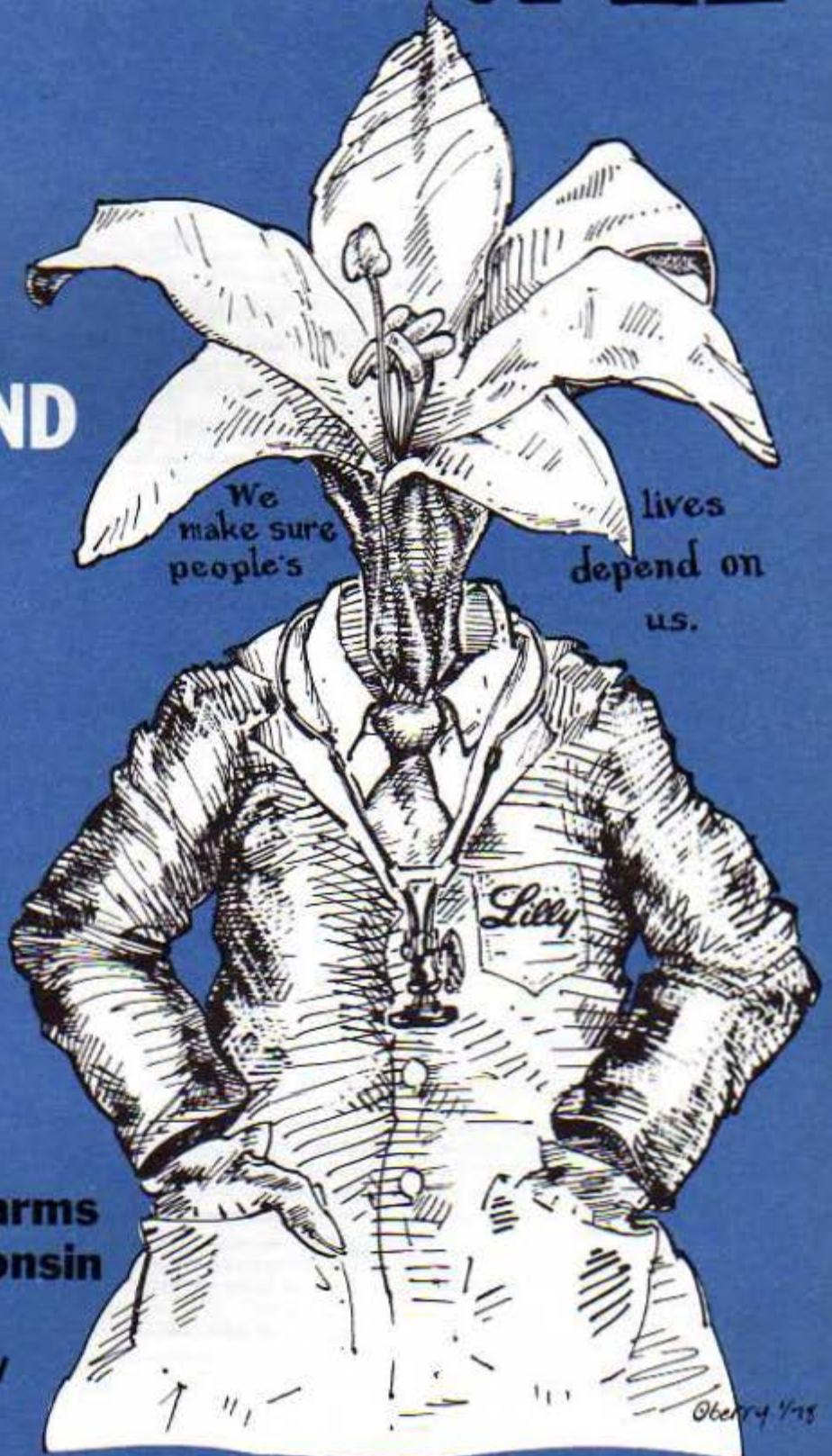


SCIENCE FOR THE PEOPLE

DRUG ABUSE AND THE MEDICAL PROFESSION: THE CONNECTION



Automating California Farms
Mining in Northern Wisconsin
Nestle Boycott
Sociobiology Film Review

CHAPTERS AND CONTACTS

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 criticize, challenge and propose alternatives to the present 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 the magazine and/or actively participating in local SftP activities.

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about this issue

In this issue we present an article on automating food production, "No Hands Touch the Land," originally a pamphlet by the California Agrarian Action Project. The article documents how publicly funded research at the University of California is used to further the interests of a handful of large growers at the expense of almost everyone else: the farmworkers displaced by the new agricultural machinery, the taxpayers whose money ends up in a few private pockets and who have to fund public assistance for the displaced workers, the consumers forced to swallow new varieties of vegetables bred for mechanical processing rather than eating, and the small farmers ruined by competition with large-scale mechanized production.

Though the research is largely funded by the public, its direction is strongly influenced by a few corporate sponsors with clout in the university administration, the state legislature, and local government. Systematic exclusion of the concerns of the people — workers, consumers, small farmers — results in a technology incompatible with human needs and the natural environment: inflexible, energy-intensive, pest-prone, oversophisticated, polluting and large in scale.

This Western, capitalist technology is large in scale for a reason: large-scale technologies tend to concentrate power and control in a few hands rather than with the majority of people. One could conclude from the article that a community or nation using such technologies should be strongly aware that decision-making comes increasingly under the influence of a small number of technical and managerial personnel — and the capitalist or bureaucratic elite whom they serve. Thus when a country such as the People's Republic of China intensifies its policy of mechanization of agricultural production through the purchase of sophisticated machinery from the West, it is natural to wonder whether that technology will continue to serve the workers and peasants of that nation.

However, one should not go overboard with this argument. Anyone familiar with heavy work in fields or factories appreciates the importance of labor-saving devices. For this and other reasons, most Third World countries — capitalist and socialist — are mechanizing agricultural production as fast as they can afford to. A number of these countries are rightly suspicious of efforts by liberal foundations to foster "intermediate technology" — small-scale production using simple tools and local materials — seeing this as an attempt to widen the gap between rich and poor nations, and a hedging on earlier aid commitments.

Thus, before condemning the practice of other countries, one should realize that intermediate technology begins at home. While it is legitimate to wonder if automation and mechanization will be ultimately liberating or repressive in a situation such as the People's Republic, it is more pressing to confront technology that has long since run amok: that of the U.S., Western Europe, and the Soviet Union. This confrontation requires careful analysis and dialogue to separate the valuable or liberating aspects of a certain process or machine from those that alienate or limit. "No Hands Touch the Land" is a worthwhile resource in this struggle.

Some new and intriguing insights into the politics of the U.S. drug abuse problem are discussed by Mike Smith in his article "The Lilly Connection: Drug Abuse and the Medical Profession." The latest response to heroin abuse, which has long been a major social problem, is an increasing reliance on methadone maintenance clinics. Smith argues that these clinics, rather than effectively coping with the heroin epidemic, have only created a new problem, the methadone epidemic.

This has *not* been the result of policies developed by well-meaning but naive or uninformed physicians and social workers. In an historical analysis, Smith describes the role that drug companies and the medical profession have played in the abuse of both heroin and methadone. Doctors, who have been instrumental in developing U.S. drug policies, have facilitated illegal drug sales and participated in the cover-up of dangerous side effects. Even more alarming is the potential use of methadone maintenance programs for social control through extensive computerization and the "therapeutic" use of the addictiveness of methadone. Rather than freeing people from heroin dependency, addiction is merely transferred and a new dependency created — on a new drug and on the agency that dispenses it.

There are alternatives to the chemical and psychoanalytic approaches to drug abuse, alternatives that have helped patients take more control over their own lives. Acupuncture, herbology, improving basic health care and programs that invite community and ex-addict participation have been effective in this way. Why haven't these programs received more attention and support? Why have their advocates been repeatedly harassed and threatened? The implications are only too clear that there are powerful interests behind maintaining these drug "treatment" programs.

ABOUT THIS ISSUE, *continued on p. 39*



letters

Biology of Man, Toronto: University of Toronto Press, 1970]

In addition we should mention the use of sweeteners in baby formulas and the likely importance that this has in initiating the syndrome of sucrose dependency, with the resulting blood metabolism disorders, atherosclerosis and ischemic heart disease that plague adult life. (See the work of Yudkin in this respect.)

All of this serves to raise the question about the advisability of using infant formula *anywhere* — not just in developing countries — except as an emergency supplement to breast feeding. This in turn must lead to questions about why breast feeding has been and is discontinued in developed and developing countries alike. Ms. Margulies, for example, does not mention *maternal malnutrition* as an important problem in developing countries (perhaps the mothers should drink the formula!), or the role of imperialism in perpetuating and in some cases instigating this problem as well. In short, as important as the problem she discusses is, we wonder whether the emphasis has not been misplaced or perhaps too narrowly placed to fully appreciate its scope.

Sincerely,
Gerald Gutenschwager
For the St. Louis SftP Chapter

P.S.: We might add that we have become sufficiently interested in this problem to have joined a St. Louis coalition on infant formula abuse which is in its early organizational phase at this time.

MORE ON CORPORATE SCIENTISTS

Gentlemen/women:

Your magazine is excellent; I look forward to reading every issue. I am not a scientist so I am sometimes put off by technical pieces but generally you are very good about that. I would like to see more articles that deal with the relationship of science to larger economic and

political issues. Your articles on Schumacher were good in that way. In the long run it is important to work out a consistent analysis and strive for theoretical clarity.

I also would like to see more on the social relations of scientists and technicians who work for corporations. This question relates to the "new working class" theorists like Gorz and Mallet. I have a feeling *SftP* is heavily oriented toward academic science, which, of course is only a small part of the pie.

It is important for organizations like yours to survive this period of political quiescence for the left. Good luck.

In solidarity,
Todd Swanstrom

PRODUCTION, POLLUTION, REVOLUTION

Dear SftP:

I would like to disagree with a statement in the November "About this Issue." You say, "It is unlikely that worker ownership and control of a developed industrial economy would significantly improve the workplace or environment if present capitalist levels of production and consumption are maintained." Social wealth is a requirement for improved living conditions. People make revolution not only to control the wealth they produce but to remove the capitalists' fetters from the means of production.

The *SftP* book, *China: Science Walks on Two Legs*, provides an example of how a socialist country deals with this question. The experience of the Shanghai Electrochemical Works (pp. 83-94) shows that increased production and improved environment can go hand in hand when the working class holds state power. Before the Cultural Revolution the Works was a big polluter, following Liu Shao-chi's capitalist line of considering only production. The Works' wastes were ruining the surrounding farmland and were harmful to the

NO SUBSTITUTE FOR MOTHER'S MILK

Dear SftP:

We appreciated the article by Leah Margulies, (Vol. 9, No. 4, July-Aug. 1977, pp. 9-12), on "Exporting Infant Malnutrition" but felt that it left the impression that infant formulas were really all right as long as the mother had clean water and could read the directions, i.e., that there was nothing wrong with feeding formula to babies in industrial countries. But hasn't the same desire for profit motivated the medical campaigns and market saturation of formula in the developed countries, with little concern for the health impact on the "well-fed" babies of the West? For example, the fat-protein proportions in breast milk and cow's milk are quite different:

Breast milk is a low-protein, high fat food, in which 6 to 7 percent of the calories are derived from protein and 53 percent from fat, whereas in modified cows' milk mixture 14 percent are derived from protein, and a considerably lower proportion of the calories from fat. In view of the fact that the infant has a limited capacity for utilizing protein and that fat has a special place in infant metabolism, you may well ask...whether later in life pathological states are not ultimately derived from early well-meant clinical and nutritional maltreatment. [Source: comments by E.H. Hipsley in S.V. Boyden (ed.), *The Impact of Civilization on the*

workers. During the Cultural Revolution this line was exposed, and within three months the major pollutants were controlled. The "pollutants" were further processed to make useful products, increasing production. At the beginning this was done even though it was more expensive. Further technical advance has allowed the Works to "make revolution more economically."

I think that the source of your error is a confused notion of what a "people's government" is. If people like Liu Shao-chi controlled the government, then capitalism would be restored, as it has been in the Soviet Union. That is how production ends up serving a few, not the whole people.

As for the "real world of limited resources," our developed country is not so much bucking up against shortages (contrived) as it is crippled by unused capacities. Millions are unemployed, factories run at half-capacity, training is granted to a few. When the initiative of the workers is unleashed to serve the whole people, this untapped social wealth will be used to vastly improve our living and working conditions. As you correctly began your editorial, capitalism is the cause of our deteriorating lives and socialism is the solution.

Yours,
Mike Teel
Boston

FREEDOM FROM NOISE

Dear Science for the People,

I am presently beginning a subscription with you and am also interested in finding other people in my area who are interested in issues concerning science and technology, and the growing need for monitoring ways in which these influences are affecting our lives directly.

I would like to see an article or the provision of some pertinent information about protecting consumers from the increasing plight of noise pollution. My own interest and concern is evolving from, perhaps, what turns out to be an immediate need or requirement for my own sanity.

I have recently moved into an area with an abundance and overload of auditory stimuli. Needless to say, the culprit is man's coveted invention, the machine. I live under the constant hum

of the air regulating system in the nursing school building across the street, which like all the other bothersome noises seems to resound at an increased volume because of the tunnel-like effect of that huge building structure. Early every morning, I am assailed by the launch of huge garbage trucks, including the mammoth one that empties the receptacle for the nursing school and plops it down with a sound at what seems the intensity of a sonic boom, particularly at such a vulnerable, sleepless hour. By the time classes for the nursing school begin, I am in anticipation of the deluge of more noisy emissions; this time they come from cars that pass by no less than two yards from my house. The unbearable roar of many of the engines assures me that there are little if any restrictions on cars (at least that are enforced effectively) to alleviate the noise problem. To top it off, the train (although I think trains are a wonderful thing and should be used more by people) in the not-too-far distance presses on and into the inner reaches of my ear

It is certain that many issues are not understood or realized until one is in a personal situation to call it to one's attention. I regret that this is the case; but in my case, I am glad I am being made aware of this problem every day. I only wonder if there is much people can do in this regard, both immediately and in the long-term, to gain greater control over their own personal space and environment. This helplessness troubles me deeply. Maybe you or some of your readers share this concern and can offer some guidance and measures that I might take.

I am fortunate not to live near an airport; the annoyances would be doubled many times over, I am sure. But no matter how big or small the particular case, the problem we must fight is the same. A major obstacle (and salvation, I suppose) is man's amazing adaptation. No sooner than we have complained are we also prepared even inadvertently to drop the whole matter if the odds of ever changing anything are too great or overwhelming. We must struggle on, even against what seem to be the most petty annoyances!

Sincerely yours,
Frances Yuan
Charlottesville, Virginia

TV TEST FOR MBD

Dear SftP:

Congratulations on continuing to hack away at the labyrinth of misconceptions regarding hyperactivity and minimal brain dysfunction. It is difficult for me to understand how any thoughtful, perceptive, sensitive professional adult can accept the idea that these behaviors and symptoms should be treated by the administration of dangerous drugs. I wonder how many more millions of kids will have to freak out of the system before the system gets the message that something is wrong with it.

Meanwhile, I would like to pass along to readers of your magazine (and to others) a couple of suggestions for dealing with this situation. One of these was passed on to me by a friend and the

LETTERS,
continued on p. 38

MEDICAL REPORT

In the liberated areas of Eritrea profound changes are taking place. Led by the Eritrean Peoples Liberation Front, the masses are smashing the colonial political structure and building peoples democratic power... This medical report describes the painstaking efforts of the EPLF to serve the masses in the field of medical care. It shows how despite the acute shortage of medicine and medical equipment, the EPLF is providing extensive medical service... (From the Intro.)

EPLF

SERVING THE MASSES ON THE MEDICAL FRONT: is available from EFLNA, Box 1247, New York, N.Y. 10027, 25¢ per copy and 15 c postage. Bulk Rates on Request.

news notes

MOBILIZATION FOR SURVIVAL CONVENTION

Mobilization for Survival (MFS), a coalition of 50 anti-nuke and peace groups that formed in April 1977, had its first national convention Dec. 2-4. Over 400 people from 34 states and 3 foreign countries created an atmosphere reminiscent of early mass meetings on the Vietnam war. Speakers included Sidney Lens, Jimmy Durnham, Peggy Duff, and Juan Roca. A variety of educational and organizing materials were available from some 20 anti-war and anti-nuke groups. Conventioneers reaffirmed support for the four MFS demands: Zero Nuclear Weapons, Ban Nuclear Power, Stop the Arms Race, Fund Human Needs.

Several national actions were planned. One will occur April 28-30 at Rocky Flats nuclear weapons plant near Denver (Rocky Flats produces the "triggers" for all U.S. nuclear weapons). A similar action will occur at the Barnwell Nuclear Reprocessing Plant, Columbia, S.C., April 29-May 1. Both actions will include a mass rally followed by non-violent civil disobedience. Teach-ins and community forums are planned for the week of March 26 to April 2. This "Save our Communities Week" is intended to build grassroots support for this year's Transfer Amendment (which would transfer many military appropriations to job, community, and economic stimulus programs). Finally, a national demonstration, coordinated with groups in other countries, is to be held on May 27, in N.Y. city at the U.N. to coincide with the opening of the U.N. special session on disarmament.

Conventioneers represented a cross-section of U.S. public, church groups, political groups, old folks, working people, students. The MFS base of support seems broad, with an unfortunate underrepresentation of the working class. But the issues are broad enough to appeal eventually to an even wider base. For example, MFS supports conversion to a "peace-time" economy for the creation of more jobs (Transfer Amendment is only one such movement).

Participants at the convention included Science for the People members from Champaign-Urbana, Chicago, and Ann Arbor. For more information contact Ann Arbor Science for the People.

—Nuclear Policy Group,
Ann Arbor Science for the People

REACTOR PUSH IN PHILIPPINES

A 600 megawatt nuclear power plant is being rushed to completion 45 miles west of Manila over the opposition of local residents. Police and soldiers have quelled protests and intimidated public debate. Meanwhile, a U.S. group, the Natural Resources Defense Council, has petitioned the Export-Import Bank in Washington D.C. to file an environmental impact statement for its financing of the Westinghouse-produced reactor. Objections to the project include: the health hazard, no provision for radioactive waste, exclusive U.S. control of uranium fuel, and the financial burden of a \$1 billion plus investment for a country already carrying a \$6 billion foreign debt. Careful investigation going beyond the usual public feasibility studies has disclosed that the Herdis Management and Investment Corporation which is directing the project is headed by a relative in the Marcos family empire. Herdis has arranged for numerous of its subsidiaries to have pieces of the action, including the exclusive distribution of Westinghouse in the Philippines, engineering consultants, construction, and insurance coverage.

—adapted from *Philippine
Liberation Courier*,
October 7, 1977

GENERAL FOODS PRESENTS

Following a CBS "60 Minutes" expose of "presweetened" cereals, the General Foods Corporation distributed a Special Report to Employees, attempting to counter that nasty program. Part of the report states: "During the three-hour interview, . . . Dan Rather was informed

repeatedly that percentage of sugar by weight is not a meaningful piece of information *since sugar is so much heavier than cereal*"(!) Furthermore, "Cocoa Pebbles . . . is 45% sugar by weight, not the 53% he said." Continuing, the GF Chairman argued: "Every newborn child has a taste for sweetness; it is innate, . . ." and, "Breakfast is a vitally important meal, and it has been shown that children who consume ready-to-eat cereals are less likely to skip breakfast," (than children who . . .?) Finally, "General Foods is proud of its support to Harvard University School of Public Health, as it is of its grants to many other outstanding educational and research centers which contribute to public well-being by advancing knowledge and promoting better understanding."

—a Westchester SftP
member and employee
of General Foods

MEDICAL AID FOR SWAPO

South Africa continues to maintain 50,000 troops in Namibia in an attempt to maintain its illegal control over the area. The Namibia Support Committee Health Collective is arranging for medical kits, simple and light enough to be carried into the operational zones, to be sent to the South West Africa People's Organization (SWAPO). Each kit, packed in specially designed haversacks, will contain basic surgical equipment, a range of drugs and basic first aid materials, together with an instruction manual. Each kit costs £100 and funds and other support for this project are urgently needed. Contact Namibia Support Committee, 21-25 Tabernacle Street, London, EC2 England. Tel: 01-588-4342.

—*Science for People*,
England

NEWS NOTES,
continued on p. 38

The Connection:

Drug Abuse and the Medical Profession

Michael Smith

Physicians play a crucial role in modern American society. No power of the physician has been more far-reaching than the power to determine which drugs can be “safely” given to the American public. A relatively small number of doctors have almost absolute control over the safety and effectiveness standards used in marketing drugs. In the field of drug abuse treatment, a handful of physicians control most of the important decisions in funding narcotic treatment programs, such as the multi-billion dollar “war on drugs” sponsored by the Nixon White House. Criticism of medical decisions is rarely given by non-physicians, because in some cases expertise is lacking but in many more cases because of the intimidating methods of the medical profession. To make matters worse, one of the basic lessons I was taught in medical school was that even a doctor shouldn’t criticize another doctor in public. What happens in a country where powerful figures cannot be criticized and questioned about their actions? This article is part of an inquiry into the actions and intentions of some of those medical professionals who have shaped U.S. drug abuse policy.

Physicians Facilitate Illegal Drug Sales

If we search behind the scenes of the popularized histories of drug abuse, a frightening and dangerous story emerges. In 1898 Bayer Pharmaceutical Products, the aspirin people, invented heroin, a “non-addictive” treatment for coughs, minor aches and pains. Millions of bottles of heroin elixirs and tonics were sold. Heroin was also touted as a miraculous cure for morphine addiction. Heroin was substituted for morphine in thousands of

clinics. Heroin maintenance would have been an appropriate name for the treatment. A massive advertising campaign led to AMA approval of heroin in 1906. By 1910 most scientists admitted that heroin is addictive and undesirable as a common home remedy. In 1914 Congress passed the Harrison Narcotics Act which outlawed most narcotics use but left loopholes just as today’s laws often do. Up to this point we might conclude that it is tragic but perhaps excusable that the medical profession itself sold the country on one of the most devastating drugs in history. But the story continues.

In 1919, 5 years after the Harrison Act, Eli Lilly & Co. published a catalogue listing 4 kinds of heroin cough medicine — mixed with wild cherry syrup, white pine, etc. The catalogue did not mention how addicting and deadly their cough medicine was. The extra-strength brand was so powerful that 8 oz. would kill an average person. Lilly’s Glycerole Heroin Compound, for instance, was supplied in pint and gallon bottles.

How could the doctors and pharmacists at Lilly have made such a decision? Was the need for cough medicine so great that they chose to take the risk of accidental overdose and the associated bad publicity? It makes one very

Michael Smith is the medical director of the Lincoln Detox Program, which is a community-based drug program in the South Bronx, New York City. The program is the largest ambulatory (walk-in) detoxification program in the country and has the largest acupuncture drug abuse treatment component in the country. This article is adapted from testimony he presented at the National Hearings on the Heroin Epidemic, Washington, D.C., in June 1976.

suspicious that their real intention was to supply the booming illegal market in heroin at that time. We now know that Lilly has repeated these suspicious marketing techniques with a series of dangerous, addictive drugs — Seconal, Tuinal, and Methadone.

Immediately at the end of World War II in Europe, a Lilly research chemist named Dr. Ervin C. Kleiderer joined the Technical Industrial Intelligence Committee of the State Department which was investigating Nazi drug companies.(1) Kleiderer's team brought methadone to this country. Two years later Lilly marketed Dolophine cough medicine, retaining the Nazi brand name for methadone which had been chosen to honor *Adolph* Hitler. Kleiderer soon became Executive Director of Development at Lilly. Lilly sold methadone cough syrup and tablets for 25 years, until the 1970s. It was supplied in pint and gallon bottles. Four ounces or four tablets would kill an average person. Does that sound familiar? Why would Dr. Ivan Bennett, the director of clinical research, and other medical professionals at Lilly take such a risk of malpractice? Methadone was never heavily advertised as a cough medicine. Federal researchers at Lexington, Kentucky had given it a bad reputation in 1947 by demonstrating how addictive and potentially fatal methadone is.(2) Despite this, methadone was slowly seeping out into the lucrative illegal drug market. It would only be a matter of time before some miracle-seeking doctor would "discover" that methadone could be used to treat heroin just as heroin had been used to treat morphine. In 1972 Lilly produced 90% of the methadone used by the tens of thousands of maintenance clients and the equal number of illicit users.(3)

Propoxyphene, known as Darvon, is the latest addition to Lilly's narcotic family. Chemically very similar to methadone, Darvon was marketed since 1958 as a treatment for headaches and minor aches and pains. It has been phenomenally successful, accounting for \$100 million



Youth Alternatives/cpf

in yearly sales for Lilly. Darvon was tested by narcotic researchers at Lexington in 1960 and found to be addictive and potentially fatal, yet paradoxically no more effective than a sugar pill for relieving pain.(4) Darvon has always been used on the streets to get high and to maintain a narcotic habit. Medium-sized cities like Ft. Worth or Oakland have consistently reported 30-40 Darvon-related deaths each year.(5) Most cities do not keep such statistics. Darvon death reports have been printed in the *Wall Street Journal*, because Darvon profits have been the keystone of Lilly's 20% yearly increase in profits; but these reports have been kept out of mass circulation papers, because the public might learn what is really going on.

As the 17-year patent on Darvon was running out in 1971, Lilly "invented" propoxyphene napsylate, or Darvon-N, a nearly identical compound that could be exclusively patented for another 17 years. In 1973 Lilly's Dr. Bennett called a private conference on Darvon-N with top drug abuse officials in Washington. He proposed that Darvon-N maintenance might be able to replace methadone maintenance. Dr. Forest Tennant, who has run several drug clinics in poor communities in Los Angeles, stated that Black drug victims in Watts and young white victims in San Francisco have heard so many bad reports about methadone that they are refusing it for treatment. He explained that Darvon-N "helps us treat the thousands of addicts who don't find methadone acceptable." A free-clinic doctor in San Francisco called Darvon-N "the hottest drug of the century." Regular side effects from Darvon maintenance include headache, rapid pulse, feeling spaced out, hyperactivity, weight gain and persistent insomnia. Darvon maintenance has been used widely in California, but fortunately this latest narcotic bonanza has failed to spread.

In each of the last 20 years Lilly has produced billions of its barbiturates, Seconal and Tuinal, which have found their way into the illegal drug market. Lilly officials have been called before a number of House and Senate committee hearings to explain why they overproduce these "sleeping pills" which bring in \$5 billion in street sales yearly.(6) The answer is almost inescapable. Eli Lilly & Co. systematically markets addictive drugs. Under the direction of physicians such as Dr. Ivan Bennett, Lilly has developed a variety of legal and illegal tactics to sell the maximum number of addictive drugs and gain the maximum profits in the process.

Cover-Up of Methadone's Dangerous Effects

Methadone maintenance has been the most expensive and far-reaching medical treatment program ever financed by the federal government. The physicians entrusted to evaluate the safety and effectiveness of this program have been for the most part the very doctors who run the maintenance programs and who thus have a vested interest in keeping things quiet. For instance, Dr. Mary

Jeanne Kreek of Rockefeller University, where methadone maintenance began, has reported in many articles that methadone maintenance is "medically safe, with minimal side effects and no toxicity." (7) She reports 14% impotence, but as one methadone program physician stated recently, "that's one of the side effects people have to learn to live with." Since insomnia cannot be measured by laboratory tests, Kreek minimizes this common effect of methadone maintenance. She never mentions the fact that pronounced edema and tissue swelling causing 20 pounds and more of weight gain occur in 5% of maintenance patients (by our estimates). Countless other complaints are passed off as "subjective" and unverifiable scientifically.

Methadone is five times as deadly as morphine in equivalent doses when tested on rats. (8) Methadone-related overdose deaths outnumbered heroin-related overdose deaths in Washington, D.C. as early as 1971. (9) Heroin overdose is treated by 1-2 injections of Narcan, the narcotic antagonist. Methadone overdose victims may require up to 20 injections of Narcan, given at 2-hour intervals. One patient at Lincoln Hospital died because he did not receive his 17th injection of Narcan. In 1974 I was a lecturer to emergency room staffs in New York City for the State Health Department, and in my experience, almost none of the physicians and nurses were aware of how to treat methadone overdose victims. Based on my experiences in New York City, I would estimate that at least 50 young people have died of methadone overdose in that city solely because medical personnel had not been informed about the proper treatment protocol. Since methadone has been on the U.S. market for nearly 30 years, how could such an oversight occur? Evidently, the government health agencies and Lilly Co. have made very little effort to teach medical personnel how to treat methadone overdoses.

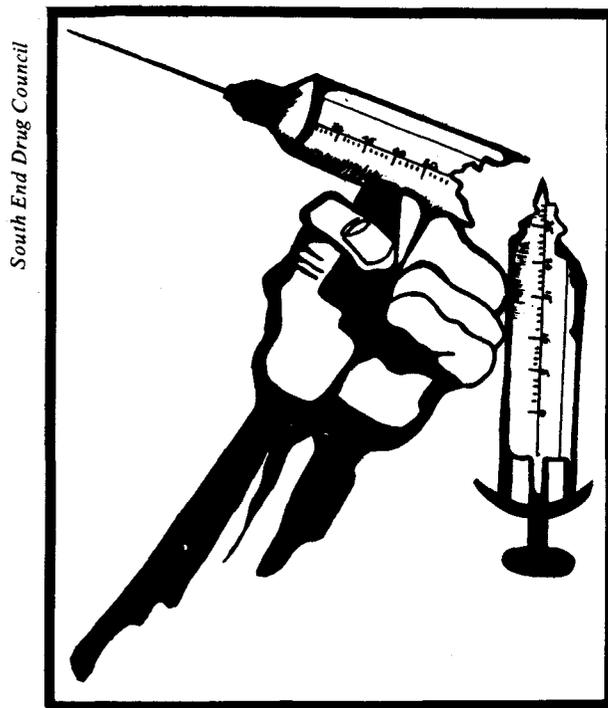
For example, in 1972 the New York City medical examiner Halperin suppressed any further announcements of methadone-related deaths "because the publicity is damaging to city-sponsored programs." (10) The consistent record of issuing falsely positive information about methadone in both the public and the private sector leads one to assume that the information regarding treatment of methadone overdoses was probably deliberately withheld. Had medical personnel known how deadly methadone is, it would have been a blow to methadone sales.

The doctors who created the theory of methadone maintenance at Rockefeller University, Vincent Dole and Marie Nyswander, still claim that it is "relatively easy" to withdraw from methadone. (11) During the first public discussions of methadone maintenance in 1967, the *New York Times* in its daily dispatches never once mentioned that this new "heroin cure" was itself highly addictive. (12) Rockefeller University methadone supporters were able to blanket the media with favorable reports. Today almost all medical observers who are not biased by working in

methadone programs agree with the complaint that methadone patient-addicts have made for years: methadone is much harder to kick than heroin. The research division of the New York State Office of Drug Abuse Services told us that their primary goal for 1976 is to develop effective means of detoxifying methadone maintenance clients.

Withdrawal from methadone addiction is a long, drawn out, brutal experience. There is no two-to-five-day crisis of vomiting and tremors as with heroin. During withdrawal from methadone the following problems occur: insomnia, depression, "bone pains," sweating, hot and cold flashes, intestinal disturbances, and the sensation of being unable to move your limbs. These symptoms occur for weeks and usually months on end. We have observed many well motivated people be unable to detoxify due to the prolonged anguish of gradual withdrawal from methadone.

The most bizarre and horrible effects of methadone withdrawal occur in infants born to mothers who are addicted to methadone. Dr. Rajegowda and Dr. Stephen Kendall reported the following study at the National Drug Abuse Conference in New Orleans in April 1975. Out of 187 methadone babies born at Jacobi and Lincoln Hospitals in the Bronx (in 1973-74), eight babies died of crib-death between two and six months of age. These methadone babies died of crib-death at 17 times the normal rate. Their mothers had no chance to help them survive. The babies died in their sleep with no warning. Medical examinations prior to death showed no changes in symptoms or other signs that might have predicted which of the 187 babies were going to die. No cause of death was found on autopsy.



A previous study was done at the Yale University School of Medicine and was reported in the Journal of the American Medical Association on June 26, 1972. At Yale three out of the 15 babies died of crib-death before three months of age. Heroin-addicted babies do not have as many withdrawal symptoms as methadone babies, and heroin is not associated with a higher rate of crib-deaths. With the exception of Thalidomide, none of the hundreds of drugs which have been outlawed by the Food & Drug



Administration has caused such a frightening level of human infant mortality as that reported for methadone in these two studies.

Both the Bronx and the Yale study were sponsored by agencies which run large methadone maintenance programs. Their statistical methods were able to be very straightforward and thus inherently more reliable than most medical surveys for adverse reactions. Methadone clients report to their program, and these babies were followed by the pediatrics departments of the same hospital as the methadone program. It would be very easy for any city health department to verify whether methadone babies have an unusually high death rate, since information on all methadone clients and all birth and death records are kept in those agencies. As fantastic as it might seem, this kind of statistical analysis has not been published. Most studies we have seen about methadone and infants evaluate withdrawal symptoms only while the child remains in the hospital. Comments are rarely made about the crib-death phenomenon in most of the studies.

We have spoken with a number of methadone maintenance clients whose babies died mysteriously in the first year of life. None of them were aware that their child's death might have been caused by methadone. They had not complained or sought further information when the doctors told them the children died "of unknown causes." Most of these mothers were afraid they had neglected their children in some unspecified way and hence they preferred

to act as though the tragedy had never happened.

What fears do the doctors who run methadone maintenance programs have? For what reasons has information regarding methadone and crib-deaths been actively suppressed? Dr. Joyce Lowinson runs the 2,400-patient Albert Einstein College of Medicine methadone maintenance program in the Bronx. Yet she has not refuted or acted upon the study that her own institution sponsored which shows disastrous infant mortality. This is a glaring example of the double standard that exists in U.S. health care. Middle-class women are encouraged to avoid any medications that even *might* cause birth defects. In contrast, women who are seeking treatment for drug addiction are encouraged to take large amounts of methadone which has been closely associated with alarming infant mortality. Most of these women on methadone are not even told about the risk they are taking. This situation is also a glaring example of the bankruptcy of professional ethics on the part of those physicians who direct methadone maintenance programs.

I have described a widespread medical cover-up of the risks of methadone treatment. In spite of methadone directors' complaints that federal agencies harass their programs,(13) exactly the opposite is the case. The federal government has supported and protected methadone more than any other health treatment — of any kind — in U.S. history. More funds have gone to methadone than to any other medical treatment. In 1972, when the FDA gave its final approval for massive use of methadone maintenance, methadone overdose deaths already outnumbered heroin overdose deaths in the nation's capital. Of 560 drug abuse grants listed in the federal Research Grants Index for 1974, only 19 mention methadone in their title. Most of these studies concern what *will* happen to rats and guinea pigs. Very few of the research studies explore what *has* already happened to the hundreds of thousands of human methadone addicts. These research policies of the National Institute of Drug Abuse certainly suggest that official ignorance about the effects of methadone will continue.

Physicians' Greed

Two reasons can be suggested for certain doctors' unquestioning loyalty to methadone: 1) greed, and 2) the desire for social power. Greed has been a traditional cause of medical malpractice throughout history. From 1970 to 1974, 24 private methadone maintenance clinics sprang up in New York City. According to investigations by City Councilman Carter Burden and the *Village Voice*,(14) these programs net a total of \$2-3.5 million in profits each year. The private methadone clinics all have a doctor as a front man, as required by law. The real owners often include construction contractors, wholesale jewelers, and real estate agents — classes of people who often have strong underworld connections. This coincidence might explain the remarkable safety record that all methadone clinics

that we know about have maintained. If any person tries to undersell the established heroin dealers in a neighborhood, his or her life could be forfeited. Yet this is exactly what public and private methadone clinics do: they offer a cheaper narcotic than heroin. What has been the reaction of large heroin sellers to this apparently huge loss in business? Nothing. No *methadone* clinics have been fire-bombed or terrorized out of business. How could these organized crime czars be so calm about methadone and yet be so willing to murder people in penny-ante extortion rackets? Only one answer seems possible: payoffs, either directly as protection money to underworld bosses, or indirectly, through "legal" returns on business investments, to these same bosses. Of course, such legal returns on business investments also accrue to wealthy and respected leaders of the country through, say, real estate holdings, but that's another story.

There is a script doctor in most neighborhoods who will prescribe harmful and addicting drugs for a price. And there is a long tradition of payoffs from the pharmaceutical companies to the medical profession. In fact, Eli Lilly & Co., the leading producer of methadone and barbiturates, is also the leading provider of gifts and travel expenses to young doctors and pharmacists.⁽¹⁵⁾ However, the possible relationship between organized crime and the methadone business — both maintenance programs and the corporations that leak drugs on the street — suggests a new and more devastating level of corruption that physicians may be involved in. By using the medical profession and the pharmaceutical industry, organized crime could be gaining a further stranglehold on our lives.

The Use of Drugs by Physicians for Social Control

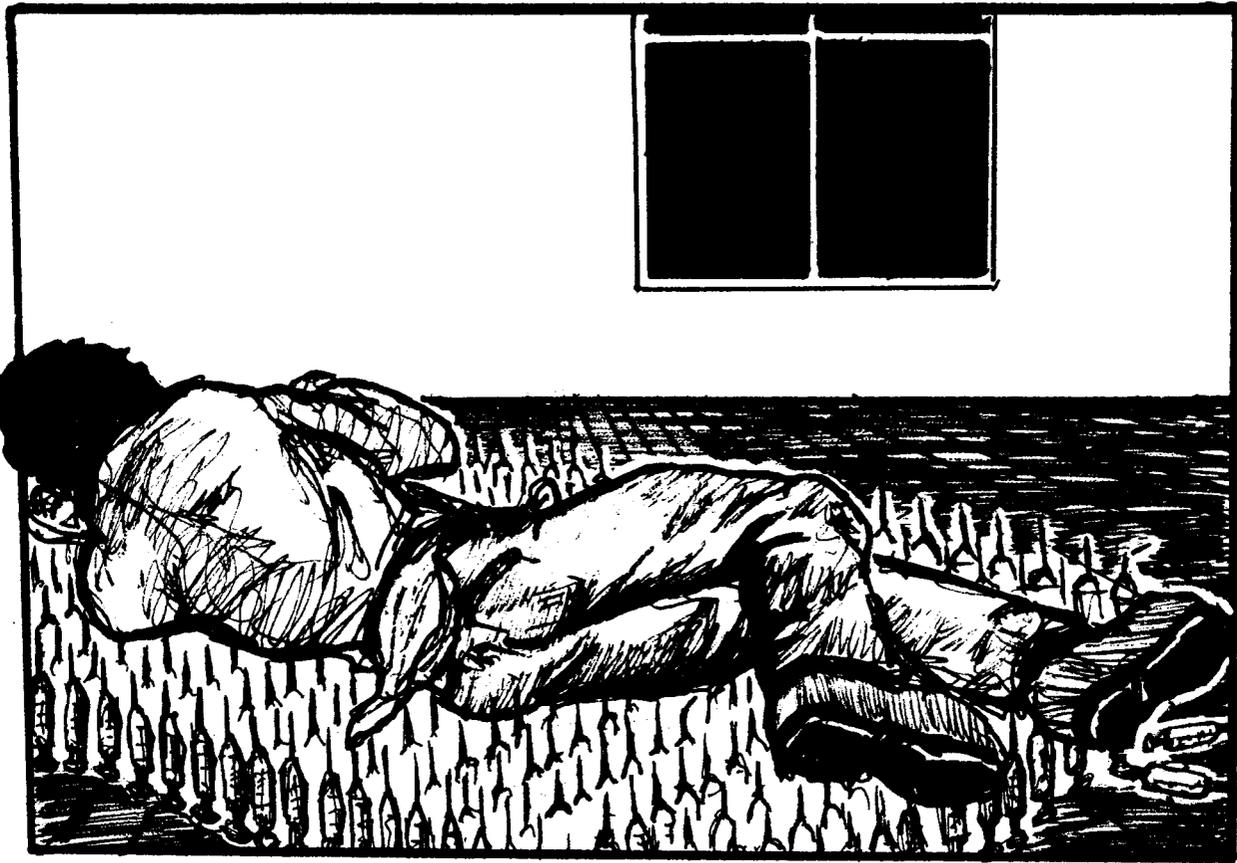
In my opinion the most dangerous aspect of physicians' involvement in the U.S. drug abuse policy is promoting the use of drugs to control people against their will. First of all, individual daily records on all methadone maintenance clients are registered in several computer systems. Methadone clients in New York City are registered in city computers and also in the computers of a private organization, the Community Treatment Foundation, which is a subsidiary of Rockefeller University. One justification of the computerization is research. Yet high officials in the city Health Services Administration methadone section told us recently that they are aware of no research studies that have been published using Rockefeller's computer data. Another justification of the computerization is protection against clients signing up for more than one program. The necessary precautions in this regard could be accomplished by just using the city computer systems. It is hard to conceive of any valid justification which would require multiple computer systems or the use of private computer systems. One of the basic principles of medical ethics is total confidentiality between doctor and patient. Yet Dr. Vincent Dole, who was

the co-founder of methadone maintenance at Rockefeller, has always been a foremost supporter of the computer systems.

Few of us have to be reminded how computer intelligence has been misused in recent times. The following report in the *Atlanta Constitution* (6/24/71) tells the story: "Carter met with Dr. Robert DuPont . . . who heads the District of Columbia's 16 month old methadone program . . . DuPont showed Carter the District's computer center . . . A treatment aide pressed a few buttons linked to a system in Boston and retrieved the name of a Washington addict named Jimmy Carter, who began the use of heroin at the age of 15." How can that Jimmy Carter of Washington be sure that credit bureaus, law enforcement agencies, potential employers and the like do not have access to that computer in Boston? Dr. Robert Newman of New York City was asked to search his files by the District Attorney. Newman refused and his decision was finally upheld by the Supreme Court. Nevertheless, it is difficult to imagine a system of record keeping that is more prone to abuse than the methadone computer system. Richard Nixon's Special Action Office funded the system. Would he have tolerated any hesitation about leaking this information for the White House benefit?

Most methadone maintenance programs offer counseling and some kinds of therapy. In some instances we know that this counselling has been constructive and that a number of people on maintenance have been stabilized and improved their lives despite the obstacles involved. However, in the majority of instances the main ingredient in this kind of "therapy" is the open or veiled threat: obey the staff or get off the program. The threat of sudden methadone withdrawal or having to hustle drug money on the street again is very powerful. At first the victim is usually suspended for 3 days, just long enough for methadone withdrawal to begin to be felt. In addition, the clients' welfare and parole status often depend on continued good standing in the maintenance program. Furthermore, the computer link-ups and agreements between the programs make it easy for expulsion from one program to mean expulsion from all programs if the program director wants it that way. As every street addict knows, you don't dare cross the pusherman, even if he happens to be kindly old Uncle Sam.

I worked as a part-time psychiatrist in the Bronx County Jail for several years. A large number of inmates were offered the opportunity of parole to a methadone maintenance program as an alternative to a prison sentence. Sometimes it meant the chance to avoid up to 5 years in jail. In spite of my views on methadone, I never discouraged these men from taking what seemed to me at the time to be clearly the better of two evils, parole onto methadone. I was startled to learn that many of these prisoners chose to remain in jail for several years rather than take their chances on methadone maintenance. Need I



say that these men hated being in prison and missed contact with their families very deeply. The prisoners I am referring to did not know most of the details about methadone that we are discussing today. They did not consider refusing methadone as a particular moral or political commitment. But they knew from street experience what methadone maintenance was all about and chose to do their time in a four-walled jail instead.

One doctor in Chicago is trying to perfect the manipulative aspect of methadone maintenance. He is Dr. Jordan Scher, the executive director of the National Council on Drug Abuse, director of the Methadone Maintenance Institute (MMI), and a visiting professor at the University of Miami. MMI has advertised that it could set up methadone maintenance clinics in any community that wanted one on a package basis. In a recent article Scher states the "conditioning nature of methadone . . . is insufficiently exploited. The patients are getting something they want in exchange for something we want."⁽¹⁶⁾ For example, MMI requires complete obedience to rules about dress and length and style of hair. In many parts of the country programs have harassed methadone clients who wear Black liberation buttons and demonstrate political beliefs in other (legal) ways. Women with a developing feminist consciousness and gay people have also been frequently harassed.

The most powerful encouragement for this type of coercive "therapy" has come from Dr. Peter Bourne. Bourne has repeatedly praised the addictiveness of methadone, saying that this quality of addictiveness "helps trust develop between the patient and the doctor." Examine the instructions he gives on page 5 of the Methadone Maintenance Treatment Manual prepared by the Department of Justice and the Law Enforcement Assistance Administration:

At the center, the patient is exposed to all of its rehabilitation services, including his relation with his counselor . . . which can evolve into one of trust and intimacy with considerable therapeutic potential. The fact that methadone is addictive is essential to allow this to occur. Many addicts have difficulty establishing close relationships and were it not for the fact that they were addicted, they would find it extremely difficult, if not impossible, to return reliably on a daily basis and establish an ongoing relationship with the personnel of the clinic.

The addicting nature of methadone, in short, "provides the critical element in allowing the establishment of a relationship with the addict with all of its therapeutic, rehabilitative potential." A non-addicting substitute for methadone would lack this essential characteristic. As

director of Drug Abuse Services in Georgia, Bourne established what he proudly admits was the most rigid computerized system of methadone maintenance in the country. He was chosen to be the only doctor in the state to have the power to prescribe methadone. Shortly after Bourne wrote a medical journal article praising the addictiveness of methadone, he was promoted to be second-in-charge of Nixon's Special Action Office on drugs. Dr. Bourne is now head of Carter's office on drug abuse.

The overall picture of methadone maintenance is frightening in its potential for social control. Using the methadone computer system, one can locate any of the hundred thousand methadone clients in a moment's notice. The dose of methadone that a certain client is taking, the name of the program director, and important background information is provided. In the name of "therapy" that program director could be asked to encourage the client to cooperate with police authorities, to provide information about certain community activities, or to perform whatever task might be deemed in the "public interest." It is not important that we cannot document a case where this has happened; it is doubtful that we would know if it had. It is extremely important that a system so rife with potential for abuse exists, with no controls on its originators and operators.

Schemes for social control are not described in the laws authorizing methadone maintenance which Congress passed. The critical aspects of the program — (1) massive computerization and (2) "therapeutic" use of the addictiveness of methadone — were developed by *physicians* who claim to be acting in the interests of their patients. I know of no safeguards or watchdog agencies which could protect against the coercion of methadone maintenance clients for purposes of social control. This expanded role for physicians, that of hit man for the forces of law and order, is perhaps the most dangerous aspect of methadone maintenance, since there are no institutional restraints on them whatsoever.

Physician, Heal Thyself!

My remarks here are a considerable indictment of physicians' actions in the area of drug abuse. Let me conclude by mentioning the positive actions that a few physicians have taken and must continue to take in our fight against drug abuse in America. First of all, there must be a primary concern for the drug abusing patients' welfare. Drug addicts are victims of the drug that they abuse, and in many ways they are victims of society as well. The people most likely to turn to drugs are the people at the bottom of the ladder — who live in the worst housing, go to the worst schools, and get the worst jobs, if they get any at all. They seek some pleasure, a kick, a high, anything that will make them oblivious in a world of too much pain. Victims of

drugs who are trying to seek help are harassed in numerous ways by medical institutions and other sectors of society. At Lincoln Detox we have been advocates for drug victims in thousands of situations where we were seeking just the bare minimum of health care and found endless roadblocks in our path. How many drug abuse programs take an active concern in improving their clients' health care? We have found that community-run programs almost always have this priority, but in our experience programs run by physicians — by and large methadone programs — have a very poor record in this regard. It takes considerable patience and energy to cope with drug victims' health needs, but if we are helping people to rehabilitate themselves, there is no other way to proceed.

Secondly, physicians must discard chemical and psychoanalytic approaches to drug abuse. It is simply absurd to compare methadone with insulin. It is equally absurd to say that individual "character disorders" caused drug abuse among 700,000 GIs, for instance. These issues have been discussed many times, and I do not have space here to go into detail in these matters. Drug abuse is primarily a social problem and can only be alleviated by socially-oriented solutions. In these areas the physician does not have any expertise. Therefore he or she must function as a student or an assistant to other more knowledgeable people in order to have any positive effect on the drug abuse epidemic. When doctors in drug abuse programs have not taken criticism and advice from community people, including ex-addicts, the results have been consistently disastrous. The fact that this humble and rational response has rarely occurred among physicians is one of the main reasons for the failure of U.S. drug abuse policy.

At Lincoln Detox we have sought alternatives to the seemingly endless cycle of chemical "solutions" to drug abuse. We have used acupuncture for four years and have now used herbology for one year as well. When I first saw people sitting around the room with acupuncture needles in their ears, I couldn't help thinking that it was all some kind of hoax. It isn't. Acupuncture has proven to be a very valuable tool in eliminating the physical problems of drug withdrawal and rehabilitation.

The final qualities I will refer to which are essential in combatting drug abuse are courage and a will to win. Drug abuse certainly does mean warfare. In addition to the casualties among actual victims of the drugs, there must be thousands of deaths each year due to the cutthroat competition between various dope dealers. Anyone seriously opposing these ruthless dealers should expect the same kind of treatment.

In every poor neighborhood in America certain individuals or small groups of people have stood up to the drug bosses in their area. We would do well to honor these people on a memorial day. One of these honored dead is Dr. Richard Taft, who worked for the Lincoln Detox program. On October 29, 1974 Richard was found stuffed in a closet,



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shot up with heroin on the morning he was to meet with a powerful Washington official about funding our acupuncture program. As an alternative to methadone and as part of a people's program against drug abuse, the Lincoln Detox acupuncture program has been very threatening to those who want to expand the drug-pushing business. Richard's death has never been seriously investigated by the police or by any of the drug abuse agencies we are involved with. Further harassment and incidents have occurred after his death.

But the Lincoln Detox Program has continued. Our approach can be outlined as follows:

(1) Supportive assistance to the victims of drug abuse, who include the drug users, their families and neighbors, and the people who have suffered as a result of drug-related crimes. Build the physical body with nutrition, exercise, and natural-healing techniques such as acupuncture and herbology so that the life energies can become strong again. Helping the body become strong enough to excrete toxic substances is very different from substituting one drug for another. Psychologically and socially, we need education, spiritual encouragement, supportive counselling, and group-centered work which focuses on coping with day-to-day anxiety-producing reality and working to change that reality. This approach contrasts with analytic, individualized and often negativistic therapy aimed at "adjustment" to bad conditions, and it is opposed to mindless welfare-oriented methods.

(2) Seriously attack the corruption and apathy which protect major heroin dealers. If you want to find the people who *control* heroin traffic, look only among the

ranks of millionaires. In truth, heroin traffic has never been outlawed in the United States. Those at the top who plan and direct heroin traffic have never been injured by the law. The criminal justice system has only punished the victims of the heroin plague. Drug users should be dealt with supportively. Major drug importers and sellers should be dealt with harshly.

(3) Sweeping changes in society are necessary in order to destroy the soil which nurtures drug addiction. There are enough problems in our society and enough work that needs to be done so that meaningful jobs should be available to everyone. Dignity with regard to racial, sexual, and cultural identity must be respected. Senseless wars such as the Vietnam conflict must be opposed. These issues are direct major causes of drug addiction; they cannot be shoved aside as peripheral social issues. Most of us have been taught to separate protest about social issues from individual treatment. These habits have crippled our efforts.

To be effective at *any* level of drug abuse prevention or treatment, a person must maintain integrity — a difficult task in a complex society. To criticize weaknesses in a drug user and not criticize the weaknesses in society that cause drug abuse only worsens the situation. Drug abuse is more a disease of society than of the individual. The task before us is to cure society. □

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Naturizing What We Do:

A Review of the Film

Sociobiology: Doing What Comes Naturally

Tedd Judd

In the past few years much energy and enthusiasm has been directed towards the supposedly new idea of extending the comparative study of animal social systems to human social systems. However, we of the Sociobiology Study Group see this movement as the latest reappearance of a much older doctrine of biological determinism, a belief which has most often served conservative, repressive political systems(1). We maintain that sociobiology's new found popularity is due more to its political than its scientific consequences. For example, political indoctrination can be seen quite clearly in the popularizations of sociobiology, as in the recently released educational film, "Sociobiology: Doing What Comes Naturally."

"Sociobiology: Doing What Comes Naturally" is advertised as, "A film on a new area of scientific inquiry with revolutionary implications for the disciplines of biology,

anthropology, sociology and psychology. Featuring Harvard University Professors Irven Devore, renowned social anthropologist; Robert Trivers, prominent biologist and social theorist; and Edward O. Wilson, zoologist and author of *Sociobiology: The New Synthesis*." In this review we will consider the social policy positions advocated by the film and the scientific claims used to support them. We will discuss the historical social and scientific context of this film and sociobiology at large.

The introduction and conclusion of the film are largely claims about the importance of sociobiology for social policy. The narrator says "A new biology, sociobiology, can help us plan our own survival and we need all the help we can get.... What we learn may become the biological basis for a better future.... We may get new power over a thousand genes..." Trivers concludes, "It's time we started viewing ourselves as having biological, genetic and natural components to our behavior and that we should start setting up a physical and social world which matches those tendencies."

The first substantive claim of the film is that social sex roles are prob-

ably genetically determined. This is the primary social message of the film and for many people the most plausible claim. This "most plausible" claim appears in the beginning of the film, perhaps to encourage the later acceptance of less widely believed ideas. Immediately after the introduction Trivers is introduced as a Harvard sociobiologist and "super-theorist" who "believes the sexes are biologically programmed or wired to behave the way they do in almost everything." Trivers' opening speech is an extended speculation about the genetic basis of university women's needs for emotional attachments preceding sex with emphasis on his disagreements with portions of the women's liberation movement. The footage following these speculations is of disrobing fashion models and young women in hot pants. The focus is quite deliberately on the pelvic area.

Next, Devore is introduced to tell us that, "Before [the development of birth control and abortion in the last few decades] human sexuality was always inevitably linked to pregnancy and bearing children, and for the first time we have the opportunity to release women from this traditional child-bearing role." This

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brash claim is surprising for an anthropologist and observer of human behavior in that it ignores an extensive literature on folk methods of birth control and abortion(2) and the entire spectrum of human sexual behavior which does not involve sexual intercourse between fertile individuals of the opposite sex. It is even more surprising in that it is the first substantive statement in the film with the possibility of scientific or historic verification.

The next part of the film concerns male competitiveness and aggressive dominance featuring the assertion that dominance reflects and results in greater sexual opportunities. The narrator tells us that "The message for males isn't subtle and it isn't subliminal; get out there and fight for your life.... go for yards, dig, be a home ground hero." Football players, boxers and fighting baboons are spliced next to pictures of sexy women and the words "Possess Her" flash on the screen. This section is introduced by Devore who tells us that, "You know, you don't have to be a scientist to notice that among

humans men are much more interested in status and in politics than women are. And it's an interesting question to ask whether there's anything in our background that might have led to this or whether it's just an outcome of human social institutions. And to me the answer is quite clear, wherever one looks throughout the vertebrates, all the animals, the primates and so on one finds males competing for status with each other."

Once again we find that Devore has distorted the situation. His claim is untrue of many human societies(3) and of portions of our own society. In our closest cousins, the chimpanzees, dominance behavior of any kind is very difficult to discover in the wild(4), there is scant evidence of any competitive struggle for dominance between males, and what dominance has been detected or inferred appears unrelated to sexual opportunity(5). In lemurs, another primate group, dominance behavior has been observed chiefly between females(6). Furthermore, even in Devore's own work on baboons the link between dominance and reproductive success

is far from clear(7), and the dominance hierarchies among baboons which he describes in this section of the film may be very different or absent in other parts of the baboon's natural environment(8).

The assertion of a biological basis for human male aggressive dominance behavior leads to the next social message: other human social pecking orders are also genetically determined. These social orders include economic class, conflict within families and the social roles or castes which are established between groups on the basis of historical technological advantages in warfare. Following a sequence of splices illustrating symbols of social class such as dress and language we are asked, "What genetic code drives the Pacific salmon to return thousands of miles to the spawning bed where it was born?" then, "How far back can we go in understanding the origins of our behavior?" We are shown fire ant colonies and told, "The individual is nothing. Roles are determined strictly by genetic code. There is no upward mobility here. Once a worker, always a worker." (There is no mention of the fact that nutritional deprivation is responsible for some of the castes, nor that ants have extreme female dominance.) Then Wilson tells us that with qualifications human social behavior can be classified according to general qualities of behavior which have been "discovered" in "lower" animal societies. The implications of these juxtapositions probably will not be missed by the high school and college students for whom this film was made. The message is that a class society with a vastly disproportionate distribution of wealth is biologically justified or perhaps inevitable.

Warfare is also considered. "Is it possible our own inner biological clocks have been sending man to battle since the beginning of time?" the narrator asks. In talking about genetic predispositions towards warfare Trivers tells us that a few key



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phrases about the other country and martial music are all it takes to send hundreds of thousands marching off. He explains with enthusiasm that "One of the most striking characteristics of warfare, and certainly of classical warfare, is that when you overrun the other country, you loot and pillage, but you also grab up the women, and you either inseminate them on the spot or you take them back as concubines. You kill off the adult males; you sometimes castrate young boys and bring them back as servants. So I think warfare has traditionally had a strong sexual counterpart to it, which is certainly biological, and you don't have to look far to see that there's that tendency

While watching footage from the Vietnam War we are told about the natural superiority of groups which develop technologically superior weapons. One wonders about the biological significance of the Vietnamese victory.

running today." While watching footage from the Vietnam War we are told about the natural superiority of groups which develop technologically superior weapons. (One wonders about the biological significance of the Vietnamese victory.)

Elsewhere in the film Trivers claims that these "insights" into

human nature have lain virtually dormant for 110 years since Darwin first enunciated the theory of natural selection. This claim is simply untrue. In the past century there have been many celebrated attempts to apply the theory of natural selection to human social behavior and time and again they have been discredited only to reappear in subtler forms(1). Such attempts began with the Social Darwinism of Herbert Spencer(9) and continued in the eugenics movement in this country and in Europe. Similarly, Nazi racism and its extermination policy were directly supported by applications of evolutionary theory to human behavior. Some more recent attempts are represented in popular but scientifically flawed books including Lorenz's *On Aggression*(10), Morris' *The Naked Ape*,(11) and Tiger and Fox's *The Imperial Animal*(12). Even Wilson acknowledges their failures in *Sociobiology: The New Synthesis*(13) while praising them for their style and vigor.

These attempts have usually failed as scientific endeavors because they have represented the wishful thinking of social theorists and biologists projecting the current social norms onto nature — they "naturize" the things we do in our culture by looking for analogies and metaphors in animal behavior. In so doing they produce a systematic distortion of nature's complexity, a glossing over of facts and a biased selection of data. Natural history becomes a mythology of human nature — a

cultural inkblot where our most deeply ingrained customs and institutions are projected. Nevertheless, these efforts frequently go well-rewarded especially by the attention and research money of those whose interests they serve, namely, male supremacists, racists and the capitalist upper class. Much of sociobiology may represent the latest reappearance of the same type of argument. At any rate, the scientific fallacies underlying such arguments are also apparent in this film. Many of these have been mentioned above. We will summarize here the most common types of errors and deceptions.

Natural history becomes a mythology of human nature — a cultural inkblot where our most deeply ingrained customs and institutions are projected.

The hallmark of the projective natural histories of biological determinists is that species are often chosen to illustrate points about human social behavior because of the behavior seen in that particular species, not because of the species' evolutionary relationship to humans. This disregard for phylogeny (the evolutionary history of the "species") is apparent throughout the film. Baboons are dwelt on at some length and monkeys, elk, salmon and even ants are discussed, but chimpanzees — which are closer to us and we to them than any other living species — are barely mentioned. Other species are regarded as representatives of earlier stages of human evolution instead of as species which have their own evolutionary history. In the film's overeager introduction we are told, "Our behavior may be more influenced by monkeys and lower forms than we think." Later we are told that "the dream [of sociobiology is] to connect the behavior, the bio-

logical evolution of lower life forms, and to project them to understanding behavior in man [sic]."

The variability within a species is also often ignored. The male dominance of savanna baboons is described in detail yet the very different social organization of the same species in a forest habitat is never mentioned. Even the rich variety of social organizations within our own species receives little attention. The footage of humans is mostly from U.S. cities.

Our closeness to other animals is emphasized — the date for the split off of the human line from other living primate species is erroneously placed at one million instead of 10-20 million years ago. We are told that "Man [sic] is already an endangered species." The simple juxtaposition of footage showing similar animal and human behaviors is also used, for this is a point of political persuasion, not scientific argument.

Finally, and most importantly, any chosen aspect of human behavior and even specific historical events which can be construed to have a relationship to reproductive fitness are assumed to be genetically determined. This is reflected in the views of warfare, rape, technology, aggressive dominance and emotional attachment described above. "[In the] next century, we may look back on the youth revolt of today as part of our natural evolution," the narrator suggests. Despite the fact that there is no direct evidence for separate and distinct genes which control specific human social behaviors, sociobiologists continue to present and claim validity for their own culturally biased beliefs in the form of supposedly scientific theories of human nature.

It is time we recognize that, although science is capable of modifying our beliefs about human nature, all attempts to build a comprehensive scientific theory of human nature must necessarily reflect the culture and beliefs of the theorists. Such theories are, therefore, intrinsically

political in nature and should be treated as such. This conclusion provides us with a rationale and strategies for combating sociobiology and especially such vulgar popularizations as this film. It helps us to resist the use of biological theory as a political tool so that we can keep alive and advance our dream that we can find better ways for people to cooperate in providing for the needs of all humanity.

* * *

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Update:

Since the appearance of this film, its use by speakers from SftP and the writing of this critique, professors DeVore, Trivers and Wilson have publicly stated (*Anthropology Newsletter*, Oct. 1977) that beyond giving the interviews they have had nothing to do with the production of the film and have requested that it be recalled. They conclude, "We deplore the vulgar misrepresentation of sociobiology by this film; we equally deplore the misrepresentation of the field by those who use this discredited film to imply that it represents an accurate statement of our ideas." Whether or not this letter and recalling request would have occurred in the absence of the film's use by SftP is a matter of speculation. In any case, they have not renounced their own statements in the film. Judging from their publications, these statements themselves accurately represent their ideas. The film is certainly

The film is certainly a vulgarization of sociobiology, yet sociobiology itself and the frequent public statements by these scientists are vulgarizations of the biology upon which they are loosely based.

a vulgarization of sociobiology (and of these statements), yet sociobiology itself and the frequent public statements by these scientists are vulgarizations of the biology upon which they are loosely based. SftP continues to use the film as an illustration of the political nature of these statements and as an example of the ease and speed with which the speculations of sociobiologists are picked up and used in support of political positions. We join these scientists in hoping that the film will be recalled and no longer used in the indoctrination of high school students. □

No Hands To Automating C

Up until last summer, Flavio Martinez made his living in the cannery tomato fields of the Sacramento Valley. Though he found work thinning and weeding tomato plants, picking apricots, or gathering prunes and walnuts, he earned most of his annual income in the eight weeks of the tomato harvest.

For ten to twelve hours each day, seven days a week, he stood shoulder to shoulder with other workers on the harvest machines, pulling rocks, vines, green and rotten fruit from the deluge of tomatoes that raced by on a conveyor belt. Despite the heat, he wrapped his head in a bandana and a hat, as protection against the noise and swirling dust.

When his family was young, it was a struggle to earn enough to feed six children, but in recent years his two oldest sons joined him on the machines, helping to support the family.

Last July, he returned to the ranch where he had worked for the last eight years. The ranch foreman told him there was no work. The harvest machines had been outfitted with electronic eyes which could sort out the green tomatoes. The sorting crew was being cut from 20 workers to 5.

Martinez spent most of the harvest season driving from ranch to ranch in search of work. Everywhere he heard the same story — no sorters needed because of the electronic eyes.

Electronic eyes sorted tomatoes in the place of 5,000 California farmworkers during the harvest of 1976 (1). Those lucky enough to find work had to accept a 25 cent an hour wage cut.

"In four or five years, every harvester in the state will be equipped with an electronic sorter," predicts Jack Deets, a corporate executive with sorter manufacturer



AMF Inc. (2). Priced from \$50,000, the new electronic device uses infrared lights and color sensors to tell a green from a ripe cannery tomato.

Photo-electric color sorting was first applied to farm machinery by John Powers, a professor of agricultural engineering at the University of California at Davis (3). In August of 1976, 250 of the unemployed tomato workers picketed UC Davis to protest the public subsidy that supports mechanization research (4).

Migrant workers were the hardest hit by displace-

This article was originally published as a pamphlet by the California Agrarian Action Project, a group dedicated towards bringing control of California agriculture to those who work the land. The Project does research, public education, and political action. Persons interested in more information should write: California Agrarian Action Project, 1007 Chestnut Lane, Davis, California 95616. Donations are gratefully accepted. The graphics that accompany this article come from the original pamphlet.

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*California Agrarian Action Project
and Yolo Friends of the Farmworkers*



ment. Their meagre savings had been spent on the trip north to the tomato harvest. They became trapped, penniless, with dismal prospects for work.

Jobless families moved in with their friends and relatives. In the government-run migrant camp at Madison, California, two-thirds of the families were living doubled up, according to Ross Parker, director of the Yolo Housing Authority. With 12 to 15 people living in each 3 room cabin, water and sanitary facilities were pushed to their limit (5).

Last summer's harvest revealed what may prove to be a serious shortcoming of the electronic sorter. While the sorter worked efficiently at the beginning of the harvest, when most cull fruit was green, human hands and eyes were needed at the end of the harvest when it is overripe and rotten tomatoes which must be discarded.

The harvest was still dependent on thousands of migrants, but their work was cut from eight weeks down to one or two weeks of harvest employment. Mar Lynn Ormsby, a demographic analyst for the California Department of Housing, says that mechanization causes "gaps in the traditional south to north itinerary — no longer [are there] 'back to back' harvests to provide continuous work" (6).

With mechanization, the farmworkers' work year is cut, reported UC Berkeley agricultural economist William Metzler, who added, "reliance on Welfare Department assistance has become part of the annual life pattern of many farm families" (7).

"We have worked hard for these growers all our lives," says Flavio Martinez. "When they brought tractors to pull the plows, they cut the horses' necks and ate horsemeat. That might be a kinder end than the future that they are preparing for us."

Social Sleepwalking

In the heart of the Sacramento Valley processing tomato district is the nation's largest center for agricultural research, the Davis campus of the University of California. UC scientists say their \$50 million annual research budget pays for a cornucopia of technology that benefits consumer, farmer and farmworker alike. The mechanization of the tomato harvest is cited as one of their greatest accomplishments.

"Mechanization is one of the chief research missions of the University of California," UC Information Officer Ray Coppock reported to the California legislature in 1966 (8). There are now 22 mechanization projects in progress at Davis, while an additional 7 projects are underway at the UC campus at Riverside (9).

Public funds pay 93% of the \$1.8 million annual cost of these projects, which are aimed at eliminating most of

the 176,000 harvest time jobs in California. The research involves scientists in several disciplines working in co-operation.

Research to mechanize the cannery tomato harvest conducted in the early 60's is a good example of the multi-disciplinary team effort. University scientists bred a thick-skinned tomato, devised precision planting systems needed to grow it, tested the chemical that could ripen it, and built the machine to harvest it (10).

Typical of the engineering studies underway is the development of a mechanical lettuce picker by Davis professor Roger Garrett. The machine uses a gamma ray selector to identify which lettuce heads are mature enough for harvest. A gattling gun packing device wraps the heads in plastic mesh.

New crop varieties are being bred to match the mechanical pickers. Davis geneticist Harold Olmo is trying to breed a new raisin grape variety that will dry without being cut from the vine. Says Olmo, "This may lead to direct mechanical harvest and eliminate all hand harvest labor."

University scientists are studying the problems in processing mechanically harvested produce. Wine chemist Cornelius Ough is analysing the "leafiness aroma" in wines made from mechanically harvested grapes. His research will be useful in setting standards for the amount of leaf trash that mechanical grape pickers can be allowed to mix into wine grape loads.

The mechanization developments were criticized at the hearings on the UC budget held by the California Assembly in April. "In a time of such high unemployment, it is inconceivable that the state is spending the taxpayers' money to put more people out of work," UFW spokesperson Michael Linfield told an Assembly committee. He asked that a moratorium be called on labor displacing research until studies are made on the social impact of the projects, and until the state makes provisions to compensate displaced workers.

None of the University's 1500 agricultural scientists is analysing the impact of UC research, admitted James Kendrick, UC Vice-President of Agricultural Sciences. "Our primary mission is concern for the production of food and fiber," he told the committee.

William Friedland, a rural sociologist at UC Santa Cruz, calls the University's approach "social sleep-walking." He wants to study the effects of Garrett's lettuce harvester. The University administration, however, feels that no study of the impact of mechanization is needed, and so will not fund Friedland's work. He has been forced to abandon his research.

Tough Tomatoes

Every American consumer knows about the new flavor in canned tomatoes. "They taste like rubber,"

remarked California State Senator Walt Stiern (D-Bakersfield) at a recent hearing on the UC budget.

Davis Professor G.C. "Jack" Hanna bred a thick-skinned tomato to withstand the rigors of mechanical harvest. Called VF-145, Hanna's tomato was not tough enough. In 1968, he reported that a quarter of the crop, some 1 million tons of VF-145, was damaged with impact cracks contaminated with soil, yeast, and bacteria (11).

University breeders have developed an even tougher "square round" tomato. To be precise, the tomato is not square like a box, but in the words of tomato specialist William Sims, "it's more square than round" (12). Named UC-82, the new tomato is a thick-walled and juiceless fruit, but it can withstand the high speed operation of harvesters equipped with electronic sorters.

Coby Lorenzon was the Davis engineer who designed the machine that could pick Hanna's tough tomatoes. His harvester was designed for large scale farms. "Usually about 125 acres may be planted per harvest machine for the beginning grower," Sims explained, "and up to 200 acres for the more experienced grower" (13).

The average farmer at the time planted 45 acres of cannery tomatoes. Most could not get the financing necessary to triple their acreage and buy a \$25,000 harvester. Within 10 years, the University scientists unwittingly forced 85% of the state's 4,000 cannery tomato farmers out of the business (14).

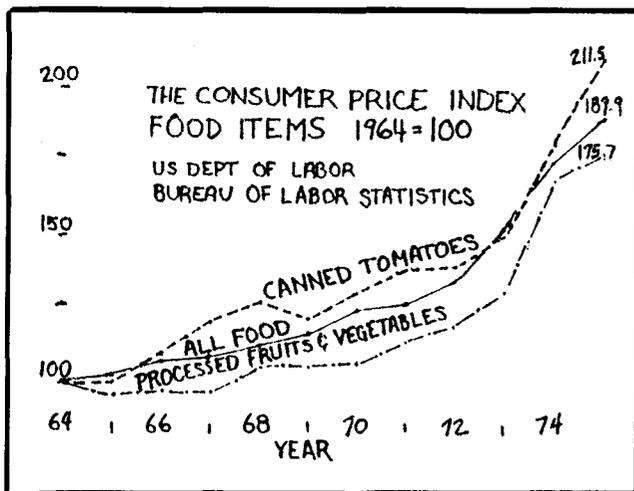
The remaining growers then expanded their tomato plantings to an average of 350 acres. Once committed to making payments on their new tomato harvesters, they could no longer be flexible in deciding how much to plant. In recent years there has been chronic over-production in the tomato industry. 1.8 million tons of fruit were left to rot in California fields in 1976 alone.

Large tracts of land are needed to grow tomatoes for machine harvest. Sims advises growers that "row lengths of less than 600 feet seriously decrease harvest efficiency." The larger the field, the less the time lost in turning the machine from one row to another. As a result, mechanization has concentrated the tomato industry in the few California counties with such large tracts of land.

Pests spread rapidly in the tomato monoculture, necessitating the virtual fumigation of tomato districts with more than four million pounds of pesticides each year.

In the rest of the United States, where there are no huge, uniform tracts of tomato land, tomato acreage is declining. A handful of California canning corporations now pack 85% of the nation's tomato products.

"The mechanized tomato has led to increased corporate concentration in the processing industry," claims consumer advocate Al Krebs. The Western Director of the Agribusiness Accountability Project, Krebs told the California Assembly in April that the



state's top four canning corporations now control more than 80% of tomato processing, a situation he termed "tight oligopoly."

It is true that mechanization did cut the cost of producing cannery tomatoes by \$7.25 a ton, according to a study made by UC farm advisor Phillip Parsons (15). Had this savings been passed on to the consumer, mechanization would have lowered the retail price of a can of tomatoes 3%.

But since 1964, the year before the tomato harvest was mechanized, the retail price of canned tomatoes increased 111%, according to statistics compiled by the U.S. Department of Labor. By comparison, the retail price of food went up only 90%, and the price of processed fruits and vegetables went up only 76% (16).

Between 1970 and 1975, the profits of the processors soared. H.J. Heinz profits went up 104.7%, while Del Monte profits increased 228.9%.

Consumers were not only stuck with high prices and a tough tomato, but as taxpayers they had paid for the research that made it all possible. They continue to subsidize mechanization by paying a number of hidden costs.

One such cost involves a simple failure of the harvest machine, which collects not only tomatoes, but substantial quantities of dirt as well. Dirt and trash removal cost processors \$75 million in 1975. The California Tomato Growers Association warns that processing plants will close if municipal sewerage systems do not expand to handle the cannery effluent (17). California, though hard hit by drought, will still be using millions of gallons of water to wash dirt from machine-harvested tomato loads.

Mechanizing the tomato harvest eliminated 32,000 picking jobs in California (18), and thousands more cannery and farm jobs in Ohio, Indiana, and New Jersey. Tens of thousands more California farmworkers have been displaced in the mechanization of the prune, nut, sugar, beet, and wine grape harvests.

Increased social welfare payments, the migration of jobless farmworkers to American cities, and the decline

of small farms and rural communities must be figured as "hidden costs" of mechanization.

"Hard tomatoes and hard times," are the products of mechanization research, wrote the Agribusiness Accountability Project in 1972, adding that "in terms of wasted lives, depleted rural areas, choked cities, poisoned land and maybe poisoned people, mechanization research has been a bad investment" (19).

Conflicts of Interest

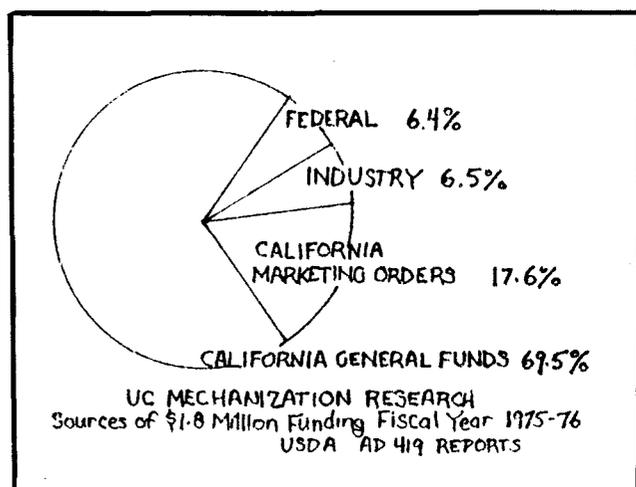
The California Assembly wants the University to re-evaluate its commitment to mechanization research. A rider was attached to the Assembly version of the UC budget, requiring that "social impact reports" be prepared to assess the effects of labor displacing agricultural research (20).

UC Vice-President Chester Mc Corkle opposed the reports, and asked that agricultural researchers be allowed to retain their "freedom of inquiry." Intense lobbying by the University caused the legislature to delete the rider from the final version of the budget.

Don Villarejo, a lecturer at UC Davis and activist with the California Agrarian Action Project, questioned whether such "freedom of inquiry" actually exists. Villarejo testified at the April Assembly hearings about the social and economic interests of UC decision makers(21). He reported that McCorkle sits on the Board of Directors of Del Monte Corporation, a major beneficiary of mechanization research, as does Edward W. Carter, a member of the University's Board of Regents.

William K. Coblentz, Chairman of the Board of Regents, is also the managing partner of ASA Farms, the corporate owner of a million-dollar parcel of tomato crop land of Yolo County.

While "freedom of inquiry" is said to govern professors' decisions about what to research, the University's Regents and Administrators have set up an agricultural research system that involves private interests in the de-



cision-making. The University employs professors, provides them with lab space and clerical help, but allocates little or no money to pay for research staff and supplies. Professors must seek outside funding to meet these costs.

According to a study by Isao Fujimoto at UC Davis, the outside funding agencies have the greatest influence on what research is undertaken (22). In this way a tax deductible dollar donation determines how four dollars worth of University research is conducted. Private donors such as farm associations, canners, and chemical companies used to be the primary source of outside funding for mechanization research.

In recent years, agribusiness interests have become reluctant to donate even the single dollar. They have turned to marketing orders to generate research funding. Under the California Marketing Act, a law authored by UC Professor E.A. Stoikdyk (23), growers or processors can join together to form a marketing order, and impose a state tax on a specific agricultural commodity. They then choose the members of an Advisory Board, which allocates the revenues to advertising, market surveys, or University research.

Provisions of the law have allowed a small number of large producers to vote a commodity tax on all the rest. Only 49% of California's wineries voted in favor of the Wine Advisory Board(24), but the fact that Gallo and United Vintners make 75% of California's wine allowed them to push the tax through. It also allows these large producers an essential veto over Advisory Board activities.

University personnel have been instrumental in establishing these lopsided boards. The Wine Advisory Board was organized by a "Campaign Committee" headed by UC Professor R.L. Adams. Four newly organized research marketing orders were organized through the joint efforts of the Western Growers Association and UC Davis Dean Jim Lyons, who received a \$2,500 research grant



Company housing at Andco's Mace II labor camp, 2 miles south of El Macero, California

from the WGA. WGA members make up most of the Advisory Board members of these marketing orders, which are managed by a former WGA employee (25).

University professors must agree to the detailed terms of a research contract in order to receive market order funds. Although the bulk of UC mechanization development costs are paid by public funds, it is private interests that dictate that the research be done.

Machines Won't Strike

It is ironic that California farms can produce \$9 billion of food and fiber each year, yet still not adequately provide for those who till the land and harvest the crops. With few independent family farmers in California, most work is done by migrant laborers who travel from one farm factory to another. Chronic high unemployment has meant that workers must accept a wage that has averaged only 40% of an industrial worker's pay, and be thankful to have any job at all.

Low wages have hurt the relatively few small-scale family farmers. The farmer who drives his own tractor must compete against a factory farm where laborers do the same work for little pay.

In 1918, Richard Adams, a professor of agricultural economics at UC Berkeley, wrote the report that has set the trend for 60 years of University thinking. When farmworkers' wages increase, he said, it is evidence of a labor shortage (26).

While other industries have paid good wages to insure an adequate labor force, California farm industrialists have relied on the government to recruit immigrant workers. Adams campaigned for the immigration of Filipino and Mexican workers in the 20's. The importation of Mexican workers during World War II, the forerunner of the Bracero program, was administered by 125 University farm advisor offices(27). UC economists opposed the end of the Bracero program in 1965 (28, 29).

Farmworkers have made repeated attempts to form unions in order to bargain for higher wages. They have been kept divided, however, by an agricultural system that assigns jobs and wage rates on the basis of race (30). In his text *Farm Management* (1921), Adams taught University agriculture students that different races were suited to different farm jobs. "The colored man," wrote Adams, is "home-loving and gregarious," and can work hoeing, planting and weeding. He reported that the Mexican "peon" is "childish and lazy" and good only for cheap hand labor. The Japanese are good squat laborers, while the "lean, lanky and enervated" Hindu workers were suitable for hand work in the beet, celery, and rice fields.

When unions are formed, the University sides with employers. In 1933, S. Parker Frisselle, manager of the UC vineyards at Fresno, organized and became the first President of the Associated Farmers, a group formed to

oppose farmworker unions (31). With the help of University Farm Advisors, thousands were recruited into the organization. By 1937, they were organized into a vigilante army that attacked picket lines, burned strikers' camps, and kidnapped union organizers.

In March 1977, the University Extension offered farmers a one-day class on California's new farm labor law. George Daniels taught the growers how to wage "psychological warfare" in order to beat the United Farmworkers in union representation elections (32).



Jack Anderson, the tomato king, stands behind a Sutter County Sheriff's Deputy patrolling picket lines during the 1974 UFW tomato strike.

Mechanization is the University's current answer to the labor problems of farm factories. As tomato breeder Jack Hanna explained it, "I'd seen nationality after nationality in the fields, and I felt that some day we might run out of nationalities to do our hard work" (33).

Mechanization has been a disaster for small-scale operators already being forced out of business by increasing capital costs. UC Information Officer Ray Coppock offered them a simple choice: "Mechanize or sell out" (34).

University-developed machines not only combat the "labor shortage" in California agriculture, but they provide large growers with insurance against unionization. When United Farmworkers' President Cesar Chavez led 8,000 Salinas Valley workers out on strike in 1970, the lettuce growers gave the University \$13,500 to build a mechanical lettuce picker. Roger Garrett, the engineer who built the machine, cited the value of his invention in

this way: "The machine won't strike, it will work when they [the growers] want it to work" (35).

Another University engineer, Mike O'Brien, tested his melon harvest machine during a UFW melon strike in West Fresno County in 1973 (36). Charles Hess, Dean of Agriculture at UC Davis, told a reporter why growers are so appreciative of the University's mechanization research. "The thing that drives growers to mechanize," he said, "is the fear of a strike" (37).

Hard Times

Born in Mexico, Flavio Martinez first came to California as a Bracero, a temporary immigrant allowed in the state for only the few weeks of the tomato harvest. Under the Bracero program, the U.S. government brought growers a virtually unlimited supply of workers from the poorest areas of Mexico.

"They paid us 10 cents to fill a 50-pound box with tomatoes," he recalls. Depending on the field, he could earn about 70 cents to a dollar an hour. California industrial workers earned an average of \$2.50 to \$3.00 an hour at that time.

Martinez legally immigrated to the U.S. in 1957. Though he married and began to raise a family, he had only seasonal work and Bracero wages to meet the high cost of living in California. The wage rate for picking tomatoes remained unchanged for a decade.

Martinez remembers the harvest of 1965 with nostalgia. In that year Congress ended the Bracero program, and the piece rate wage for tomato picking jumped. It appeared that the high wage would soon attract enough pickers to the tomato fields to compensate for the absence of Braceros.

That same year the mechanical harvester was introduced. While hand pickers could work their own pace, the sorters were tied to the pace of the machine, and could rest only when it stopped. Sorting was not skilled work; in fact there was much more skill involved in being an efficient hand picker. Growers paid sorters \$1.40 an hour, a wage that was 25 cents an hour less than the average earned by hand pickers (38).

By 1969, 1500 machines harvested California's cannery tomatoes, and hand picking became a thing of the past. The high wage evaporated, and 32,000 tomato pickers were displaced. Though their productivity had been doubled by the harvest machine, the hourly wage paid to tomato workers remained low, 15 cents to 25 cents below the average California farm wage.

Cesar Chavez's United Farmworkers of America began an organizing drive in the northern California tomato industry in 1974. Since 1972, the price paid for cannery tomatoes had doubled, from \$28.00 to \$56.80 a ton (39). Thousands of workers, hopeful that their wages could be increased, signed cards authorizing the UFW to represent them.

In August 1974, the UFW called a strike against cannery tomato growers in the Stockton area. The strike soon spread south into Stanislaus County and west into the Delta area. Further north in Yolo County, a second strike was called against cannery tomato growers at the beginning of September. Five hundred more workers walked out of the fields.

The growers raised wages 50 cents an hour in an attempt to get workers to abandon the strike. When the harvest ended, the strikers called the wage increase a victory, but no contracts had been signed.

California's new farmworker election law was enacted the next year. In the midst of the election campaigns, tomato growers raised wages above \$3.00 an hour in order to win a no-union vote from workers. The workers' memory was not so short. The majority of workers on some 20 tomato ranches voted for UFW representation.

The tomato growers have turned to a second generation of University-developed technology, electronic sorting. Thousands of workers were displaced as the 1976 wages were lowered to \$2.75 an hour.

The UFW has been negotiating contracts with a group of five tomato growers in the Delta area. Only a single major issue, that of a mechanization clause, remained to be resolved when negotiations between the UFW and one grower, Kline Ranches, broke off in May. Kline employees who were at work harvesting asparagus walked out on strike. To date, the strike continues, with the company holding out for its unilateral right to mechanize tomato harvest operations. The union wants mechanization to be subject to negotiation.

Bernell Harlan, who grows 800 acres of tomatoes in Yolo County, explains his move to electronic sorting in quite simple terms — he wanted to stop unionization of his workforce.

Many of Harlan's 155 employees joined the UFW strike in 1974. He responded by fitting his five harvest machines with electronic sorters, cutting all but 44 workers from his payroll.

"It required a stiff capital investment," says Harlan, who admits electronic sorting is more costly than hand sorting. He feels it was worth the extra cost because "one of the big advantages of these machines is you can keep the people you want, and get rid of the trouble makers" (40).

To Flavio Martinez, the outcome is an old story. "Every time we begin to earn good wages, they bring in a machine to break our bargaining power and keep us poor."

If a list were made of those who have benefited from the mechanization of the tomato harvest, the name of John B. "Jack" Anderson would belong near the top. A graduate in Agricultural Economics from UC Davis, the 35-year old "king of the cannery tomatoes" farms a 62,000 acre empire that stretches across 5 California counties.

From his headquarters in Davis, Anderson used the UC developed technology to parlay loans from wealthy doctors into the largest tomato ranch in the world, Andco Farms, Inc. In 1974, Andco raised 17,000 acres of tomatoes, worth roughly \$25 million and accounting for 7% of the California crop.

Andco employs more than a thousand farmworkers, most of them in the tomato harvest, according to business manager Henry Stone. It is in tribute to the tomato that the



Farmworkers on UFW picket line in Yolo County, California, during the strike of the 1974 tomato harvest.

corporation's buses, harvestors, pick-up trucks, combines, and even Anderson's personal Cadillac and Land Rover — are all colored tomato red.

With success in tomato production, Anderson has begun to diversify his holdings. He has bought a rice-dehydrating mill, a trucking company, a 14,000 acre cattle ranch, part of a fertilizer distributorship, and half-interest in a newly built tomato cannery.

Farm equipment manufacturer FMC Inc. loaned Anderson and the T.H. Richards Co. \$4.2 million to build the tomato cannery. Cattle from the Andco ranch are fattened on tomato waste in an adjacent feedlot, with the aid of advice from UC Davis scientists. FMC also leases 16 of its tomato harvesters to Andco, 7 of which are being fitted with electronic sorters.

Grievances over company housing caused Andco workers to be among the first to join the 1974 UFW strike. Inspectors from the California Department of Housing found 378 people living in Andco's Mace 1 labor camp, an average of 6.8 people in each 10' x 12' room. Families were cooking on gas fired hot-plates in the same room where they slept. Sinks were located outdoors, the communal showers were usually without hot water, and the broken plumbing leaked raw sewage before discharging it into an open roadside ditch (41).

Anderson himself lives in a community built around a golf course, the fashionable El Macero. Two \$70,000 houses were joined together to form Anderson's ranch style mansion. In 1966, Ronald Reagan announced his intention to run for Governor at a press conference held in this sprawling El Macero home (42).

Andco workers were among the first to vote under California's new Agricultural Labor Relations Act. "We campaigned hard for a no-union vote," said business manager Stone (43). UFW organizer Al Rojas said that Andco used "fraud, threats and intimidation" to dissuade workers from voting in favor of the union (44). Andco workers cast 373 votes for no union and 290 votes for the UFW.

The Agricultural Labor Relations Board held hearings on company conduct before the election. Hearing Officer Bob Covington found that at least eight Andco workers had been fired on account of their support for the UFW. He cited nine counts of company misconduct in recommending that a new election be held (45).

However, another ALRB election is unlikely at Andco Farms. Like Bernell Harlan, Jack Anderson has found electronic sorters to be an excellent alternative to unionization.

California's Agrarian Movement

Community activists have started a service center in Woodland, California, to provide emergency aid to farmworkers displaced by the electronic tomato sorter. Called simply "Centro de Servicios para Campesinos" (Farm-

workers' Service Center), the center sends volunteers door-to-door in the migrant camps and barrios to help farmworkers get food, housing, transportation, and medical attention.

"We need an emergency aid program to help the people who have been put out of work," says service center director Rosa Villareal. Current government programs, she says, cannot cope with the crisis of thousands of now unemployed farmworkers.

State aid for displaced farmworkers is only in the preliminary stages. Assemblyman Art Torres (D-Los Angeles) has introduced legislation that would create a fund to provide aid. Under his bill, the sale and output of harvest machines would be taxed. Revenue would then be used for extended unemployment benefits, training, and job placement.

The measure, AB 1537, is backed by the United Farmworkers. "The machines must pay their own way," says UFW spokesperson Michael Linfield, "including the costs of employee displacement." The bill was tabled in 1977, not to be considered again until sometime in 1978.

Electronic tomato sorters will displace an estimated 24,000 farmworkers, according to the Assembly Office of Research (46). While growers try to farm with fewer farmworkers, farmworkers have been starting their own farms. Resettling displaced farmworkers on the land may prove to be a long term solution towards the problem of returning the unemployed to productive lives.

The Co-operativa Central, in Salinas, California, is one of the more successful farmworker owned and operated farms (47). 52 farmworkers' families, all former sharecroppers and migrant workers, now grow strawberries to earn an average annual income of more than \$17,000 per family. The co-op recently bought 700 acres of prime Salinas Valley farmland.

As farm owners, the farmworkers make decisions to insure not only maximum profit for the farm, but also maximum work and wages for its employees.

Land is central to California's new agrarian movement. A Fresno based group, National Land for People, is pressing for the enforcement of Federal Reclamation Law in the 570,000 acre Westlands Water District. A \$2 billion water project provides the District's large corporate growers with cheap irrigation water. The law requires landowners to sell all but 160 acres of their holdings at pre-irrigation land prices, about 25% of current market value. If NLP is successful, thousands of acres of low cost land will become available for farmworkers and small farmers.

In the northern part of the state, the California Agrarian Action Project has found that thousands of acres of farmland, owned by agencies of the State government, are being leased to large growers, often in "sweetheart" arrangements. The Project is asking that these lands be leased to farmworkers, with priority given to those who have been displaced by mechanization.

Crucial to all of these attempts to re-settle farmworkers on the land is the need for adequate financial and technical assistance. The scarcity of credit has forced many recently established farmworker owned farms out of business.

The taxpayer will be subsidizing whatever change is to come. While it is uncertain that mechanization will lower food prices, it is certain that it requires a public research subsidy to automate the farms, and additional millions of

dollars of public assistance to support those who are displaced.

The alternative of resettling farmworkers into productive lives on the land would also require a taxpayer subsidy, but the result would be far more attractive than the influx of thousands more into the ghettos of urban poor. California's farms would not be automated factories, but homes for an autonomous rural people. □

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Mining Spectre Haunts Northern Wisconsin

Al Gedicks

Like an army of thieves under cover of darkness, the multinational natural resource corporations are buying and bullying their way to obtain mineral rights in a mad scramble to control what may be the world's richest and most extensive deposits of copper, nickel, lead, chromium, zinc and uranium in northern Wisconsin. The discovery of the world's fifth largest deposit of copper and zinc in Forest County by the Rockefeller-controlled Exxon Corp., is only the latest episode of a long story whose final chapters have yet to be written.

There are at present over 40 major energy and minerals corporations which are conducting serious exploration efforts in northern Wisconsin, northeastern Minnesota and the upper peninsula of Michigan. There is further reason to believe that the valuable mineral resources found along the Great Lakes probably extend out under the lakes as well. The lake beds hold potential supplies of copper, sand, gravel, manganese nodules, natural gas and oil. From the point of view of the companies, these geologic formations may contain the answers to any possible or projected shortages of critical minerals and fuels in the near future. From the point of view of the Wisconsin public, the control of these deposits by a handful of powerful multinational corporations may spell the end of agriculture, dairy farming, forestry and tourism in northern Wisconsin.

The potential scope and consequences of mining development in the Great Lakes region has been one of

Al Gedicks is a Wisconsin journalist and film producer who has written extensively on mining in the Great Lakes area. His work has appeared in the Madison Capital Times, the Nation, and North Country Anvil. He contributed a chapter on mining to Natural Resources and National Welfare: The Case of Copper (Praeger, 1975).

the best-kept secrets of the mining industry. Since the discovery of a copper-sulfide deposit by Kennecott in Rusk County in 1968 there has been a conspiracy of silence to prevent the public from learning about some of the far-reaching implications of large scale mining development in northern Wisconsin. This silence was partially broken in 1972 when John Rigg of the Metal Mining Division of the U.S. Interior Department predicted that northern Wisconsin and northeastern Minnesota would be the largest copper-nickel producing regions on the North American continent. Yet, up until the Exxon discovery in Forest County, Kennecott Copper Corporation had been claiming that its copper find in Rusk County was a small isolated deposit. Since the Kennecott discovery in Rusk County there have been four other corporations which have made public their intention to proceed with plans for mining development in Wisconsin: Noranda's exploration subsidiary in Oneida County, Exxon's subsidiary in Forest County, International Nickel's subsidiary in Rusk County and Ray Rock Mines in Oneida County.

The area in which intensive exploration is taking place in northern Wisconsin and northeastern Minnesota is an extension of the Canadian Shield — a massive formation of Precambrian rock which has yielded millions of tons of metallic ores in Canada. The lengths to which the multinational natural resource corporations are willing to go to conceal their operations from the public is well illustrated by the case of Scintrex, Ltd., which had been searching for minerals by plane in an area east of Marshfield in 1972. Scintrex, Ltd., is a Toronto mineral exploration firm but the identity of its client remains a secret. Industry observers have speculated that the firm sponsoring the search for minerals is

probably located in the United States since federal law prohibits foreign interests from claiming mineral rights on U.S. lands.

This veil of secrecy over the extent of the explorations going on up north, the value of the mineral deposits, and the plans of the corporations for the region, puts the public at an extreme disadvantage. In the first place, individual landowners who are approached by the companies to sign away mineral rights have no idea what the real value of their land may be while the companies know full well the value of the minerals they are bargaining for. In the second place, the state is at a disadvantage in assessing taxes and royalties because the value and extent of the mineral deposits is considered the "privileged" information of the private mining corporations. Finally, the state is at a disadvantage in terms of planning for the economic and environmental impact of mining development because each corporation is only required to submit a site-specific impact statement rather than a regional impact statement.

Nor can we expect that the attempt to raise the issue of the public interest in regard to mining development will become any easier as more and more corporations announce their plans to dig up the northern two-thirds of the state and sell it off pound by pound as the steel companies did in Iron and Ashland Counties. During the era of Wisconsin's greatest mining development (1890-1940), the iron ores of Wisconsin fed the steel furnaces in Gary, Cleveland, and Pittsburgh and provided fantastic profits for the steel company stockholders.



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But very little of this enormous wealth remained in the iron-mining areas of northern Wisconsin. When the steel companies were able to exploit higher grades of ore at lower labor costs in Venezuela and Brazil in the early 1950's, they shut down their Wisconsin mining operations and transferred production to South America.

While Kennecott talks about creating a few new jobs for a 10 or 20 year period, they refuse to address themselves to long-term environmental pollution by the copper mine.

This unilateral corporate decision threw the iron-mining counties of Iron and Ashland into a severe economic depression which afflicts the area today. These mining areas were "one-industry towns" — totally dependent upon mining for employment, taxes and the service industries which grew up around the mines. When the mines closed down, the area experienced a huge out-migration of the economically active population, a corresponding increase in the welfare demands of the old, the sick and the disabled, and the loss of a major tax base to support these social readjustment costs.

As long as the major decisions about production, investment and environmental responsibility remain in the hands of the multinational natural resource corporations there is no reason to believe that northern Wisconsin will not become another resource colony for the corporations. The major difference this time is that the vast scope of mining development creates the possibility for a regional environmental disaster whose long term effects are irreversible. Throughout the history of copper mining, environmental destruction has been closely associated with extraction and refinement of the ores, especially when the deposits contained sulfides, as is the case in northern Wisconsin. If the multinational natural resource corporations proceed with copper and other types of mining in northern Wisconsin, millions of tons of water will be used in processing and concentrating the ores. Run-off and seepage from tailings ponds, waste dumps, ore dumps and stockpile areas often are heavily contaminated with pollutants.

Studies that have been done in Canada indicate that 20 to 25 chemicals are present in trace quantities in the effluent of most copper sulfide mining operations, and are capable of killing aquatic life. Many of these chemicals, including copper itself, are poisonous to fish at part per-billion levels. The conclusion of a recent study on water quality and copper-nickel mining by the Minnesota Public Interest Research Group was that "in an area with closely connected waterways, such as northeastern Minnesota, toxic discharges into one lake or river can quickly poison an entire watershed."

For large parts of the northern Wisconsin economy, which depend upon agriculture, dairy farming, forestry and tourism, the environmental pollution associated with copper mining could destroy the ecological basis for these industries. This is precisely the fear that has already been raised by the research done by the Rusk County Citizens Action Group regarding the proposed Kennecott mine in Ladysmith. While Kennecott talks about creating a few jobs for a 10 or 20 year period, they refuse to address themselves to long term environmental pollution of the copper mine. It is only when these long-term consequences of mining development have been addressed and satisfactory answers given that any responsible decisions about the future of northern Wisconsin mining can be made. If you would like to become involved in educational and organizational activities regarding mining in Wisconsin, write the Environmental Agenda Task Force on Mining at the Wisconsin Citizens Environmental Council, Box 7921, Madison, WI 53707 or call Cindy Sampson at 266-7714. More information on mining in northern Wisconsin can

be obtained by writing Al Gedicks, Center for Alternative Mining Development Policy, 731 State St., Madison, WI 53703.□

Postscript

In September (1977) the Wisconsin Department of Natural Resources dismissed Kennecott's request for permits to start a copper mine south of Ladysmith in northern Wisconsin. The decision of the Department of Natural Resources came after local citizens and small farmers mobilized public opinion in Rusk County against the mine. The defeat of Kennecott's mining plans for northern Wisconsin has not deterred other companies from continuing to explore and stake out new deposits. Exxon, for instance, has announced plans to develop the world's largest deposit of copper and zinc in nearby Forest County. Exxon has even hired Kennecott's chief geologist to insure that Exxon does not permit the mobilization of public opinion in Forest County that defeated Kennecott in nearby Rusk County.

CARCINOGENS IN THE WORKPLACE

The Research Triangle Institute has prepared a study* for the National Institute for Occupational Safety and Health (NIOSH), which seeks to identify the most carcinogenic chemicals and the industries which use them, using presently available data on carcinogenicity. The information is to be used by NIOSH to decide which industries should receive the most attention. First the investigators ranked 86 industrial chemicals according to their carcinogenic potential. The ten worst are: N-nitrosodiethylamine, thallium, chromium, asbestos, nickel, coal tar pitch volatiles, methyl methane sulfonate, acetamide, yellow OB, and ethylinimine.

**The Development of an Engineering Control Research and Development Plan for Carcinogenic Materials* (Government Printing Office, Washington, D.C., in press).

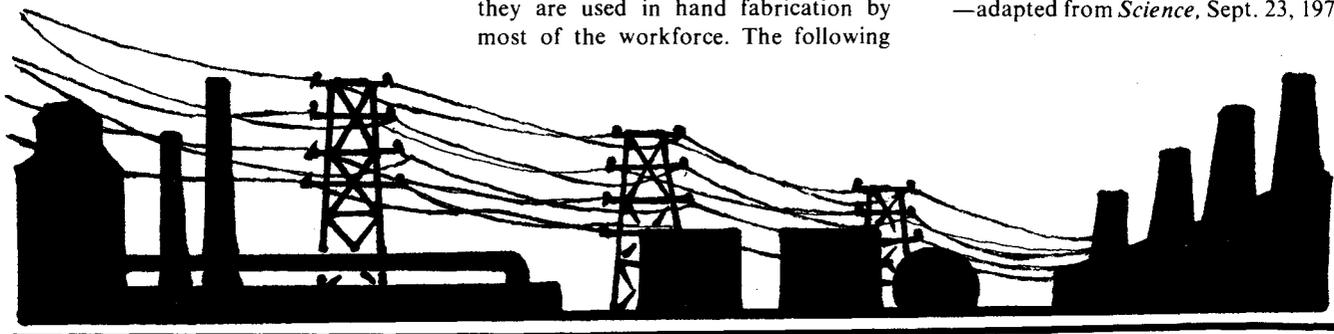
Next, the investigators combined their information on potency with data on the amount of exposure and annual production, to produce a list of those materials which actually cause the greatest amount of cancer. They are, in order: asbestos, formaldehyde, benzene, lead, kerosene, nickel, chromium, coal tar pitch volatiles, carbon tetrachloride, and sulfuric acid. To produce their ranking of most carcinogenic workplaces, the investigators considered both the potency of the materials and the amount and type of exposure of the worker.

For example, in the chemical industry (which ranked 12th) only a few workers come into direct contact with the large amounts of hazardous materials being produced. In the manufacture of scientific and industrial instruments (the worst industry), only small amounts of dangerous materials are involved but they are used in hand fabrication by most of the workforce. The following

list gives the most hazardous industries in order and some of the carcinogens used in them:

1. Industrial and scientific instruments (solder, asbestos, thallium).
2. Fabricated metal products (nickel, lead, solvents, chromic acid, asbestos).
3. Electrical equipment and supplies (lead, mercury, solvents, chlorohydrocarbons, solders).
4. Machinery except electrical (cutting oils, quench oils, lube oils).
5. Transportation equipment (constituents of polymers or plastics, including formaldehyde, phenol, isocyanates, amines).
6. Petroleum and products (benzene, naphthalene, polycyclic aromatics).
7. Leather products (chrome salts, other organics used in tanning).
8. Pipeline transportation (petroleum derivatives, metals used in welding).

—adapted from *Science*, Sept. 23, 1977



People & Energy/cpf

Don't Let the Stearns Miners Stand Alone

In December, 1975, Blue Diamond Coal Company purchased the Justus Mine of Stearns Coal and Lumber Company in Stearns, Kentucky. Blue Diamond Coal Company is known to have one of the worst safety records in the coal industry. In March, 1976, Blue Diamond's Scotia Mine was ripped by two explosions that killed 26 men (a Mine Enforcement and Safety Administration report said Blue Diamond was knowingly operating an unsafe mine). The Stearns miners, determined not to suffer the same fate, petitioned the National Labor Relations Board for a representative election and voted 152 to 53 for United Mine Workers of America (UMWA) representation. Blue Diamond immediately challenged the election and refused to recognize the miners' union. After months of delay and frustration, the miners voted in July, 1976 to strike to win their contract. Today, eighteen months later, the Stearns miners are still on strike.

Over the past year, company guards have attacked the strikers with automatic weapons while the company has begun to bring in scab labor to work the mine. On October 17, 1977 the Stearns strikers, while gathered on the picket line to stop the scab labor, were attacked by 120 Kentucky State Police. Over 100 men and women were arrested and eleven of the strikers were sentenced to six month jail terms.



The Stearns miners need your help. The nationwide UMWA contract talks will not help them unless they win recognition from Blue Diamond. Eighteen months of strike have taken their toll, but the Stearns strikers remain adamant: *American coal will be mined safely or not at all.*

You can help the Stearns miners by sending contributions to their relief fund at: Stearns Relief Fund, 303 Yoakum Circle, LaFollette, Tenn. 37766

You can also help by writing letters expressing your support for the miners' right to work in safe mines to: Governor J. Carroll, State House, Frankfort, Ky. and also to: Gordon Bonnyman, President, Blue Diamond Coal Company, Kingston Pike, Knoxville, Tenn. □

GIULIO MACCACARO (1924-1977)

On January 15, 1977, Giulio Maccacaro, 52, professor and chairperson of the Institute of Biometrics at the Medical School of Milan University, died of heart failure. He had just finished editing the issue of *Sapere* on the tragedy of the chemical explosion at Seveso, Italy. At 19, as a medical student, he joined the Italian liberation army to fight Fascism and, throughout his very active life, he consistently fought entrenched privilege, oppressive authority and imperialism at home and abroad. He felt acutely the social dilemma between scientific research and practical political activity. On that subject, he wrote:

We must fight for a society in which scientists are not required to choose between their scientific dedication and political involvement: a society in which they won't feel as a potential instrument of power for a privileged few, but as producers of a universally shared participation to the power [created by science].

Maccacaro worked in theory and in practice with students, workers and progressive unions and organizations to turn science from a tool of oppression and exploitation into one of liberation, in the hands of the people who can and want to use it as such. For this purpose, he founded two journals: *Medicina e Potere* ("Medicine and Power") and *Epidemiologia e Prevenzione* ("Epidemiology and Prevention"). He also took over the direction of *Sapere* ("Knowledge"), an authoritative scientific magazine that he transformed into the Italian counterpart of *Science for the People*, of which he was a member.

When he died, students and workers put up a poster on the doors of his institute:

A great scholar and scientist, [Giulio Maccacaro] did not take advantage of his position . . . to acquire easy privilege, but used his great intelligence and knowledge to the advantage of all workers. Involvement with social issues took his time, energy and money, which he spent with extreme liberality The democratic workers are moved and proud that a man like him chose to be with them. He will live in our struggles. □

Why Boycott Nestlé?

Sue Tafler and Betsy Walker

A nationwide boycott of the Nestle Corporation has been called, because of their aggressive and deceptive promotion and marketing of infant formula in the developing world. Third World mothers are being encouraged to abandon breast feeding in favor of buying such products as Nestle's Lactogen. Intensive advertising, radio jingles, billboards, and mother-craft personnel (milk nurses hired to increase sales of infant formula at the same time as they provide simple health care) are selling the message: the modern way for the caring mother is to bottle-feed her baby. Sophisticated techniques are being used to stimulate an artificial demand; only a tiny fraction of women have a real medical need for the expensive substitute product. Friendly relationships are being cultivated with doctors and other health professionals, with generous sponsorship of conferences, research grants, and other inducements. The distribution of free infant formula to mothers through hospitals and clinics is all the more insidious and effective because of the implicit medical endorsement.

Formula sales in the Third World are booming, despite the fact that using infant formula is a luxury for many families. For an average Third World worker, purchasing enough formula for one baby can consume 40-60% or more of a family budget. Commonly, formula is over-diluted to insure that the powder lasts until the family can purchase more. Contamination of the formula is also common. Without refrigeration, prepared formula is a breeding ground for bacteria. Water sources are often unsanitary and sterilization of water or bottle is often impossible. Even the company-sponsored health pamphlets, which suggest to mothers that breast feeding is difficult and requires a special diet, help erode the confidence which is essential for successful breast feeding. Indeed, encouragement to mothers to supplement breast feeding with bottle feeding has the effect of diminishing their supply of milk until artificial feeding becomes necessary. The consequence of this persuasion is severe malnutrition and infection for millions of babies every year. Third World babies are dying of an epidemic which has been called the "bottle syndrome" (1).

The boycott is being organized by a loosely structured coalition of church hunger activists, nutrition advocates, food coops, a few women's groups, and some radicals (2). The coalition demands that Nestle stop all promotion of infant formula in Third World countries, including mass advertising to consumers, free supplies to hospitals and new mothers, use of milk nurses for sales, and promotion to health professionals (3).

What can the boycott hope to accomplish? Nestle is the second largest food corporation in the world and has sales of \$5.5 billion a year (1975). Though Nestle's largest consumer market outside of Europe is in the United States, it is unlikely we can hurt Nestle financially. We *can* hope to hurt their reputation. It seems from their response to the announcement of the boycott and from the response of other corporations to similar actions that they may care about their "good name." Other infant formulas seem to be making token concessions. The use of public media and the writing of letters to Nestle (4) may be as (or more) effective than actually changing buying practices.

Why isn't the infant formula issue a struggle solely of the Third World countries rather than of those of us who are not directly hurt? We have heard scattered reports of restriction of infant formula distribution by a few small communist countries such as Guinea-Bissau (limited there to prescription only). Even Chile has been reported to have recently instituted a program to promote breast feeding. Local public health efforts can have only limited effect, considering that the annual sales of Nestle exceed the gross national products of many of the countries in which it operates. Unfortunately, the power in many developing countries is not held by the people themselves, and local ruling elites often want to encourage corporate investment. Third World governments and urban elites often have a vested interest in the status quo and their own profits, and even medical personnel often have received Western-oriented training.

What the boycott will not do is overthrow capitalism. Even if Nestle makes concessions to our demands, this will not end multinational corporation dominance of Third World markets nor end world hunger and malnutrition. Why should radicals like Science for the People be

involved in limited-objective actions? We have to have a sense of political reality; radical change can only begin from where people are. Radicals should not exclude themselves from progressive struggles. The boycott can unite well-meaning groups that see themselves as apolitical with more openly political groups. Radicals can raise questions among organizers from a perspective no one else might have. We can have the effect of politicizing others working in the coalition. If Nestle does make some concessions to the demands of the boycott, the sense of victory can give encouragement to the organizers of the boycott to continue on to larger struggles.

While the boycott is specifically directed against Nestle, it should be a tool for educating people about all multinational corporations. We want to be sure to make it clear that Nestle is not an exception. The immense power of the multinationals and their pervasiveness in international markets are clearly exemplified by the amazing array of subsidiaries owned by Nestle. With declining birth rates in Western countries, it is inevitable that multinational corporations would create a demand and would push their baby products (and many others) into Third World markets. Expanding sales and increasing profits are a capitalist imperative. If left to multinational corporations, Third World families will be drawn into more and more dependence on many imported products and less reliance on local food. The

coalition hopes to make the boycott attract media attention on these issues. We can hope that the success of the boycott will increase other multinational corporations' fear of people's knowledge and growing power. Finally, the goal of the boycott is important to accomplish — health and lives of Third World infants are at stake.

We want Science for the People to endorse and actively support the Nestle boycott. We urge you to spread the word and to do organizing in your communities. □

1. See *Science for the People*, July 1977, article by Leah Margulies.

2. INFACT (Infant Formula Action Coalition) is being coordinated nationally by the Third World Institute, 1701 University Avenue, Minneapolis, MN 55414. Boston INFACT can be reached c/o Boston Industrial Mission, 56 Boylston Street, Cambridge, MA 02138.

3. The American drug companies Bristol Myers, Abbott, and American Home Products also export infant formula but Nestle has 1/3-1/2 of the Third World market. Some people (Interfaith Center on Corporate Responsibility) have begun stock-holder actions against the American companies, but Nestle is a European-owned company so stockholder actions by Americans would be impossible.

4. The address of the office administering Nestle's American subsidiaries is Nestle Co. Inc., 100 Bloomingdale Road, White Plains, NY 10605.

5. Nestle products: Nestle Crunch, Quik, Toll House Morsels, Nescafe, Nestea, Decaf, Taster's Choice, Souptime; all Libby's canned goods, Stouffer products and restaurants, Crosse and Blackwell, Jarlsburg cheese, Deer Park Mountain spring water, Kavli crispbread, Maggi, Keiller, McVities, Wispride, Swiss Knight. The labels for some of these products often do not mention Nestle ownership.

Correction

References for "Biological Determinism as an Ideological Weapon", by Richard Lewontin, that appeared in *SftP* Vol. 9 No. 6.

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POPULATION TARGET

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resources

Please send your items and suggestions for this column to Tallahassee SftP, c/o Progressive Technology, P.O. Box 20049, Tallahassee, FL 32304.

"Electronics: The Global Industry." Three articles on this general topic make up the April 1977 issue of NACLA's *Latin America and Empire Report*. \$1.25. The Sept.-Oct. 1977 issue (now bimonthly, with a new format and name, *NACLA Report on the Americas*) has as its main theme "Power Struggle: Labor & Imperialism in Mexico's Electrical Industry," \$2.00. Available from North American Congress on Latin America (NACLA): P.O. Box 57, Cathedral Station, New York, NY 10025.

Carlotta and the Scientist, Patricia Riley Lenthall, 48 pp., with illustrations, 1973, \$2.15, a children's book for ages 5-9. A scientifically based story about a non-conformist penguin whose determination and curiosity lead her to an adventure with a people's scientist. Lollipop Power, P.O. Box 1171, Chapel Hill, NC 27514. Lollipop Power is a feminist collective working to overcome sex role stereotypes in the lives of children.

Sexism and Science: Anthropology, Primatology, Sociobiology, Evelyn Reed, 1977, 128 pp., \$1.95, Pathfinder Press, 410 West Street, New York, NY 10014. "The controversial feminist anthropologist whose book *Woman's Evolution* catapulted into the center of the ferment around the role of women in history, continues her frontal assault on male-dominated academia and sexist prejudices in science." — from prepublication description.

Directory of Major U.S. Corporations Involved in Agribusiness, A.V. Krebs, 47 pp., 1976, \$3.50. Profiles of top 126 firms. Also published by the same group is the periodical *AgBiz Tiller: Monitoring the Activities of Agribusiness*, \$12 per year. *The AgBiz Tiller*, San Francisco Study Center, P.O. Box 5646, San Francisco, CA 94101.

"Medicine and Imperialism: The Moroccan Experience," *MERIP Reports* #60 contains this very informa-

tive ten-page article by Jim Paul that shows how medicine is absolutely inseparable from imperialism. Often doctors work as agents of espionage, propaganda and socialization to capitalist rule, while medical systems provide social control and reproduce a labor force to suit the needs of capital. \$1.00. Available from the Middle East Research & Information Project (MERIP), P.O. Box 3122, Columbia Heights Station, Washington, D.C. 20010.

Minerals in African Underdevelopment, Samuel A. Ochola, 1975, 148 pp., \$4.50, Bogle-L'Ouverture Publications, Ltd., 5a Chignell Place, Ealing, London W13 OT England. A study in the continuing exploitation of African resources.

The Brain Bank of America: An Inquiry into the Politics of Science, Phillip Boffey, McGraw-Hill, 1975. This is an extensive study of the National Academy of Sciences. Early chapters of the book focus on the "honored" elite, special interests, how the brain bank functions and malfunctions. Later chapters give several case studies of areas the NAS has handled, and how conflicts of interest were involved.

Food Monitor, P.O. Box 1975, Garden City, New York 11530. Subtitled, Information Analysis & Action on Food, Land & Hunger. \$15/year. The Nov-Dec 1977 issue of *SftP* gave a positive review of the book *Food First* by Lappe, Collins and Fowler. Lappe and Collins are on the Editorial Board of this new periodical that will investigate, analyze and publicize the economic and political roots of hunger.

Now there is a journal for those interested in alternative community-based service programs. It contains articles and resource information. *C/O: Journal of Alternative Human Services*, 1172 Morena Blvd., San Diego, CA 92110.

Legacy of Malthus: The Social Costs of the New Scientific Racism, Allen Chase, 1977, \$17.95, Alfred A.

Knopf, Inc. Documents the historical relation between Malthusianism, racism, and the Social Darwinism and eugenics movements.

Nuclear Power: The Unviable Option, John J. Berger, 1976, 384 pp., \$4.50, Ramparts Press. Recently Dell Publishers has come out with an updated mass market paperback edition for \$2.50. A critical look at our energy alternatives.

Two periodicals that give an anti-imperialist presentation of the problems of native and natural peoples of the Americas are *Akwesasne Notes* (Mohawk Nation via Roosevelttown, New York 13683) and *Indigena* (P.O. Box 4073, Berkeley, CA 94704). Both of these fine periodicals give stunning exposure to the negative effects of Western technology: sterilization, theft of natural resources, genocidal destruction of native peoples, etc. Both give ongoing coverage of the struggles against such criminal acts.

Science, Technology and Society: A Guide to the Field. A directory of teaching, research and resources in the U.S. It is edited by Heitowit, Epstein and Steinberg and it is available free from Cornell University STS Program while a limited supply lasts. Program on Science, Technology and Society, 620 Clark Hall, Cornell University, Ithaca, NY 14853.

Soviet Sociology of Science, Linda L. Lubrano, 102 pp, 1976, \$4.95. American Association for the Advancement of Slavic Studies, 190 West 19th Avenue, Columbus, OH 43210. An attempt to portray the sociological perspective on science as it has developed in the Soviet Union.

Africa Counts: Number & Pattern in Africa, Claudia Zaslavsky, 1973, 328 pp., \$13.50, Prindle, Weber & Schmidt, Inc., 20 Newbury Street, Boston, Mass. 02116. History, development and employment of mathematics in African civilizations.

Mazingira. A new journal, "the world forum for environment and development." Published in Spanish, French, and English. *Mazingira* means environment in Swahili. *Mazingira*, Headington Hill Hall, Oxford OX3 0BW United Kingdom. Quarterly, \$10 per year.

Progressive Scientists Needed in Mexico

I. HEALTH WORKERS AND EDUCATORS IN OAXACA

Progressive forces in southern Mexico need help from Spanish-speaking health workers. Since early this year, class struggle in the Mexican state of Oaxaca has been fierce. A transport workers' strike during the winter paralyzed the state. A worker-student alliance mobilized demonstrations in many towns. The army and police killed at least thirty workers and six students. Still, organizing among workers, students, and community groups has continued. The government has responded with increasing repression. This struggle has received very little coverage in the U.S. press.

The University of Oaxaca has entered a process of democratization. A coalition of students, workers, faculty members, and community representatives eventually will govern the university. In Oaxaca this process is especially important, because the university's professional schools provide health, legal, and welfare services to low-income communities. The Medical, Dental, and Nursing Schools are undergoing democratization. Students and workers widely support this process. However, some faculty members who oppose democratization are leaving their teaching roles. Students are facing difficulties in obtaining the instruction they need.

Spanish-speaking health workers in nursing, medicine, dentistry, and allied fields can contribute to this struggle by working in Oaxaca for brief periods of time (weeks to months). Their role would involve teaching and some direct clinical work, partly in rural areas. Arrangements can be made for salary and accommodations as needed. For more information, please send a brief resume and statement of interest to: Oaxaca Support Committee, 51 Pontiac St., Roxbury, MA 02120.

II. MARINE SCIENTISTS IN BAJA

The Marine Sciences Unit of Baja California State University in Mexico needs science educators interested in continuing the process of democratization of teaching recently begun there by students.

The Institute is located about 100 miles south of the U.S.-Mexican border in Ensenada, Baja California, and is dedicated to the study of marine science. Started 16 years ago, it has a B.S. program in Oceanography, composed of study in four basic areas: Biology, Chemistry, Geology and Physics.

Until 18 months ago, the Institute functioned along traditional lines, training professional personnel for service to the Mexican elite. The process of education was structured anti-democratically, producing uncritical, narrow-minded specialists. Since then a group of students and recent graduates has come together to bring about much-needed changes in the process and purposes of the Institute. Successes achieved by the group include:

- a review and modification of the curriculum to include the study of Political Economy, History of Science, Underdevelopment in the Third World, and other relevant subjects.
- a more democratic structure, opening the decision-making process to students and academic and non-academic workers.
- research and teaching can now be done by collective work groups.

During the course of these reforms, many of the foreign teachers, mostly conservative, left the Institute, so now there is a need for qualified academic personnel to replace them. In order to consolidate recent gains, it is important to fill these posts with people who support democratic and collective structures and other progressive goals.

At this point, marine geologists are especially needed, but there are also openings for people with a background in fisheries biology (using mathematical models), marine chemistry, physical oceanography and mathematics. Salary is around \$800.00 a month. Housing and food costs in this locality amount to 20-40% of salary.

Interested people should send a letter and curriculum vitae to the Unidad de Ciencias Marinas, c/o Science for the People, 897 Main Street, Cambridge, MA 02139.



chapter reports

ANN ARBOR CHAPTER REPORT

1977 has proved to be a vintage year for our chapter. Our membership has grown steadily to about 30 active members. In addition, we've reached a wider audience through publications, events, and better distribution of the magazine (now available at most bookstores in Ann Arbor). This fall we held a series of political films, the best attended being "Sociobiology: Doing What Comes Naturally", which drew over 150 people. We had Allan Chase, author of *The Legacy of Malthus*, speak here (on his way back from the Champaign-Urbana chapter). The Science Teaching Group held a workshop for High School science teachers. It was poorly attended but established contact with the teachers that will facilitate the success of future workshops planned for the Michigan Science Teachers Association and a city-wide "in-service" day this spring.

We have been writing prolifically. Our book, *Biology As A Social Weapon*, was finally published in August and is being used in several courses taught by SftP members around the country. An article we wrote, entitled "Is Our Biology to Blame?", appeared in the October 77 issue of the *American Biology Teacher* magazine. The Sociobiology Study Group in Ann Arbor wrote several articles including a response to DeVore's letter in the Oct. *Anthropology Newsletter*, a rebuttal to an article defending sociobiology in the student newspaper, and a lesson plan for the STG workshop.

Many new groups have formed within our chapter this year. We started a support group for the Farm Labor Organizing Committee (FLOC) in Toledo. The support group wrote bilingual pamphlets on pesticides and nutrition for the migrant workers. They are now planning (with the Food, Nutrition, and Agriculture Group) a spring teach-in on the food issue. Members of our Nuclear Policy Group attended the Mobilization for Survival convention in Chicago recently and are actively working to support that coalition. The group is planning a film series on nuclear power this



winter. The Food, Nutrition, and Agriculture Group is writing an article on pesticide poisoning in Guatemala. The China Study Group is awaiting a reply from the People's Republic to their trip proposal. Meanwhile, a Cuba Study Group has just formed. SftP members have also been active in a local group opposing Recombinant DNA research and in the effort to vindicate two local nurses (Narciso and Perez) accused of poisoning patients at the VA hospital here in 1975.

One group was formed last spring on Sexism in Science. Its purpose was to discuss sexism in science and within Science for the People. It grew out of the discussions at the Midwest Regional meeting in Champaign-Urbana. The group (composed mostly of men) spent the summer discussing and reading about sexism, but broke up in September.

Currently, the chapter is organizing for the AAA\$ meetings in February, planning a mini-course for March, and preparing for the Midwest Regional meeting in Champaign-Urbana on January 21-22 (Contact Tina Hall there, if you would like to attend).

And lastly, Science for the People in Ann Arbor has a new office (4104 Michigan Union, Ann Arbor, Mi. 48109)! So stop by and check us out, if you're in the neighborhood. □

ST. LOUIS CHAPTER REPORT

Yes, we are very much alive, in fact we've never been stronger or more active. This semester we've been concentrating on issues concerning the "Social Structure of Health." We read and discussed the article from the magazine on infant formula abuse, and wrote a critique of it. [See Letters, p.5] We moved on to examining a paper by one of our members on the subject and are now reading Ivan Illich's *Medical Nemesis*. We have gotten so involved with the issues, we are planning a relatively large conference in April on the subject.

We had a membership meeting in October and now have approximately 20 members. We still meet weekly for discussion and business meetings. We now have members from Architecture, Anthropology, History, Chemistry, Engineering, Physics, Technology and Human Affairs, Sociology, and English. Needless to say it is a diverse and exciting group.

We are apologetic for our lack of correspondence, and hope to be communicating more often in the future. We collectively believe in the importance of SftP's work in analysing, educating, and acting on scientific issues. We wish to offer our support for the continuation of the Boston Chapter as a central force and intend to offer ideas on national organizing in the future.

NEW SCHOOLS EXCHANGE

PROBING THE DYNAMICS OF CHANGE

New Schools Exchange Newsletter is an energetic and conscientious publication which concerns itself with educational liberation. Although their political perspective is often not stated, NSEN reflects a profound and integrated understanding of education's role in facilitating - or inhibiting - social change. The articles are often loving, occasionally bitter, but always rooted in the reality of human struggle. It's friendly as well as critical.

-Lincoln Cushing

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LETTERS,
continued from p. 6

other suggestion occurred while I was walking by our local medical school. First, any parent who is concerned about whether his or her child has organic brain damage, minimal brain dysfunction or a case of the heebie jeebies can perform the following experiment.

Sit down with your child and together watch his or her favorite TV show. If the child sits quietly and attentively watching the show and is able to tell you what is going on, then your kid is OK. I also suggest you use the commercial breaks for the question and answer period. My friend who has worked with children in a clinical setting for years uses this simple test to be sure the problems have nothing to do with organic brain damage. As a parent you can then proceed to tell the school officials and physicians what to do with their psychological and neurological workups.

The second experiment can be used on your favorite family physician (FFP). When you are called into the office of your FFP and he begins to gently explain to you the various symptoms and disabilities your child suffers from and what a great drug Ritalin is, you begin by raising your hand. In this culture raising the hand with arm extended upward is usually enough to stop the flow of bullshit for a few moments. You then proceed to lecture your FFP on the results of experiment Number 1 which you and your child have performed, on the dangers of Ritalin, on the ethics of treating medically, behaviors which are socially produced, and on whatever else comes into mind. If, after a few minutes, he begins to squirm, to try to interrupt, to become authoritative or aggressive — you stop and point out that his behavior is characteristic of hyperactivity or minimal brain dysfunction and perhaps he should get a checkup.

I strongly recommend these procedures to parents who are concerned about their child's well being. Responsibility, even in health, is the *ability* for each person to *respond*. Only when each of us assumes responsibility for our health will the power and abuses of the doctors and drug companies be overcome.

In Peace and Health,
Gordon Edlin
Davis, California

NEWS NOTES,
continued from p. 7

IUC AGAINST THE
ARMS RACE

The Inter-University Committee to Stop Funding War and Militarism is a network of people, mostly in universities, who study arms-race issues and disseminate position papers analyzing new developments. It is organized in two main clusters, Berkeley and Philadelphia, with several hundred correspondents coast to coast. Current projects: writing a number of papers on the politics, economics, and technology of current arms decisions, and helping organize the November teach-ins on nuclear weapons and nuclear power in cooperation with the national Mobilization For Survival.

The IUC is looking for new members of the network — to form local working groups, to work on the fall teach-ins, to do research and writing aligned with a reviving movement against the arms race. For more information, write: Inter-University Committee, 2302 Ellsworth, Berkeley, CA 94704.

—IUC

MORE SCIENCE FOR
SALE

Alan Dalton of the British Society for Social Responsibility in Science (BSSRS) has charged that the British asbestos industry has been buying the opinions of respected scientists and attempting to hide from the public evidence about the harmful effects of asbestos. According to Dalton, Dr. Robert Murray, the ex-medical adviser to the British Trades Union Congress, was paid £20,000 by the industry, in part to tell the Irish Development Authority that asbestos was all right.

Dalton also charged that pressure had been exerted on Julian Peto, a cancer epidemiologist, to have him minimize the results of his work with British asbestos workers. When the asbestos industry discovered that Peto's research was to be the subject of an article in the *Sunday Times*, they tried to persuade the newspaper not to publish the article.

These attempts to hide the evidence occur just when the Advisory committee on asbestos is considering a nationwide ban on asbestos for Great Britain.

—New Scientist

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As work within the field of sociobiology develops, it is only human nature for the practitioners to want to promote their work to a more general audience. One method of doing this has been by film. The movie "Sociobiology: Doing What Comes Naturally" is such

an attempt to disseminate the more vulgar aspects of the field.

In Tedd Judd's article in this issue, features of the film, the theory, and practical political applications are discussed. He shows on numerous occasions errors in the film and harmful consequences of its popularized use. □

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The goal of **Science for the People** is to examine the role of science and technology in society, in order to encourage progressive political activity.

Articles in **Science for the People** come out of the experience and interest of its readers. We urge everyone to contribute to the magazine. We welcome articles written collectively. Good articles can evolve from collective and individual political work, from research, or from other activities. Articles can take the form of book reviews, personal accounts, reports of events, analytical essays, etc. Writing done for another purpose can often be adapted for **Science for the People** and is welcome.

Contributions to the magazine should: 1) deal with issues of science and technology from a radical perspective; 2) sharpen political awareness; 3) stimulate political action on issues of science and technology. It is important to use straightforward English and to keep technical terms to a minimum.

Procedure: 1. New articles: submit 3 copies (manuscripts are not usually returned, so don't send originals unless

you have kept a copy for yourself). The Editorial Committee works hard in revising articles and discussing them with authors. You may want to send an outline of a proposed article to the Editorial Committee in advance for response to content and emphasis, and suggestions for source materials. Final substantive changes are cleared with authors. In the "About This Issue" column, the Editorial Committee may describe the range of opinions on a particular issue, point out unexplored questions, or draw some additional implications from the articles.

2. Articles written for another purpose: submit 3 copies, along with a letter describing the article's origin, and whether or not it may be adapted.

3. Current Opinion: Submit 3 copies. Contributions should be about 500 words, tightly argued positions on timely subjects, including occasional contributions from the Editorial Committee. The Editorial Committee may discuss with authors changes which clarify debate.

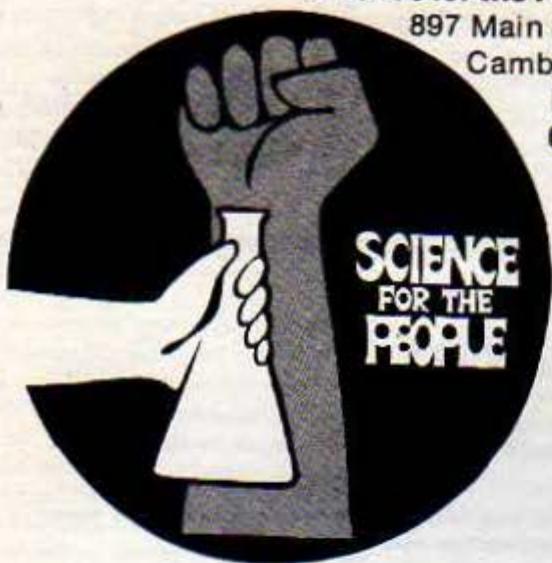
4. Readers are also encouraged to contribute letters, News Notes — news

items on the social and political role of science and technology, and especially reporting people's activities around these issues, Chapter Reports and StP Activities — brief summaries essentially assured of publication, and graphics — cartoons, designs, photographs, etc., not necessarily original but with credits.

Science for the People is a collective effort of the Editorial, Production, and Distribution Committees (volunteer) and the Magazine and Office Coordinators (paid). All committees are accountable to the membership of Science for the People through the annual Eastern Regional Conference. Members of Science for the People outside the Boston area are encouraged to participate (by mail or in person) in the work of the Editorial Committee. People interested in reviewing and editing articles should contact the Magazine Coordinator through the Boston StP office.

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