussion that the projected economic plan must contain concrete provisions for education, training and financial help to individuals, cooperatives and community enterprises, directed at eliminating those pockets of chronic unemployment. It must keep business from taking advantage of the subsidies and other facilitations provided by the plan, and keep the military or other government or business bureaucracies from monopolizing the public work programs for their sectorial interests. It was pointed out that unemployed hired on such programs have been used to break strikes. Finally, the economic plan must include workers and communities in its formulation at the local and national level (and not only the President's economic advisors, as provided by the bill) and make sure that environmental guidelines concerning human and natural resources are taken into account in the short and long term.

While all of these recommendations might not be realistically written in a single bill, they are important guidelines for future action. It was important that the conference, while endorsing the general concept of the H-H bill, also expressed its sense of the direction in which we should go and organize for.

Different voices from the Community

The most dramatic expression of community concerns came as a nonscheduled statement from the Black caucus, during the question period after the talks on Wednesday. The Black caucus brought together many concerns of the urban communities and their organizers. It charged the environmental movement with elitism, with not being aware of the effect of environmental concerns on the poor, with often seeking to solve problems in a way that benefitted the middle class. It demanded that jobs for the 3% hard-core unemployed be included in the provisions of the H-H bill, that the impact of environmental laws on low-skill jobs and on the poor be compensated by adequately funded educational and training programs, that decent housing, day-care, health services and transportation be funded and implemented in the poor neighborhoods of the inner cities, that financial help be directed to those in need, while red-lining practices by banks and other lending or granting institutions be penalized — among other things, by unions withdrawing their funds from them.

A joint special workshop convened to reach agreement among environmentalists, labor, and community representatives specifically on the issues raised by the Black caucus statement and, in general, on the problem of economic growth and the poor. There was considerable tension in the packed room, due both to the specific charges made by the Blacks and to the fact that their demands appeared to be directed (sometimes personally) against environmentalists and organized labor. For example, one Black man said "We are tired of educating whites," and a white woman retorted, "And we are tired of being educated." Fortunately, a sense of honesty, rationality, and commitment helped relieve the tension. A joint task force continued to work on a resolution concerning economic growth and the poor; their statement on Thursday morning reflected a strong substantial agreement on the demands of the Black caucus. The fact that environmental legislation is often biased in favor of the white middle class and helps maintain the status quo was pointed out by other groups and caucuses, such as the Humphrey-Hawkins task force and the women's caucus.

Any mention of the problems of women as women was conspicuously absent from the official program. Furthermore, the issue of "environmental and economic justice and jobs" for women was not so easy to raise given the initial narrow emphasis of the conference. This difficulty was another aspect of the problems brought out by the community groups — the need to deal with issues

relating to the unorganized and the poor. However, unlike the community groups, strong representation from women as women did not exist. No feminist groups were present — it is not known whether or not they were invited.

Still, a women's caucus called for Tuesday night attracted about 20 women (out of about 90 to 100 at the conference). Organization difficulties, besides the many other tasks that women had to fulfill during that hectic Wednesday, reduced the task force working on women's issues to a very small number. The final statement reminded the conference that the problems of women had not been addressed and that they were crucial to any consideration of the issues facing the conference: for example, unemployment hits women harder than men; women make up a large part of poor heads of households; they are a large percentage of the unorganized work force and have difficulty in gaining decent-paying jobs. It called on the women and men at the conference to be aware of and act on women's issues.

Most of Wednesday was taken up by an incredible variety of special task forces, caucuses and workshops, initiated by conference participants. One of the most impressive reports came from the rural caucus. From the beginning of the conference, small farmers (the National Farmers Union) and farmworkers had been expressing their separate frustrations on the lack of attention to the social and economic problems of rural America. What we heard later from the rural caucus was a comprehensive radical analysis and proposal for action, rather than simply complaints about the diminishing profits in farming and the like. The report advocated a new concept of land tenure and land grants, including implementation of the legal granting of federal land to farmers and farmworkers (limited to 160 acres), a tax based on land productivity to eliminate rent profits, a transformation of agricultural research programs in universities, government or state agencies, which presently help only agribusiness. The problems of rural America became complementary to those of the cities, as soon as people rather than business were at the center of the picture. One set of problems could not be solved without solving the other.

A Starting Point

Thursday morning was for summing up, although no resolutions were submitted for endorsement by a general vote. What happened instead was that each core group, caucus and task force presented its own resolution, statement or action proposal, while the whole assembly listened intently. Then everyone sang "Solidarity."

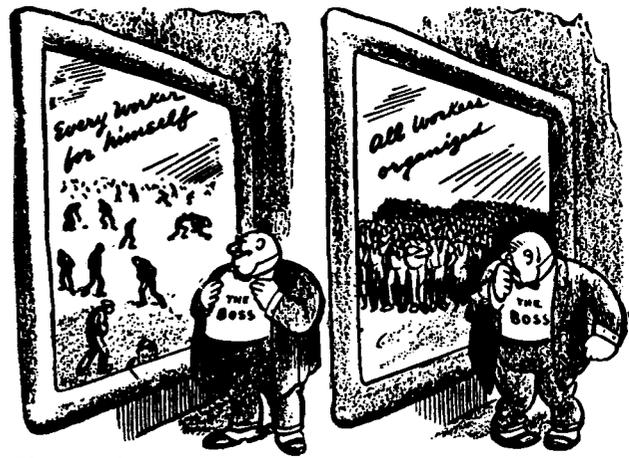
The sense of the conference thus emerged, through a variety of different viewpoints, as a substantial unity of goals and a firm general determination to continue and expand the work started at Black Lake. Widespread commitment was expressed to work on problems not dealt with sufficiently, and especially against discrimina-

tion based on race, sex or class; to set up a network of local, regional and national resource groups for legal, medical, technical, and financial advice to labor and communities; to organize at all levels strong coalitions — such as people against the utilities — on issues that reflect major and general concern; to organize locally and nationally to fight unemployment, dislocation and environmental blackmailing. One of the most constantly recurring statements was tracing the roots of our environmental and economic problems to economic inequality among individuals and to the mechanism of economic decision-making. Some groups proposed holding public hearings on concrete issues such as the price of electricity, gas or oil, in which the relative merits of capitalism and economic democracy (socialism) could be argued. These hearings were intended to initiate an ongoing national debate aimed at achieving a concrete definition of a socialist analysis and program.

It had been an interesting and intense political and human experience. The organizing committee and the UAW staff had worked with great dedication, sensitivity and intelligence. The result was a schedule which — in spite of shortcomings — made space for a great deal of learning experience and was flexible enough to allow confrontations to emerge, without destroying our growing sense of solidarity, awareness and strength.

It was a sign of strength and maturity on the part of the organizing committee and the conference that no general compromise resolutions, for example, concerning environmental issues or energy options, were pressed to a vote. Not only would the majority of the conferees have been unable to express any more than their personal opinion, unless their group's position had been previously formulated, but such votes would have hampered rather than helped all the work which remains to be done together. The importance of the conference was not in making headlines, but in initiating a process of working together for social change on a broad basis and in a progressive direction.

In dealing with many of the issues which were raised at the conference, quite a few environmentalists, especially those from the traditional, well-established groups, tended to stick with technical recommendations and legal proposals. They would then present themselves as experts and lobbyists, and ask others to support them by keeping up the pressure: everyone doing their own job, as Donahue (AFL-CIO) had said. This perspective dominated the first part of the conference and, if it had continued, would have allowed only some political maneuvering and compromising between top labor and environmental representatives. Its supporters and spokespersons avoided an overall analysis, such as Commoner's, that could provide a framework and a new direction for technical and reform programs and for local actions. They also neglected the immediate needs and demands of community groups, Blacks and other minorities, the poor and the unemployed, women, and other groups not represented in the leadership of various



The picture the Boss likes . . . and the one he hates.

organizations. More important still, they ignored the ability of such groups to transcend and integrate their immediate demands into a general political strategy.

Labor, community and environmental representatives all included bureaucrats and local politicians or lobbyists with little interest in concrete social change. Many people at the conference, however, were concerned not with saving the earth as it is, but with establishing real contact, understanding and alliances, because they saw that we have to change the world in order to save it. Perhaps what distinguished the environmentalists who agreed with this view from most of the other social activists in labor and community groups was a strong intellectual concern (sometimes too abstract) for general economic and political problems and solutions, and also more typically middle-class positions, often based on scientific, technical or academic jobs.

The second part of the conference was, in fact, dominated by social activists of the three groups. They had much in common and they all attempted to reach out and organize that large section of the American people who neither identify themselves with traditional labor nor with the narrow defensive positions of the traditional middle class. There was hope — and now some evidence — that when social activists could listen to each other, without being offended, intimidated and confused by bureaucrats, academic experts and traditional politicians, they could talk together and perhaps work together later. Through a considerable amount of work and good thinking, some of the problems in the way of major radical change had been defined more clearly. Some of the contradictions between the immediate demands of the oppressed, the poor and the unemployed (or marginally employed) and the long-term needs of everyone to control our own work and community environment and our future, had been examined. A growing awareness has matured that such contradictions must be resolved among the people, rather than allowed to be magnified and used against them. □

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NEWS NOTES

• *The Occupational Health and Safety Administration (OSHA)*, under attack by President Ford for being "too tough on business," has postponed the adoption of new safety regulations until after the November elections. The regulations, which include limits on exposure to ammonia, lead, asbestos, and excess noise, affect the health of over 10 million workers. The Oil, Chemical and Atomic Workers Union is already suing the Ford Administration over red tape regulations on OSHA which have been used to delay the adoption of safety regulations.

• According to columnist Jack Anderson, the Labor Department recently inspected an eleven story office building in downtown Washington, and found more than 300 safety violations. The building was the office of the Occupational Safety and Health Administration.

NAM Newspaper, June 76

Gay Health Workers' Conference

A California first — Earlier this Spring, March 19 and 20, over 200 gay people who work in the health field met at a Bay Area Gay Health Workers Conference. The conference, which included an evening of music and films and a day and a half of workshops, drew a crowd, approximately half women and half men, from a variety of health jobs such as aides, nurses, mental health workers, and alternative health workers.

The wide range of topics included: The ranking of the health labor force, women and the health system, health services for gay people, and psychiatric oppression of gays. Particularly well-attended workshops included: Coming Out and Not Coming Out On The Job, where people

discussed relationships with co-workers and the common isolation felt, even from other gay workers; Racism In The Health System, where both Third World and White People talked about racism at the work place and the many ways it is used to divide workers; The American Health System, which explored how the various powerful businesses that make up the medical-industrial complex affect the lives of health workers and consumers.

A member of the conference planning group explained why the conference was organized: "We got together because we felt the lack of any place where we could combine and share two very important aspects of our lives — our jobs as health workers and our social identities as gays. We felt that meeting together as gay people could give us a basis of trust that would allow us to share not only the details of our particular experiences as gays, but also the broader issues that affect everyone at our workplaces." Another planner added: "We felt that the time and place were right for this — Here in the Bay Area, there are so many gay people in the health workforce, in such a large, unionized health industry. And with the current economic crisis, we are all feeling the pinch with lay-offs and speed-ups." The planning group was an independent coalition of lesbians and gay men, third world and white, working in various health facilities in the area.

Throughout the conference, there was a general sense of excitement and encouragement. One conference participant expressed her enthusiasm, "This has been a real important experience in my life — to have had the chance to talk about these things that mean so much to me with other people in the same boat. The workshops were great — I learned a lot about the health system and about other people's experiences. Everyone showed a lot of mutual respect. I even met other gay people who work at my hospital and I think connecting with them could really make a difference at work."

Many conference-goers expressed interest in continuing projects including putting out a gay health

workers newsletter and planning a series of afternoon workshops to pursue topics raised during the conference. An address was established for those interested in joining activities or for information:

GAY HEALTH WORKERS
P.O. Box 42242

TRINAGO'S UNITED LABOR FRONT

Raymond Mahadeo, our contact for the West Indies (see the last page of this magazine for his address), has informed Science for the People that a new party has formed in Trinidad and Tobago, (Trinago for short). The United Labor Front (ULF) was formed by the leadership of the trade unions in Trinago's major industries. It represents over 40,000 sugar workers, almost the same amount in oil and petroleum, and members of smaller trade unions.

The ULF is attempting: 1) to form a labor government that will represent all workers and peasants; 2) to forge unity between Indian and African people long divided by racism; and 3) to create the conditions for a new democracy by eliminating Trinago's *socio-economic-political-cultural-psychological* dependence upon imperialist countries (US and Great Britain) and their multinationals (Texaco, Amoco, Lever Bros., Nestles, Unilever, etc.).

The ULF was organized in February 1975 and had its founding congress on March 28, 1976. It rose out of a 5 year period of struggle beginning in 1970 with spontaneous demonstrations by the unemployed (mostly African people), an army uprising, and the jailing of union leaders. A state of emergency was called in 1970, and again in 1971 when sugar workers, a key sector of the working class and predominantly Indian, moved to join up with the African unemployed. By 1974, the Transport and Industrial Workers Union formally opted for socialism and in 1975 crippling strikes occurred in the 2 major industries, sugar and oil. From these struggles the ULF was born.

Trinago is a small country (under 2000 square miles) with a population of just over 1 million, endowed with an abundance of human and natural resources — sulphur-free oil, sugar, asphalt, fertile lands, waters teeming with fish, excellent tropical climate. But in such a potential paradise there are a seemingly endless social-economic-political-cultural crises — the product of racism, sexism and imperialism. There is galloping inflation, about 70,000 young, energetic people are being driven to drugs and crime through unemployment, and an even greater number are underemployed. Disease is widespread, and those who survive to adulthood face intense police brutality and a growing tendency towards fascism, manifested by the emergence of torture and murder squads of a series of repressive legislation. Trinago's courts, parliament and the press have launched all out attacks on the ULF especially now with government elections about to take place this year.

The ULF's goal is to organize the working class, to prepare the people to assume state power and to use that power to transform Trinago from the brutal decadence which now envelops it to one of peace, bread and justice, to one which puts an end to exploitation, to a *new democracy*. It's aim is to abolish the ills characteristic of capitalist-imperialist domination and to restore the human dignity which has been robbed from the majority of the people by this domination.

In seeking to build the new democracy, the ULF proposes the establishment of workers committees everywhere — factories, farms, offices, villages, schools, etc. The workers will elect their own delegates to the regional and national assembly. The national assembly, comprised of delegates from all sectors of the community, would meet regularly to decide all matters of national interest. Parliament would operate on a daily basis carrying out all the decisions of the national assembly. The new democracy would insure all fundamental rights and freedoms including the right to employment and to strike, the right to education

and culture, and unrestricted rights of trade unionism.

The ULF also proposes a policy for economic reorganization. Some of the main objectives are: 1) satisfying the immediate needs of the people which involves transforming the productive capacity and priorities of Trinago away from luxury items and those dictated by the multinationals, towards the production of low cost, high quality items to meet these basic needs; 2) full employment for all of working age with an adequate level of remuneration, since employment is viewed as a birthright, and equal pay for equal work with no discrimination by sex, age or race; 3) freeing Trinago from foreign domination of its economy, and joining with other Third World countries in bringing about a new world economic order; 4) emphasis on rapid but *decentralized* economic growth to develop productive forces to their maximum and insure that the individual's needs and aspirations for dignified work and a fully human life are satisfied; 5) Ensure adequate housing, and medical and dental care both preventive and curative for all; and finally 6) Ownership of the means of production by the people as a whole.



Lead Poisoning at Prestolite

The Prestolite auto battery plant in Visalia, California, has 150 employees, mostly Mexican-Americans. In January, the plant was fined \$45,000 by the state's division of industrial safety for health and safety code violations, the highest fine ever from the agency. The fine is being appealed by Prestolite. At issue is whether battery production is the source of lead poisoning. The state of California says it is, and charges that despite repeated warnings and orders the company avoids correcting the problem. Prestolite, realizing that a costly precedent may be set if they are forced to clean up their plant, denies any guilt and threatens to leave the state if this "harassment" continues.

According to United Auto Workers studies, lead poisoning is common in many battery plants. In Canada, General Motors ordered that no women of childbearing age could work at its battery plant because of the danger. At Prestolite, 119 workers saw a doctor about lead problems last year. Lead contamination has long been known to cause anemia, neuritis, and damage the blood, kidneys, brain and central nervous system.

One worker has this to say about his job:

I'm 29 but I feel like 50. I've been having stomach problems and kidney problems. I know my nerves are shot. I notice myself shaking. I get headaches. Some days I take 5 aspirins. The lead makes you irritable. It's hard to get along with your family. People get on your nerves all the time.

But the workers remain at Prestolite. "The \$4.24 an hour is a good wage for around here. Right now it's hard to find another job." As a UAW spokesperson stated: "Nobody wants to be out of a job but nobody wants to work in that environment. It's not right that we have to choose between our job and our health. It's just not right."

N.Y. Times, 6/6/76

Sally Hacker

REVIEWING AFFIRMATIVE ACTION

Over a decade ago under considerable pressure, the U.S. government finally wrote into law equality of opportunity in employment. It is taking civil rights activists many more years to put some teeth into this paper equality. One such requirement is affirmative action, whereby employers, unions, and finally even universities must take positive steps to end discrimination and produce hard data to prove it.

Universities have been particularly resistant to changing. Women, Third World groups and others have filed thousands of charges against them, and the results are pitiful. The Office of Civil Rights of the Dept. of Health, Education and Welfare is responsible for enforcing the law. Recently fifty-seven civil rights groups charged the Secretary of HEW in court with failure to withhold federal funds after finding discrimination, and deplored "the persistent and continuing failure of the Dept. of HEW to protect the rights of minorities, women and the handicapped." (*Chronicle of Higher Education*, 2/23/76)

Part of the resistance arises because those with power and privilege — primarily white men — are being asked to share it. Those with less power but relative privilege are reacting defensively rather than joining in attacking the hierarchical system which limits good jobs to very few. They are fighting tooth and nail to preserve their piece of the same old pie. (Bob Kuttner, "Quota Hiring: White Males and Jews Need Not Apply", *Village Voice*, 8/31/72; Patricia Sloan, "Discrimination Against the Unqualified? Come Off It, Sidney Hook", *Feminist Art Journal*, 2:10-11, 1973.) Objections are raised — quotas are unfair; women and minorities are unqualified; white men will lose opportunities; universities will decline in quality. And answered — discrimination is unfair; there is no reason to assume women or minority candidates are unqualified (study after study shows that they are not rewarded with jobs, pay, promotion at the same rate as equally qualified white men); white men will only lose their privileges, not their rights; the quality of universities might indeed change (for the better), given an influx of talented people from diverse cultural experience.

Underlying the controversy over affirmative action are several problems of great significance, such as the function of higher education. These institutions exist to produce the elite workers and the managers of a highly stratified labor force. Such reforms as affirmative action or equal employment opportunity — if they worked — could come close to threatening the hierarchical system, because by definition there are few jobs at the top. While we fight with the tools we have for equal opportunity, we should also aim for the reorganization of the very nature of work itself. Otherwise, affirmative action and related reforms which encourage participation in the system as it is now imply that the more a woman or minority male approximates the values, style and skills of middle class white males, the more successful they will be. Thus everyone might end up learning to develop an authoritative manner, a technical, professional ideology, little concern with people, with feelings, with interpersonal relations. Everyone might reach college age with similar cognitive styles, pencil and paper skills, and kinds of degrees and publications. This is the basic contradiction between equal employment opportunity and hierarchical systems such as capitalism. If everyone displayed these traditionally white male attributes, the conviction that failure is one's own fault because of inherent inferiority would fade. There wouldn't be enough jobs to go around, and anyone would be pissed at the lack of a job or adequate salary. Further, no one would want to merely fix the food, mind the kids, or tend the machines.

However, affirmative action can become a tool for beginning the larger struggle necessary to overturn the accepted structure of employment with its hierarchy of status and job definitions. Working to implement legal reforms can promote solidarity among and between oppressed groups. If women and minorities begin to see the similarity in the functions they serve for society, a working coalition between them can and has indeed threatened the status quo. Our economy uses women and minorities as a reserve labor force, a group socialized not to expect as much as white males in the way of employment, and not to complain about demeaning jobs, poorly paid jobs, or no jobs at all. The relationship between group prejudice and discrimination on the one hand, and an economy oriented toward profit and expansion on the other must be clearly recognized, and affirmative action struggles make these connections obvious. Ultimately, white males may join in to demand reorganization for full employment, so that no group suffers at the expense of another.

MALE CONTRACEPTION

Continued from p. 15

the development and acceptance of new agents and for the better use of existing ones. For instance, most sex education and health courses dealing with birth control are directed towards the female. Teenage birth control means birth control methods for young girls. Among those teenage boys who receive no education about their bodies and contraception are the future doctors and researchers who will continue to ignore men's responsibility in contraceptive affairs. Also, it is easier to experiment on women than on men, since Planned Parenthood clinics and individual obstetricians can reach vast numbers of females, who, in need of contraception, will be "appropriate material" for clinical trials. Thus the cycle continues.

The attitudes of women toward male contraception are themselves varied and give an indication of the tensions to which most women's sexual lives are subject. Many females feel that even if male birth control methods were available, they would not welcome their partners using them since errors or lapses of responsibility would result in their becoming pregnant. They do not feel relaxed or

comfortable with the idea of being dependent on somebody else for their contraceptive needs. It is clear that lack of trust between the sexes can render the best contraceptive totally ineffective.

Effective contraception can exist in a very oppressive context. As pointed out before, a typical male-dominated society like Japan relies on the condom as the number 1 method of birth control and that does not guarantee any improvement in the position of women. Dehumanized sexual intercourse can coexist with any technical breakthrough and the most violent rape can be performed with the ideal contraceptive. Consciousness raising around the issues of sexuality, birth control and male participation have to go hand in hand with the scientific and technological work to develop contraceptive methods for the male. Men must share the responsibilities and risks that up to now have been born by women alone.

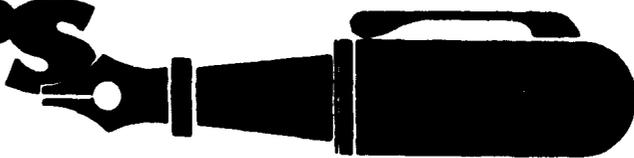
For the next few years, though, the sexual politics of the research establishment plus the profit motive of the drug industry makes it very unlikely that we will be presented with a safe, simple and effective contraceptive for *either* sex.

Rita Arditti

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letters



Dear Science for the People,

In the May 1976 issue of Science for the People, the references to our response to E.O. Wilson were left out. We feel that these references should be very useful to readers of the magazine and want to publish them in this letter. Those references that describe the difficulties in separating genetic and environmental factors for human behavioral traits are:

1. R.C. Lewontin. "The Analysis of Variance and the Analysis of Causes." *Am. J. Human Genetics*, 26, 400 (1974).
2. M.W. Feldman and R.C. Lewontin. "The Heritability Hang-up." *Science* 190, 1163 (1975).
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Those references which present a critique of Sociobiology are:

4. Sociobiology Study Group of Science for the People. "Sociobiology — Another Biological Determinism." *Biosciences*, 26, 182 (1976).
5. An expanded, more detailed version of reference 4 is available from the Science for the People office, 16 Union Square, Somerville, MA 02143, for 75¢.

The Sociobiology Study Group

Dear SftP

I am a prisoner in Folsom prison where I have spent most of the last 25 years. I've naturally had a lot of time to read extensively and to try to think objectively and am very impressed with *SftP* which from my sketchy information based on reading only two copies is probably the most stimulating magazine I've ever read. It provokes thought and offers me hope in this screwed up world for myself and the people who contribute to the struggles for justice. I was especially interested in the article on Sociobiology in the Nov. 1975 issue. The publication is without doubt the very best I've been able to read because even I, an uneducated person, can fully comprehend all the writings and can easily relate to its declared purpose. Keep up the good work.

George M. Mason

Dear Friends:

SftP inspires me when I read your analysis of the relations between established science and government, academia and the military-industrial complex.

I was a geology student in college but dropped out because I was disgusted by and fundamentally opposed to the fact that all geologists work for the government, corporations or schools and thus have their research controlled by the desires of those institutions: finding natural resources and ignoring the resulting devastation of the environment and people's lives, or doing research into obscure albeit geologically interesting rock formations with no regard to whose back's sweat produced the money for their research grants. Geology is a field not noticed much by the public: the perfect apolitical science, concerned only with locating oil or discovering the origin of the earth. But one look at MIT's Earth Sciences Building is enough to realize that geology is another field of science intimately bound into the capitalist-imperialist system and the elitist hierarchy. I would be interested in seeing an article in *SftP* relating to geology and geological research.

Emily Allen

Dear SESPA People:

Just a short note to say that I still find the magazine important and useful — and with a spirit of struggle. I've watched SESPA grow over the years, through its political struggles and changes. I find, in general, the articles to be objective, well-researched, and useful. There exist differences in political line, which is good, as long as struggle around those differences continues.

I've used some articles in my environmental problems class (9-12 grade, though mostly 9-10); mainly ones about food additives and the food industry and about industrial health and safety (in a section I call "environment of the workplace"). These have always stirred up lots of interest. At the end of our last semester, we did some stuff around environmental protection in China, using sections of *Science Walks on Two Legs*, articles from *China Reconstructs* and some things in U.S. magazines. Very interesting — none of the students had any idea what the PRG was about and really questioned things they had read and things they had heard. Every student I've had has volunteered that money (profit) is more important here than anything else. They were fascinated to learn about a place where people are more important!

In struggle,
Paul Fishman
Santa Anna, CA

Dear SftP,

The past twelve months or so have been very momentous for our country and in some ways for myself personally, as I have decided more and more to enter the field of rural development, applying both social and physical sciences directly in experimental endeavour. I am now in the course of preparing a systematic project, which is based on a fairly extensive field study of such development projects already in progress and also various reports and studies that I've come across. In your last letter you have rightly mentioned the main blockages to development of a relevant science and technology — elitism, neo-colonialism, racism, sexism, class biases, etc.

What has probably prevented a break-through, even on the part of those who reject these is that they have nevertheless remained confined within its walls. For instance, they almost invariably belong to elitist institutions and organizations, who are therefore unable to identify themselves with the minds, thoughts, aspirations and emotions of the common people. Hence their critique of elitist and exploitative science and technology remains elitist and exploitative. To break out of this vicious circle, the only way is to enter the rural areas and to live with the people with whom one wants to work. Somehow this is a very difficult matter in India, although villages are often just next door to a town. Nevertheless we have developed a plan, of which I'll send you a copy when it is ready.

The reorientation of scientific research in India in order to serve the needs of the masses is in fact a very long-term task. The main reason is that the intellectual and scientific tradition was broken after the imposition of European rule in the 18th century; the new education, science, technology were imported from abroad, with no relationship to the local society, its traditions, its expertise, its fund of knowledge, the skills of its engineers and artisans, etc. A whole intellectual universe was superimposed on an existing society, with its roots in the erstwhile imperialist countries; and this continues to dominate and control educational and scientific life in this country. Even

the radical or revolutionary elite is so caught in this imposed neo-colonial pattern that, however desperate or rebellious, it is unable to break out. No strategy for breaking out of this has been worked out or even discussed. At best the alternative that occurs readily is to substitute another external dependence pattern — on Soviet Russia or China — for the existing dependence on the Western world.

The other part — the native universe — in which the bulk of the people (at least 75%) subsist, and who are mostly the poor and illiterate, are inarticulate at least so far as making themselves heard to the elite in their own terms (of the poor) is concerned. Their talent is sucked away to serve the elite, rarely to join it. In Ceylon, which is a much smaller country, somehow the non-Westernized elite was able to overthrow the westernized elite in the election of 1956, which brought the Bandaranaike's to power. Whatever its ultimate outcome, it was an assertion of the local forces — non-westernized intelligentsia mainly — to a predominant voice in local affairs. Nothing like this has happened in India, in part because the westernized elite has preempted radical slogans.

The only practical way I can think of is to make the journey to the real India and speak from within its location. There are a number of interesting programmes already underway. Perhaps the most important are the Science Education for rural and slum area schools being conducted in Bombay; a science education and technical training centre in central India; two science and polytechnical training centres in U.P. in northern India; and the Social Work and Research Centre in Rajasthan.

Recently, the Indian Institute of Science has started a rural development programme in Bangalore. Possibly Science for the People might be interested in an analytical report on these (and some other) efforts. Ultimately, of course, unless the political power is decisively in the hands of the poor and the workers, the orientation of scientific research, technological development etc. cannot be directed to the tasks of mass uplift and liberation. At the moment, of course, there is a stalemate in the sense that, on paper, the commitment is to socialism; but the economic power structure is clearly capitalistic or monopolistic. The contradiction between the prevailing ideology, which is necessary to win mass support for the regime, and the economic reality creates confusion and prevents the vigorous development of either socialism or capitalism. The presently declared Emergency is intended to some extent to clean up the confusion, not by removing the contradiction but by tidying up the confusion — perhaps to the extent that it separates the process of ideology propagation from economic activity. Those who want to talk socialism may do so but not interfere in the economic process; and those who want to build strong capitalism may do so but not interfere in the talk of socialism. How far this process of tidying up will work remains to be seen. Incidentally, do send me a packet of your literature and SftP copies.

S.S.
Hyderabad, India

To the Editor:

Recently, a copy of your January 1976 issue was brought to my attention; the article of particular interest to me was entitled "Accelerating the Struggle: Discontent Stalks the National Labs," by Peggy Strom. What concerns me is the number of errors and distortions in the discussion dealing with the Professional Staff Association (PSA) and the Oak Ridge National Laboratory (ORNL). I shall let the spokesmen for ORNL worry about the latter, but as president of the PSA, I must try to set the record straight on several points concerning the PSA.

Continual usage of the phrase "steering committee" or "organizers" misleads the reader into believing that PSA never got off the ground. In fact, since January 1975 (a year prior to publication of your article), we have been operating according to a formally adopted Constitution and By-laws with an Executive

Committee composed of elected officers and divisional and at-large representatives. As to the central problems we face:

1. We are not exhausted — on the contrary, the diverse issues we tackle are expanding.
2. We are not reluctant to push militant issues.
3. Although there is *some* reluctance on the part of potential membership to participate in collective activity on their own behalf, our membership is growing and, as in all endeavors, it takes time to educate people.
4. We have neither ambivalence towards management nor a conflict of interest — on the contrary, we know what we want.

In the interest of brevity, I shall not comment on the minor errors and non-sequiturs scattered throughout the article. However, I must take exception to your journalistic style (or lack thereof). First, as far as I can determine, not one of the elected officials of the PSA was interviewed by Peggy Strom. I suppose that there is no point in getting the information from the horse's mouth when the statements coming from the other end of the horse fit your preconceptions. Secondly, persons identified not by name but only as "organizers" are quoted — a practice I thought endemic only to the "capitalist press." Finally, I find little if any relation between the summation (in reality an editorial) and the rest of the article.

Sincerely yours,
Peter F. Dittner
President, PSA

Dear Friends:

I received two issues of SftP and I'm sending my £1 which is approximately \$2 (of course the pound is falling these days). For the last two years I have followed the progress of your magazine and I have noticed that in every issue there are a lot of improvements. Especially the quality of the articles is increasing and the information that you are providing is very valuable even with the British standards of scientific magazines. Articles about Third World problems are my main interest as of course are articles on the use-misuse of science and occupational health.

Yours,
A. Valaxanidis
London

Dear SftP:

The Berkeley-Oakland Women's Union is a socialist-feminist organization located in the San Francisco Bay area. One of our priority work areas is the issue of forced sterilizations. Work is being done extensively in major cities around the country to expose the racism, medical sexism and classism of population control exemplified in the disproportionate number of sterilizations performed on third world and poor women.

The anti-forced sterilization work group in BOWU is in an investigative stage now. We are attempting to find information about sterilizations in the Bay area; where they are occurring, who is being sterilized, etc. It is clearly a difficult task, since most of the medical profession is very reluctant to reveal any information — particularly statistics (which often are not even kept).

As a result we are hoping to find people inside medical establishments who are willing to help obtain information. We need people who work in hospitals, clinics, offices — anywhere related to medicine as nurses, doctors, orderlies, clerks, etc. We hope that this letter may reach health workers in the Bay area who are interested in combatting these gross injustices in the health system. If you have any information at all, and are willing to share it, please contact us c/o me.

Mindy Kurzer
5160 Claremont Ave.
No. 402
Oakland, California 94618

About this issue
continued from p. 3

notoriously corrupt and will not endanger their carefully organized power by involving their unions in any movement which threatens the status quo. The present system has maintained and enhanced their power. Secondly, union leaders and environmental groups have shown in the past their lack of awareness of the interests of women and Third World and white working class people. Community groups representing these interests are wary of joining an alliance with organizations which do not take their demands seriously. The fact that the Black Caucus and the Women's Caucus had to struggle to be put on the agenda demonstrates the problem. The fact that these caucuses were to some extent successful in winning their demands is encouraging. The direction of this conference — forming this alliance — is a new and exciting one which SftP should actively support. This conference is a first step.

The Davis affair at Harvard is a graphic demonstration of the connection between theory and practice on the part of a reactionary member of the "intelligensia." Fortunately mass consciousness on the opposite side of the issue was sufficient to bring about a retreat. The incident's import is apparent not only from the heavy play in the media but also from the immediate response of the Harvard administration itself. Harvard's reaction should not be mistaken for a profound commitment to extinguishing racism in U.S. society: Harvard has consistently played a leading role in sustaining racism both at the academic level (consider Banfield, Moynihan, Herrn-

stein, Glazer *et al.*) and in its institutional practice in real estate, health care and education. At a time when priorities in medical research, ethics in medical human experimentation and funding for medical education are under attack, perhaps Harvard feels especially vulnerable to widespread anger on the part of minorities, women and all supporters of real affirmative action.

CHINA

The Boston China study group is very interested in getting the proposal for a second SftP trip to China off the ground. Every aspect should be organized on a national basis and be open and democratic. We need INPUT. Please contact us *soon* if you want to work with us, or if you're interested in going to China (if so, please say a bit about why you want to go). We'll be contacting regions and chapters soon.

Boston China Group
c/o Jean Kollantai
98 Ellery St. #3
Cambridge, MA 02138

Continued from page 2

EDITORIAL PRACTICE

1. *Operations:* SftP is published through the activities of the Editorial, Production and Distribution Committees under the direction of the Magazine Coordinating Committee (whose members are drawn from the other committees). All committee members (part-time, unpaid and serving 6-12 months) and the Magazine Coordinator (part-time, paid) are from the Boston area except for some members of the Editorial Committee who are from other cities. All committees are accountable to the general membership by way of 1) the annual Northeast Regional Conference (the most regular and widely attended conference of SftP) which reviews the magazine and makes general policy, 2) the different chapters of the Northeast Region through the Northeast Regional Coordinating Committee, and 3) local chapters through selection, review and direction of their participants on the Editorial Committee. Nationwide representation on the Editorial Committee by active SftP members is encouraged.

2. *Material for Publication:* To be in accord with established guidelines, material for publication 1) should deal with issues of science and technology, from a radical perspective, 2) should raise the political awareness and involvement of the general readership, and 3) should stimulate activities of individual persons and groups and the formation of chapters, but should not generally have the character of an "organizing manual."

3. *Kinds of Contributions: Articles.* Good articles can evolve from our work and from community-based or other, political, investigation and activity. Topics may reflect research, teaching or other interests, and can take the form of book reviews, reports of events, or analytical articles. Writing done for another purpose often can be adapted for SftP and is welcome.

Procedure: 1) articles written for another purpose and roughly conforming to above guidelines: submit 3 copies along with a letter describing the article's origin, how it might be adapted, and whether the author(s) are willing to do so. 2) new articles: if convenient, send an outline of a proposed article so that the Editorial Committee can point out possible conflict with the guidelines and make suggestions concerning content, resource material, emphasis and magazine context. In this way, some assurance can be given that an article will be used. Writing articles collectively is encouraged. Submit articles in 3 copies. In attempting to give authors constructive criticism and support, the Editorial Committee expends considerable effort in reviewing articles and discussing them with authors. Final substantive editorial changes are cleared with authors. In discussing the magazine's content, in the "About This Issue" column, the Editorial Committee may point out unexplored questions, describe the range of opinion within SftP on a particular issue and draw some additional political interpretations of its own from the articles.

Current Opinion. Short, tightly argued positions on timely subjects are required for the Current Opinion feature. These contributions, including an occasional one from the Editorial Committee, should rely on facts and analysis generally accepted by the membership. It is the responsibility of the Editorial Committee to try to select those which best clarify the debate; this will include discussing changes with authors. Contributions should be 500 words or less, in 3 copies.

Other Contributions: Letters: contributions for continuing debate, commenting on previous magazine content, initiating new discussion, etc. News Notes: news items illustrating the social and political role of science and technology, especially reporting people's actions on these kinds of issues (300 words or less). Chapter Reports and SftP Activities: brief summaries having essentially assured publication, with editing. Graphics: all kinds, including cartoons, designs, photographs, etc., not necessarily original but with credits.

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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:

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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.

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